MARYLAND AVIATION ADMINISTRATION

2013 Design Standards

Volume III of III

BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT

MARTIN STATE AIRPORT

OFFICE OF DESIGN & CONSTRUCTION

January 2013

TABLE OF CONTENTS

Volume I of III

TABLE OF CONTENTS CONTINUED

Volume II of III

APPENDICES

Volume III of III

APPENDIX F

RESTROOM DESIGN CUT SHEETS

MARTIN STATE AIRPORT

BWI BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT

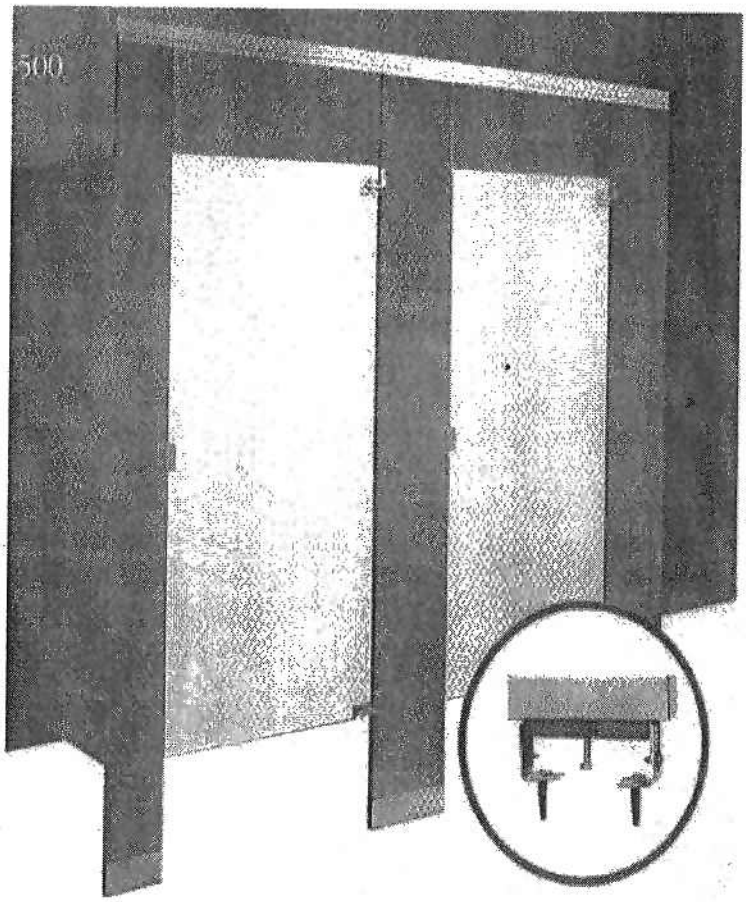
TABLE OF CONTENTS

NOTE:
Manufacturers' product illustrations included in this Appendix have been selected as representative of products complying with this Standard, and are not intended to restrict or otherwise limit selection of individual products to those manufacturers.

APPENDIX B – PRODUCT CUT SHEETS

TABLE OF CONTENTS

APPENDIX B – PRODUCT CUT SHEETS (cont.)



FP500 - *Corinthian* Overhead Braced

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS** SHEET TITLE **TOILET PARTITIONS AND DOOR HARDWARE-1** SCALE **NONE** DATE **MARCH 2005**	PROJECT NO. **TASK 1314.20** **B-1**

STAINLESS STEEL TOILET ENCLOSURES

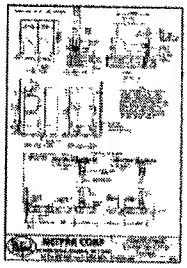
THE CORINTHIAN METPAR TYPE: FP-500 Overhead Braced

MATERIALS: Stainless Steel Type 304

THICKNESS: Doors..... 22 Gauge, Finished to 1" (25.4mm)

Panels..... 20 Gauge, Finished to 1" (25.4mm)

Pilasters..... 20 Gauge, Finished to 1 ¼" (31.75mm)



Click on image to full size the detail

CONSTRUCTION:

Doors:
Finished to 1" (25.4) thick, constructed of two sheets of 22-gauge, type 304 stainless steel formed and cemented under press honeycomb core. Door face sheets are welded at intervals around the entire perimeter. All edges to be finished with a 20-g stainless steel interlocking molding. Corners are finished with pre-formed stainless steel (type 304) reinforcements. Doors s internal steel reinforcements to secure hardware items.

Panels:
Finished to 1" (25.4) thick, constructed of 2 sheets of 20-gauge type 304 stainless steel, formed and cemented under pressur honeycomb core. All partition edges are finished with a 20-gauge stainless steel interlocking molding. Corners will be finish pre-formed stainless steel (type 304) reinforcements.

Pilasters:
Finished to 1¼" (31.75) thick, constructed of two sheets of 20-gauge, type 304 stainless steel, formed and assembled with a honeycomb core. Face sheets are electrically welded at intervals around the entire perimeter. All pilasters will have a 3" (7 #4 finish stainless steel plinth (18-8 type 304) and have straight, flat sides profile with rounded edges to match the pilaster pr Pilasters will have leveling bolts threaded to the pilaster support bracket. Floor mounting will be with #12 x 2½" (63.5) scre shields. Headrail is anodized aluminum .050" (1.27) wall thickness with anti-grip profile. The headrail is set into a 16ga. ch reinforcement which occupies the full width of the pilaster and is electrically welded in place for maximum strength.

FITTINGS:
Wall fittings are die cast chrome plated.

HARDWARE:
Each compartment will be complete with all hardware, door hinges, latch, stop and keeper, coat hook, as well as all necessar and fastenings for a complete installation. Hinges and door strikes are fastened by means of tamper- proof Torx-Pin Head t

bolts, which are polished chrome plated. All other screws to be tamper-proof Torx-PinHead chrome plated. Doors are to be concealed, *"stay-set"*, fully adjustable, non-rising door mechanism.Upper hinge pin shall be 3/8" (9.525) diameter steel. All will have wrap-around flanges with a minimum of 5/8"(15.875) wrap onto pilaster. All doors will have a concealed ADA ap slide latch with external *"in-use"* indicator.

FINISH:
All stainless steel material will have a #4 satin finish.

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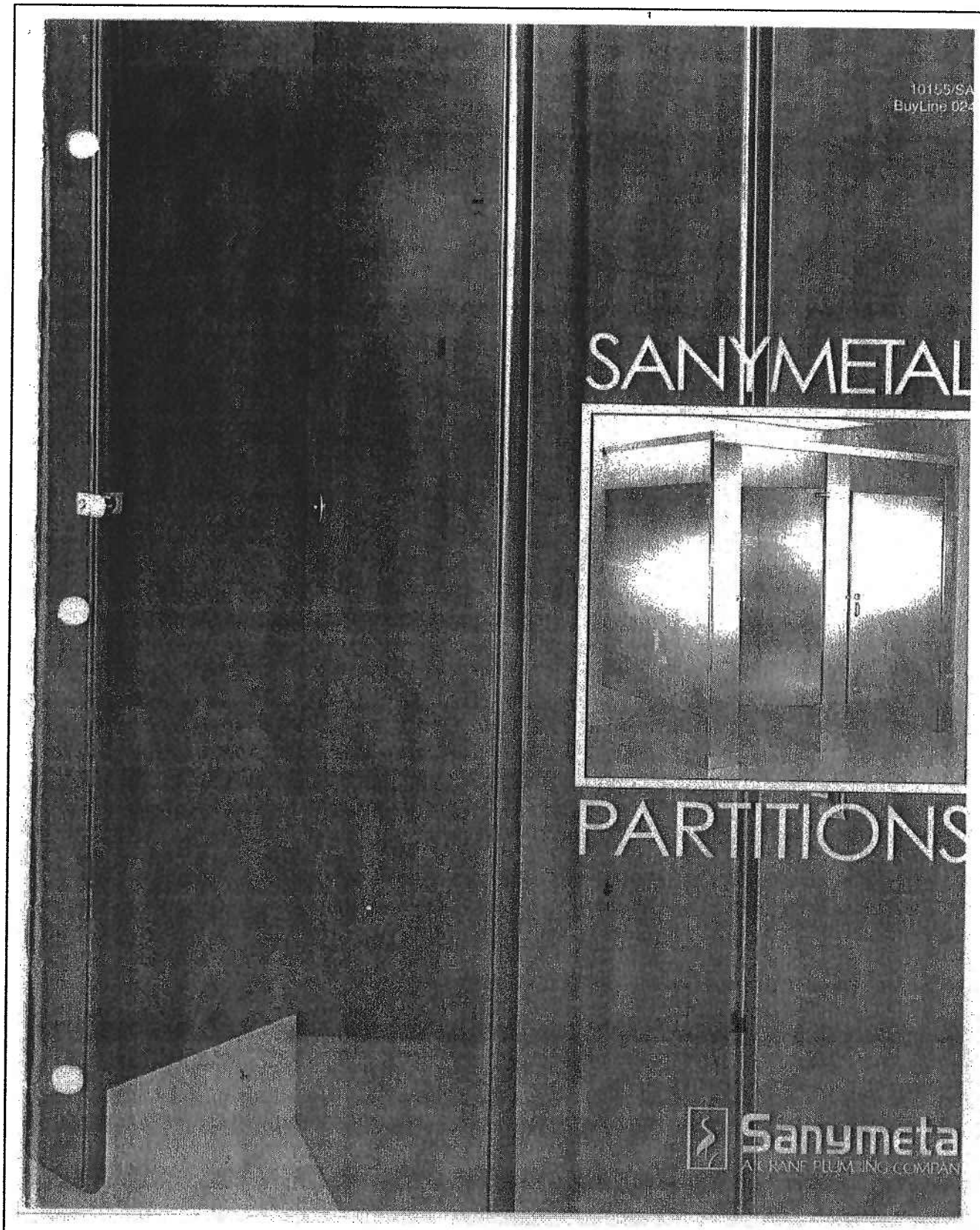
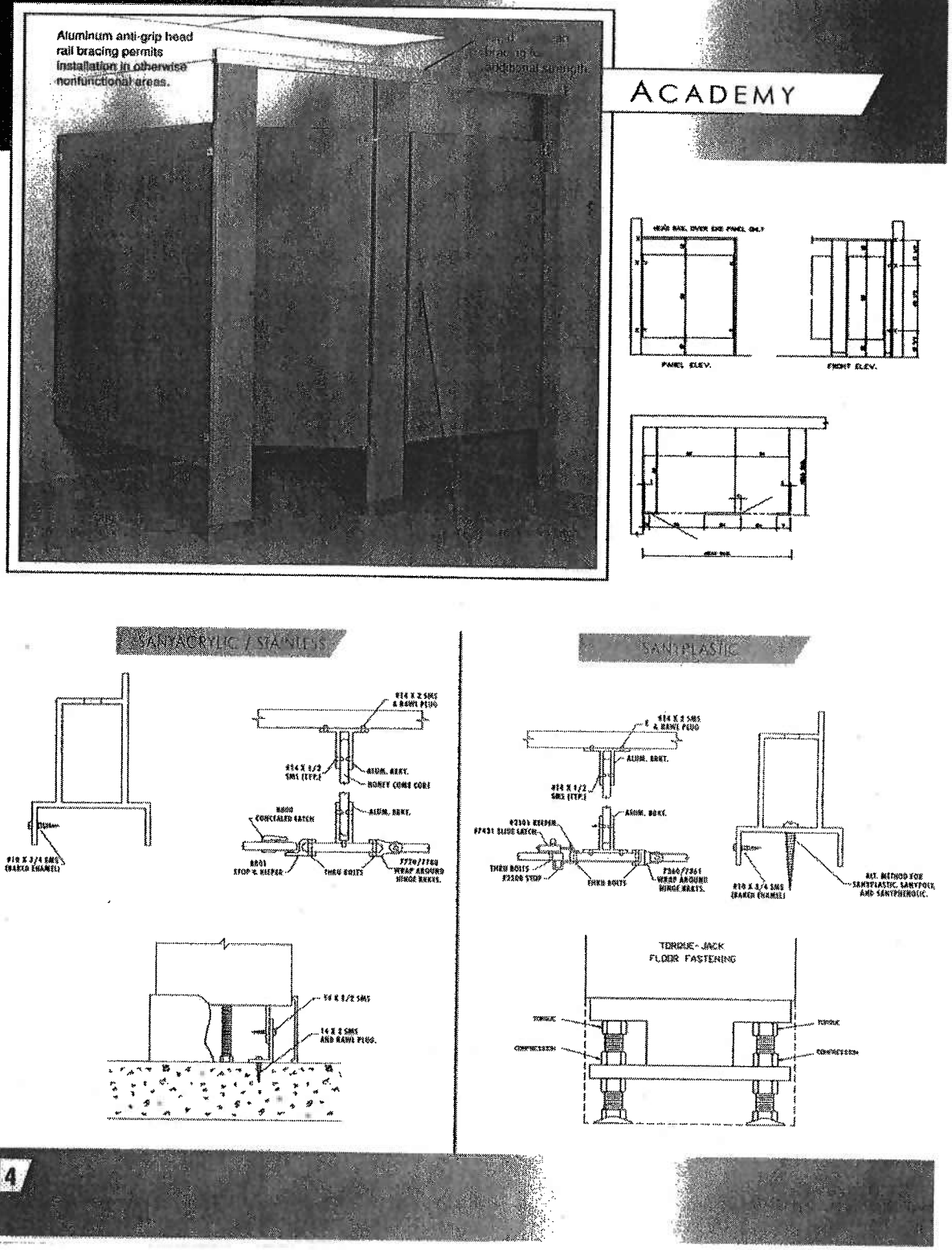
PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	TOILET PARTITIONS AND DOOR HARDWARE-2
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-2



Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **TOILET PARTITIONS AND DOOR HARDWARE-3**		**B-3**
	SCALE **NONE**	DATE **MARCH 2005**	



Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **TOILET PARTITIONS AND DOOR HARDWARE-4**		**B-4**
	SCALE **NONE**	DATE **MARCH 2005**	

SHORT FORM SPECIFICATIONS

Sanymetal offers design opportunity...a method to specify and order the type, materials, colors and combinations to meet your criteria for strength, corrosion resistance, in-place costs and design.

Specify the design type (Section 1), select the material for doors, panels and pilasters from Section 2, 3 and 4. For example: Sanyplastic panels can be installed with steel pilasters.

	BAKED ENAMEL	STAINLESS STEEL
1 TYPE	1: Academy toilet compartments shall be Acrylic Coated Academy type as manufactured by Sanymetal. Century toilet compartment shall be Acrylic Coated Century type as manufactured by Sanymetal. Normandie toilet compartments shall be Acrylic Coated Normandie type as manufactured by Sanymetal.	1: Academy toilet compartments shall be stainless steel Academy type as manufactured by Sanymetal. Century toilet compartments shall be stainless steel Century type as manufactured by Sanymetal. Normandie toilet compartments shall be stainless steel Normandie type as manufactured by Sanymetal.
2 DOORS	2: Shall be 1" thick with two sheets of #22 Galvanneal-Bonderized steel enclosing sound-deadening Bridgecore. All formed edges shall be welded every 18" and sealed with a surrounding oval-crown locking strip, mitered, welded and finished at the corners. Standard door size, other than "handicapped" is 24".	2: Shall be 1" thick with two sheets of #22 gauge, 304 16-8 stainless steel enclosing sound-deadening Bridgecore. All formed edges shall be welded every 18" and sealed with a surrounding oval-crown locking strip, mitered, welded and finished at the corners. Standard door size, other than "handicapped" is 24".
3 PANELS	3: Academy, Century and Normandie shall be 1" thick with two sheets of #22 Galvanneal-Bonderized steel enclosing sound-deadening Bridgecore. All formed edges shall be welded every 18" and sealed with a surrounding oval-crown locking strip, mitered, welded and finished at the corners.	3: Academy, Century and Normandie shall be 1" thick with two sheets of #22 gauge, 304 16-8 stainless steel enclosing sound-deadening Bridgecore. All formed edges shall be welded every 18" and sealed with a surrounding oval-crown locking strip, mitered, welded and finished at the corners.
4 PILASTERS	4: Academy pilasters shall be 1 1/4" thick with two sheets of acrylic coated #20 gauge Galvanneal-Bonderized steel welded and finished as specified for Baked Enamel doors. Pilaster bases shall be attached with floor stirrups and leveling bolts to secure for anchorage. Pilaster tops shall be overhead braced the full perimeter of the installation with 1" x 1 1/2" anodized aluminum anti-grip headrail bracing. Century pilasters shall be 1 1/4" thick with two sheets of #18 gauge, Galvanized-Bonderized steel welded and finished as specified for baked enamel doors. Pilasters to be secured with 3/8" bolts to overhead member (by others) in accordance with details shown on page 6. Not recommended for ceiling heights exceeding 9'0". Normandie pilasters shall be 1 1/4" thick with two sheets of #18 gauge. Galvanized-Bonderized steel welded and finished as specified for baked enamel doors. Pilasters to be secured with 3/8" bolts and expansion shield in accordance with details shown on page 5.	4: Academy pilasters shall be 1 1/4" thick with two sheets of #20 gauge, #304 18-8 stainless steel welded and finished as specified for Stainless doors. Pilasters bases shall be attached with floor stirrups and leveling bolts to secure for anchorage. Pilaster tops shall be overhead braced the full perimeter of the installation with 1" x 1 1/2" anodized aluminum anti-grip headrail bracing. Century pilasters shall be 1 1/4" thick with two sheets of #18 gauge, stainless steel welded and finished as specified for Stainless doors. Pilasters to be secured with 3/8" bolts to overhead member (by others) in accordance with details shown on page 6. Normandie pilasters shall be 1 1/4" thick with two sheets of #18 gauge, stainless steel welded and finished as specified for baked enamel doors. Pilasters to be secured with 3/8" bolts and expansion shield in accordance with details shown on page 5.
5 HARDWARE	5: a. Top hinge pin shall be secured at three points with all doors hinge fittings fully flush with face plates of the door. b. Each door shall be equipped with chrome plated cast alloy coat hook and bumper. Sanymetal concealed latch #8800 with bolt of stainless steel permitting exterior access, a one piece chrome plated stop and keeper and #7961 concealed controlled power heeling gravity hinge. c. The door shall be adjustable to permit rest position at any angle within a 270° arc and the weight at all times shall be carried by a power bearing with all moving parts concealed within the door thickness. d. Pilaster hinge brackets shall be chrome-plated zamac alloy and tau-bolted to the pilaster. e. Floor and ceiling connections shall be concealed with a one piece 304 stainless steel theftproof plinth. f. Chrome-plated zamac strap brackets shall be used to attach panels and pilasters.	5: a. Top hinge pin shall be secured at three points with all chrome-plated door hinge fittings fully flush with face plates of the door. b. Each door shall be equipped with chrome plated cast alloy coat hook and bumper. Sanymetal concealed latch number 8800 with bolt of stainless steel permitting exterior access, a one-piece chrome plated stop and keeper and number 7961 concealed controlled power heeling gravity hinge. c. The door shall be adjustable to permit rest position at any angle within a 270° arc and the weight at all times be carried by a power bearing with all moving parts concealed within the door thickness. d. Pilaster hinge brackets shall be chrome plated zamac alloy and tau-bolted to the pilaster. e. Floor and ceiling connections shall be concealed with one piece 304 stainless steel theftproof plinth. f. Chrome-plated zamac strap brackets shall be used to attach panels and pilasters.
6 FINISH	6: Finish shall consist of base metal coating and a finish color coat of thermo-setting acrylic enamel applied electrostatically in a pressurized, dust free atmosphere, baked on to produce a uniform, smooth lustrous protective finish.	6: All stainless steel walls shall be #4 finish and shall be paper covered for protection during shipment and installation.
7 COLOR	7: Colors shall be.....(Sanymetal number and color name) (Any two colors for contrasting pilasters/panels and doors may be specified.)	7: Colors shall be 304 stainless steel, #4 finish.
8 CERTIFICATION	8: A certificate of compliance shall be attesting that all materials are in accordance with Sanymetal's preceding specifications.	8: A certificate of compliance shall be attesting that all materials are in accordance with Sanymetal's preceding specifications.

Baker

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PROJECT TITLE
RESTROOM DESIGN STANDARDS

SHEET TITLE
TOILET PARTITIONS AND DOOR HARDWARE-5

SCALE **NONE** DATE **MARCH 2005**

PROJECT NO.
TASK 1314.20

B-5

stainless steel panels with baked enamel pilasters or; normal homogeneous materials can be used depending upon preference.

Possible combinations are virtually unlimited for top performance, durability, lowest maintenance and proven Sanymetal value. Complete specifications available on request.

10155/SAP
BuyLine 0247

SANYPLASTIC	SANYPHENOLIC	SANYPOLY
1: Academy toilet compartments shall be Plastic Laminate Academy type as manufactured by Sanymetal. Century toilet compartments shall be Plastic Laminated Century type as manufactured by Sanymetal. Normandie toilet compartments shall be Plastic Laminated Normandie type as manufactured by Sanymetal.	Academy toilet compartments shall be Solid Phenolic Core (SPC) Academy type as manufactured by Sanymetal. Century not recommended Normandy not recommended	1: Academy toilet compartments shall be Solid Polymer Academy type as manufactured by Sanymetal. Century not recommended Normandy not recommended
2: Shall be constructed of industry Standard plastic laminate NEMA approved, laminated under heat and pressure to a solid 45 lb. density flakeboard core. Finished Doors shall be 1" thick. Standard door size, other than "handicapped" is 24"	2: Shall be 3/4" thick solid phenolic core with high pressure melamine color surface on faces. Edges shall be burnished and slightly rounded. Standard door size, other than "handicapped" is 24",	2: Doors shall be 58" high, 1" thick, single component construction, Solid Polymer. Standard door size, other than "handicapped" is 24",
3: Shall be 3/4" thick and of the same construction, finish and performance standards as for Sanyplastic doors (section 2 above).	3: Academy shall be 1/2" thick solid phenolic core with high pressure color surface on faces. Edges shall be burnished and slightly rounded.	3: Panels shall be 58" high, 1" thick, single component construction, Solid Polymer.
4: Academy pilasters shall be 1 1/4" thick of same construction, finish and performance as for Sanyplastic doors. Pilasters shall be secured to floor by means of a 1/4" thick anchor bar mechanism and shall be secured and leveled by using 3/8" bolts and nuts-tension/compression mounted. Pilasters shall be braced with extruded, anodized aluminum anti-grip headrail and wall return. Century pilasters shall be 1 1/4" thick of the same construction, finish and performance as for Sanyplastic doors. Pilaster shall be secured to overhead support member (furnished by others), by means of 1/4" thick anchor bar mechanism, and shall be secured and leveled by using 3/8" bolts and nuts-tension/compression mounted. Steel core pilasters recommended for ceiling heights exceeding 8'6". Normandie pilasters shall be 1 1/4" thick of same construction, finish and performance as for Sanyplastic doors. Pilasters shall be secured to floor by means of 1/4" thick anchor bar mechanism and shall be secured and leveled by using 3/8" bolts and nuts-tension/compression mounted.	4: Academy shall be 1" thick solid phenolic core with high pressure color surface on faces. Edges shall be burnished and slightly rounded. Headrail shall be heavy duty aluminum extrusions, anodized with anti-grip configuration, and shall be fastened to the pilaster tops.	4: Pilasters shall be 82" high, 1" thick, single component construction, fitted with an 11 gauge stainless steel footer for attachment to min. 3/8" floor studs and expansion shields. Headrail shall be heavy duty aluminum extrusions, anodized with anti-grip configuration, and shall be fastened to the pilaster tops.
5: Doors: Shall be equipped with Sanymetal #6610 top hinge recessed into door 3" from top with pin supported in door above and below top hinge bracket. Lower hinge shall be Sanymetal #6100 controlled power bearing consisting of Zytel cams under spring tension. Door weight shall be carried by power bearing only, not on the cams. Door cycling shall be on a level plane and shall be openable and adjustable to any angle within a 270° arc. Brackets: For panels and pilasters shall be chrome-plated zamac. Operation: A power bearing shall carry the door weight. All moving parts shall be concealed within the 1" door thickness. Accessories; Attachment and Construction. Hinge brackets shall be non-ferrous chrome plated stirrup type attached to the pilaster by means of through bolts. Top hinge bracket shall be Sanymetal #7361, bottom hinge bracket to be Sanymetal #7360. Door keeper and stop shall be Sanymetal, chrome plated No. 2501 keeper and No. 2900 stop with rubber bumper locked into place. Door latch shall be Sanymetal No. 7431 non-ferrous, chrome plated slide latch. Pilaster base shall be 3" high; No. 304 stainless steel, polished finish to conceal floor (or ceiling) connections.	5: Hinges shall be fabricated from 11 gauge stainless steel, one piece leaf, for surface mounting. Hinge shall be equipped with one piece 3/8" stainless steel pintle extending the full height of the hinge. Upper and lower hinge are to both be cam operated, with the one piece pintle: Sanymetal #7280/81. Coat hook and bumper to be stainless steel 14 gauge #7367. Door strike and keeper shall be 14 gauge stainless steel, Sanymetal #7269/7270. Door latch to be slide type, 14 gauge stainless steel, Sanymetal #7231 Bracket for wall and partition attachment shall be 14 gauge stainless steel. Pilasters shall be attached to the floor by means of an 11 gauge stainless steel footer, with provisions for leveling, attached by two 3/8" diameter stainless steel studs set into expansion shields. The floor connection are to be covered by a 4" high stainless steel shoe, #4 finish. Aluminum bracket not available for phenolic material.	5: Hinges shall be fabricated from 11 gauge stainless steel, one piece leaf, for surface mounting. Hinge shall be equipped with one piece 3/8" stainless steel pintle extending the full height of the hinge. Upper and lower hinge are to both be cam operated, with the one piece pintle: Sanymetal #7280/81. Coat hook and bumper to be stainless steel 14 gauge #7367 Door strike and keeper shall be 14 gauge stainless steel Sanymetal #7269/7270. Door latch to be slide type, 14 gauge stainless steel, Sanymetal #7231 Panel brackets to wall pilasters to be heavy duty aluminum, anodized and polished with 3 brackets per connection. (Optional) Full height aluminum brackets with mill finish can be specified if required. Pilaster shoe 4" high stainless steel shoe #4 finish. (Optional) Headstrips to be applied to the bottom edges of panels and doors are available in both aluminum or stainless steel to prevent burning.
6: All units shall be made of Sanyplastic plastic laminate. All wood grain panels larger than 57 1/4" will have horizontal grain, unless vertical splicing is required. 7: Color shall be from current Sanyplastic color section. Any two colors may be combined.	6: Melamine color surface on material face, edges burnished. All wood grain panels larger than 57 1/4" will have horizontal grain. 7: Color shall be selected from the manufacturer's high pressure Sanyplastic color chart, the colors available shall be the same as offered for Sanyplastic partitions.	6: Panels, doors and pilasters shall be fabricated from Polymer resin, which forms a single component section, waterproof and non-absorbent, with a self-tubelcoating surface. 7: Color shall extend throughout the entire thickness of all the components. Colors shall be selected from the manufacturer's standard polymer colors.
8: A certificate of compliance shall be offering that all materials are in accordance with Sanymetal's preceding specifications. Use of this product in showers or areas subject to hose-down maintenance is not recommended. Sanymetal recommends rust-proof Phenolic, or Stainless Steel for these environments	8: A certificate of compliance shall be attesting that all materials are in accordance with Sanymetal's preceding specifications.	8: A certificate of compliance shall be offering that all materials are in accordance with Sanymetal's preceding specifications. Sanymetal provides a one-year warranty against workmanship and defects not against inherent physical characteristics of the solid polymer material such as sagging/warpage due to lack of rigidity.

Note: Sanymetal reserves the right to improve, modify, or change its material and specifications at any time in such a manner as it may consider necessary or advisable, and to discontinue the manufacture and sales of any product without notice.

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PROJECT TITLE
RESTROOM DESIGN STANDARDS

SHEET TITLE
TOILET PARTITIONS AND DOOR HARDWARE-6

SCALE **NONE** DATE **MARCH 2005**

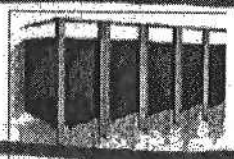
PROJECT NO.
TASK 1314.20

B-6

The Mills company offer 3 styles of toilet partitions and 2 styles of urinal screens

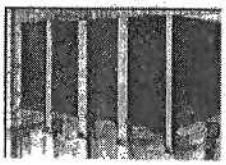
Sentinel Overhead Braced

Provides the most economical solution for heavy traffic or vandalism prone areas.



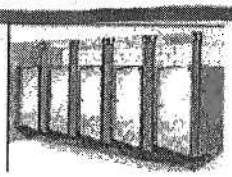
Floor Braced

The floor based compliments design with functional performance. This model is recommended with areas with high ceilings.



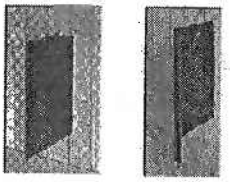
Ceiling Hung

The ceiling hung system is ideal for areas with low ceilings. This models fast and easy maintenance .

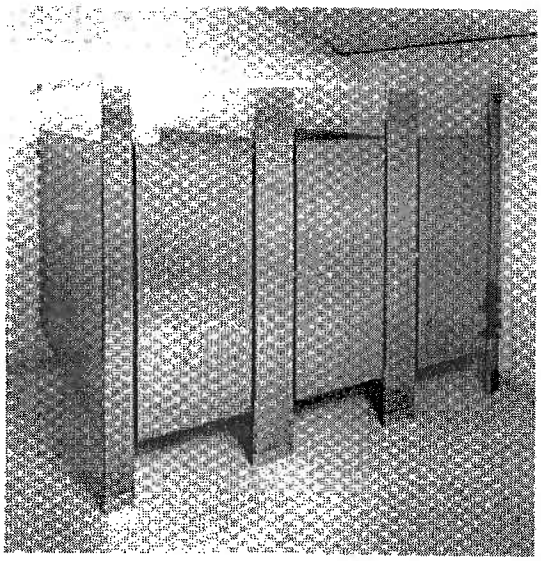


Urinal Screens

These two styles available are wall mount. Available in baked enamel or stainless steel.



Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **TOILET PARTITIONS AND DOOR HARDWARE-7**		**B-7**
	SCALE **NONE**	DATE **MARCH 2005**	



FAST TRACK 48 Hour Shipping
In #4 Satin Finish. Floor Anchored/Overhead Braced, Floor Anchored, and Ceiling Hung. Call for details.

Global Stainless Steel

GLOBAL stainlees steel toilet partitions are virtually indestructible and retain their gleaming beauty indefinitely. These units combine the strength of #304 stainless steel with a #4 stain finish or textured finish, formed and bonded to a honeycomb core. The face sheets are held rigid and permanently in place by an interlocking strip welded at each corner.

GLOBAL stainless steel compontents are impervious to just about any substance. Even scratches caused by deliberate vandalism can be removed by buffing. The elegance of **GLOBAL** stainless steel compontents complements any design scheme, either in new construction or for renovations.

View Specifications/Drawings
Care and Maintenance Instructions

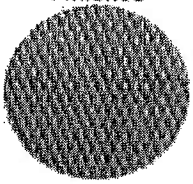
Construction Features

Honeycomb Core is made of cellular honeycomb. This type of core provides strong construction, maximum adhesion, and prevents delamination.

Welded Corners
Corners of panels, pilasters and doors are welded to each other and to the adjacent face sheets.

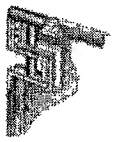
Theft - Resistant Fasteners
Special driver installs fasteners which virtually eliminates unauthorized removal and ensure easy installation.

Optional Textured Finishes

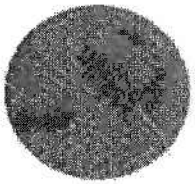


Concealed Latch
With emergency access and ADA lever handle.

Bottom Door Hinge
Gravity-positioning hinge provides safe, durable and maintenance-free support.



Upper Door Bracket
Bracket is an internal part of the door. A pin goes through the door and bracket for three point bearing and operates in a nylon bushing in upper hinge bracket attached to the pilaster.



Options:

Plywood Core

No Sight Line

Eastern Style Height

Full Height Aluminum Brackets

Full Height Stainless Steel Brackets

Pilaster Mounting
Pilaster adjustments, with floor-mounted jack-leveling device, are used on Embassy pilasters.

Alternate Pilaster Mounting
This type of mounting is furnished on all Imperial and Regal pilasaters.

Shoe Construction
One-piece stainless steel, type304, with #4 satin finish trim shoes are hemmed top and bottom for rigidity and sleek appearance.

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PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	TOILET PARTITIONS AND DOOR HARDWARE-8
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-8

FLOOR ANCHORED/OVERHEAD BRACED TOILET COMPARTMENTS
STAINLESS STEEL – TEXTURED LEATHER GRAIN

GLOBAL STEEL PRODUCTS CORP.

PART-1 GENERAL

1.01 DESCRIPTION

A. Textured leather grain stainless steel compartment work includes the following:
   1. Floor anchored/overhead braced partitions.
B. Furnish all labor and materials necessary for the completion of work in this section as shown on the contract drawings and specified herein.
C. Work in this section shall include but is not limited to:
   1. Toilet compartments
   2. Hardware for toilet compartments
   3. Shop drawings and working drawings
   4. Manufacturer's guarantee
D. Related work specified elsewhere shall include accessories and anchorage/blocking for attachment of compartments.

1.02 PRODUCTS

A. Submittal of shop drawings and details, for architects approval.
B. A sample of textured leather grain finish stainless steel and hardware samples shall be submitted for approval to the architect upon request.

PART-2 PRODUCTS

2.01 MANUFACTURER

A. Toilet compartments to be supplied by Global Steel Products Corp., Deer Park, New York 11729.

2.02 MATERIALS

A. Doors and panels shall be 1" thick, constructed of two sheets of 22-gauge, textured leather grain, stretcher-leveled quality stainless steel formed and bonded under pressure with a non-toxic adhesive to a full-face honeycomb core.
B. Pilasters shall be 1-1/4", constructed of two sheets of 22-gauge, textured leather grain finish stainless steel, formed and bonded under pressure with a non-toxic adhesive to a full-face honeycomb core.

2.03 CONSTRUCTION

A. Doors and panels shall be 1" thick. Panels over 48" shall be manufactured with four (4) face sheets (2) sheets each side, seamed and spot welded together. The edges shall be sealed with a 22-gauge, stainless steel interlocking molding. Molding corners shall be welded to each other and to face sheets, and ground smooth to form a rigid frame around the component.
B. Pilasters shall be 1-1/4" thick. Edges shall be sealed with 22-gauge stainless steel interlocking molding. An inverted stirrup with a jack bolt for leveling during installation and permanent height adjustment shall be welded within the base of each pilaster. "L" brackets shall be coupled to the stirrup bracket and floor for full range adjustment. A shoe shall conceal each mounting, having an internal cross section conforming to the pilaster.
C. Headrail shall be provided to bridge all compartments and brace the end freestanding pilasters to the wall; the headrail to comprise anodized aluminum with satin finish, contoured to provide anti-grip features.

2.04 HARDWARE (NOTE: Refer to the ORDER INFORMATION CONTRACT for specific hardware to be supplied on your order.)

A. All exposed door hardware shall be of chromium-plated diecast Zamac and shall be as noted:
   1. Upper door hinge is recessed and interlocked in door and includes a nylon pin within the plane of the door. Lower door hinge is recessed in door and includes mating box and pintle nylon cams, which provide the bearing surface. The cams are adjusted to allow the door to rest at any position within a 270-degree range.
   2. Door hardware shall include a coat hook, bumper, a stop, keeper, and a concealed latch with emergency access.
   3. Fasteners shall be of chrome-plated steel; door hinges will be mounted with theft-proof barrel nuts and machine screws; hooks and handles will be mounted with theft-proof, full-thread screws.
B. Wall brackets shall be secured to walls with anchoring and/or expansion shields.
C. Pilaster shoes shall be of type 304 stainless steel having a #4 finish.

PART-3 EXECUTION

3.01 PREPARATION

A. Examine areas to receive toilet compartments for correct height and spacing of anchorage/blocking and plumbing fixtures that may affect installation of compartments. Report any discrepancies to the architect.
B. Take complete and accurate measurements of complete toilet compartment locations.
C. Start of work constitutes acceptance of job.

3.02 INSTALLATION

A. Install compartments in a rigid, straight, plumb and level manner as shown on the shop drawings and manufacturer's installation instructions.
B. All doors and panels to be mounted at 12" above the finished floor unless otherwise specified.
D. Clearance at vertical edges of door shall be uniform top to bottom.
E. No evidence of cutting, drilling and/or patching shall be visible on the finished work.
F. Finished surfaces shall be cleaned after installation and be left free of all imperfections.

3.03 WARRANTY

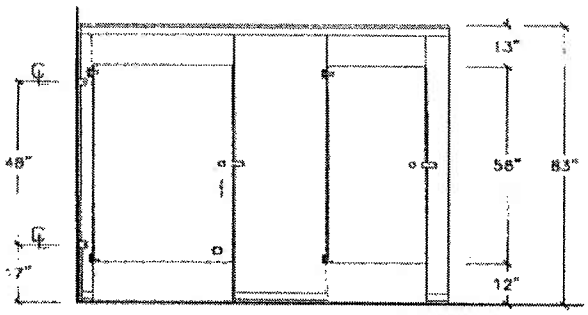
A. Global Steel Products Corp. guarantees its textured leather grain stainless steel units, properly maintained, against corrosion or discoloration for 5 years from the date of receipt by the customer. If materials are found defective during that period for the reasons listed above, the material will be replaced free of charge. No credits or allowances will be issued for any labor or expenses relating to the replacement of components covered under the warranty plan. All such expenses are to be borne by the buyer.

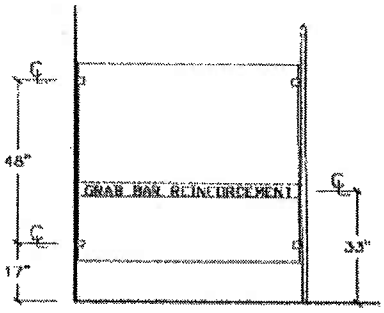
Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

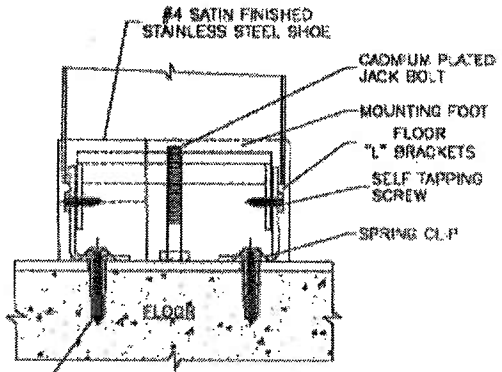
PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	TOILET PARTITIONS AND DOOR HARDWARE-9
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-9

GLOBAL STEEL PRODUCTS CORP.

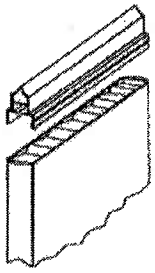
FLOOR ANCHORED/OVERHEAD BRACED
STAINLESS STEEL
TEXTURED LEATHER GRAIN



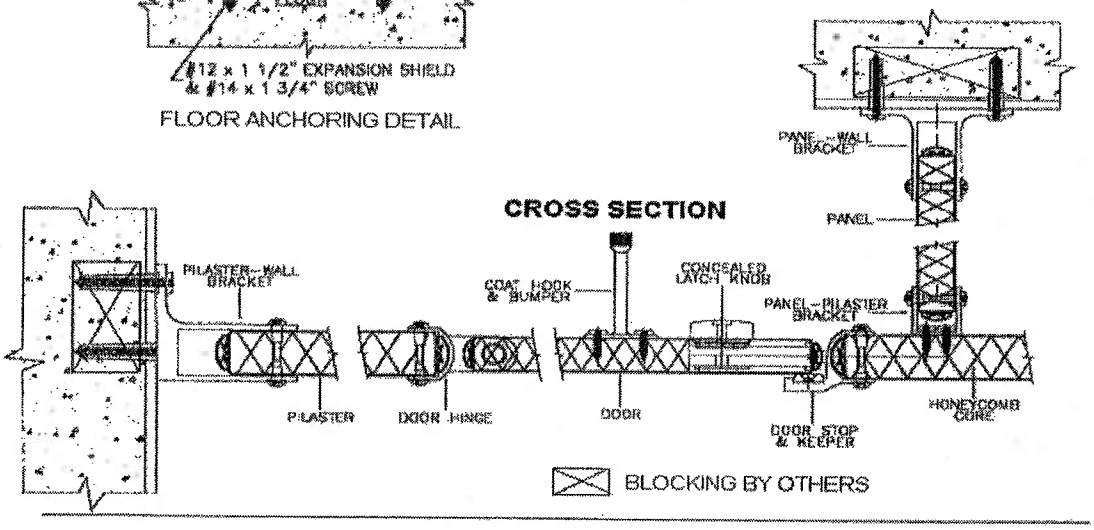




FLOOR ANCHORING DETAIL



HEADRAIL DETAIL



2.18

95 Marcus Blvd., Deer Park, New York 11729 Phone: 631-586-3330 Fax: 631-586-3455
Website: www.globalpartitions.com email: sales@globalpartitions.com

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE TOILET PARTITIONS AND DOOR HARDWARE-10		B-10
	SCALE NONE	DATE MARCH 2005	

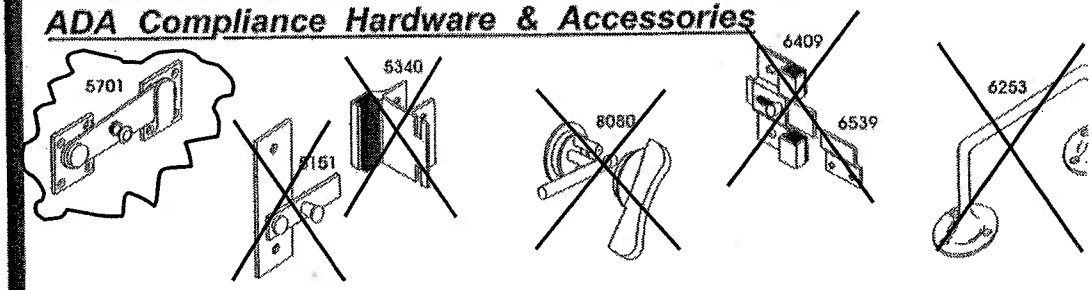
Our Commitment to Your Satisfaction

For over 50 years, Jacknob has been supplying the highest quality partition hardware and washroom accessories. Manufacturing over 2,400 standard items, as well as a wide range of specialty and private label components, has given us experience and production capabilities unmatched in the industry.

Complete tooling and up-to-date production facilities integrated with our computerized ordering & inventory systems provide efficient service and fast delivery.

We're proud our growing list of clients and welcome every opportunity to justify our reputation for customer satisfaction. If you have any questions concerning a hardware application or suitability of a particular component, please feel free to call.

ADA Compliance Hardware & Accessories



About ADA Compliance -

The American Disabilities Act (ADA) of 1992 was enacted to make accessible all areas of public, municipal and commercial buildings to the physically challenged. Public lavatories and restrooms require special consideration to comply with these new and vigorously enforced regulations. The Jacknob Corp. has placed specific emphasis on thoroughly understanding and providing the correct hardware and washroom accessories to satisfy these new laws, and is ready to supply what you need to come up to code. While our hardware and accessories meet or exceed the new ADA guidelines, we do indemnify ourselves as corporate and individual entities against situations of installation and actions of others as beyond our control.

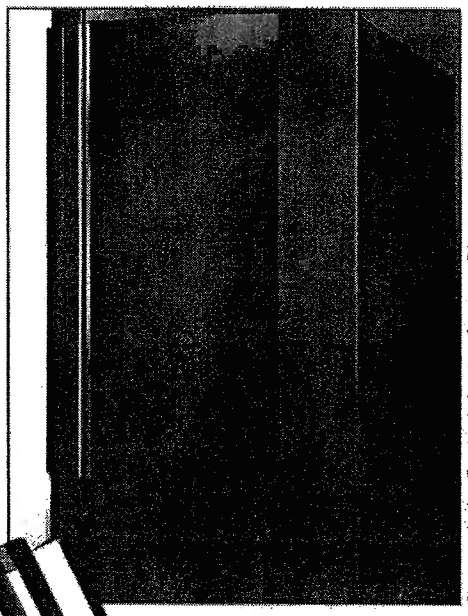
Tel: 631-231-9

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE TOILET PARTITIONS AND DOOR HARDWARE-11		B-11
	SCALE NONE	DATE MARCH 2005	

TP HINGES

toilet

- ❑ **Continuous Partition Hinges are Durable -** Add years of maintenance-free operation to any partition system.
- ❑ **Support Partition Doors Along Their Entire Length -** Markar TP Hinges run the complete length of the door to distribute weight evenly.
- ❑ **Add Rigidity to Ceiling Hung Partitions -** Projects that require this type of mounting procedure need the added support given by the TP Hinge.
- ❑ **Eliminate Open "Sight-Lines" -** Continuous hinge surfaces maximize privacy by eliminating visual intrusion. There are no openings along the hinge.
- ❑ **Ideal for Damp or Corrosive Environments -** Fabricated from heavy-duty 14 gauge 304 stainless steel or 6463-T5 anodized aluminum.
- ❑ **Adjustable Spring-Loaded Hinges -** Torx Tip Cap adjusts the internal mechanism to close the partition door tightly, or to keep the door open to show vacancy.
- ❑ **Left or Right-Handed -** All partition hinges can be used on either side of the door.



Photographed at Comtec Industries, Scranton, PA

TP Continuous Pin and Barrel type hinges have been engineered to withstand the extraordinary abuse and heavy traffic associated with toilet partition doors. Various models, designed to be function-specific, are constructed from heavy gauge stainless steel or aluminum. Markar Continuous Hinges distribute door weight and stress along the entire length of the door, so partition doors operate dependably year after year. Maintenance expense is dramatically reduced.

In addition to their strength and durability, TP Hinges provide important benefits. When less expensive multi-part hinge systems are used on partitions, they leave a gap along the door "sight-line", thus exposing the occupant. Markar's Continuous Hinge alternatives have twenty-eight bearing surfaces which eliminate the gap or sight-line completely.

To comply with ADA requirements many TP Hinge models are available with internal spring mechanisms. The adjustable Torx Tip Cap included with spring-loaded hinges permits the door to swing either fully closed or to a predetermined position.

To help prevent vandalism, certain models include a tamper-resistant Finishing Cover Cap that conceals all mounting hardware. TP Hinges provide safety and security while giving the toilet partition a clean appearance. For data on specific models, please request Data Sheet Series TP Hinge.

Torx Tip Cap shown with adjusting tools and setting pins.

MARKAR

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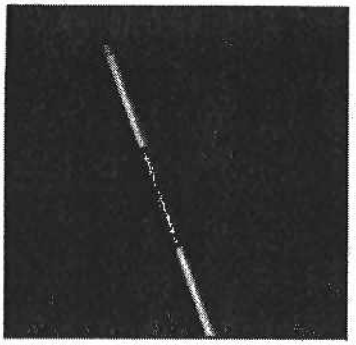
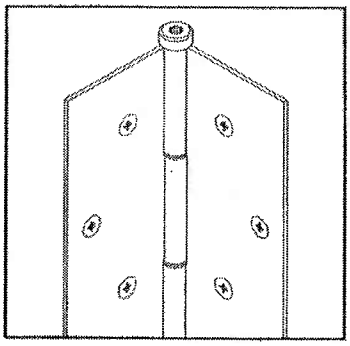
	SHEET TITLE TOILET PARTITIONS AND DOOR HARDWARE-12		B-12
	SCALE NONE	DATE MARCH 2005	

TP HINGES toilet

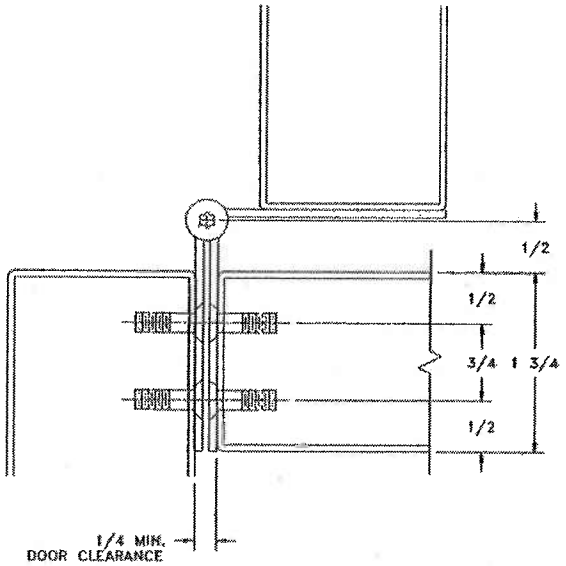
Edge Mount

FM-900-TP Spring-Loaded
FM-500-TP Edge Mount





Ideal for use in damp or corrosive environments, this hinge was designed for 1-3/4" stainless steel doors and frames. The addition of optional tamper proof security screws make this an excellent hinge for abusive traffic.



Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D satin stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

Torx Adjusting Screw
(with Spring Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
- 10-24 flat head stainless steel machine screws.
- No exposed mounting hardware.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.

Optional Features

- US 32 bright polished stainless steel (629).
- 84 powder coated paint colors.
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.

Markar Products, Inc.

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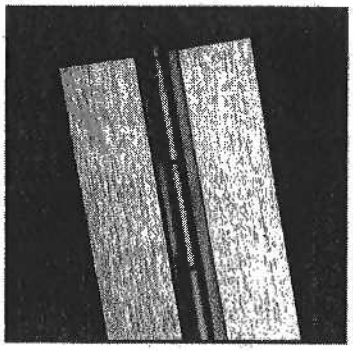
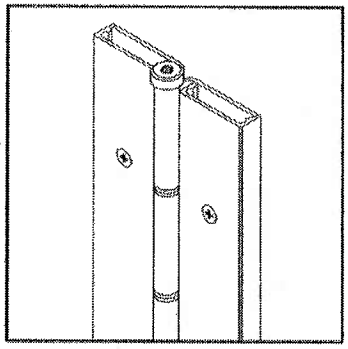
TP HINGES toilet

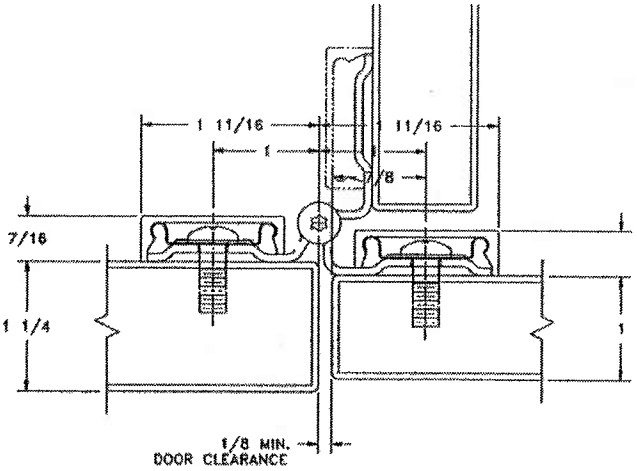
Full Surface

FS-901-TP 1/8" Offset Spring-Loaded
FS-501-TP 1/8" Offset





This hinge is to be used with a 1-1/4" pilaster and 1" door assembly. Stainless steel continuous toilet partitions are excellent for retrofit or constructing a new facility, where a high volume of abusive traffic can be found.



Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D brushed stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

Torx Adjusting Screw
(with Spring-Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
- 1/4 20 pan head machine screws.
- Cover caps conceal all mounting hardware.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.

Optional Features

- 84 powder coated paint colors
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.

Markar Products, Inc.

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Baker

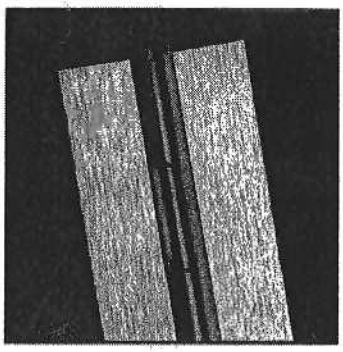
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

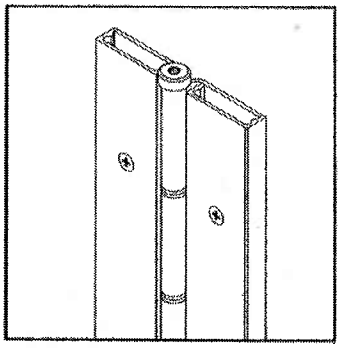
PROJECT TITLE: RESTROOM DESIGN STANDARDS		PROJECT NO.: TASK 1314.20
SHEET TITLE: TOILET PARTITIONS AND DOOR HARDWARE-14		B-14
SCALE: NONE	DATE: MARCH 2005	

TP HINGES
toilet

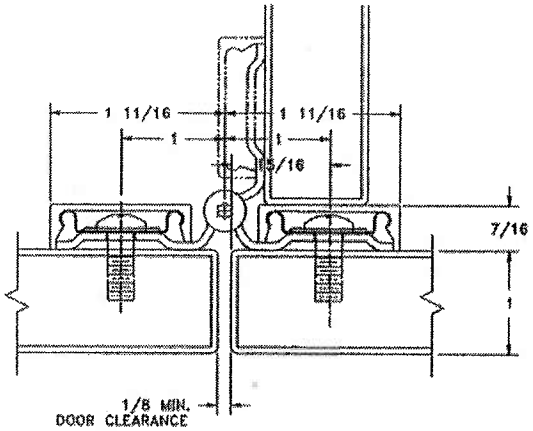
Full Surface

FS-902-TP Flush Spring-Loaded
FS-502-TP Flush





For pilasters and doors that are flush with each other, this style of hinge is excellent. Stainless steel continuous toilet partition hinges are just right for retrofit or constructing a new facility, where a high volume of abusive traffic can be found.



Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D brushed stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

Torx Adjusting Screw
(with Spring-Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
- 1/4 20 pan head machine screws.
- Cover caps conceal all mounting hardware.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.

Optional Features

- 84 powder coated paint colors
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.

Markar Products, Inc.

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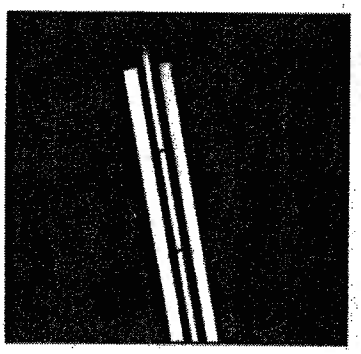
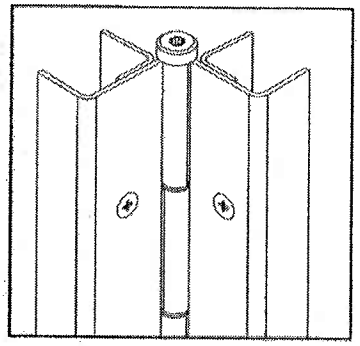
TP HINGES toilet

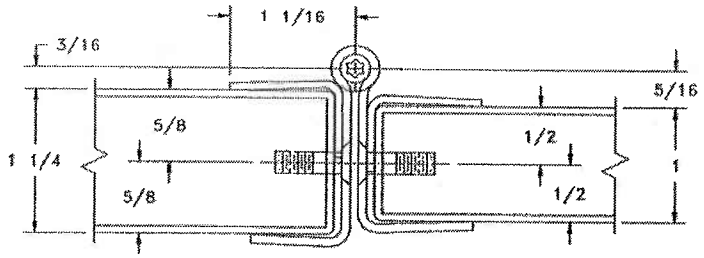
Hinge Guard

HG-906-TP 1/8" Offset Spring-Loaded
HG-506-TP 1/8" Offset





Ideal for use with corrian or marble type partitions with 1-1/4" pilaster and 1" door. This hinge provides door and pilaster edge protection and is adjustable with optional AdjustaScrew fasteners for 1/2" width correction.



Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D satin stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

Torx Adjusting Screw
(with Spring-Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
No exposed mounting hardware.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.

Optional Features

- US 32 bright polished stainless steel (629).
- 84 powder coated paint colors
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.
- AdjustaScrew for corrections of door fit problems up to 1/2".

Markar Products, Inc.

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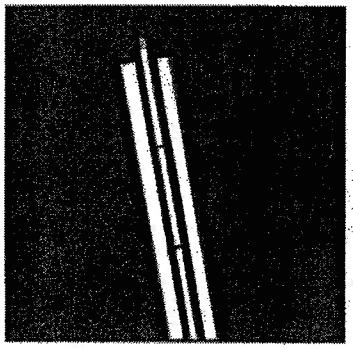
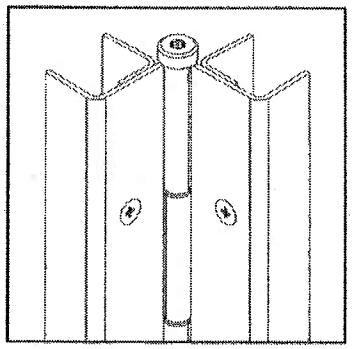
TP HINGES toilet

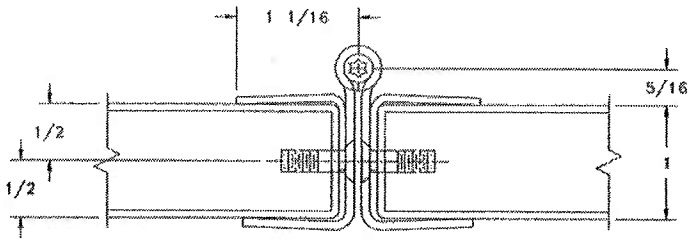
Hinge Guard

HG-907-TP Flush Spring-Loaded
HG-507-TP Flush





Ideal for use with corrian or marble type partitions, the slim, clean design provides door and pilaster edge protection. This hinge is also adjustable with optional AdjustaScrew fasteners for 1/2" width correction.



Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D satin stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

Torx Adjusting Screw
(with Spring-Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
No exposed mounting hardware.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.

Optional Features

- US 32 bright polished stainless steel (629).
- 84 powder coated paint colors
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.
- AdjustaScrew for corrections of door fit problems up to 1/2".

Markar Products, Inc.

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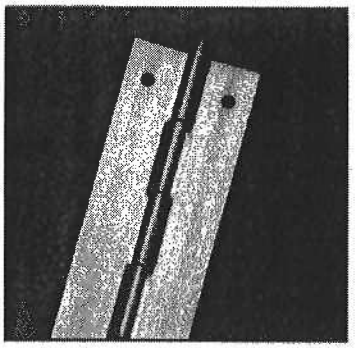
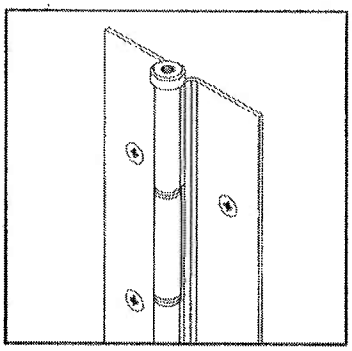
TP HINGES
toilet

Full Surface

FS-910-TP Flush Spring-Loaded
FS-510-TP Flush





This hinge was designed for detention facilities or areas where vandalism is common. The hinge can be mechanically fastened or welded in place for optimum security.

Standard Features

Material
Heavy-duty 14 gauge 304 stainless steel.

Finishes
US 32D brushed stainless steel (630).

Pin and Barrel Type Hinge
- 1/4" diameter stainless steel pin.
- Long-life split nylon bearings.
- 28 bearing surfaces.

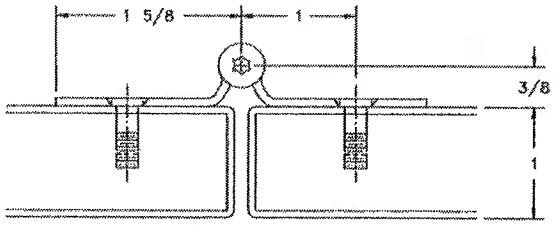
Torx Adjusting Screw
(with Spring-Loaded hinges only)
- Torx tip cap.
- Internal stainless steel spring mechanism.
- Adjust tension on door to close tightly for out-swinging ADA compliance.
- Allows door to stay open in predetermined position.

Mounting Hardware
10-24 flat head stainless steel machine screws.

Capacity
Supports weights up to 80 lbs.

Sizes
54" and 57"

Non-Handed
Use the same hinge for right or left handed doors.



Optional Features

- US 32 bright polished stainless steel (629).
- 84 powder coated paint colors
- Custom lengths (in inches).
- Custom hole pattern.
- Tamper-proof security screws.
- One way shoulder bolt and screws.

Markar Products, Inc.
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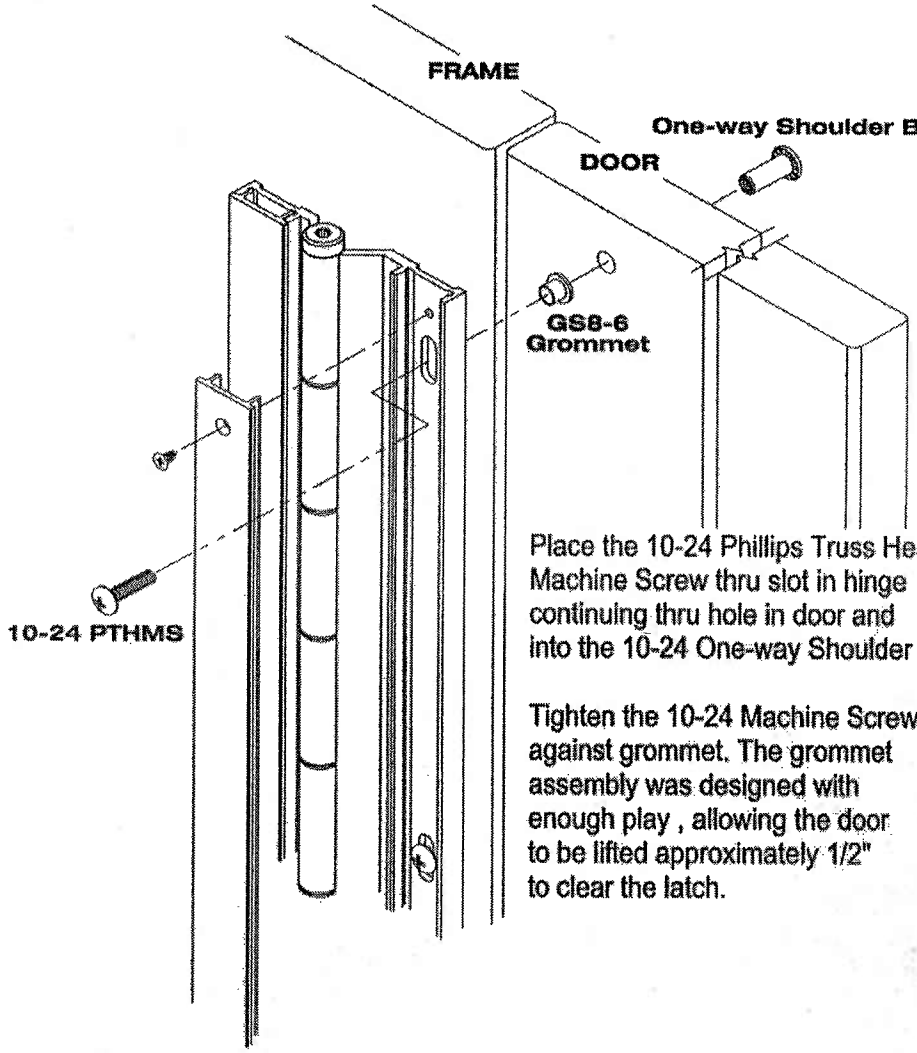
TECHNICAL MEMO

400 SERIES TOILET PARTITION SAFETY LIFT FEATURE



Place the 10-24 Phillips Truss Head Machine Screw thru slot in hinge continuing thru hole in door and into the 10-24 One-way Shoulder Bolt.

Tighten the 10-24 Machine Screw against grommet. The grommet assembly was designed with enough play , allowing the door to be lifted approximately 1/2" to clear the latch.

4/99 *For more information contact:*
Markar Products, Inc. 68 WARD ROAD LANCASTER, NEW YORK 14086 1-800-868-1688 (716) 685-4104 FAX (716) 685-3919

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS SHEET TITLE TOILET PARTITIONS AND DOOR HARDWARE-19 SCALE NONE DATE MARCH 2005	PROJECT NO. TASK 1314.20 B-19

TECHNICAL MEMO

STRENGTH OF COMPONENTS

12 GAUGE STAINLESS STEEL CONTINUOUS HINGES

Leaves

Material: 12gauge 304 stainless steel
Tension: 85,000 P.S.I.
Shear: 35,000 P.S.I.

Stress Analysis

The center of gravity of a door of uniform construction is located half-way between the top and bottom and half-way from edge to edge. The forces acting on the hinge are tensile and shear in the top half of the door and compression and shear in the bottom half. The leaf is 0.109 inches thick, so the cross-sectional area resisting tensile stresses is 4.5 in² for a 7-foot hinge and 6.5 in² for a 10-foot hinge.

Tensile Limits

7' door 4.5 in²
x 85,000 P.S.I. = 385,075 lbs
+ 12 (safety factor) = 32,100 lbs

8' door 5.0 in²
x 85,000 P.S.I. = 440,675 lbs
+ 12 (safety factor) = 36,725 lbs

10' door 6.5 in²
x 85,000 P.S.I. = 551,850 lbs
+ 12 (safety factor) = 46,000 lbs

Shear Limits

7' door 9.0 in²
x 35,000 P.S.I. = 317,125 lbs
+ 12 (safety factor) = 26,425 lbs

8' door 10.25 in²
x 35,000 P.S.I. = 551,850 lbs
+ 12 (safety factor) = 46,000 lbs

10' door 13.0 in²
x 35,000 P.S.I. = 454,450 lbs
+ 12 (safety factor) = 37,875 lbs

Fasteners

Type: 10-24 machine screw
Material: 1035 cold rolled steel
Tension: 83,000 P.S.I.
Area: 0.0145 in²

7' hinge 16 fasteners
x 0.0145 in² = 0.232 in²
x 83,000 P.S.I. = 19,256 lbs
+ 12 (safety factor)= 1,604 lbs

8' hinge 18 fasteners
x 0.0145 in² = 0.261 in²
x 83,000 P.S.I. = 21,663 lbs
+ 12 (safety factor)= 1,805 lbs

10' hinge 20 fasteners
x 0.0145 in² = 0.290 in²
x 83,000 P.S.I. = 24,070 lbs
+ 12 (safety factor)= 2,005 lbs

Type: 1/4-20 machine screw
Material: 1035 cold rolled steel
Tension: 83,000 P.S.I.
Area: 0.0269 in²

7' hinge 16 fasteners
x 0.0269 in² = 0.430 in²
x 83,000 P.S.I. = 35,723 lbs
+ 12 (safety factor)= 2,977 lbs

8' hinge 18 fasteners
x 0.0269 in² = 0.484 in²
x 83,000 P.S.I. = 40,189 lbs
+ 12 (safety factor)= 3,349 lbs

10' hinge 20 fasteners
x 0.0269 in² = 0.538 in²
x 83,000 P.S.I. = 44,654 lbs
+ 12 (safety factor)= 3,721 lbs

4/99 *For more information contact:*
Markar Products, Inc. *68 WARD ROAD LANCASTER, NEW YORK 14086 1-800-866-1688 (716) 685-4104 FAX (716) 685-3919*

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PRODUCT DETAIL

Refill Info | Shipping Info

VuAll Cormatic® (P15) High-Capacity Roll Towel Dispenser

High capacity, key-locking towel dispensing system solution provides an attractive, hygienic, hands-free, portion-control solution.

ADD TO LIST

Item Description:

Our most popular, attractive, smoke-capacity Cormatic® VuAll® roll towel you control costs with style. Our com free roll towel dispensers feature no t or cranks that can serve as germ rese helps you meet higher public health s in pollution prevention and control yo costs through waste and maintenance self-locking dispenser is designed to c pilferage while making towel dispensi Choose our VuAll® dispenser for a co system solution that is suitable for an

Features & Benefits:

- *Attractive Design*
  Attractive smoke-tinted dispensers washroom
- *High Capacity*
  Reduced maintenance intervals an of run-out
- *Portion-Control Mechanism*
  Reduces solid waste by 25 to 35 p limiting the amount of product dis time

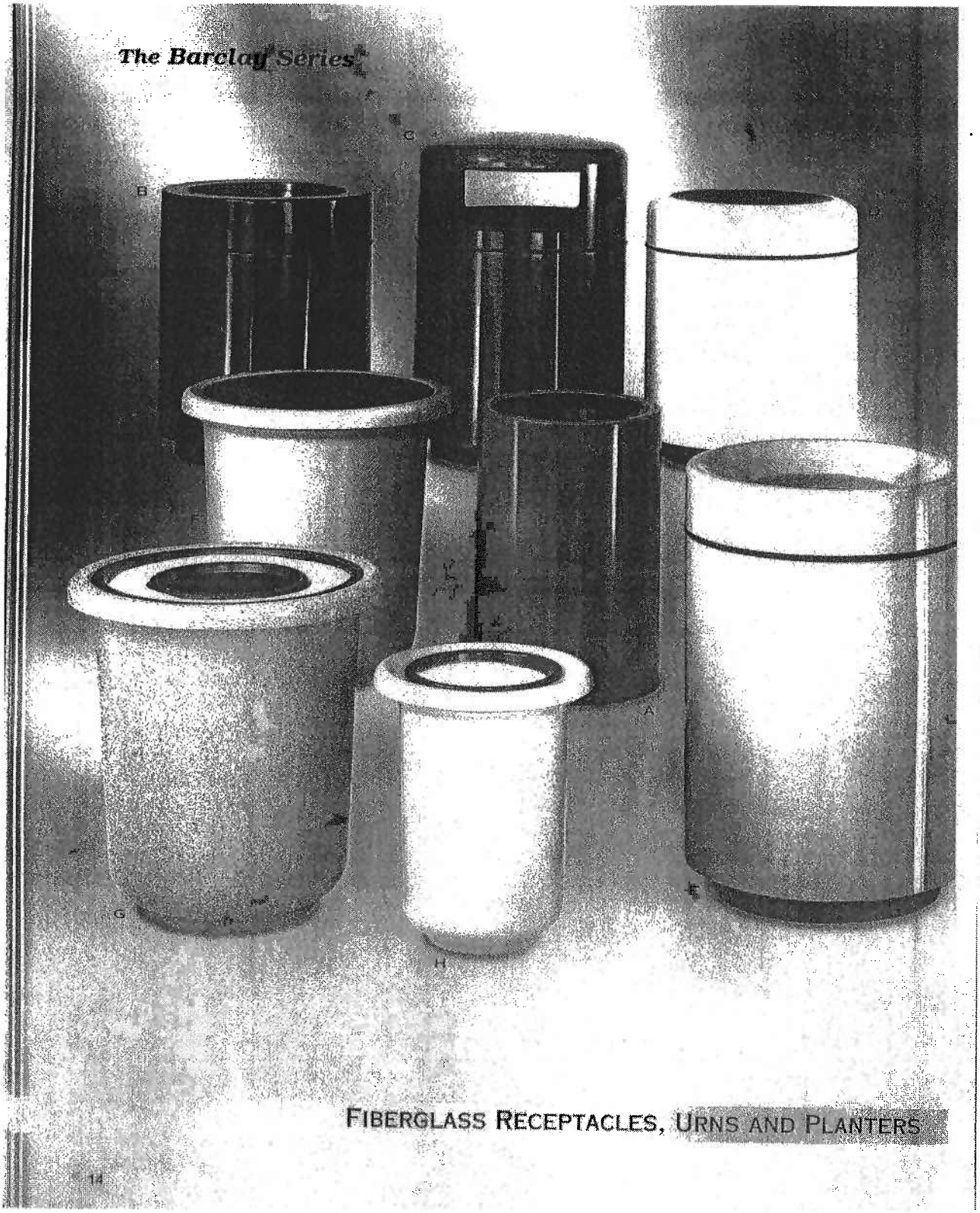
Item #	Product Family	Pack	Inner Pack Count
HV200K	Hygiene		6 Count

Color	Dispenser Dimensions	Paper Grade	Ply	Core Size	SCC	UPC # Reta Scanner Co
Smoke					36500049706	

Shipping Info

Gross	Case	Shipping	Layer	Floor HI	Floor	Pallet HI	Pallet	Shipping C

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE PAPER TOWEL DISPENSER		B-21
	SCALE NONE	DATE MARCH 2005	



Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **RECEPTACLES-1**		**B-22**
	SCALE **NONE**	DATE **MARCH 2005**	

THE BARCLAY SERIES

FIRE SAFE / SELF-EXTINGUISHING FIBERGLASS RECEPTACLES

The Barclay Series of fiberglass receptacles offers a variety of styles from classic to contemporary that complement and enhance their surroundings.

- Over 30 different colors in solid, matte, and Sand-x™ finishes are offered. Rose Gran-x™ and Gray Gran-x™ finishes are also available, see page 21.
- Units can be used indoors and outdoors.
- Seamless construction with molded gel-coat finish will not stain or tarnish and is scratch resistant.
- Ultra violet stabilizer is added to all models, to retard fading due to sunlight.
- Vinyl trim on edges prevents chipping and damage during maintenance.
- All models with two openings are available with a single opening as a custom order.
- Custom color matching and designs available.
- Optional Fire Retardant treated
  - Compliance with NFPA (National Fire Protection Agency) Life Safety Code #101
  - Class I Fire Retardant Flame Spread 0-25
  - Class II Fire Retardant Flame Spread 26-75
- Optional anchoring kits available, see page 49 for details.
- ADA Compliant.

See page 20.

Folding retainer bands hold poly bags securely inside the receptacle.

	Description	Model Number	Liner	Gallon Capacity RB	PL	GL	Dimensions	Disposal Opening Dimensions	Color Shown
A	Waste Receptacle	FG1830ARLQ	PL / GL	—	21	21	18" Dia. x 30" H	9" Dia.	Blackberry
B	Waste Receptacle	FG2432†	RB / PL / GL	57	40	31	24" Dia. x 32" H	18" Dia.	Black
C	Waste Receptacle	FG2439†	RB / PL / GL	57	40	31	24" Dia. x 39" H	two 13" W x 6.5" H	Plum
D	Waste Receptacle	FG2432AR†	RB / PL / GL	57	40	31	24" Dia. x 32" H	8" Dia.	Almond
E	Waste Receptacle	FG2438†	RB / PL	62	50	—	24" Dia. x 39" H	13" Dia.	Warm Gray
F	Waste Receptacle	FGL2730GT†	PL	—	22	—	27" Dia. x 30" H	12" Dia.	Tan
G	Ash / Trash	FGL2730GSUT†	PL	—	22	—	27" Dia. x 30" H	12" Dia.	Rose Gran-x
H	Urn	FGL1824GSU	—	—	—	—	18" Dia. x 24" H	—	Mauve

Liner codes: RB - Poly Bag Retainer Bands, PL - Germ-Fighter® Rigid Plastic Liner, GL - Galvanized Steel Liner.

† FG2432, FG2439, FG2432AR, FG2438, FGL2730GT, FGL2730GSUT cannot ship UPS

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE: RESTROOM DESIGN STANDARDS

SHEET TITLE: RECEPTACLES-2

SCALE: NONE

DATE: MARCH 2005

PROJECT NO.: TASK 1314.20

B-23

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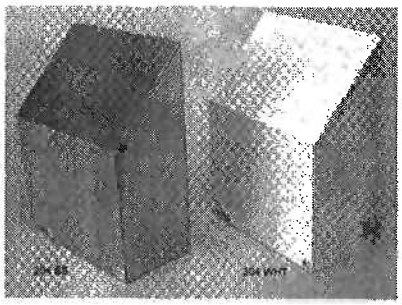
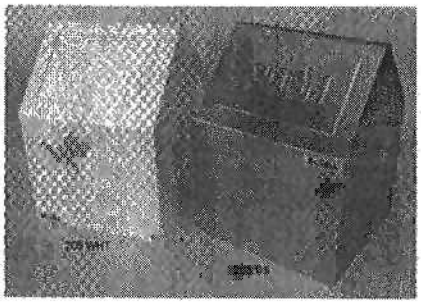
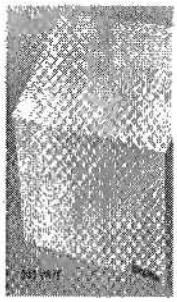
Sanitary Napkin Receptacles / Disposal Units

Model 203: Economy wall mount sanitary napkin receptacle. Hinged top lifts to empty. White Enar only.
Model 204: Deluxe wall mount. Spring closing door with full length hinge. Easy lift out galvanized for emptying. White or Stainless Steel finish.
Model 205: ***The Standard of the Industry!*** Deluxe floor model fits under divider and serves 2 stalls closing door with full length hinge. Inner galvanized liner with dimpled bottom keeps it off the floor in white or stainless steel.

		Model Number	Finish	Product Name
●		203 WHT	White Gloss	Sanitary Napkin Receptacle - Wall
●		204 S/S	Satin Stainless Steel	Sanitary Napkin Receptacle - Wall
●		204 WHT	White Gloss	Sanitary Napkin Receptacle - Wall
●		205 S/S	Satin Stainless Steel	Sanitary Napkin Receptacle - Floo
●		205 WHT	White Gloss	Sanitary Napkin Receptacle - Floo
●		206 WHT	White Gloss	Individual Sanitary Napkin Bag D
●		225	Liner	Individual Sanitary Napkin Bag

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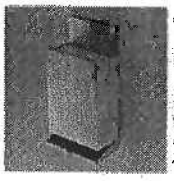
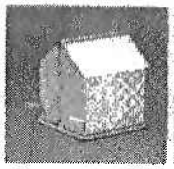
- Toilet Seat Covers
- Trash Receptacles



Convertible Sanitary Napkin Receptacle

Price **$41.56** Save up to **23%**

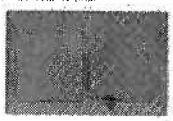
Hinged lid. Stays open for disposals, then closes tightly. Empties from the bottom; hands never touch the contents. Wall mountable (screws not included). Uses Liners (HOS260) sold separately. 8w x 4d x 11h.



Deluxe Sanitary Napkin Receptacle

Price **$74.10** Save up to **7%**

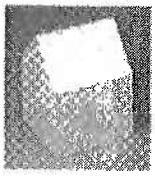
OSHA compliant. Floor model services two stalls. Sanitary—foot pedal opens lid. Antimicrobial Germ-Fighter® leakproof rigid plastic liner controls germs and odors. Easy-empty side opening design. Heavy-duty steel, contains 30% recycled steel content. Powder coated finish. Uses plastic liner bags (EXCLB1718) sold separately. 9-1/4w x 9-3/4d x 11h. Shpg. wt. 9 lbs.



Napkin Receptacle Liners

Price **$25.75** Save up to **21%**

Kraft waxed paper liners for Convertible Sanitary Napkin Receptacle (HOSND1E) sold separately, Sanisac, and all standard wall units. 500 liners per carton. Shpg. wt. 12 lbs.



Sanitary Napkin Receptacle, Plastic Liner Bags

Priced from **$40.73** to **$50.54** Save up to **11%**

Floor model fits under stall divider. Serves two stalls with double swinging spring-closing push-doors on full-length piano hinges. Galvanized inner liners. Plastic Liner Bags (EXCLB1718) sold separately. 9w x 9d x 11-1/2h.

4 pages

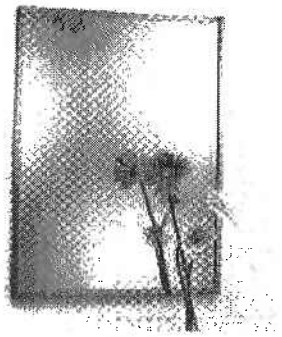
Contact us by phone 1-877-677-7015 or email questions@cleansweepsupply.com

5 items

Company Information | Delivery Information | Return Policy | Suggestions

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE RECEPTACLES-4		B-25
	SCALE NONE	DATE MARCH 2005	

Channel Frame



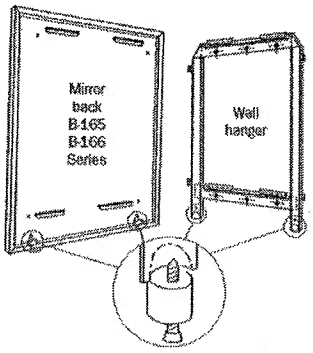
B-165 SERIES

B-165 SERIES FRAMED MIRRORS One-piece channel frame is ½" x ½" x ½" (13 x 13 x 13mm) with bright polished finish and mitered corners. Phillips-head frame screw permits easy replacement of mirror. No. 1 quality, ¼" (6mm) glass mirror electrolytically copper-plated; guaranteed against silver spoilage for 10 years. Mirror corners and back protected by shock absorbing material. Back is galvanized steel. Secured to concealed wall hanger with two theft-resistant locking screws.

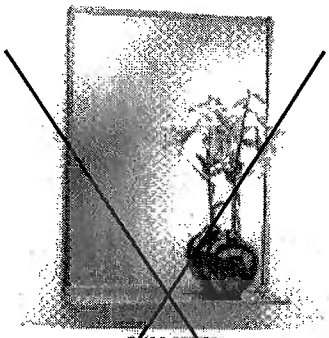
STANDARD STOCK SIZES B-165 SERIES MIRROR

Model No.	Width	Height	
B-165 1624	16"	24"	(41 x 61cm)
∮B-165 1824	18"	24"	(46 x 61cm)
∮B-165 1830	18"	30"	(46 x 76cm)
∮B-165 1836	18"	36"	(46 x 91cm)
∮B-165 2430	24"	30"	(61 x 76cm)
∮B-165 2436	24"	36"	(61 x 91cm)
B-165 2448	24"	48"	(61 x 122cm)
∮B-165 2460	24"	60"	(61 x 152cm)
B-165 3636	36"	36"	(91 x 91cm)
B-165 4830	48"	36"	(122 x 91cm)
B-165 6036	60"	36"	(152x 91cm)

SPECIAL-ORDER CUSTOM SIZE MIRRORS
Maximum size mirror: 72" x 60" (183 x 152cm). To specify special sizes, use Series Number followed by width and height.



Channel Frame/Shelf



B-166 SERIES

B-166 SERIES MIRROR/SHELF COMBINATION Theft-resistant channel frame mirror with one-piece type-304, satin finish stainless steel shelf; projects 5" (127mm) and has ⅜" (10mm) return edges on front and sides. Front return edge hemmed for maximum rigidity. Concealed 16-gauge (1.6mm) stainless steel brackets attach shelf to mirror frame.

STANDARD STOCK SIZES B-166 SERIES MIRROR/SHELF

Model No.	Width	Height	
B-166 1824	18"	24"	(46 x 61cm)
∮B-166 1830	18"	30"	(46 x 76cm)
B-166 1836	18"	36"	(46 x 91cm)
∮B-166 2436	24"	36"	(61 x 91cm)

SPECIAL-ORDER CUSTOM SIZE MIRRORS
Maximum size mirror: 24" x 60" (61 x 152cm). Maximum shelf length: 24" (61cm). To specify special sizes, use Series Number followed by width and height.

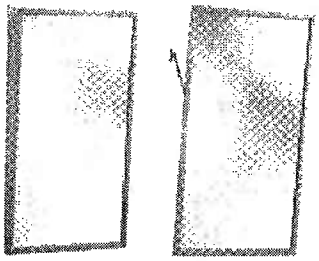
Frameless, stainless steel

B-1556 SERIES FRAMELESS MIRRORS Bright polished stainless steel. Mirror has ¼" (6mm) return concealing ¼" (6mm) tempered masonite backing. Furnished with four mounting screws.

STANDARD STOCK SIZES B-1556 SERIES MIRROR

Model No.	Width	Height	
B-1556 1620	15 ½"	19 ½"	(39 x 50cm)
∮B-1556 1824	17 ½"	23 ½"	(44 x 60cm)
B-1556 1830	17 ½"	29 ½"	(44 x 75cm)
∮B-1556 2436	23 ½"	35 ½"	(60 x 90cm)

Tilt Mirrors



B-293 B-294

B-293 SERIES TILT MIRRORS Provide visibility for wheelchair patients. Frame is type-304 stainless steel, satin finish. Special bevel design hugs mirror. No. 1 quality, ¼" (6mm) glass mirror electrolytically copper plated. Mirror extends 4" (10cm) from wall at top and tapers to 1" (25mm) at bottom.

STANDARD STOCK SIZES B-293 SERIES MIRROR

Model No.	Width	Height	
∮B-293 1630	16"	30"	(41 x 76cm)
∮B-293 1830	18"	30"	(46 x 76cm)
∮B-293 1836	18"	36"	(46 x 91cm)
∮B-293 2436	24"	36"	(61 x 91cm)

SPECIAL-ORDER CUSTOM SIZE MIRRORS
Maximum size mirror: 36" x 48" (914 x 1219mm).

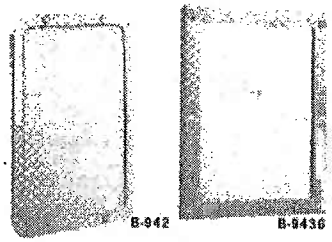
B-294 SERIES TILTING MIRRORS Tilt forward to provide full visibility for wheelchair patients or return to upright position. Frame is ¾" x ¾" (19 x 19mm), type-304 stainless steel angle, satin finish. Special bevel design hugs mirror. No. 1 quality, ¼" (6mm) glass mirror electrolytically copper-plated. Top of mirror tilts 7" (18cm) from wall with self-locking mechanisms; bottom of mirror mounts to wall with full-length stainless steel hinge.

STANDARD STOCK SIZES B-294 SERIES MIRROR

Model No.	Width	Height	
∮B-294 1624	16"	24"	(41 x 61cm)
∮B-294 1630	16"	30"	(41 x 76cm)

SPECIAL-ORDER CUSTOM SIZE MIRRORS
Maximum size mirror: 30" x 36" (762 x 914mm).

Vandal-Resistant



B-942 B-9436

B-942 FRAMELESS MIRROR (Secured From Front) Mirror is 11 ⅛" x 17 ⅛" (285 x 440mm) overall, ¼" (6mm) deep. 18-gauge (1.2mm), type-430 stainless steel with bright polished finish.

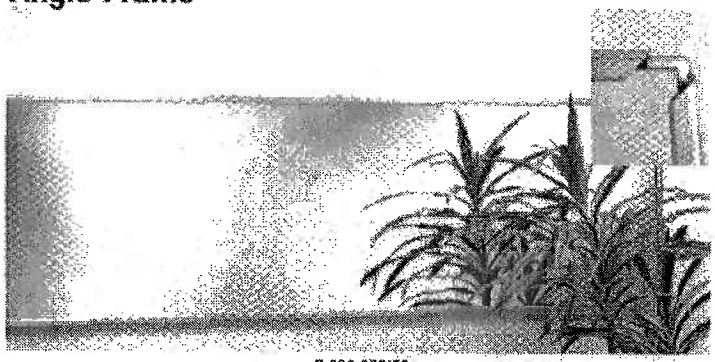
B-9436 FRAMED MIRROR (Secured From Front) Reflective surface: type-304 bright polished stainless steel. Frame: 14-gauge (2mm), type-304 stainless steel with satin finish; ⅝" (16mm) deep; corners heliarc welded, ground and polished smooth, mirror protected by ½" (13mm) thick fiberboard backing. Overall mirror size: 12" x 16" (305 x 405mm).

MIRRORS

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE MIRRORS-1		B-26
	SCALE NONE	DATE MARCH 2005	

MIRRORS

Angle Frame



B-290 SERIES

B-290 SERIES FRAMED MIRRORS One-piece roll formed frame is ¾" x ¾" (19 x 19mm), type-304 stainless steel angle with satin finish. Special bevel design hugs mirror. Corners are heliarc welded, ground and polished smooth. No. 1 quality, ¼" (6mm) glass mirror electrolytically copper-plated; guaranteed against silver spoilage for 15 years. Mirror edges protected with plastic filler strips to prevent chipping; back is protected by 3/16" (5mm) thick, water-resistant, polyethylene padding. Galvanized steel back attached to frame with concealed screws. Secured to concealed wall hanger (shown below) with two theft-resistant locking screws.

SPECIAL-ORDER CUSTOM SIZE B-290 AND B-292 SERIES MIRRORS Maximum size of one-piece mirror: 144" x 72" (366 x 183cm). Maximum frame size available: 186" x 72" (472 x 183cm) with two pieces of glass in one-piece frame furnished with I-section molding with polished stainless steel exposed finish covering seam where two pieces of glass butt together. Shelves longer than 120" (305cm) will be furnished as two pieces butted together. To specify special sizes, use Series Number followed by width and height in inches. For example: B-290 70 x 30 (178 x 76cm) or B-292 132 x 48 (335 x 122cm).

STANDARD STOCK SIZES
B-290 SERIES MIRROR

Model No.	Width	Height	
B-290 1824	18"	24"	(46 x 61cm)
⚡B-290 1830	18"	30"	(46 x 76cm)
⚡B-290 1836	18"	36"	(46 x 91cm)
B-290 2430	24"	30"	(61 x 76cm)
⚡B-290 2436	24"	36"	(61 x 91cm)
B-290 2448	24"	48"	(61 x 122cm)
B-290 2460	24"	60"	(61 x 152cm)
B-290 2472	24"	72"	(61 x 183cm)
B-290 3636	36"	36"	(91 x 91cm)
B-290 4836	48"	36"	(122 x 91cm)
B-290 7236	72"	36"	(183 x 91cm)

DESIGNER'S NOTES
To specify mirrors, use Series Number desired followed by width and height in inches. Width dimension must always be stated first following Series Number.

B-165, B-166, B-290, B-292, B-293, and B-294 Series mirrors must be installed with width and height dimensions as ordered. Mirror back and wall hanger cannot be installed side ways to reverse width and height dimensions.

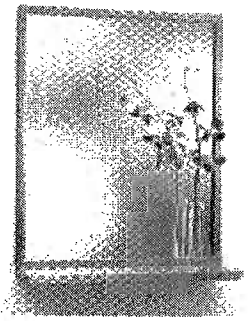
BARRIER-FREE WASHROOM GUIDELINES
MIRRORS. Bottom edge of reflective surface should be mounted no higher than 40" (1015mm) above the finish floor. A single full-length mirror is recommended in each washroom because it is universally usable.

IMPORTANT NOTE
All Bobrick framed mirrors are manufactured to overall dimensions, as shown in all mirror tables on pages 18 and 19. Overall height of mirror/shelf models includes shelf.

SPECIAL-ORDER REFLECTIVE SURFACES
Polished Stainless Steel, Tempered and Laminated Glass Mirrors resist breakage and provide a measure of safety from broken glass, but differ in color and reflective quality from standard glass mirrors. Available on special order.

PRICE INDEX	B-290 Series 1.7	B-292 Series 1.8
	B-165 Series 1.0	B-166 Series 1.0

Angle Frame/Shelf

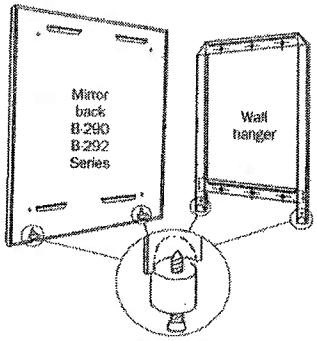


B-292 SERIES

B-292 SERIES MIRROR/SHELF COMBINATION Theft-resistant angle-frame mirror furnished with one-piece, type-304 satin-finish stainless steel shelf; projects 5" (127mm) and has ¾" (19mm) return edges on front and sides. Front return edge hemmed for maximum rigidity and safety. Corners are heliarc welded, ground and polished smooth. Concealed 16-gauge (1.6mm) stainless steel brackets attach shelf to mirror frame.

STANDARD STOCK SIZES
B-292 SERIES MIRROR/SHELF

Model No.	Width	Height	
B-292 1824	18"	24"	(46 x 61cm)
B-292 1830	18"	30"	(46 x 76cm)
B-292 1836	18"	36"	(46 x 91cm)
B-292 2436	24"	36"	(61 x 91cm)



B-290, B-292, B-165 AND B-166 SERIES MIRRORS. CONCEALED WALL HANGER FOR THEFT-RESISTANT MOUNTING Simplifies installation. Mirror is held flush to wall by integral brackets at top and bottom of mirror back locked by two concealed theft-resistant screws on bottom of mirror back. Back is constructed of galvanized steel. Note: Provide minimum ¾" (19mm) clearance at top of mirror for mounting on wall hanger, minimum 1" (25mm) clearance at bottom for engaging locking screws, and 1" (25mm) clearance on each side.

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MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE: RESTROOM DESIGN STANDARDS
SHEET TITLE: MIRRORS-2
SCALE: NONE
DATE: MARCH 2005
PROJECT NO.: TASK 1314.20
B-27

Grab Bars Comply With Barrier-Free Design Codes

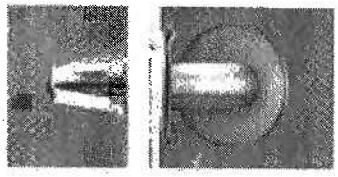
Clearance between wall and grab bar

- Constructed of satin-finish stainless steel tubing in 1 ¼" and 1 ½" (30 and 40mm) diameters; concealed or exposed mounting.
- Peened nonslip gripping surface available on all Series. Add suffix .99 to model number.
- Bar 18-gauge (1.2mm), type 304 stainless steel.
- Bar passes through flange and is heliarc welded to form single structural unit.
- Comply with structural strength requirements; grab bars that provide 1 ½" (40mm) clearance from the wall can support loads in excess of 900 pounds (408kg) when properly installed, meeting ADA Accessibility Guidelines in U.S.A.
- Mandrel bending process ensures uniform bar diameter around curves.
- All joints and supports are contour cut and welded.
- Concealed anchors and fasteners available as an optional accessory.

DESIGNER'S NOTE

Any grab bar configuration not included within a Series row in the Grab Bar Configuration Chart is available on special order.

INSTALL GRAB BARS WITHOUT BACKING. NO NEED TO OPEN AND RECONSTRUCT WALLS.



Wingit™ Grab Bar Fastening System secures all Bobrick Grab Bar Series. For walls with a minimum of ⅝" (16mm) thick painted or tiled drywall. Can also be used on ½" (13mm) thick drywall with added finished wall material. The fastener will support 300 lb. load exceeding all building code and governmental agency guidelines including ADAAG in the United States.

251-4 WINGIT™ GRAB BAR FASTENER For 2 ½" and 3 ½" (65 and 90mm) or deeper hollow walls with finished wall surfaces ¾" to 1 ½" (6 to 38mm) thick. One fastener required for each flange. Corrosion-resistant stainless steel. Patented.

Wingit™ is a trademark of Wingit Innovations, LLC.

EXPOSED MOUNTING

- Flange ⅛" (3mm) thick, type-304 stainless steel plate, 3" (75mm) diameter.
- Exposed mounting screw holes; vandal-resistant screws available as an optional accessory.

CONCEALED MOUNTING WITH SNAP FLANGE

- Cover snaps over mounting flange to conceal screws.
- Concealed mounting flange ⅛" (3mm) thick, type-304 stainless steel plate, 2" W x 3 ⅛" H (50 x 80mm), with screw holes for concealed anchors.
- Cover is 22-gauge (0.8mm), type-304 stainless steel with satin finish, 3 ¼" (85mm) diameter.

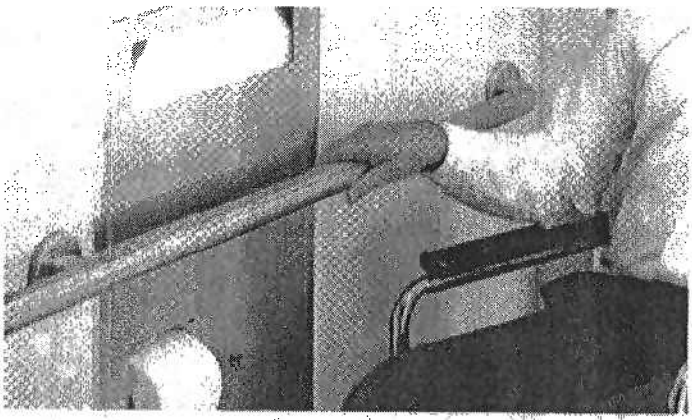
GRAB BARS

Series	Diameter	*Finish
*B-6106	1 ½" (40mm)	Satin Finish
*B-490	1 ¼" (30mm)	Satin Finish

*Peened nonslip gripping surface available. Add suffix .99 to model number.

Series	Diameter	*Finish
*B-6806	1 ½" (40mm)	Satin Finish
*B-5806	1 ¼" (30mm)	Satin Finish

*Peened nonslip gripping surface available. Add suffix .99 to model number.



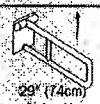
BARRIER-FREE WASHROOM GUIDELINES

GRAB BARS. Diameter of grab bars should be 1 ¼" to 1 ½" (30-40mm) with 1 ½" (40mm) clearance from the wall. Grab bars should not rotate in their fittings. The required mounting height is universally 33" to 36" (840-915mm) from the centerline of the grab bar to the finish floor. The structural strength of all grab bars and their mounting devices should withstand more than 250 pounds of force (1112 N). For all barrier-free toilet compartments, individual toilet rooms and guest bathrooms, it is recommended that a 36" (915mm) min. horizontal grab bar be installed on the back wall over the toilet and a 42" (1065mm) min. horizontal grab bar be installed on the side wall or partition nearest the toilet. This can also be accomplished with a single horizontal two-wall grab bar.

 ✗ USA & Canada QuickShip model. ✓ USA QuickShip model.

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE GRAB BARS-1		B-28
	SCALE NONE	DATE MARCH 2005	

Grab Bar Configurations

GRAB BAR CONFIGURATIONS	CONCEALED MOUNTING B-6806 SERIES 1 ½" (40mm) dia. satin finish or peened grip snap-flange	CONCEALED MOUNTING B-5806 SERIES 1 ¼" (30mm) dia. satin finish or peened grip snap-flange	EXPOSED MOUNTING B-6106 SERIES 1 ½" (40mm) dia. satin finish or peened grip	EXPOSED MOUNTING B-490 SERIES 1 ¼" (30mm) dia. satin finish or peened grip
 Straight	**B-6806 x** **12", ℊ18", ∮24", ℊ30",** **ℊ36", ℊ42", ℊ48"** **(305, 455, 610, 760,** **915, 1065, 1220mm)** B-6806.99 x 18", ∮24", ℊ30" ℊ36", ℊ42", ℊ48" (455, 610, 760, 915, 1065, 1220mm)	**B-5806 x** **12", 18", ∮24", 30",** **ℊ36", ℊ42", ℊ48"** **(305, 455, 610, 760,** **915, 1065, 1220mm)** B-5806.99 x ∮24", ∮36", ℊ42" (610, 915, 1065mm)	**B-6106 x** **18", 24", ℊ36", ℊ42", 48"** **(455, 610, 915,** **1065, 1220mm)** B-6106.99 x 24", 36", 42" (610, 915, 1065mm)	
 36" W x 24" D (91 x 61cm) Grab Bar for Tub/Shower/ Toilet Compartment	**B-68616** B-68616.99	**B-58616** B-58616.99		
 30 ⅞" W x 15 ⅞" D (78 x 40cm) Grab Bar for 36" x 36" (91 x 91cm) Shower Stall	**ℊB-6861** B-6861.99			
 54" W x 36" D (137 x 91cm) Grab Bar for Toilet Compartment/ Tub/Shower	**ℊB-68137** B-68137.99	**ℊB-5837** B-5837.99		
 29" (74cm) Swing Up (Wall Mounted) Patented				**ℊB-4998** ℊB-4998.99
 33 ½" H x 27 ⅞" D (84 x 71cm) Swing Away (Floor Mounted)				**B-4993** B-4993.99
†OPTIONAL MOUNTING DEVICES Order for each Series using part numbers listed. See descriptions below.	**∮252-30** **ℊ2521-30** **ℊ2522-30** **2562** **2573** **2583**	**∮252-30** **ℊ2521-30** **ℊ2522-30** **2562** **2573** **2583**	**∮252-30** **ℊ2521-30** **ℊ2522-30** **2571** **2581**	**∮252-30** **ℊ2521-30** **ℊ2522-30** **2571** **2581**

†OPTIONAL MOUNTING KITS. Order one per flange. Part No. **252-30** (3) sheet-metal screws; **2521-30** (3) machine screws with toggle nuts; **2522-30** (3) machine screws with expansion shields. †OPTIONAL ANCHOR DEVICES. Part No. **2562** concealed anchor plates for stud walls (order one per pair of flanges); **2571** and **2573** concealed anchors for solid walls (order one per flange); **2581** and **2583** anchors for ¾" to 1" (19–25mm) panels (order one per flange)

GRAB BARS

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PROJECT TITLE: RESTROOM DESIGN STANDARDS
SHEET TITLE: MIRRORS-2
SCALE: NONE
DATE: MARCH 2005
PROJECT NO.: TASK 1314.20
B-29

PRODUCT INFORMATION

TO ORDER, PLEASE CALL: 888.733.3456

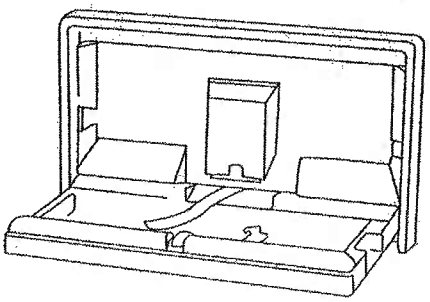
OR FAX: 303.574.9000

7881 South Wheeling Court, Englewood, CO 80112

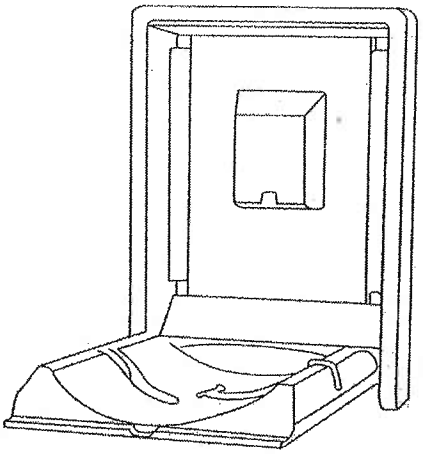
Baby Changing Station

Provides a practical place for parents to attend to their children's dirty diapers without leaving your business

Horizontal



Vertical



Horizontal

Unit dimensions:

Height: 20 in (508 mm) **width:** 35 in (889 mm)
Depth: 4 in (102 mm) closed; 20 in (508 mm) opened
Changing surface: 442 sq in (2873 sq mm)
Weight: 30 lbs (13.64 kilos)

Vertical

Unit dimensions:

Height: 36 in (914 mm) **width:** 22 in (559 mm)
Depth: 5.25 in (127 mm) closed; 35 in (889 mm) opened
Changing surface: 420 sq in (2730 sq mm)
Weight: 30 lbs (13.64 kilos)

Product features:

- Rugged design withstands static loads up to 400 pounds (182 kilos)
- Steel-on-steel hinges with 10 gauge (3.42 mm squared) steel mounting supports for durability
- Hidden pneumatic gas spring to ensure smooth, safe open and close motions; closes fully after each use
- Child protection strap features snap-lock fastener to hold child secure
- Sanitary bed liner dispenser holds 25 liners to promote good hygiene
- High-impact polyethylene resists odors, has no sharp corners, and cleans easily
- Chemical-free sanitary liners are made from 3-ply biodegradable paper for protection and easy disposal
- Molded-in safety and usage instructions in 6 languages
- Door plaque clearly identifies family friendly restrooms
- Includes step-by-step instructions and all mounting hardware for easy installation
- Optional factory-installed lock secures station from vandalism
- Available in off-white and light gray

Additional Features:

- **5-year manufacturers limited warranty**
- **Made in the USA**

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PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	DIAPER CHANGING STATIONS-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20

Recessed and Surface Mounted

B-223x24

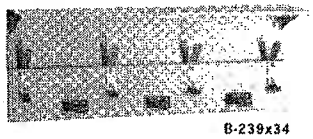
B-223 MOP AND BROOM HOLDER Type-304 stainless steel, satin finish. Anti-slip mop holders have spring-loaded rubber cam that grips handles ⅞" to 1 ¼" (20–30mm) diameter. Holds mops 3 ¼" (85mm) from wall. Height 5" (125mm).

Model No.	No. Holders	Length
B-223x24	3	24" (610mm)
B-223x36	4	36" (915mm)

B-224x36

B-224 SHELF WITH MOP AND BROOM HOLDERS AND RAG HOOKS Shelf is 18-gauge (1.2mm), type-304 stainless steel, satin finish; 8" H, 8" D (150 x 205mm). Anti-slip mop holders have spring-loaded rubber cam that grips handles ⅞" to 1 ¼" (20–30mm) diameter. Holds mops 8" (205mm) from wall. Stainless steel rag hooks. Rod for wet rags below shelf.

Model No.	No. Holders	No. Hooks	Length
B-224x30	3	2	30" (760mm)
B-224x36	4	3	36" (915mm)

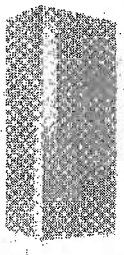


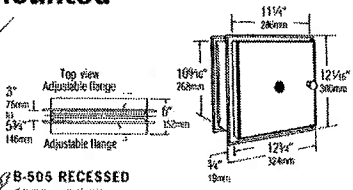
B-239x34

B-239 CLASSIC SERIES SHELF WITH MOP AND BROOM HOLDERS AND HOOKS Shelf is 18-gauge (1.2mm), type-304 stainless steel, satin finish; 13" H, 8" D (330 x 205mm). Anti-slip mop holders have spring-loaded rubber cam that grips handles ⅞" to 1 ¼" (20–30mm) dia. Stainless steel hooks.

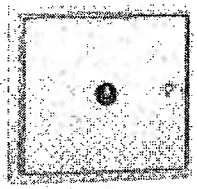
Model No.	No. Holders	No. Hooks	Length
B-239x34	3	4	34" (865mm)
B-239x44	4	5	44" (1120mm)

B-633 STAINLESS STEEL CORNER GUARDS Eliminate expensive maintenance work. 18-gauge (1.2mm), type-304 stainless steel, satin finish. No sharp edges. Furnished with adhesive mounting for easy permanent installation: 3 ½" x 3 ½" (90 x 90mm); 48" (1220mm) long.

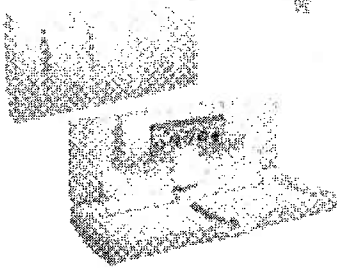




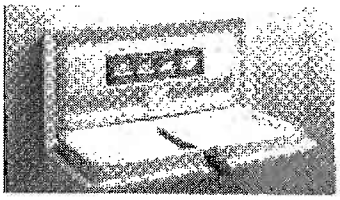
B-505 RECESSED SPECIMEN PASS-THRU CABINET Provides convenient passage for specimen from patient area to laboratory. Mounts in walls 3" to 5 ¾" (75–145mm) thick. Type-304 stainless steel, satin finish. Self-closing doors. Interlocking mechanism prevents both doors from being open at the same time; provides sight barrier. Removable stainless steel tray. Rough Wall Opening: 11 ½" W, 10 ⅞" H (290 x 275mm); 3" to 5 ¾" (75–145mm) thick.

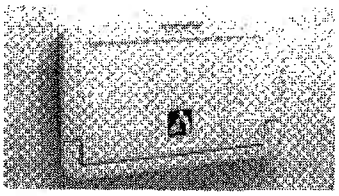


B-235 SURFACE-MOUNTED PAPER CUP DISPENSER Satin-finish stainless steel. Dispenses 150 3-oz (0.1-L) cups. Also adjusts to dispense up to 6-oz (0.2-L) cups. Tumbler lock on top and stainless steel piano-hinge on bottom. Cabinet swings down for easy filling. Slot on front indicates refill time. 3 ¼" W, 14 ½" H, 3 ¼" D (85 x 370 x 85mm).



B-2230 CLASSIC SERIES SURFACE-MOUNTED DIAPER CHANGING STATION Provides safe, convenient location for parent and child in public washrooms at a budget price. Unit features a smooth concave changing area with nylon safety strap, two hooks for bags, purses and instruction graphics. Durable, high-impact polyethylene body resists odors and bacterial growth. Pneumatic cylinder provides controlled, slow opening and closing of bed. No hinge structure exposed on interior or exterior surfaces. Bed secured to backplate with concealed full-length stainless steel hinge rod with steel bushings embedded in the plastic. Unit supports loads up to 250 lb. (113kg) when properly installed. Equipped with liner dispenser that accommodates many commercially available folded liners. Unit measures 34 ¼" W, 16 ⅞" H (870m x 430 mm). When closed, surface-mounted unit projects 4" (102 mm) from wall; when open, bed projects 18" (455mm). Patented.



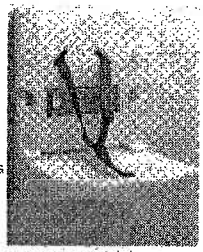


B-2210 SURFACE-MOUNTED DIAPER CHANGING STATION Provides safe, convenient location for parent and child in public washroom. Bed features smooth concave changing area with safety strap, hooks for bags and purses, and universal instruction graphics. Pneumatic cylinder provides controlled, slow opening and closing. Nonporous polyethylene resists odors and bacterial growth; matches Bobrick color #889 Grey. Unit has foam core for added durability. No hinge structure exposed on interior or exterior surfaces. Bed secured to back plate with concealed full-length stainless steel hinge rod with steel bushings imbedded in plastic. Supports up to 250 lb (113kg) when properly installed. Equipped with multi-size liner dispenser that accommodates many commercially available folded liners and dental bibs, as well as C-fold or multifold paper towels measuring 6 ½" to 10 ⅝" long by 2 ⅝" to 4 ⅞" wide (165–270mm x 65–125mm). Unique design allows unit to be semi-recessed into wall opening 4" (102mm) deep. Unit measures 32" W, 20" H (815 x 510mm). When closed, surface-mounted unit projects 4" (102mm); semi-recessed unit projects 1 ⅝" (40mm). When open, surface mounted bed projects 19" (485mm) from wall; semi-recessed bed projects 16 ⅝" (420mm). For semi-recessing, provide Rough Wall Opening 30 ½" W, 18 ½" H, 4" D (775 x 470 x 102mm). Patented.

B-2200 Similar to B-2210, but without multi-size liner dispenser. Patented.

2210-40 LINERS FOR DIAPER CHANGING STATION Optional accessory for multi-size liner dispenser in Model B-2210. Case of 500 absorbent paper liners with soil-resistant plastic backing.

B-2220 PARTITION-MOUNTED CHILDSEAT Provides safe location off of floor for child with parent inside toilet compartment or fitting room. Features safety strap and hooks for bag or purse. Polyethylene matches Bobrick color #889 Grey. Supports up to 80 lb (36kg) when properly installed. Closed unit measures 13" W, 18" H, 4 ½" D (330 x 455 x 115mm). Seat projects 13 ¼" (335mm) from partition when open.



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PROJECT TITLE: RESTROOM DESIGN STANDARDS

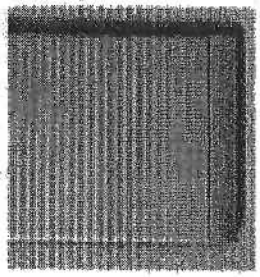
SHEET TITLE: DIAPER CHANGING STATIONS-2

SCALE: NONE

DATE: MARCH 2005

PROJECT NO.: TASK 1314.20

B-31



C800-Series Crash Rail

- 8" rail with continuous aluminum retainer (except C860)
- Exclusive connector plates and variety of mounting options
- Continuous vinyl cushion to protect profile cover (except C860)
- Economy models (C860 & C870) available for light- to medium-impact situations
- Available in 21 standard colors with no minimums
- Custom colors available with low minimum quantities required

Iowa Paint Manufacturing Company, Inc.
17th & Grand Avenue
Des Moines, Iowa 50309
1-800-659-4455

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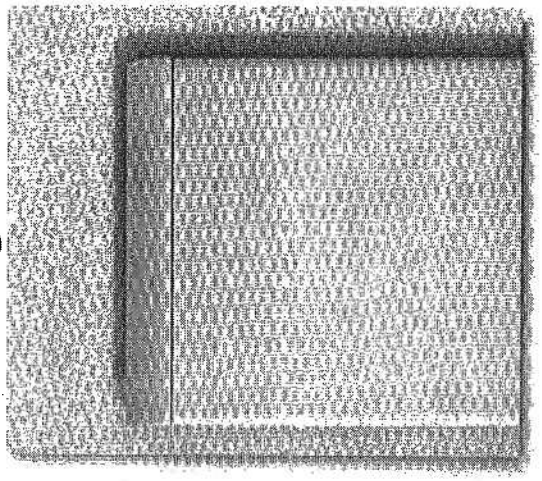
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	CRASH RAILS-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-32

KOROSEAL WALL PROTECTION SYSTEMS
KOROGARD(r) C800-Series Crash Rails

KOROGARD C800-Series Crash Rails are 8" (203.2mm) high with a full-length vinyl bumper and continuous aluminum retainer. C800-Series Crash Rails combine a wide area of protection and a variety of mounting options to meet every impact need. KOROGARD rugged durability makes C800-Series Crash Rails best suited for high impact areas.

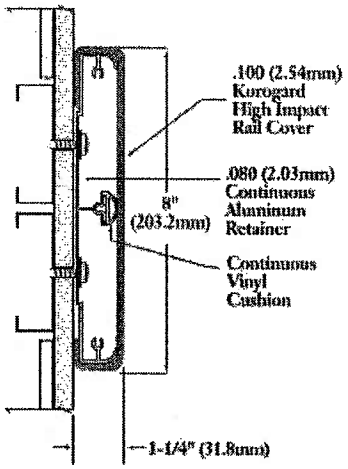


KOROGARD C800-Series Crash Rails are backed by a limited five-year warranty. All crash rails are Class I/A fire rated and meet national building code standards. All KOROGARD linear profiles color coordinate with a multitude of KOROSEAL(r) Wallcoverings for a systems approach to wall protection.

For more information on KOROGARD Crash Rails or the KOROSEAL Wall Protection System, please call your local KOROGARD distributor or 1-800-628-0449.

- Product Guide Specification
- Color Chart
- Installation Instructions
- Cleaning Instructions
- Warranty

HC800 SERIES ACCESSORY ITEMS	
C801	Standard End Cap
C803	90° Corner Cap
C804	135° Corner Cap
C805	Splice Kit
C841	Extended End Cap



C800

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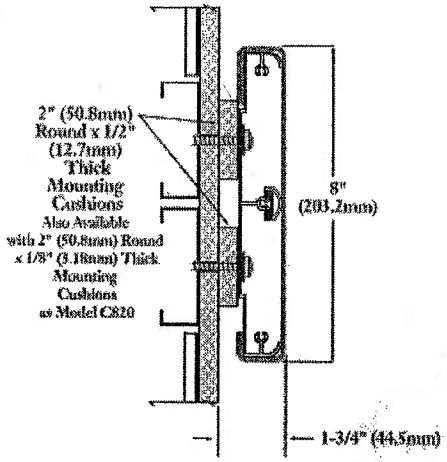

C830

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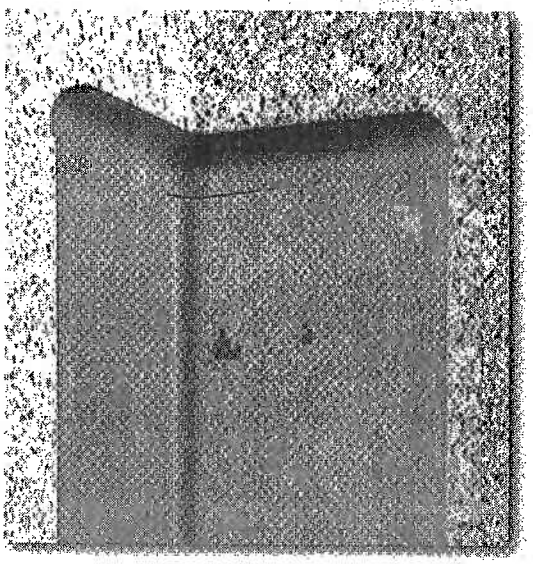
PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	CRASH RAILS-3
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-34

KOROSEAL WALL PROTECTION SYSTEMS
KOROGARD(r) G200-Series
Surface-Mounted Corner Guards

KOROGARD G200-Series Corner Guards consist of a formidable 3" (76.2mm) vinyl 1/4" (6.35mm) radius cover mounted over a continuous aluminum retainer. KOROGARD Corner Guards are an attractive and durable solution to unsightly, damaged corners. G200-Series Surface-Mounted Corner Guards provide support in medium to high impact areas. The G210 Model is available for 135° angle corners.

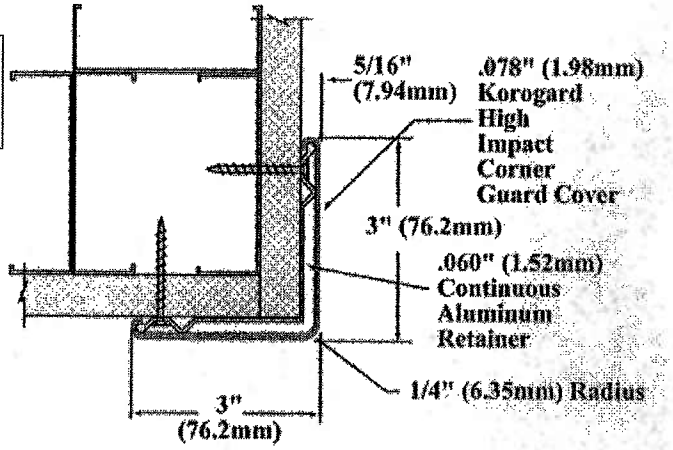


KOROGARD G200-Series Corner Guards are backed by a limited five-year warranty. All corner guards are Class I/A fire rated and meet national building code standards. All KOROGARD linear profiles color coordinate with a multitude of KOROSEAL(r) Wallcoverings for a systems approach to wall protection.

For more information on KOROGARD Corner Guards or the KOROSEAL Wall Protection System, please call your local KOROGARD distributor or 1-800-628-0449.

- Product Guide Specification
- Color Chart
- Installation Instructions
- Cleaning Instructions
- Warranty

G200 SERIES ACCESSORY ITEMS	
G201	Standard End Cap
G211	135° End Cap



G200

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE CORNER GUARDS-1		B-35
	SCALE NONE	DATE MARCH 2005	

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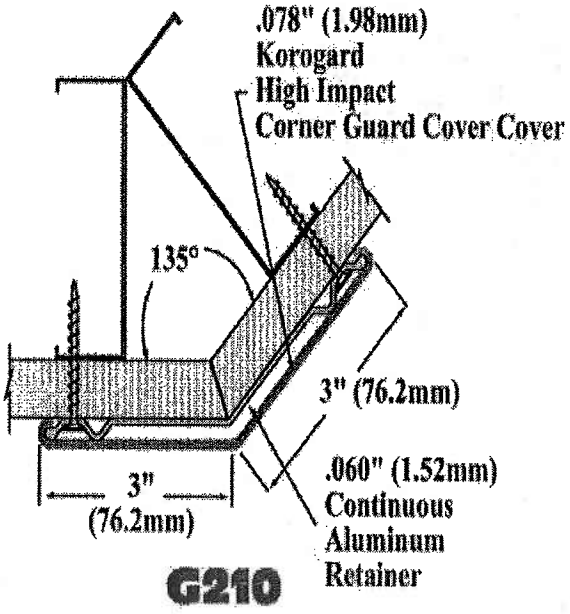
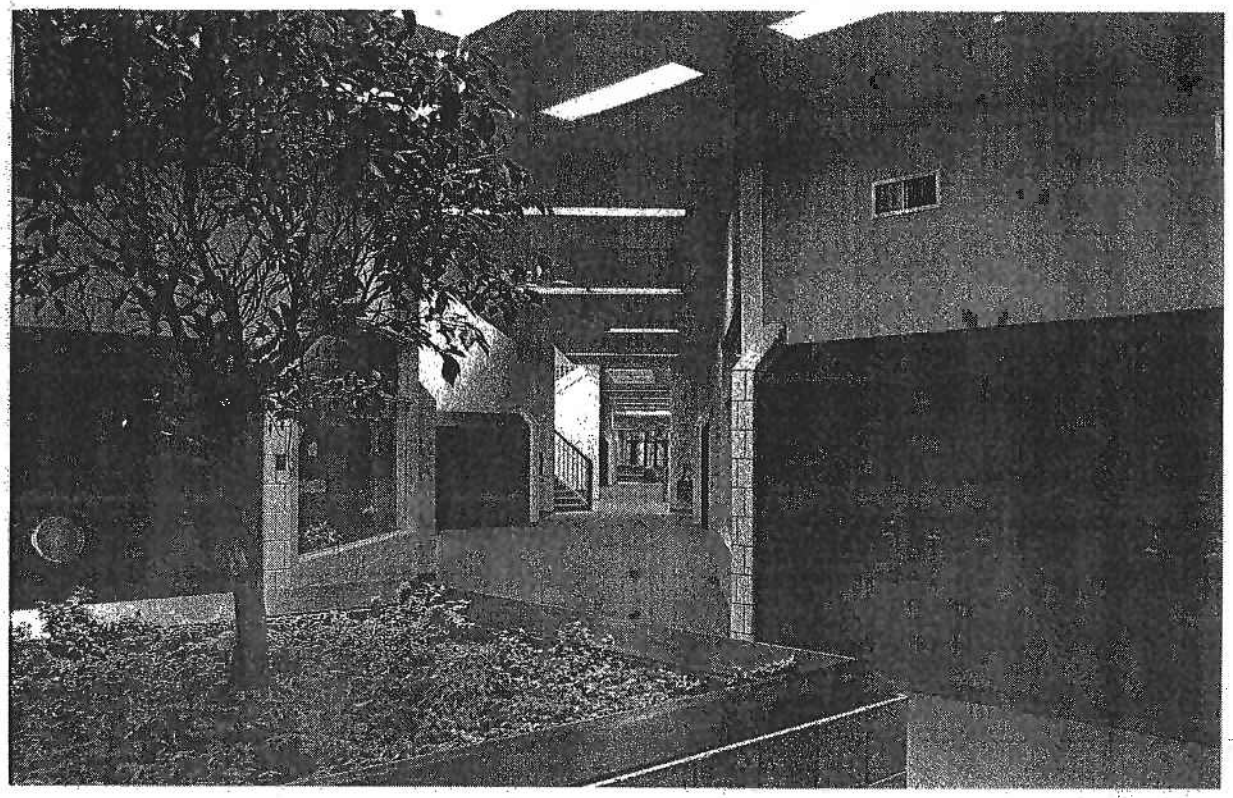


Download this drawing in AutoCAD format

KOROSEAL
WALL PROTECTION SYSTEMS
PROTECTION IN EVERY DETAIL
A Division of RJF International Corporation
3875 Embassy Parkway, Fairlawn, OH 44333
Phone 800-628-0449 or 330-668-7600
Fax 330-668-7703

REPUBLIC STORAGE SYSTEMS



THE LOCKER BOOK

Baker

MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

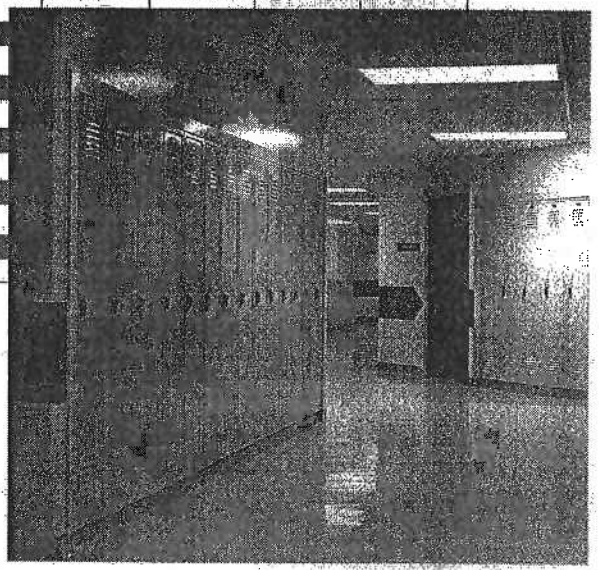
PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LOCKERS-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-37

STANDARD LOCKERS

W x D Inches	Single Tier Heights	Double Tier Heights	Triple Tier Heights	Four tier Heights	3-High Box Heights	4-High Box Heights	5-High Box Heights	6-High Box Heights
9 x12	48,54,60,72	30, 36			20, 24	15, 18		
9 x15	48,54,60, 72	30, 36			20, 24			
9 x18	60, 72	30, 36			20, 24			
9 x21	60, 72	30, 36						
9 x24	60, 72	30, 36						
12x12	36,48,54,60,72	24,30,36,42	20, 24	18	20, 24	15, 18	12, 14,4	12
12x15	36,48,54,60,72	24,30,36,42	20, 24		20, 24	15, 18	12, 14,4	12
12x18	36,48,60,72	24,30,36,42	20, 24		20, 24	15, 18	12, 14,4	12
12x21	60, 72	30, 36						
12x24	60, 72	30, 36						
15x12	60, 72	30, 36			20, 24		12, 14,4	12
15x15	60, 72	30, 36			20, 24	15, 18	12, 14,4	12
15x18	60, 72	30, 36			20, 24	15, 18	12, 14,4	12
15x21	60, 72	30, 36						
15x24	60, 72	30, 36						
18x12	60, 72	30, 36						
18x15	60, 72	30, 36						
18x18	60, 72	30, 36						
18x21	60, 72	30, 36						
18x24	60, 72	30, 36						
24x18	60, 72	30, 36						
24x21	60, 72	30, 36						
24x24	60, 72	30, 36						

ADDITIONAL SIZES FOR STANDARD LOCKERS

W x D Inches	Two Person Heights	Duplex Heights	Double Door Heights
15x12	60, 72		
15x15	60, 72	60, 72	
15x18	60, 72	60, 72	
15x21	60, 72		
18x15	60, 72		
18x18	60, 72	60, 72	
18x21		60, 72	
24x18			60, 72
24x21			60, 72
24x24			60, 72



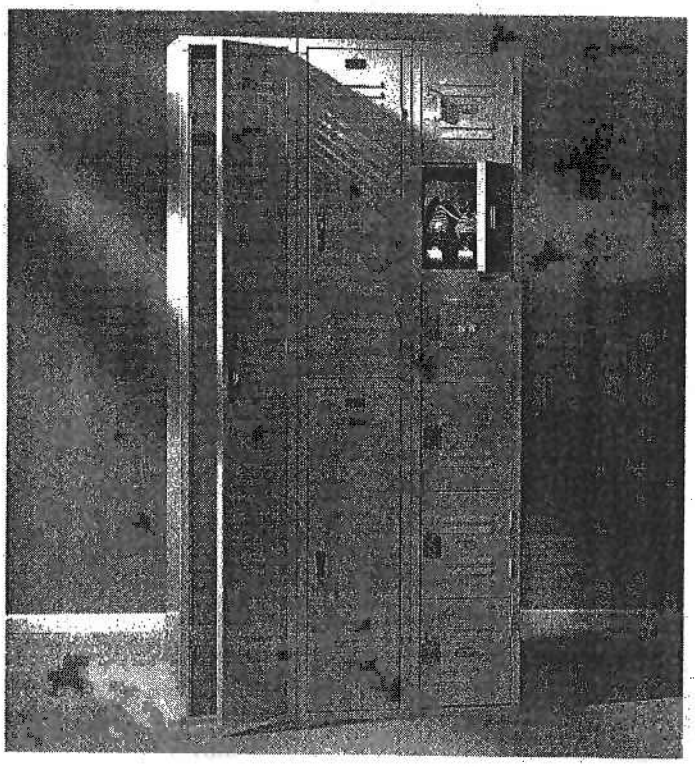
Actual height of the 36" single tier locker is 36½"

Above: Standard Lockers
Jeannette McKee Elementary/Middle School
Jeannette, Pennsylvania
Architect: Kaclik and Graves, Pittsburgh, Pennsylvania
Distributor: Tri-State Lockers & Shelving, Pittsburgh, Pennsylvania

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LOCKERS-2
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-38

S T A N D A R D L O C K E R S

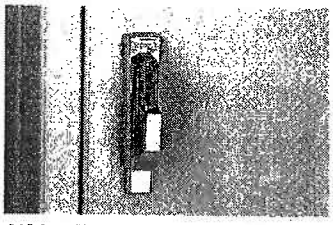


Republic's Standard Locker is recognized as the industry standard
or durability, reliability and value. Year after year, generation after gen-
ration, this sturdy locker has been meeting the most demanding expectations
or quality, design and performance.

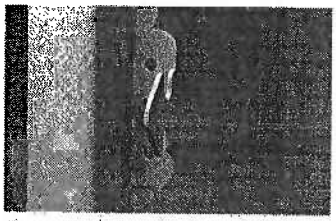
Republic® offers you a broad range of options, features and accessories
o customize your lockers to meet any specific need or application.

- Continuous vertical door strikes
- Heavy gauge frame hooks
- Full-flanged, channel edged doors
- Heavy duty guarded door handle
- Double-channel lock bar
- Full loop, 2", 5-knuckle hinges welded to frames, double-riveted to doors
- Double-lapped rear vertical corners in body
- Overlapped upright/frame assembly connection

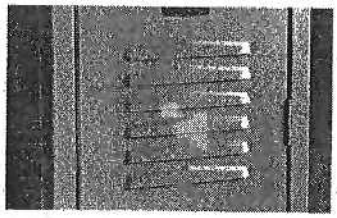
or fast delivery, many Standard Lockers are also available from
epublic's Qwik Ship stock. Check with your local Republic distributor.



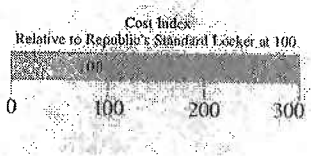
***Lift handle** is made of attractive, durable chrome plated die cast zinc. The rugged handle case protects the lift trigger from kicking and other abuse, and also serves as a padlock strike. Handle equipped with two rubber silencers to reduce mechanism noise.*



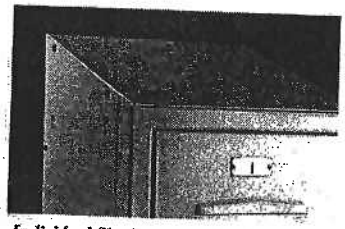
***Frame Hooks** are made from heavy gauge steel for security and are set-in for minimum opening protrusion. Rubber silencers are attached to soften door slam.*



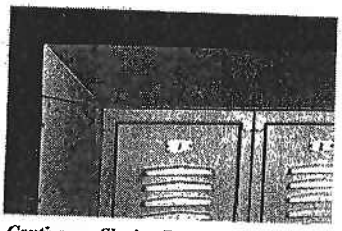
***Louvers** are provided on all Standard Lockers. Single tier and double tier lockers have a block of six louvers located near the top and bottom of each door.*



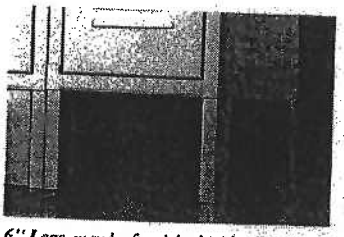
Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **LOCKERS-3**		**B-39**
	SCALE **NONE**	DATE **MARCH 2005**	



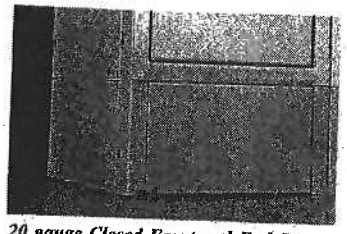
Individual Sloping Tops *provide a finished appearance, prevent trash accumulation on locker tops and discourage using locker tops as storage areas. The rise of the slope is ⅓ the locker depth. Standard flat tops are omitted.*



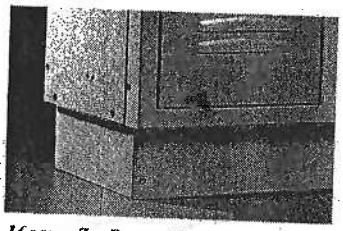
Continuous Sloping Tops *provide a smooth, finished appearance for lockers mounted along walls or in island groups. The rise of the slope is ⅓ the locker depth. Customize your installation with sloping top splices, valley corners and hip ends - all without exposed fasteners.*



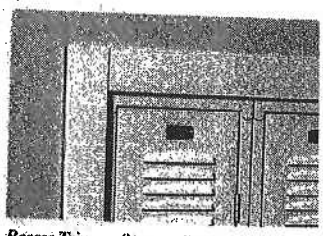
6" Legs *may be furnished with all lockers. Front legs are an extension of vertical frames. Adjustable rear angle legs are provided for every third upright.*



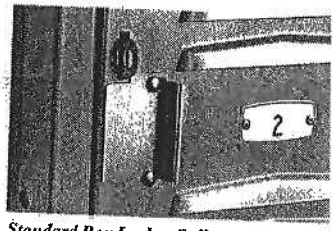
20 gauge Closed Front and End Bases, *give a finished appearance to lockers with legs. Closed Bases also cover the hard to clean area under the lockers.*



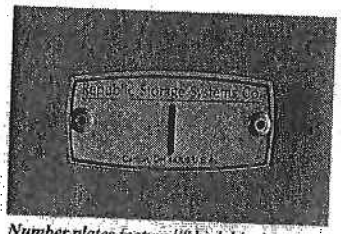
16 gauge Zee Bases *offer an attractive and economical way to raise lockers above the floor and create an overhang or "toe space". Available in 3", 4" and 6" heights.*



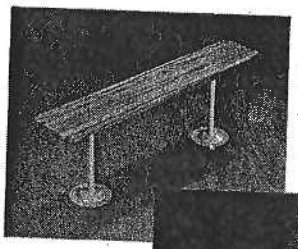
Recess Trim *really sets off your recessed locker installations. The trim has a 3" face and a ⅜" top return. Integral corner caps and hairline joints reinforced with welded-on splice fingers leave a clean appearance. When used with Mondrian® or Designer lockers the trim can be set in a sculptured design (locker projects 1" beyond wall) or a flush design (locker projects ⅛" beyond wall).*



Standard Box Locker Pull *provides a convenient finger pull and serves as a padlock strike and lock hole cover. Made from 20 gauge stainless steel.*



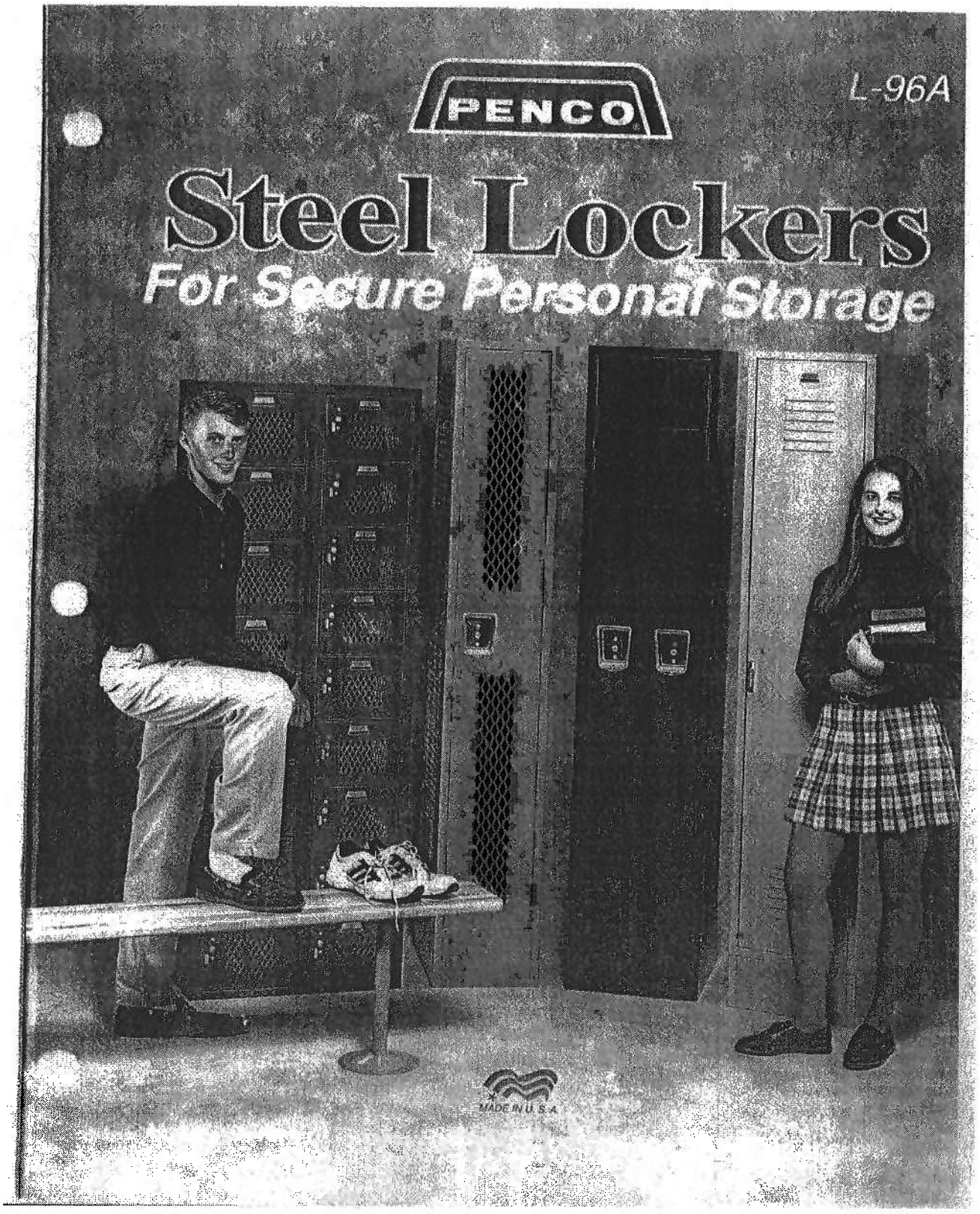
Number plates feature ½" high black numerals on brushed aluminum to permit easy locker identification.



Benches and Pedestals *have an overall height of 17½". Benches are 9½" wide x 1¼" full finished thickness laminated maple. Pedestals consist of sturdy 1¼" O.D. tubing with 10 gauge steel flanges welded to each end.*

Moveable Benches *consist of maple bench tops mounted to free-standing trapezoidal-shaped pedestals. Pedestals made from ¼"x 3" aluminum bar stock, with black anodized finish.*

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **LOCKERS-4**		**B-40**
	SCALE **NONE**	DATE **MARCH 2005**	



Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE LOCKERS-5		B-41
	SCALE NONE	DATE MARCH 2005	

PENCO Vanguard Lockers

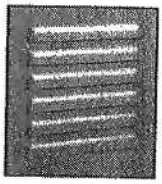
KD Knocked Down

Penco has been building lockers for decades that last for decades, and the Vanguard line is the embodiment of what it takes to withstand the daily use and abuse typically given to a locker.

What you see first is the baked enamel finish, which is applied over a phosphatized smooth steel surface. There are 17 standard colors from which to choose, and the body parts are the same color as the doors.

Vanguard Handle

Single and double tier lockers have multi-point latching that makes opening and closing a door an effortless task. The patented die-cast Vanguard handle pulls out with a simple motion for opening. When you are ready to close the door, you may do so with one motion of one hand, since the spring-loaded latch clips will secure the door even while the door is locked, either with a built-in lock or padlock. The latch hooks have noise-reducing rubber bumpers.



Vanguard Louvers

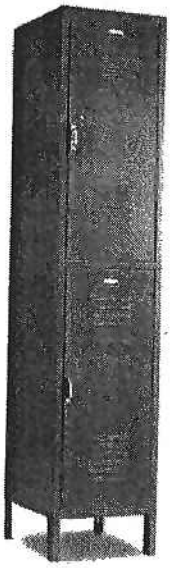
Box locker doors have a functional friction catch latch that permits the use of built-in locks or padlocks.

The door frames have mortise and tenon construction and are securely spot welded for lifetime rigidity. Every door frame has a vertical flange which creates a continuous door strike. All hinges are full loop, 5-knuckle design, welded to the frame, and riveted to the door.

These features, available across the broad range of models and sizes, make Vanguard the first choice for many locker users. Most Vanguard lockers are available on a *Quick Ship* basis, unit-packaged with flat tops and 6" legs in the 028 Gray finish. Contact your Penco representative for details.

NOTE: 1, 2, 3, 4, 5 & 6 tier lockers are ordered by the opening. 2 Person, Duplex, Dual and Box Over are ordered by the frame. 7, 8, 16 Person and Wall Mounted are ordered by the entire unit. Overall height does not include legs.

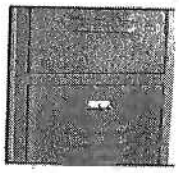
Single Tier



Double Tier

Single Tier — The most popular and widely used locker offers maximum space for full hanging of clothing and other belongings. Each locker has a convenient shelf for storage of books, hats or other small articles. Lockers 18" deep or more come with a coat rod in addition to coat hooks.

Double Tier — Accommodates twice as many people as single tier lockers in the same floor space, while still providing enough room for light outer wear and personal belongings.



Size (Inches)		Single Tier		Double Tier		
W	D	60" Opening Ht. Cat. No.	72" Opening Ht. Cat. No.	30" Opening Ht. (60" overall ht.) Cat. No.	36" Opening Ht. (72" overall ht.) Cat. No.	42" Opening Ht. (84" overall ht.) Cat. No.
9	12	6101V	6151V	6201V	6221V	-
9	15	6103V	6153V	6203V	6223V	-
9	18	6105V	6155V	6205V	6225V	-
12	12	6111V	6161V	6211V	6231V	6251V
12	15	6113V	6163V	6213V	6233V	6253V
12	18	6115V	6165V	6215V	6235V	6255V
12	21	6117V	6167V	6217V	6218V	-
15	12	6119V	6169V	-	6239V	-
15	15	6121V	6171V	-	6241V	6261V
15	18	6123V	6173V	-	6243V	6263V
15	21	6125V	6175V	-	6245V	-
18	18	6131V	6181V	-	6247V	-
18	21	6133V	6183V	-	6249V	-
18	24	6135V	6185V	-	-	-
*24	18	6149V	6196V	-	-	-
*24	21	6158V	6198V	-	-	-
*24	24	6160V	6199V	-	-	-

* 24" wide lockers are also available with double doors. Contact your representative.

FOR SAFETY PURPOSES WE STRONGLY RECOMMEND THAT ALL LOCKERS BE EITHER FLOOR OR WALL ANCHORED.

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LOCKERS-6
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-42

PENCO Vanguard Lockers


3 Tier


4 Tier


5 Tier


6 Tier


2 Person


Duplex

Multiple Tier Box Lockers – Also known as "box lockers" for their compact dimensions, Penco multiple tier lockers allow numerous users in the smallest amount of floor space. They are available in 3, 4, 5 and 6 tier configurations, and are ideal for storage of athletic gear or employee personal storage. Can be locked with padlocks or built-in locks. (Vanguard cast handle with multi-point latching is available at extra cost on 3 Tier box lockers).

2 Person Lockers – A space saving model that has ample room for two people while occupying about the same space as a single tier locker. Full width book compartment doors. Coat rods are included in lockers 18" deep or more.

Hidden door release for book compartment doors of 2 Person lockers.

Duplex Lockers – An economical way to provide full length locker convenience in a small amount of floor space. Two private lockers are combined in one 15" wide frame. Door openings are 6" wide and each locker contains a 7-1/2" wide shelf located 18" from the top.

Size (Inches)		3 Tier		4 Tier		5 Tier		6 Tier	2 Person		Duplex
W	D	20" Opening Ht. (60" overall ht.) Cat. No.	24" Opening Ht. (72" overall ht.) Cat. No.	15" Opening Ht. (60" overall ht.) Cat. No.	18" Opening Ht. (72"overall ht.) Cat. No.	12" Opening Ht. (60" overall ht.) Cat. No.	14-2/5" Opening Ht. (72" overall ht.) Cat. No.	12" Opening Ht. (72" overall ht.) Cat. No.	40" Opening Ht. (60" overall ht.) Cat. No.	52" Opening Ht. (72" overall ht.) Cat. No.	72" Opening Ht. Cat. No.
12	12	6307V	6319V	6325V	6331V	6343V	6353V	6365V	-	-	-
12	15	6309V	6321V	6327V	6337V	6345V	6355V	6367V	-	-	-
12	18	6311V	6323V	6329V	6339V	6347V	6357V	6369V	-	-	-
12	21	6349V	6399V	6393V	6395V	-	6435V	6371V	-	-	-
15	12	-	-	-	-	-	-	-	6510V	6500V	-
15	15	-	-	-	6431V	6351V	6359V	6373V	6506V	6501V	6531V
15	18	-	-	-	6433V	6397V	6361V	6375V	6437V	6503V	6533V
15	21	-	-	-	-	-	-	6377V	-	6505V	6535V
18	18	-	-	-	-	-	-	6379V	-	-	-
18	21	-	-	-	-	-	-	6378V	-	-	-

Additional sizes are available for most locker types. Consult your Penco representative.

FOR SAFETY PURPOSES WE STRONGLY RECOMMEND THAT ALL LOCKERS BE EITHER FLOOR OR WALL ANCHORED.

Baker

MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE: RESTROOM DESIGN STANDARDS

SHEET TITLE: LOCKERS-7

SCALE: NONE

DATE: MARCH 2005

PROJECT NO.: TASK 1314.20

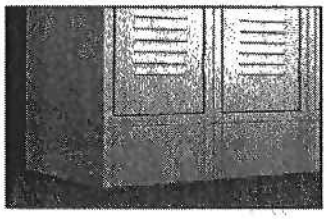
B-43

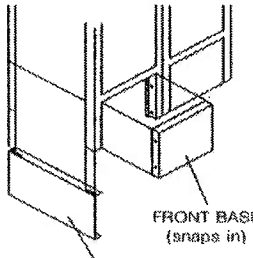
PENCO Locker Accessories

Individual Closed Bases

Front and end bases are designed to fit beween standard Penco 6" legs. They present a clean flush appearance and prevent the accumulation of dust and dirt under the lockers. (Not for use on All-Welded lockers.)

Closed Bases			
Size (Inches) W	D	H	Cat. No.
Front Bases			
9	-	6	60216C
12	-	6	60217
15	-	6	60218
18	-	6	60219
24	-	6	60220C
End Bases Single Row			
-	12	6	60204
-	15	6	60205
-	18	6	60206
-	21	6	60207
-	24	6	60208C
End Bases Double Row			
-	24	6	60209C
-	30	6	60210C
-	36	6	60211C



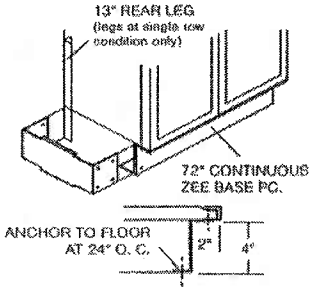


Zee Bases

Zee bases raise lockers without legs 4" off the floor when there is no concrete or wood base. They provide a toe space in the front and a concealed flange for floor anchoring at the rear. A special 4" high rear leg can be ordered to simplify installation.

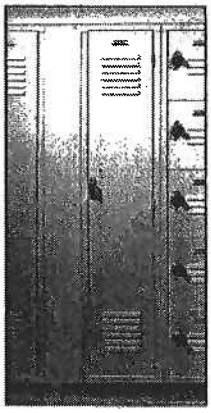
Zee Bases are available only in 72" lengths, and may need to be cut to fit at the time of installation. Splices/End Bases are used at ends of rows, and where the front sections join. (Not for use on All-Welded lockers.)

Zee Base			
Size (Inches) W	D	H	Cat. No.
Front Zee Base			
72	-	4	66700H
Splice/End Base Single Row			
-	12	4	66701H
-	15	4	66702H
-	18	4	66703H
-	21	4	66704H
-	24	4	66705H
Splice/End Base Double Row			
-	30	4	66707H
-	24	4	66706H
-	36	4	66708H
Zee Base Filler			
-	-	4	66709H
Rear Leg for Zee			
-	-	4	66092C



Fillers

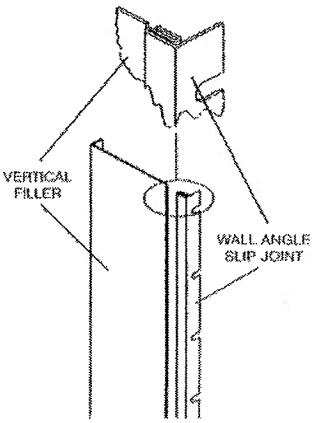
Penco provides standard fillers to adapt lockers to a wide range of field conditions and provide a professional, finished appearance. They can be used to cover columns, pipes or other obstacles in a row of lockers, or fill the gap between the lockers and a wall.



A. Vertical Fillers

These come in three widths and are designed to be used in conjunction with Wall Angle Slip Joints for a solid fit and smooth finish. The slip joint conceals any raw edges caused by field cutting.

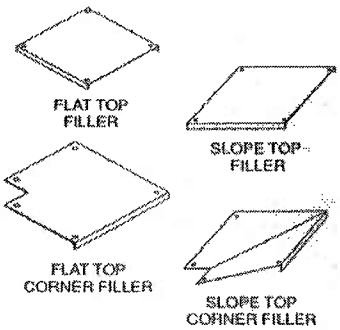
A. Vertical Fillers			
Size (Inches) W	D	H	Cat. No.
Fillers, Vertical Angle			
5	-	60	66112C
5	-	72	66115C
9	-	60	66114C
9	-	72	66117C
9	-	78	66127C
12	-	60	66113C
12	-	72	661141C
12	-	78	66116C
Wall Angle Slip Joints			
-	-	60	66118C
-	-	72	66119C
-	-	78	66121C



B. Top Fillers			
Size (Inches) W	D	H	Cat. No.
Flat Top Fillers			
15	12	-	661321C
15	15	-	661322C
15	18	-	661323C
Slope Top Fillers			
15	12	-	661371C
15	15	-	661372C
15	18	-	661373C
Flat Top Corner Fillers			
12	12	-	66138C
15	15	-	66139C
18	18	-	66140C
Slope Top Corner Fillers			
12	12	-	66100C
15	15	-	66101C
18	18	-	66102C

B. Top Fillers

Top Fillers cover gaps between tops of lockers. They overlap the locker tops and can be field cut to allow for pipes, etc. There are separate designs for flat top vs. slope top, and in-line vs. corner applications.



FOR SAFETY PURPOSES WE STRONGLY RECOMMEND THAT ALL LOCKERS BE EITHER FLOOR OR WALL ANCHORED.

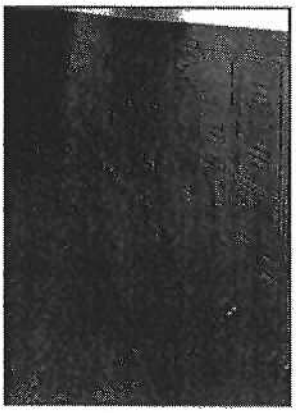
Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

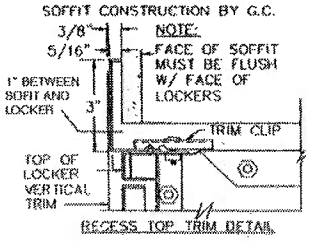
PROJECT TITLE: RESTROOM DESIGN STANDARDS
SHEET TITLE: LOCKERS-8
SCALE: NONE
DATE: MARCH 2005
PROJECT NO.: TASK 1314.20
B-44

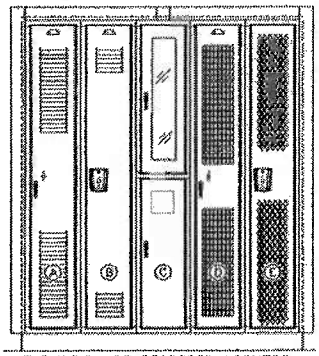
Recess Trim

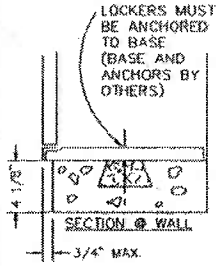
Recess Trim - 3" Recess trim bridges the gap between lockers and wall and/or soffits when the lockers are recessed into a wall.

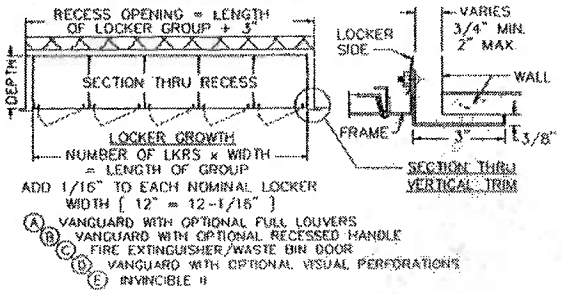
Recess Trim			
Size (Inches)			Cat. No.
W	D	H	
Side Trim, LH			
3	-	63	60465C
3	-	75	60469C
Side Trim, RH			
3	-	63	60466C
3	-	75	60470C
Top Trim			
74	-	3	60456H
Splice			
2	-	3	60105C
Outside Corner Splice			
2	2	3	66108C





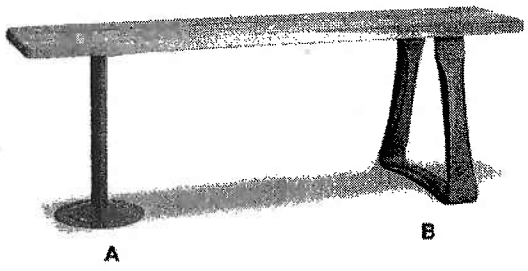






Locker Room Benches and Pedestals

A natural accessory for any locker room. Benches add permanent comfort and order to the floor plan arrangement.



Bench Tops

Exceptionally strong. Made from selected hardwood and finished with clear lacquer. 9-1/2" deep x 1-1/4" thick. (Order Pedestals separately.)

Bench Tops	
Size (Inches) W	Cat. No.
36	09611
48	09600
60	09601
72	09602
84	09603
96	09604
108	09605
120	09606
132	09607
144	09608

Bench Pedestals

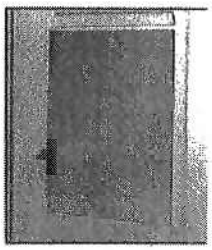
Penco offers a choice in bench pedestal styles, as shown below. *Order two pedestals for benches 96" long or less; order three pedestals for benches over 96" long.*

A. Heavy Duty Bench Pedestal—16-1/4" High
Pedestal consists of a heavy duty steel tube welded to top and bottom flanges. Hardware for fastening to the bench only is included. Pedestal must be anchored to the floor. Order two or more per bench (see above). Available for quick shipment in 028 Gray; available in all 17 colors.
Cat. No. 60822H

B. Stainless Steel Free Standing Pedestal–16-1/4" High
This pedestal has a 14" wide base which allows for moveable free standing use. Holes in the bottom are provided for optional floor anchoring. Hardware supplied for fastening to the bench top.
Cat. No. 60827H

Mirror

Made of acrylic plastic that will not break in normal usage. Mirror has an adhesive backing for easy installation. Size is 6" wide x 8" high.
Cat. No. 096370.



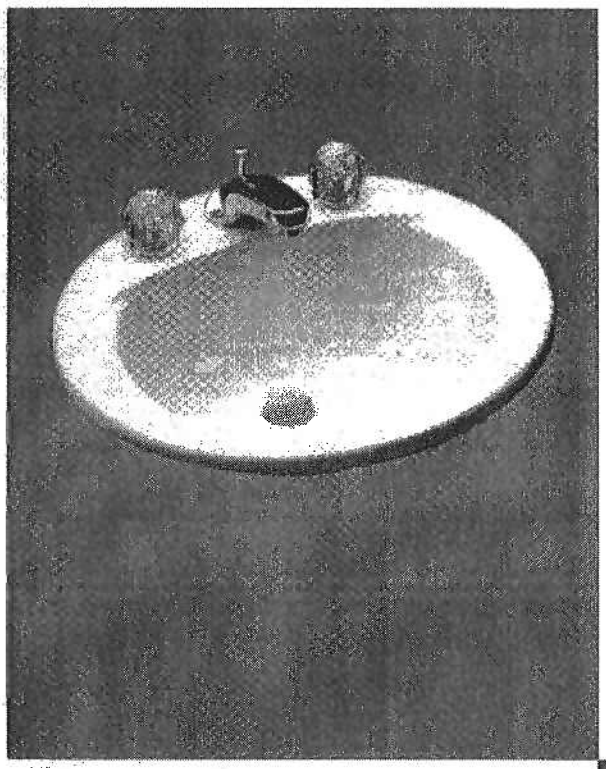
FOR SAFETY PURPOSES WE STRONGLY RECOMMEND THAT ALL LOCKERS BE EITHER FLOOR OR WALL ANCHORED.

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LOCKERS-9
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-45

TOTO®
Perfection by Design

LT501
Self-Rimming Lavatory



LT501.8

- 20" x 17"
- Attractive design in vitreous china
- Spacious oval basin
- Concealed front overflow

Vitreous china self-rimming lavatory. Complete with installation template and sealing compound.

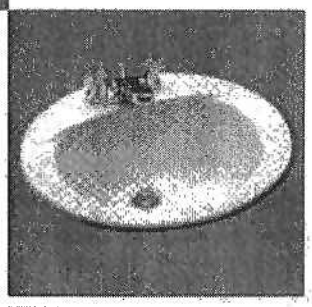
LT501
Lavatory only with single hole faucet center

LT501.4
Lavatory only with 4" faucet centers

LT501.8
Lavatory only with 8" faucet centers

Colors:
Standard *#01 Cotton*
Optional *See price book for additional colors*

Faucet Not Included



LT501.4

Reliance Commercial Line

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LAVATORIES-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-46

LT501
Self-Rimming Lavatory

DESIGN
Distinctive oval designed drop-in lavatory for easy installation on narrow countertops.

FUNCTION
Durable vitreous china offers years of quality use.

SPECIFICATIONS

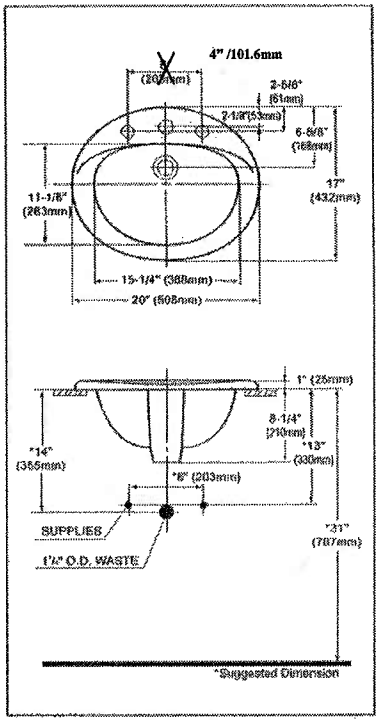
Waste:	1¼" O.D.
Size:	20"W x 17"D
Basin:	15¼"W x 11⅛"D
Material:	Vitreous china
Warranty:	One Year Limited Warranty
Shipping Weight:	**LT501 / LT501.4 / LT501.8** 20.5 lbs.
Shipping Dimensions:	**LT501 / LT501.4 / LT501.8** 21⅛"L x 19⅞"W x 10⅛"H

Fixture dimensions meet ANSI/ASME standard A112.19.2M and CAN/CSA B 45 requirements.

Listing / Approvals: IAPMO/UPC, CSA, City of Los Angeles, State of Massachusetts, and others.

Meets the American Disabilities Act Guidelines and ANSI A117.1 requirements when countertop installed 864mm (34") from finished floor and lavatory installed 51mm (2") minimum from front edge.

These dimensions and specifications are subject to change without notice.



LT501.8

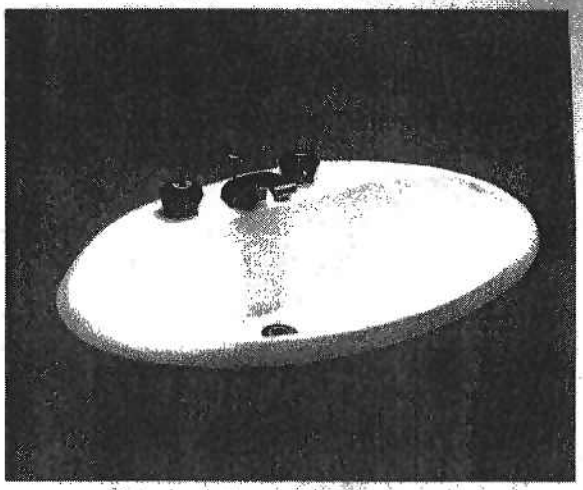
TOTO®
Perfection by Design

TOTO U.S.A., INC. • 1155 Southern Road, Morrow, GA 30260
Tel. (770) 282-8686 • Fax. (770) 282-8701 • www.totousa.com

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **LAVATORIES-2**		**B-47**
	SCALE **NONE**	DATE **MARCH 2005**	

SONNET™ 1-345-V or S

SELF-RIMMING
COUNTERTOP LAVATORY
VITREOUS CHINA



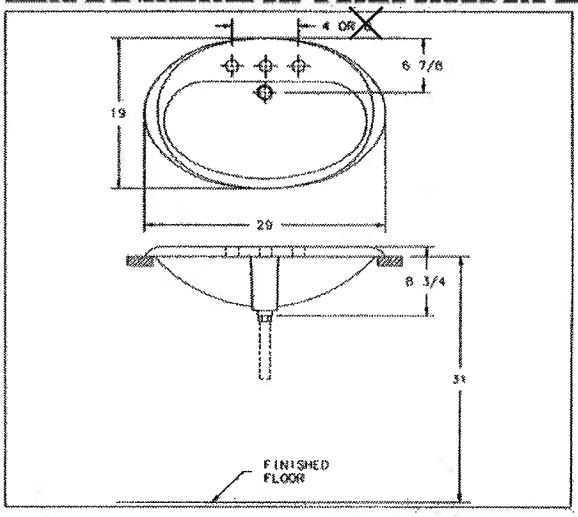
FEATURES

- ***Lavatory:*** *Sonnet™ 1-345-V or S vitreous china self-rimming countertop lavatory with oval basin and front overflow. (Countertop is not included.)*
- ***Trim:*** *Specify C-1003-G (4") or C-1113-G (8") Dial-ese supply and indirect lift waste fitting with aerator and indexed acrylic handles or select an alternate choice as shown in the plumbing brass section.*
- ***Supplies:**** *Angle supplies 3/8" I.P.S. with wheel handle stops and flexible risers.*
- ***Trap:*** *Specify 8-5260 chrome plated cast brass adjustable "P" trap (1 1/4") with cleanout and waste to wall.*

NOTES

- *Size: Lavatory, 29" x 19"; Basin, 25 3/4" x 12 1/4"*
- *Fixture dimensions conform to ANSI/ASME A112.19.2M standard.*
- *Seatant and installation instructions included.*

ROUGH-IN SPECIFICATIONS



Continuous product improvement is a Crane Plumbing policy. Therefore prices and specifications are subject to change without prior notice. Due to variations in the printing process, product colors may vary slightly from those shown here.

*Not furnished by Crane Plumbing. Description for specification purposes only.

CRANE PLUMBING

CRPLR2 01/05 Printed in U.S.A.

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **LAVATORIES-3**		**B-48**
	SCALE **NONE**	DATE **MARCH 2005**	

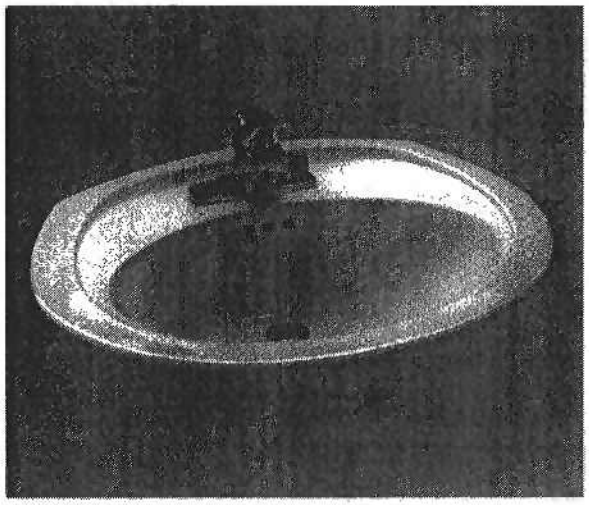
American Standard

ELLISSE™ COUNTERTOP LAVATORY

VITREOUS CHINA

ELLISSE COUNTERTOP LAVATORY

- Vitreous china
- Self-rimming
- Rear overflow
- Supplied with template and color-matched sealant
- Faucet ledge.
  Shown with 2000.101 Ceramix faucet (not included)



❑ **0076.013**
Faucet holes on 203mm (8") centers

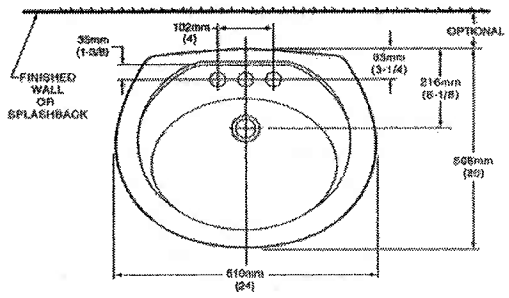
❑ **0076.027** (Illustrated)
Faucet holes on 102mm (4") centers

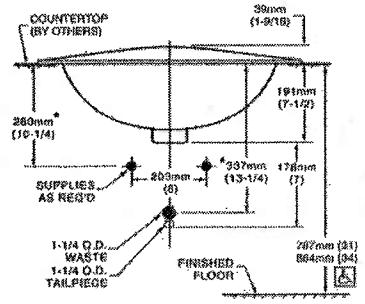
❑ **0076.033**
Center hole only

Nominal Dimensions:
610 x 508mm (24" x 20")

Bowl sizes:
457mm (18") wide,
324mm (12-3/4") front to back,
159mm (6-1/4") deep

Fixture Dimensions conform to ANSI Standard A112.19.2





To Be Specified

- ❑ Color:
- ❑ Faucet*:
- ❑ Faucet Finish:
- ❑ Supplies:
- ❑ 1-1/4" Trap:
- ❑ Nipple:

* See faucet section for additional models available

MEETS THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR PEOPLE WITH DISABILITIES
Countertop 864mm (34") from finished floor.
Lavatory installed 51mm (2") minimum from front edge.

NOTES:
★ DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
▼ FOR COUNTERTOP CUTOUT AND INSTALLATION INSTRUCTIONS USE TEMPLATE SUPPLIED WITH LAVATORY.
FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2.
These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

SPS 0076

LAV-017

Revised 6/95

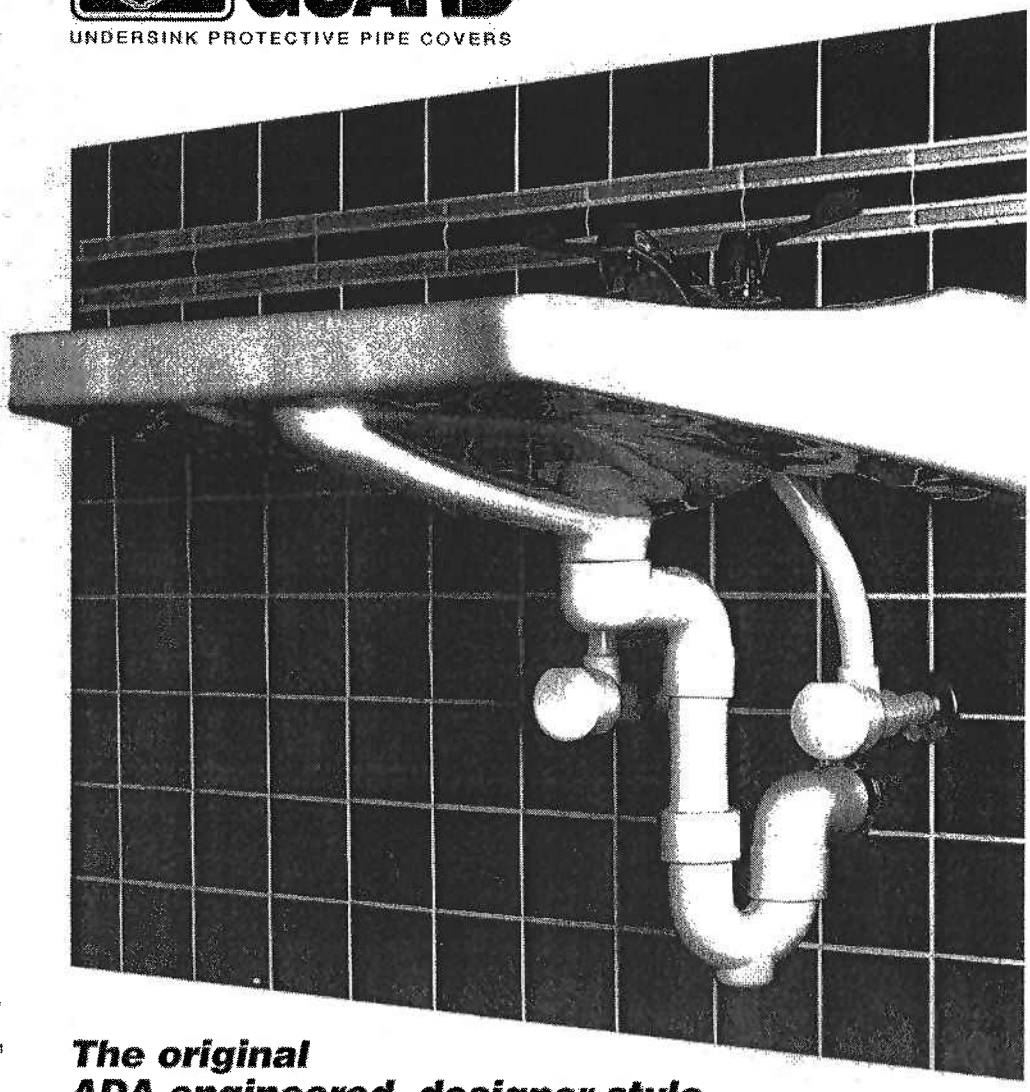
Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LAVATORIES-4
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-49

10800/TR
Buy Line 9

LAV GUARD™

UNDERSINK PROTECTIVE PIPE COVERS



CLASSIFIED UL

LAV GUARD CLASSIFIED BY UNDERWRITERS LABORATORIES INC.®

IN ACCORDANCE WITH ADA article 4.19.4 22FF

Made in the USA

The original ADA-engineered, designer-style protective undersink drain piping and angle valve supply covers.

TRUEBRO

MAKING AMERICA ACCESSIBLE

Baker

MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	LAVATORY GUARD-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-50

LAV GUARD™
UNDERSINK PROTECTIVE PIPE COVERS

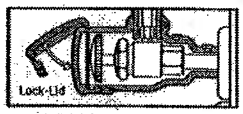
General Description

The LAV GUARD undersink protective pipe cover is the "original" high-quality ADA piping protection system, proven at thousands of facilities across the USA. The designer-style, highly-durable LAV GUARD is soft and flexible, universally adaptable to any 1-1/4" or 1-1/2" P-trap/tailpiece assembly and 3/8" or 1/2" angle stop valve assembly.*

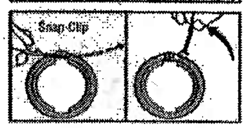
**The LAV GUARD will not fit Schedule 40 plastic P-traps.*

Features and Benefits

- **ADA-conforming design protects wheelchair users from scalding and sharp, abrasive surfaces.** LAV GUARD protective covers have excellent insulation properties while maintaining a smooth, non-abrasive surface.
- **Rotatable, flexible design makes on-site adjustment and installation easy.** The LAV GUARD allows for on-site fitting to meet unexpected jobsite conditions and unusual piping configurations (see diagram). The LAV GUARD is easy to install. No trap disassembly is required.
- **Patented Lock-Lid™ covers angle stop valves while allowing for convenient servicing.** The hinged Lock-Lid is molded into the angle stop valve cover, and latches shut–minimizing tampering.



- **Unique, patented Snap-Clip™ reusable fasteners simplify installation and servicing.** New flush, non-abrasive fasteners install in seconds, are self-trimming leaving no sharp edges, and are tamper-resistant.



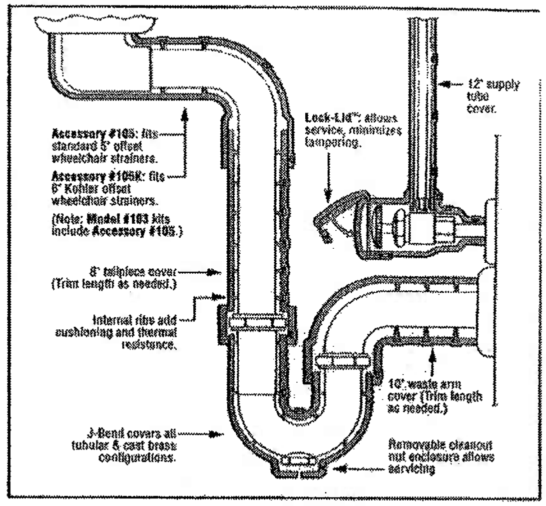
- **Internal rib design maximizes safety.** Compared to other pipe covers on the market, the LAV GUARD internal rib design increases thermal resistance and provides soft, resilient cushioning (see diagram).
- **Easy-to-clean, antimicrobial vinyl minimizes maintenance.** The LAV GUARD is molded from impact-resistant, stain-resistant, antimicrobial vinyl. Its smooth surface makes the LAV GUARD exceptionally easy to clean and maintain.
- **Variety of models, colors, and accessories assure the right product for your needs.** The LAV GUARD is available in six different models, in gray or white, with optional accessories to assure proper installation (see ordering chart).
- **Strict code compliance minimizes risk.** The LAV GUARD complies with ADA article 4.19.4, California P 1504B, ANSI A117.1, BOCA P 1203.4, New York and other state and local regulations.

Specifications

Material	Molded closed cell vinyl
Nominal Wall	[illegible]
Durometer	60-70 Shore A
Finish	Smooth high gloss
UV Protection	Will not fade or discolor
Durability	Virtually indestructible
Fasteners	Reusable snap clips included
Color	Light gray or china white
Compatibility*	Fits all 1 - 1/4" or 1 - 1/2" cast brass or tubular P-trap assemblies and 3/8" or 1/2" angle stop assemblies
Paintability	Apply acrylic enamel
Flame Characteristics ASTM D 635	(ATB), 0 sec (AEB), 0 mm
Thermal Conductivity	K value [illegible]
Bacteria Resistance	Antimicrobial vinyl formula

** The LAV GUARD will not fit Schedule 40 plastic P-traps.*

Cross-Section View



Gray and White Models Available

# 99	one angle valve and one supply tube cover
#100	one P-trap cover
#101	one P-trap cover, one angle valve, and one supply tube cover
#102	One P-trap cover, two angle valve covers, and two supply tube covers
#103	one P-trap cover, two angle valve covers, two supply tube covers, one 5" offset tailpiece wheelchair strainer cover
#103K	same as #103 with one 6" Kohler offset tailpiece wheelchair strainer cover
	Accessories
#105	one 5" offset tailpiece wheelchair strainer assembly
#105K	one 6" Kohler offset tailpiece wheelchair strainer assembly
	Extensions
#EX99	one 16" extension for supply
#EX100	one 16" extension for waste arm or tailpiece

Suggested Specification

ADA-conforming, wheelchair accessible lavatory P-trap and angle valve assemblies shall be covered with the molded, antimicrobial TRUEBRO, INC. LAV GUARD undersink protective pipe cover Model__________, Accessory __________, Color__________(white or gray). Cover shall be secured with Snap-Clip flush reusable fasteners, angle stop shall have Lock-Lid locking access cover.

For additional information on this and other fine TRUEBRO products, contact:

TRUEBRO
MAKING AMERICA ACCESSIBLE

TRUEBRO, INC.
7 Main Street • P.O. Box 440 • Ellington, CT 06029
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Distributed by:

American Standard

TRIMBROOK™ 1.0 URINAL

VITREOUS CHINA

TRIMBROOK 1.0 URINAL

- Vitreous china
- Low-consumption (3.8 Lpf/1.0 gpf)
- Flushing rim
- Siphon jet flush action
- Extended sides for privacy
- 3/4" inlet spud
- Outlet connection threaded 2" inside (NPTF)
- 2 wall hangers
- Fixture only
- Meets ANSI flush requirements of 0.7 to 1.0 GPF

❑ **6561.017** Top spud

Nominal Dimensions:
445 x 311 x 679mm
(17-1/2" x 12-1/4" x 26-3/4")

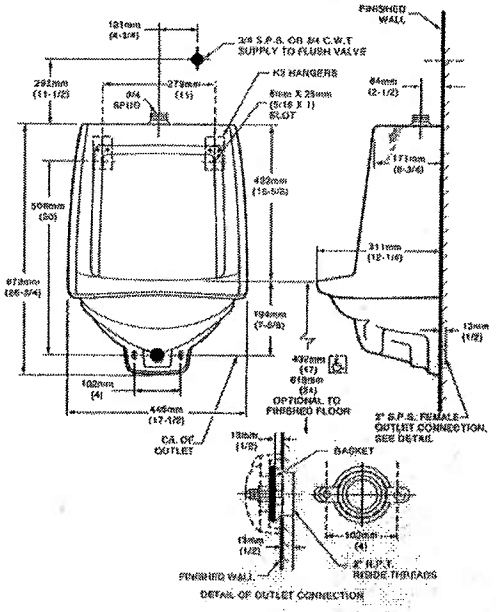
Fixture Dimensions conform to ANSI Standard A112.19.2

To Be Specified

❑ Color: ❑ White ❑ Bone ❑ Silver ❑ Shell ❑ Black

❑ Flush Valve: Sloan Royal 186-1

❑ Alternative Flush Valve:



● When installed so top of rim is 432mm (17") from finished floor.
MEETS THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR PEOPLE WITH DISABILITIES

NOTES:
FLUSH VALVE NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.
IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2.
These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

SPS 6561

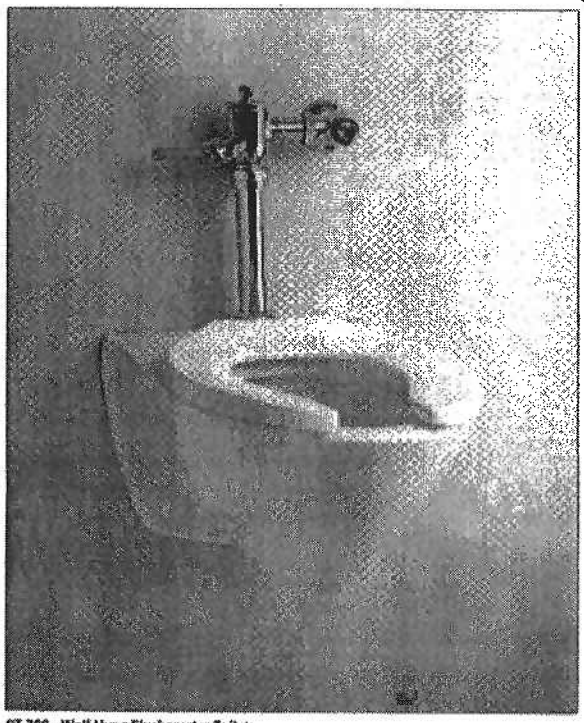
TBU-065

Revised 6/95

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE: RESTROOM DESIGN STANDARDS SHEET TITLE: URINALS SCALE: NONE — DATE: MARCH 2005	PROJECT NO.: TASK 1314.20 B-52

TOTO®
Perfection by Design

CT 708
Wall Hung Flushometer Toilet, 1.6 GPF



CT 708 - Wall Hung Flushometer Toilet
SC534 - Commercial Toilet Seat
TMT1HNC - 32 - Manual Toilet Flushometer Valve

- Powerful siphon jet flush
- Elongated rim
- Low consumption (6Lpf/ 1.6 Gpf)
- Available with performance matched TOTO Flushometer Valve.

Vitreous china wall hung flushometer toilet with elongated rim. Low consumption (6Lpf/1.6 Gpf) siphon jet flush.

CT708
1-1/2" top spud inlet, less seat.

CT708V
1-1/2" back spud inlet, less seat.

❑ **SS114**
SoftClose: Seat and lid gently close with a touch of a hand. Elongated, closed front seat with lid.

❑ **SC134**
Elongated, open front seat with cover.

❑ **SC534**
Elongated, open front seat less cover.

TOTO wall hung toilets require a supporting carrier (supplied by others). Follow carrier manufacturers' installation instructions.

Colors:
Standard *#01 Cotton*
Optional *See price book for additional colors*

Recommended flushometer valve:
TOTO Manual and Electronic Flush Valves are highly recommended for maximum performance.

Reliance Commercial Line

Baker
MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	WATER CLOSET-1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-53

CT 708
Wall Hung Flushometer Toilet, 1.6 GPF

PERFORMANCE
The TOTO low consumption flushometer toilet received high ratings during ANSI/ASME testing at independent laboratories. Designed with a powerful siphon jet flush, the bowl offers a large water surface and a 100% glazed trapway.

SPECIFICATIONS
Water Use: 1.6 Gpf/6.0Lpf
Flush System: Siphon jet
Min. Water Pressure:
15 psi (Flowing)
Water surface: 12-5/8" x 10-1/4"
Trap dia: 2-1/8"
Trap seal: 2-5/8"
Warranty: One Year Limited Warranty
Material: Vitreous china

Shipping Weight:
CT708–Bowl
49 lbs.
CT708V–Bowl
53.5 lbs.

Shipping Dimensions:
CT708–Bowl
15-1/2"L x 15-1/2"W
x 26-3/8"H
CT708V–Bowl
17-1/8"L x 16"W x 26"H

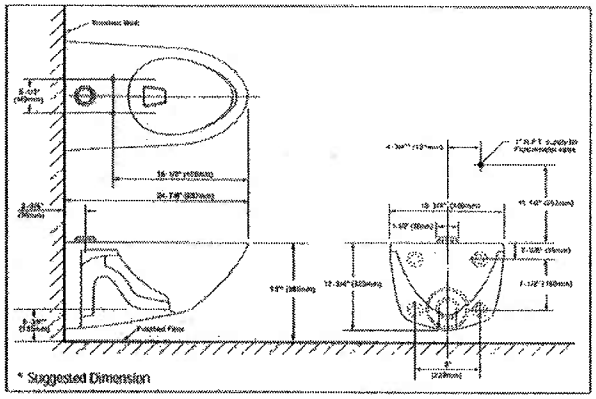
Recommended carrier: Any Jay R. Smith siphon jet support (Four-bolt).

Fixture dimensions and hydraulic performance meet or exceed ANSI/ASME standard A112.19.2M and CAN/CSA B 45 requirements.

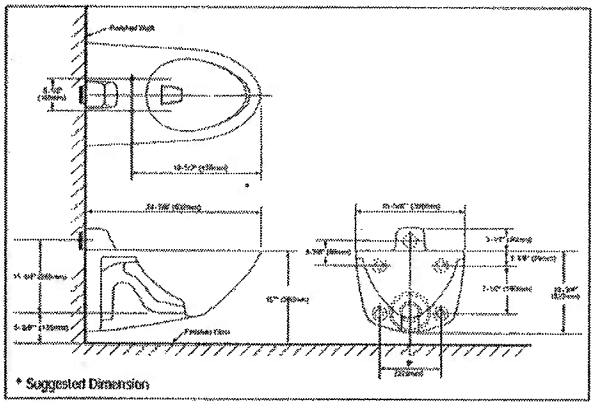
Listing / Approvals: IAPMO/UPC, CSA, City of Los Angeles, State of Massachusetts, and others.

Meets the American Disabilities Act Guidelines and ANSI A117.1 requirements where installed so top of rim is 17" from the finished floor.

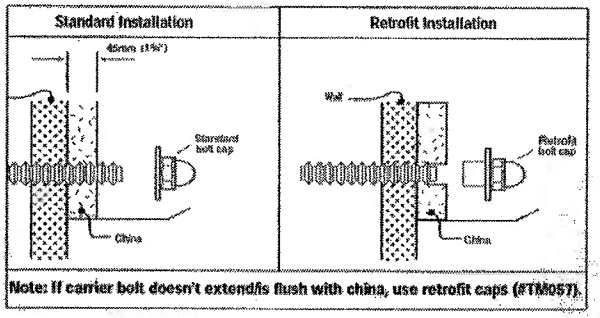
These dimensions and specifications are subject to change without notice.



CT 708 Top Spud



CT 708V Back Spud



Note: If carrier bolt doesn't extend/is flush with china, use retrofit caps (#TM057).

TOTO®
Perfection by Design
TOTO U.S.A., INC. • 1155 Southern Road, Morrow, GA 30260
Tel. (770) 282-8686 • Fax. (770) 282-8701 • www.totousa.com

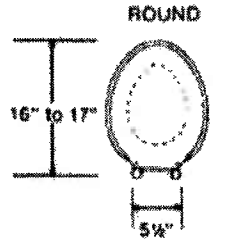
REV 2/01

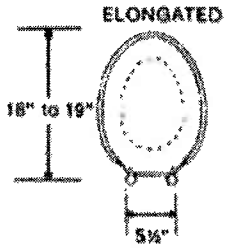
Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS SHEET TITLE WATER CLOSET-2 SCALE NONE DATE MARCH 2005	PROJECT NO. TASK 1314.20 B-54

MOLTEX®

HEAVY DUTY
SOLID PLASTIC
HIGH IMPACT

CHURCH
THE BEST SEAT IN THE HOUSE



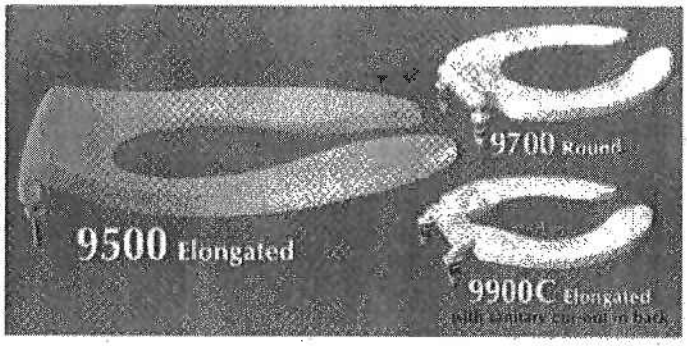


9500C

(5320.114)

Extra heavy duty Moltex comfort seat, solid Duraloy plastic elongated, open front toilet seat, built-in bumpers, rugged unbreakable external check with stainless steel posts.

___ White
___ Black



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ConNet/CAPS®

gt-wc-14

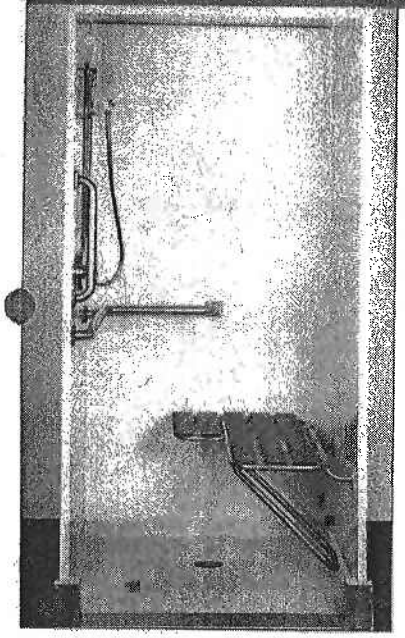
Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE WATER CLOSET-3		B-55
	SCALE NONE	DATE MARCH 2005	

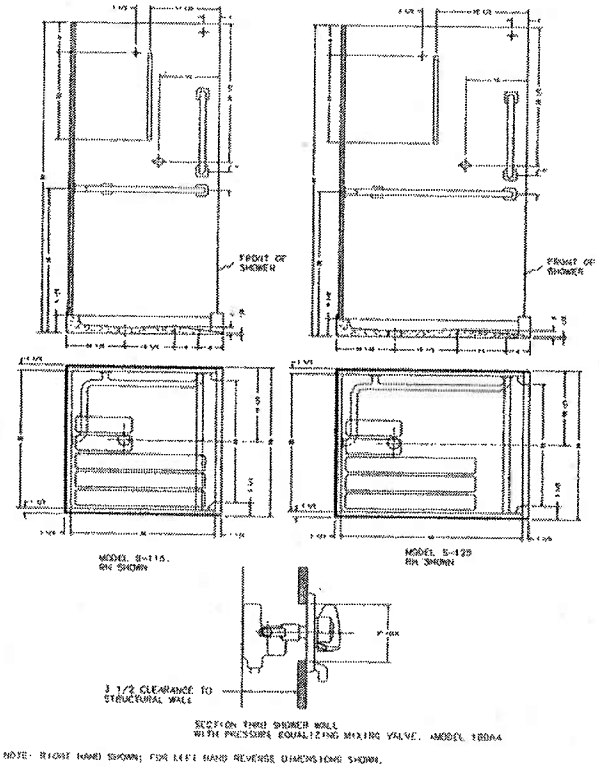
Designed for demanding institutional applications. Available in six models, all made with easy to clean Wonder-Wall sandwich panels. Models S-115 and S-125 made for the physically challenged.

Commander models S-115 and S-125 are designed and built for people who are physically challenged. Both models are available in finishes (1), (2) and (3). S-115 is ADA compliable. S-115 and S-125 have the same high quality features as the standard Commander series.

Standard equipment includes a model 180AA pressure balanced mixing valve with stops, in-line vacuum breaker with wall and hand held shower head with 69" flexible stainless steel hose and a supply elbow with flange. A 24" slide guide with hanger hook, one wrap around 1¹/₈" grab bar (horizontal) and one straight 1¹/₂" grab bar (vertical) are also included. Shower walls are reinforced to securely anchor all accessories. The folding wheelchair transfer shower seat is phenolic; the seat frame and supports are made of stainless steel tubing. The 1" stainless steel curtain rod is hung on brass chromium-plated brackets. A 10 oz. GSA approved curtain, pins and brass chromium-plated soap dish are standard features, grab bars, seat and other accessories are in accordance with ANSI standard A-117.1-1980. Commander models S-115 and S-125 are available in alternate sizes and finishes.

S-115/S-125 FOR THE PHYSICALLY CHALLENGED





SECTION THRU SHOWER WALL WITH PRESSURE EQUALIZING MIXING VALVE. MODEL 180AA

NOTE: RIGHT HAND SHOWN; FOR LEFT HAND REVERSE DIMENSIONS SHOWN.

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE SHOWERS-1		B-56
	SCALE NONE	DATE MARCH 2005	

14

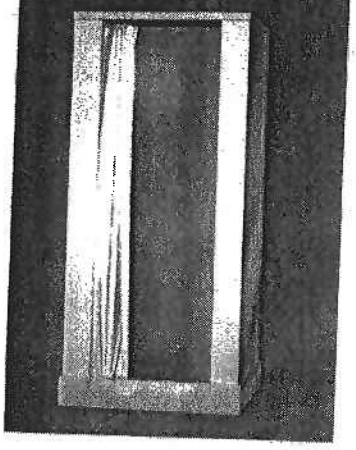
COMMANDER® SHOWER CABINETS

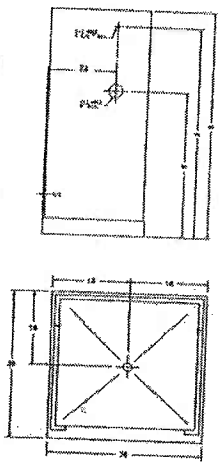
Commander shower cabinets are made for demanding institutional use. Special Wonder-Wall panels and top frame are made of galvanized-bonderized steel finished in (1) baked enamel inside and out, (2) stainless steel inside and out or, (3) stainless steel inside, baked enamel outside. Wonder-Wall panels with a 1" core and water impervious insulation significantly reduces noise and vibration. Floors are durable, one-piece pre-cast terrazzo. Cove corner interior walls are formed with 1" radii at all four corners for easy cleaning. There are no corner joints, cracks or crevices to leak or to harbor germs and grime.

On Commander models with back and side walls, panels are joined with anodized aluminum extruded molding.

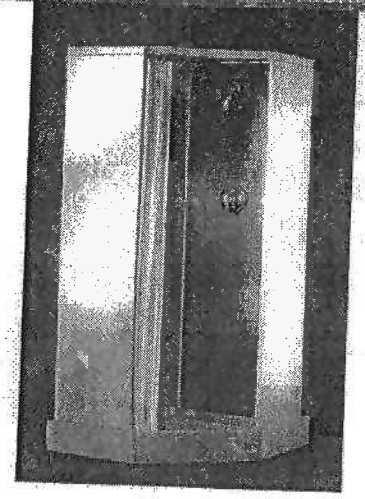
Standard equipment includes a model 190AA pressure-equalizing valve with stops, shower head, arm and flange. Also included are a stainless steel curtain rod, chromium-plated brass brackets, curtain and chromium-plated brass soap dish.

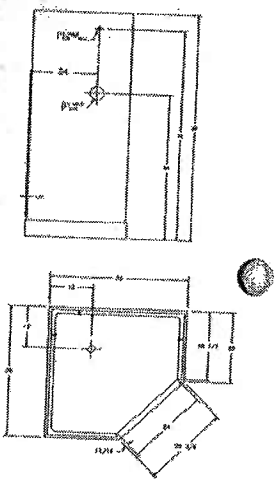
S-86 SINGLE ACCESS FRONT OPENING



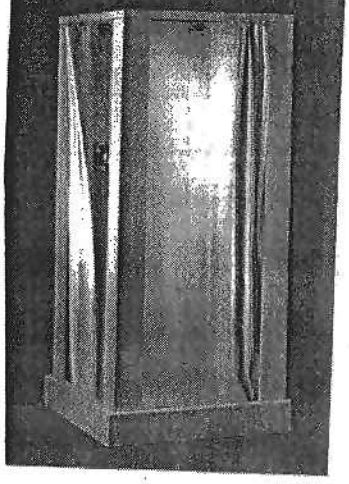


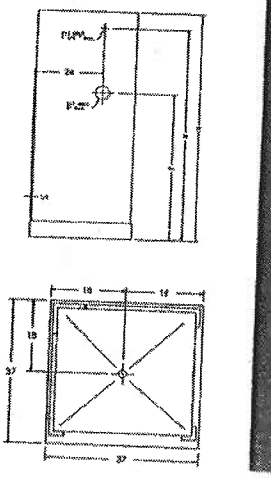
S-101 SINGLE ACCESS, FRONT OPENING NEO-CORNER



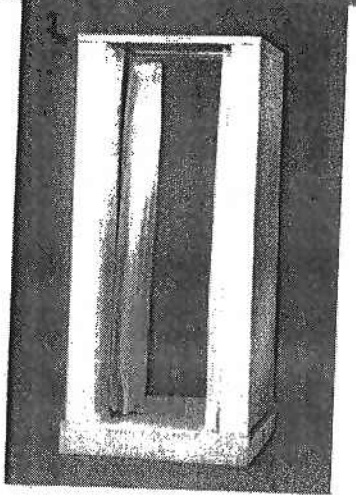


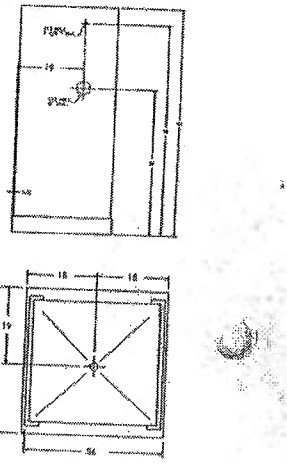
S-92 DOUBLE ACCESS CORNER OPENING





S-91 DOUBLE ACCESS WALK-THROUGH

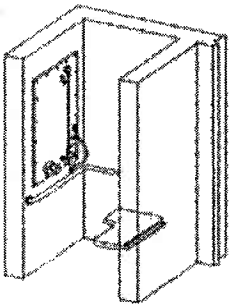




Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE SHOWERS-2		B-57
	SCALE NONE	DATE MARCH 2005	

Plumbing Fixtures: Showers

HN200 Barrier-Free Shower - Title 24 Compliant
Model HN200



- No Frame Required for Installation
- Ideal for Barrier-Free Shower Rooms
- Flexible Supply Hoses Make Rough-In Easier
- Completely Preassembled, Recess-Mounted Wall Unit
- Hydrostatically Tested to 150 PSI

Tech Data	CAD Files	Installation Instructions	Valve Selections	Send m liter
Tech Data Sheet PDF (100k) Introduction to Bradley Showers (247k) Shower Accessories		HN200 Barrier-Free Shower - Title 24 Compliant (with hand-held hose spray) (236k) Shower Operation & Service Guide (767k)	Hot & Cold Equa-Flo Pressure Balancing Mixing Valve Tempered	Plumbing Fi Sweets

Get Acrobat — Tech Data and Install Sheets PDFs require the FREE Adobe Acrobat Reader, please download the most recent version from Adobe Systems.

AutoCAD COMPATIBLE — CAD files require AutoDesk AutoCAD R1 compatible.

Baker

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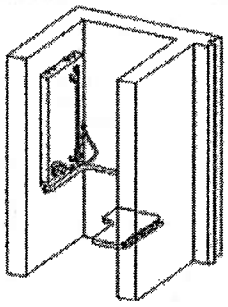
PROJECT TITLE: RESTROOM DESIGN STANDARDS		PROJECT NO.: TASK 1314.20
SHEET TITLE: SHOWERS-3		B-58
SCALE: NONE	DATE: MARCH 2005	

PRODUCT INFORMATION

Plumbing Fixtures: Showers

HN250 Barrier-Free Shower - Title 24 Compliant
Model HN250



- Ideal for Barrier-Free Shower Rooms
- Flexible Supply Hoses Make Rough-In Easier
- Completely Preassembled, Surface-Mounted Wall Unit
- Hydrostatically Tested to 150 PSI

Tech Data	CAD Files	Installation Instructions	Valve Selections	Send m liter
Tech Data Sheet PDF (100k) Introduction to Bradley Showers (247k) Shower Accessories		HN250 Barrier-Free Shower - Title 24 Compliant (with hand-held hose spray) (245k) Shower Operation & Service Guide (767k)	Hot & Cold Equa-Flo Pressure Balancing Mixing Valve Tempered	Plumbing Fi Sweets

Get Acrobat Tech Data and Install Sheets PDFs require the FREE Adobe Acrobat Reader, please download the most recent version from Adobe Systems.

AutoCAD Compatible CAD files require AutoDesk AutoCAD R1 compatible.

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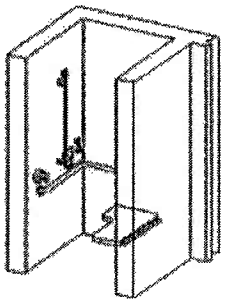
	SHEET TITLE SHOWERS-4		B-59
	SCALE NONE	DATE MARCH 2005	

Plumbing Fixtures: Showers

HN300 Barrier-Free Shower - Title 24 Compliant

Model HN300



- Ideal for Barrier-Free Shower Rooms
- Hydrostatically Tested to 150 PSI

Tech Data	CAD Files	Installation Instructions	Valve Selections	Send m lite
Tech Data Sheet PDF (100k) Introduction to Bradley Showers (247k) Shower Accessories		Shower Operation & Service Guide (767k)	Hot & Cold Equa-Flo Pressure Balancing Mixing Valve Tempered	Plumbing Fi Sweets

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AutoCAD COMPATIBLE — CAD files require AutoDesk AutoCAD R1 compatible.

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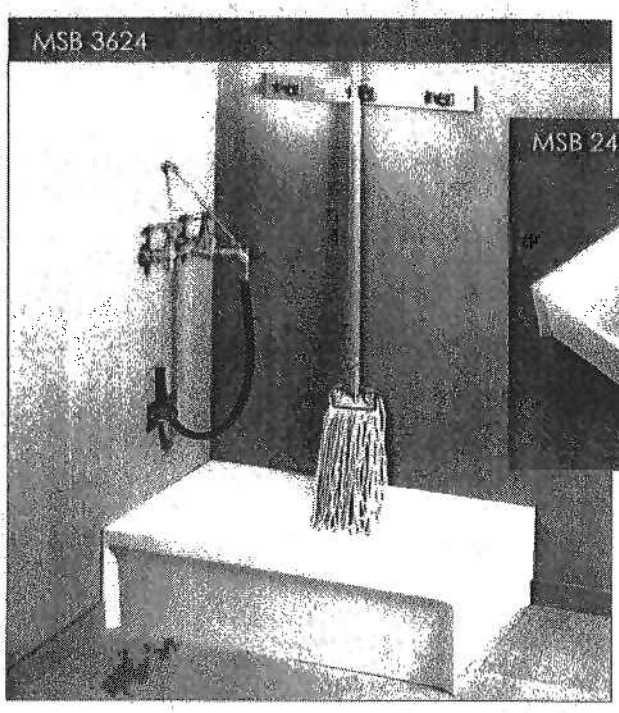
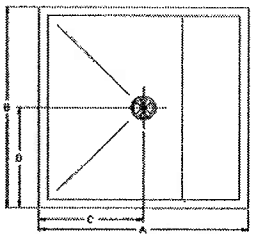
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	SHOWERS-5
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-60

6

MOP SERVICE BASINS





ROUGHING IN DETAILS

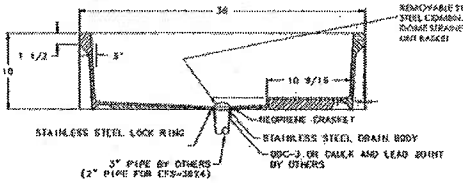
MODEL NO.	A	B	C	D	E
MSB-2424	24"	24"	12"	12"	10"
MSB-3624	36"	24"	18"	12"	10"

SPECIFICATIONS

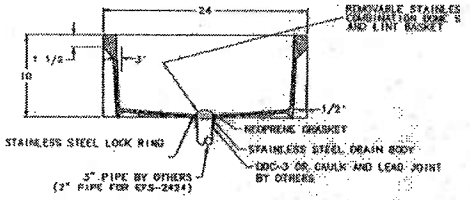
MODELS: MSB-3624; MSB-2424

The MOP SERVICE BASIN shall be a Molded-Stone® product as manufactured by Flat Products. The molding shall be done in matched metal dies under heat and pressure, resulting in a one-piece homogeneous product. Color: White.

Both models shall have 10" high walls with not less than 1" wide shoulders. MSB-3624 only shall have an integrally molded shelf 10 9/16" where indicated. The factory installed drain body shall be stainless steel and designed to allow for a lead caulk or optional QDC-3 gasket for 3" pipe. A combination dome strainer and lint basket made from stainless steel shall be included. Optional QDC 3-2 available for 2" pipe. Also available with factory installed stainless steel drain body for lead caulked joint to accept a 2" pipe with optional flat strainer (Model No.1453-BB) for residential use (Model Nos. EFS-3624 and EFS-2424).



MSB 3624 (WITH SHELF)



MSB 2424 (LESS SHELF)

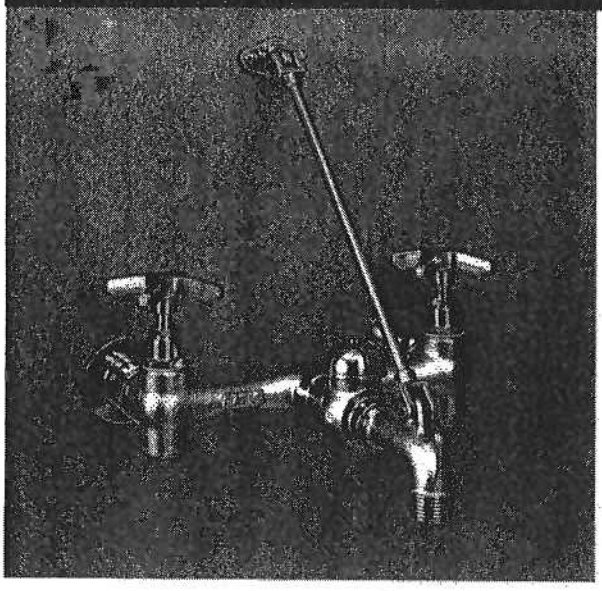
Baker

MICHAEL BAKER JR. INC.
801 Cromwell Park Drive
Suite 110
Glen Burnie, MD 21061

PROJECT TITLE	RESTROOM DESIGN STANDARDS
SHEET TITLE	JANITORS CLOSET 1
SCALE	NONE
DATE	MARCH 2005
PROJECT NO.	TASK 1314.20
	B-61

FIAT mop service receptors of Molded-Stone® set the industry standard for quality and reliability. In addition, our complete line of MSB accessories provide the plumbing professional, engineer, and specifier with a complete package; designed, engineered and backed by FIAT's commitment to the best in mop service basins.

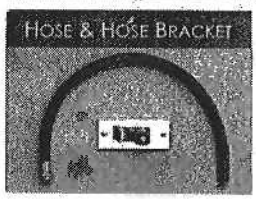
830-AA SERVICE FAUCET



Wall mounted fitting. Chrome plated with vacuum breaker, integral stops, adjustable wall brace, pail hook and 3/4" hose thread on spout. Body inlets 8" center to center, four arm handles. Center of spout outlet from back of wall flange 8". The 830-AA Faucet meets or exceeds all of the requirements of ANSI A-112.18.1-1975, "Finished and Rough Brass Plumbing Fixture Fittings", as tested by U.S. Testing Laboratories (copy of report available upon request). The 830-AA Faucet is CSA approved per file number LM 57412-1, Class 6811 01.

ACCESSORIES

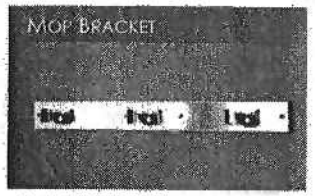
HOSE & HOSE BRACKET



Model 832-AA 30" long flexible h duty 5/8" rubber hose, cloth reinf with 3/4" chrome coupling at one Bracket is 5" long x 3" wide, stainles with rubber grip.

ACCESSORIES

MOP BRACKET

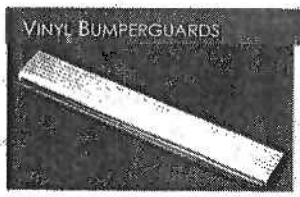


Model 889-CC 24" long x 3" wide, stainless steel with three (3) rubber foot grips.

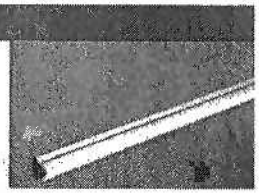
STAINLESS STEEL BUMPERGUARDS

Model E-88-AA
For Molded-Stone Mop Basins.

VINYL BUMPERGUARDS



Model 1239-88
For Terrazzo Mop Basins.



Model E-77-AA
For Molded-Stone Mop Basins.

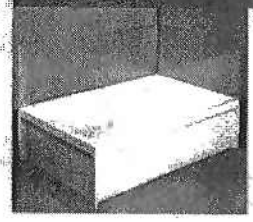
ALTERNATE STRAINER

Model 1453-88
Flat type stainless.

SILICONE SEALANT

Model No. 833-AA

WALL GUARD



For use with either Molded-Stone or precast Terrazzo Mop Basins, made of heavy gauge stainless steel and is used to protect walls adjacent to the receptor. Two panels are supplied for corner installations, a third panel is required for a recessed installation. The wall guard models are identified as follows:

MSG 2424; MSG 3232;
MSG 3624; MSG 3636

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE **RESTROOM DESIGN STANDARDS**		PROJECT NO. **TASK 1314.20**
	SHEET TITLE **JANITORS CLOSET-2**		**B-62**
	SCALE **NONE**	DATE **MARCH 2005**	

Corbin Russwin

Trim Designs

Mortise Locksets ML2000 Series

Lustra

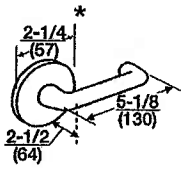
Complies with codes requiring lever to return to within 1/2" (13mm) of door face. Brass, bronze or stainless steel

LWA
Lever: Wrought
Rose: Wrought
Door thickness: 1 3/8" (35mm), 1 3/4" (44mm), 2 1/4" (57mm)

LWB
Lever: Wrought
Rose: Cast
Door thickness: 1 3/8" (35mm), 1 3/4" (44mm), 2 1/4" (57mm)

LSA
Lever: Cast
Rose: Wrought
Door thickness: 1 3/8" (35mm), 1 3/4" (44mm), 2 1/4" (57mm)

LSB
Lever: Cast
Rose: Cast
Door thickness: 1 3/8" (35mm), 1 3/4" (44mm), 2 1/4" (57mm)



*Dimensions:
inches
millimeters

ML2000.8

Baker MICHAEL BAKER JR. INC. 801 Cromwell Park Drive Suite 110 Glen Burnie, MD 21061	PROJECT TITLE RESTROOM DESIGN STANDARDS		PROJECT NO. TASK 1314.20
	SHEET TITLE MORTISE LOCKSET DOOR LEVER		B-63
	SCALE NONE	DATE MARCH 2005	

APPENDIX G

CODES AND STANDARDS

MARTIN STATE AIRPORT

BWI BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT

CODES AND STANDARDS

ENFORCEMENT OF FIRE RELATED CODES AND STANDARDS BY THE MAA OFFICE OF THE FIRE MARSHAL (OFM) AS THE AUTHORITY HAVING JURISDICTION (AHJ)

The OFM is the AHJ for the enforcement of the Maryland State Fire Prevention Code, the fire safety aspects of the adopted Building Codes, and all other adopted fire related Codes and Standards for the BWI Marshall and MTN Airports.

The following Codes and Standards are applicable to all new project designs, specifications, construction, and occupancy. As such, the OFM enforces them during plan review and inspections as authorized representatives of the Maryland State Fire Marshal. Failure to comply with the fire and life safety related requirements of the Codes and Standards listed herein would result in the withholding of project design approvals, inspection approvals, or occupancy approvals by the OFM. Additionally, violations of these codes are subject to the penalties set forth in the Public Safety Article of the Annotated Code of Maryland.

Questions regarding interpretations and application of the referenced codes should be referred to the BWI Marshall OFM. If there are any discrepancies in this list, the latest editions adopted by the State of Maryland take precedence. Whenever a newer Edition of the NFPA Codes or Standards becomes available, it may be accepted for use by the OFM. Please contact the OFM in advance concerning the use of newer Standards than are listed below.

Whenever a newer Edition of the Codes listed herein becomes adopted under COMAR Regulations or the State Fire Code, they supersede the Editions listed herein. It is recommended that the following resources be used to determine the latest adopted Editions of these Codes and Standards.

For State of Maryland Fire Codes:
http://www.firemarshal.state.md.us

FOR FIRE RELATED ASPECTS OF BUILDING CODES:
HTTP://MDCODES.UMBC.EDU

ADOPTED CODES AND STANDARDS

The following Codes and Standards are applicable to all new project designs, specifications, construction, and occupancy at BWI Marshall and MTN airports.

- Maryland State Fire Prevention Code, Revised January 1, 2013
- Maryland Aviation Administration Design Standards (DST)
- International Building Code (IBC), 2009 Edition
- International Plumbing Code (IBC), 2009Edition
- International Mechanical Code (IMC), 2009 Edition
- International Existing Building Code, 2009 Edition

Applicable COMAR (Code of Maryland) Regulations:

COMAR 05.02.01 Maryland Model Performance Code 01 January 2010.
COMAR 05.02.02 Maryland Accessibility Code 18 March 2002.
COMAR 05.02.07 Maryland Building Performance Standards (MBPS) 01 January 2010.
COMAR 09.20.01 Maryland State Plumbing Regulations 23 July 2001.
COMAR 29.06.01.07 State Fire Prevention Code 01 August 2004.

Applicable COMAR Regulations above incorporate by reference, and contain amendments to the following Model Codes:

International Building Code, 2009.
International Existing Building Code, 2006
International Energy Conservation Code (IECC) 2009
International Plumbing Code 2009 (Maryland Model Performance Code for industrialized buildings).
International Mechanical Code 2009 Edition
NFPA 1, Uniform Fire Code, 2009 Edition
NFPA 70, National Electrical Code, 2008 Edition
NFPA 101, Life Safety Code, 2009 Edition with modifications
Americans with Disabilities Act Accessibility Guidelines 23 July 2004 and amended 05 August 2005.
National Standard Plumbing Code Illustrated 2006, and 2007 Supplement (Maryland Building Performance Standards)

NFPA CODES AND STANDARDS

In addition to the above, the Codes and Standards below, as published by the National Fire Protection Association (NFPA), are also applicable. While those listed below comprise the most widely used regulations concerning new construction, please refer to Chapter 2 of NFPA 1, Fire Prevention Code, for a complete list of other reference Standards that may also apply to particular projects or unusual hazards.

NFPA Code or Standard	Title	Edition	Notes (see below)
1	Uniform Fire Code	2009	1
10	Portable Fire Extinguishers	2010	2
11	Low, Medium, and High Expansion Foam	2010	2
12	Carbon Dioxide Extinguishing Systems	2008	2
12A	Halon 1301 Fire Extinguishing Systems	2009	2
13	Installation of Sprinkler Systems	2010	2
14	Standpipe and Hose Systems	2010	2
15	Water Spray Fixed Systems for Fire Protection	2007	2
16	Foam-Water Sprinkler and Foam-Water Spray Systems	2007	2
17	Dry Chemical Extinguishing Systems	2009	2
17A	Wet Chemical Extinguishing Systems	2009	2
20	Installation of Stationary Fire Pumps	2010	2
22	Water Tanks for Private Fire Protection	2008	2
24	Private Fire Service Mains and their Appurtenances	2010	2
25	Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems	2011	2
30	Flammable and Combustible Liquids Code	2008	2
30A	Code for Motor Fuel Dispensing Facilities and Repair Garages	2008	2
31	Standard for the Installation of Oil-Burning Equipment	2006	2
33	Spray Application Using Flammable or Combustible Materials	2011	2
37	Installation and Use of Stationary Combustion Engines and Gas Turbines	2010	2
51B	Fire Prevention During Welding, Cutting, and Other Hot Work	2009	2
52	Vehicular Fuel Systems Code	2010	2
54	National Fuel Gas Code	2009	2
55	Compressed Gases	2010	2
58	Liquefied Petroleum Gas Code	2011	2
70	National Electrical Code	2011	2
72	National Fire Alarm Code	2010	2
75	Standard for the Protection of Information Technology Equipment	2009	3
76	Standard for the Fire Protection of Telecommunications Facilities	2009	3
80	Fire Doors and Fire Windows	2010	2
80A	Recommended Practice for Protection of Buildings from Exterior Fire Exposures	2007	3
88A	Parking Structures	2011	2
90A	Installation of Air-Conditioning and Ventilating	2009	2

NFPA Code or Standard	Title	Edition	Notes (see below)
	Systems		
90B	Installation of Warm Air Heating and Air-Conditioning Systems	2009	2
92A	Standard for Smoke-Control Systems Utilizing Barriers and Pressure Differences	2009	3
92B	Standard for Smoke Management Systems in Malls, Atria, and Large Spaces	2009	3
96	Ventilation Control and Fire Protection of Commercial Cooking Operations	2011	2
101	Life Safety Code	2009	1
105	Installation of Smoke Door Assemblies	2010	3
110	Emergency and Standby Power Systems	2010	2
170	Fire Safety Symbols	2009	3
204	Smoke and Heat Venting	2007	2
220	Types of Building Construction	2009	2
221	Fire Walls and Fire Barrier Walls	2009	2
241	Safeguarding Construction, Alteration, and Demolition Operations	2009	2
407	Aircraft Fuel Servicing	2007	2
408	Standard for Aircraft Hand Portable Fire Extinguishers	2010	3
409	Aircraft Hangars	2011	2
410	Aircraft Maintenance	2010	2
415	Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways	2008	2
418	Heliports	2006	2
502	Road Tunnels, Bridges, and Other Limited Access Highways	2011	3
505	Powered Industrial Trucks	2011	2
703	Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials	2009	2
704	Standard System for the Identification of the Hazards of Materials for Emergency Response	2007	2
780	Standard for the Installation of Lightning Protection Systems	2011	3
2001	Clean Agent Fire Extinguishing Systems	2008	2
5000	Building Construction and Safety Code	2009	4

NOTES TO NFPA STANDARDS AND CODES TABLE

1. Direct Adoption By State Fire Prevention Code – the Maryland State Fire Code directly adopts this Code or Standard *(Reference: TITLE 29. DEPARTMENT OF STATE POLICE, SUBTITLE 06, FIRE PREVENTION COMMISSION, CHAPTER 01, FIRE PREVENTION CODE, Amended Effective August 1, 2004).* Check the State Fire Prevention Code for possible amendments to the adopted Code or Standard.

2. Mandatory Requirements by Referenced Publication - Although not directly adopted by the State Fire Prevention Code of Maryland, this Code or Standard is referenced by other adopted Standards or Codes and are therefore applicable. See NPFA 1, Chapter 2, for a complete listing of Referenced Publications, which are mandatory requirements.

3. Recommended Practice - Although not directly adopted by the State Fire Prevention Code, and not adopted by reference, this may be considered recommended practice by the OFM for certain projects. Check with the OFM for guidance regarding application of this Standard to particular projects.

4. NFPA 5000 is listed as a “Referenced Publication” by NFPA 1. However, the Maryland Fire Prevention Code specifically deleted it from adoption and substituted the IBC.

STATE OF MARYLAND
FIRE PREVENTION CODE

MARTIN STATE AIRPORT

BWI BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT

State of Maryland
Fire Prevention Code

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Colonel Marcus L. Brown
Secretary
Department of State Police

William E. Barnard, CFPS
State Fire Marshal

Promulgated by:
State Fire Prevention Commission
Timothy F. Dayton, Chairman

http://www.mdsp.org/sfpc

(Revised January 1, 2013)

Chapter 1: Fire Prevention Code **PAGE**

(COMAR 29.06.01)

.08 National Fire Protection Association 1 Fire Code

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 01 FIRE PREVENTION CODE
Authority: Public Safety Article §6-206 and 6-501
(Amended effective January 1, 2013)

.01 Title.
This chapter shall be known and may be cited as the State Fire Prevention Code.

.02 Purpose.
A. The purpose of this chapter is to establish minimum requirements that will provide a reasonable degree of fire prevention and control to safeguard life, property, or public welfare from:

(1) The hazards of fire and explosion arising from the storage, handling, or use of substances, materials, or devices; and

(2) Conditions hazardous to life, property, or public welfare in the use or occupancy of buildings, structures, sheds, tents, lots, or premises.

B. This chapter incorporates by reference NFPA 1 Fire Code (2012 Edition), except as amended in Regulations .08 and .09 of this chapter, and NFPA 101 Life Safety Code (2012 Edition), except as amended in Regulation .07 of this chapter. Certain requirements of the International Building Code as incorporated by reference by the Maryland Building Performance Standards are also adopted by incorporation by reference in Regulations .06—.16 of this chapter and are considered minimum standards.

C. The State Fire Prevention Commission recommends the use of the NFPA National Fire Codes or other nationally recognized standards in technical matters not specifically addressed by this chapter.

.03 Application and Scope.
A. This chapter applies to both new and existing buildings and conditions. In various sections there are specific provisions for existing buildings that may differ from those for new buildings. Unless otherwise noted, this chapter does not apply to facilities, equipment, structures, or installations that were existing or approved for construction or installation before the effective date of this chapter, except in those cases in which it is determined by the authority having jurisdiction (AHJ) that the existing situation constitutes a hazard so inimical to the public welfare and safety as to require correction. The requirements for existing buildings and conditions may be modified if their application clearly would be impractical in the judgment of the AHJ, but only if it is clearly evident that a reasonable degree of safety is provided. The State Fire Marshal or the legally appointed designee has the authority to make a determination of the applicability of this chapter to any building or condition in it, subject to the right of appeal to the State Fire Prevention Commission as prescribed in COMAR 29.06.02.

B. (Repealed)

C. The provisions of this chapter do not apply in Baltimore City except to those buildings and conditions specifically prescribed in Public Safety Article, Title 6, Subtitle 4, Annotated Code of Maryland.

D. The provisions of this chapter do not apply to buildings used solely as dwelling houses for not more than two families as prescribed in Public Safety Article, Title 6, Subtitle 3, Annotated Code of Maryland.

.04 Enforcement.

A. Enforcement of this chapter is the responsibility of:

(1) The State Fire Marshal;

(2) A legally designated fire official of a county or municipal corporation of the State; or

(3) Other persons legally appointed by the State Fire Marshal under Public Safety Article, Title 6, Subtitle 3, Annotated Code of Maryland.

B. The State Fire Marshal or the legally appointed designee may accept alternate methods of satisfying the intent of this chapter if the material, method, or work is at least the equivalent of that required by this chapter in quality, effectiveness, durability, and safety, and meets or exceeds the intent of the chapter.

C. If there are differing or conflicting requirements between this chapter and codes or standards adopted by incorporation by reference by this chapter, the State Fire Marshal or the legally appointed designee shall determine which requirements apply, subject to the right of appeal to the State Fire Prevention Commission.

D. If Public Safety Article, Annotated Code of Maryland, or this chapter requires that a permit, license, or certificate of approval be obtained from the State Fire Marshal, it shall be obtained from the State Fire Marshal, or other appropriate authority, of the county, city, or incorporated town where the activity or equipment for which the permit, license, or certificate required is located.

E. A violation of this chapter is subject to the penalties set forth in the Public Safety Article, Annotated Code of Maryland.

.05 Definitions.

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

(1) "Authority having jurisdiction (AHJ)" means the State Fire Marshal or the legally appointed designee as prescribed in this chapter.

(2) "International Code Council (ICC)" means International Code Council, Inc., 500 New Jersey Avenue N.W., 6th Floor, Washington, DC 20001-2070.

(3) "Legally appointed designee" means those local or county officials specifically authorized under the Public Safety Article, Annotated Code of Maryland, to enforce the provisions of the State Fire Laws and State Fire Prevention Code.

(4) "New building or condition" means a building, structure, installation, plant, equipment, renovation, or condition:

(a) For which a building permit is issued on or after the effective date of this chapter;

(b) On which actual construction is started on or after the effective date of this chapter in a jurisdiction where a building permit is not required;

(c) Which represents a change from one occupancy classification to another on or after the effective date of this chapter; or

(d) Which represents a situation, circumstance, or physical makeup of any structure, premise, or process that was commenced on or after the effective date of this chapter.

(5) "NFPA" means National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

.06 Incorporation by Reference.

A. In this chapter, the following documents are incorporated by reference, with the amendments specified in this chapter. Tentative interim amendments and supplements to these documents and to the codes and standards referenced in these documents are not included as part of this chapter unless specifically adopted by this chapter.

B. Documents Incorporated.

(1) NFPA 1 Fire Code (2012 Edition).

(2) NFPA 101 Life Safety Code (2012 Edition).

(3) International Building Code as incorporated by reference by the Maryland Building Performance Standards, which can be found under COMAR 05.02.01.02-1 in depository libraries and in the depositories described in §C of this regulation.

C. Incorporation by Reference Locations. The documents incorporated by reference in §B of this regulation are available for inspection at the following depositories:

(1) Office of the State Fire Marshal, Headquarters, 1201 Reisterstown Road, Building C, Pikesville, MD 21208, (410) 653-8980, 1-800-525-3124;

(2) Office of the State Fire Marshal, Northeast Regional Office, 2 South Bond Street, Suite 401, Bel Air, MD 21014, (410) 836-4844;

(3) Office of the State Fire Marshal, Upper Eastern Regional Office, 301 Bay Street, Lower Level, Easton, MD 21601, (410) 822-7609;

(4) Office of the State Fire Marshal, Western Regional Office, 18345 Colonel Henry K. Douglas Drive, Suite 240, Hagerstown, MD 21740, (301) 766-3888;

(5) Office of the State Fire Marshal, Southern Regional Office, 200 Duke Street, Prince Frederick, MD 20678, (443) 550-6820;

(6) Office of the State Fire Marshal, Metro Regional Office, 15 East Main Street, Westminster, MD 21157, (410) 871-3050;

(7) Office of the State Fire Marshal, Maryland State Police Barracks "C", 1125 National Highway, Cumberland, MD 21502, (301) 729-5021;

(8) Office of the State Fire Marshal, 170 East Main Street, Elkton, MD 21921, (410) 996-2790;

(9) Office of the State Fire Marshal, Lower Eastern Regional Office, 201 Baptist Street, Suite 17, Salisbury, MD 21801, (410) 713-3780;

(10) Office of the State Fire Marshal, Garrett County Public Safety Center, 67 Friendsville Road, McHenry, MD 21541, (301) 387-0437;

(11) Department of Legislative Services Library, 90 State Circle, Annapolis, MD 21401, (410) 946-5400;

(12) Maryland State Law Library, Courts of Appeal Building, 361 Rowe Boulevard, Annapolis, MD 21401, (410) 260-1430;

(13) Thurgood Marshall Law Library, University of Maryland School of Law, 501 West Fayette Street, Baltimore, MD 21201, (410) 706-0784;

(14) Hornbake Library, University of Maryland, Marylandia and Rare Book Department, College Park, MD 20742, (301) 405-9210; and

(15) State Library Resource Center, Enoch Pratt Free Library, Maryland Department, 400 Cathedral Street, Baltimore, MD 21201, (410) 396-1789.

.07 National Fire Protection Association 101 Life Safety Code.
The NFPA 101 Life Safety Code (2012 Edition) is incorporated by reference, except for the following amendments:

A. Amend Subsection 3.3.62 to add the following Paragraph: 3.3.62.3 Bulkhead Door. A type of door assembly covering an opening in the ground providing direct access to a basement, the floor of which is not more than 8 feet below ground level. The door consists of a single rigid leaf or two overlapping rigid leaves or covers which need to be pushed or lifted upwards in order to be opened. A person, after opening the door, can walk up a series of steps to escape to the outside.

B. Amend Paragraph 3.3.140.1 and Subparagraphs 16.6.1.1.2 and 17.6.1.1.2 to delete "more than 3, but".

C. Amend Paragraphs 3.3.188.4 and 6.1.4.1 to delete "four or more".

D. Amend Paragraphs 3.3.188.12 and 6.1.9.1 to replace "four" with "six".

E. Amend Subsection 4.5.8 and Paragraph 4.6.12.1 to delete "for compliance with the provisions of this Code".

F. Amend Paragraph 4.6.12.3 to delete "by the Code".

G. Amend Subsection 4.8.2 to add the following Paragraph: 4.8.2.4 Emergency plans shall be maintained in a location approved by the AHJ.

H. Amend Subparagraph 7.2.1.5.12 to replace “required” with “provided”.

I. Amend Subparagraph 7.2.1.6.3 to replace "in Chapters 11 through 43" with "by the AHJ and Chapters 11 through 43".

J. Amend Subparagraph 7.2.1.7.1 to delete “required to be”.

K. Amend Subparagraph 7.2.1.7.3 to delete “Required”.

L. Amend Paragraph 7.9.1.2 to replace "only" in the first sentence with ", but not be limited to,".

M. Amend Paragraph 9.6.2.6 to add the following: This paragraph does not permit the omission of manual fire alarm boxes in accordance with other provisions of this Subsection unless specifically permitted by Chapters 11 through 43.

N. Amend Paragraph 9.7.1.1 to add the following Subparagraph: 9.7.1.1.1 For new ceiling installations, drop-out ceilings as referenced in NFPA 13, Subsection 8.15.14, shall be prohibited.

O. Amend Subsection 9.7.5 to delete "required by this Code".

P. Amend Paragraph 11.8.3.1 to add “High-rise buildings do not include a structure or building used exclusively for open-air parking.”

Q. Amend Paragraph 11.11.2.1 to add "or other approved testing standard approved by the State Fire Marshal".

R. Amend Paragraphs 12.2.4.1 and 13.2.4.1 to add the following:
(1) Not less than two separate exits shall be provided on every story.
(2) Not less than two separate exits shall be accessible from every part of every story.

S. Amend Subsections 16.1.1 and 17.1.1 to add the following Paragraphs:
16.1.1.8 and 17.1.1.8 Day-care centers providing day care for school-age children before or after school hours in a building which is in use as a public or private school are not required to meet the provisions of this chapter, but shall meet the provisions for educational occupancies.

T. Amend Subparagraphs 16.2.11.1.1 and 17.2.11.1.1 to add the following item:
(4) For windows at grade the minimum net clear opening shall be permitted to be 5.0 ft2.

U. Amend Sub-subparagraphs 16.6.1.4.1.1 and 17.6.1.4.1.1 to delete "more than three, but" and replace "seven" with "nine".

V. Amend Sub-subparagraphs 16.6.1.4.1.2 and 17.6.1.4.1.2 to replace "7" with "9".

W. Amend Subparagraphs 16.6.1.7.1 and 17.6.1.7.1 to replace “both” with “all” and Items (1) and (2) with the following Items:

(1) The minimum staff-to-client ratio shall be not less than one staff member for up to eight clients, including the caretaker's own children incapable of self-preservation.
(2) There shall be not more than four clients incapable of self-preservation, including the caretaker's own children incapable of self-preservation.
(3) A staff-to-client ratio of at least one staff member to every two clients incapable of self-preservation shall be maintained at all times.
(4) The staff-to-client ratio shall be permitted to be modified by the authority having jurisdiction where safeguards in addition to those specified in this section are provided.

X. Amend Paragraphs 16.6.2.1 and 17.6.2.1 and Subparagraphs 16.6.2.4.5 and 17.6.2.4.5 to add the following: Bulkhead doors may not serve as a primary means of escape.

Y. Amend Paragraphs 16.6.2.2 (Reserved) and 17.6.2.2 (Reserved) to add the following:
SLIDING DOOR: For family day-care homes, a sliding door used as a required means of escape shall comply with the following conditions:

(1) The sliding door shall have not more than one, easily operated, locking device that does not require special knowledge, effort, or tools to operate;
(2) There may not be draperies, screens, or storm doors that could impede egress;
(3) The sill or track height may not exceed 1/2 inch above the interior finish floor;
(4) The surface onto which exit is made shall be an all weather surface such as a deck, patio, or sidewalk;
(5) The floor level outside the door may be one step lower than the inside, but not more than 8 inches lower;
(6) The sliding door shall open to a clear open width of at least 28 inches;
(7) Before day-care use each day, the sliding door shall be unlocked and tested to the full required width to be sure it is operating properly, and the door shall be nonbinding and slide easily; and

(8) During periods of snow or freezing rain, door tracks shall be cleared out and the door opened periodically throughout the day in order to ensure proper operation.

Z. Amend Paragraphs 16.6.2.3 (Reserved) and 17.6.2.3 (Reserved) to add the following: SPECIAL MEANS OF ESCAPE REQUIREMENTS: For family day-care homes, deadbolt locks shall be provided with approved interior latches, or these locks shall be of a captured key design from which the key cannot be removed from the interior side of the lock when the lock is in the locked position.

AA. Amend Subsections 16.7.5 and 17.7.5 to add the following exception: Exception: Day-care homes with no more than three clients for overnight lodging.

BB. Amend Subparagraph 17.6.3.4.4 to delete "existing".

CC. Amend Subparagraph 22.4.5.1.3 to delete "or 22.4.5.1.5".

DD. Amend Subparagraphs 22.4.5.1.4(1) and 23.4.5.1.4(1) to replace "2 minutes" with "30 seconds".

EE. Amend Subparagraphs 22.4.5.1.4(2) and 23.4.5.1.4(2) to replace "2-minute" with "30-second".

FF. Delete Subparagraphs 22.4.5.1.5 and 23.4.5.1.5.

GG. Delete Paragraphs 22.4.5.2 and 23.4.5.2.

HH. Amend Subparagraph 23.4.5.1.3 to delete "or 23.4.5.1.5".

II. Amend Paragraph 24.1.1.1 to replace "three" with "five" and delete ", if any, accommodated in rented rooms".

JJ. Amend Subparagraphs 24.2.2.3.3, 32.2.2.3.1(3), and 33.2.2.3.1(3) to insert ", or not less than 5.0 ft2 when at grade" after "5.7 ft2".

KK. Amend Paragraph 26.1.1.1 to replace "buildings" with "buildings that do not qualify as one- and two-family dwellings".

LL. Amend Sub-subparagraph 33.3.3.4.8.1 to delete “33.3.3.4.8.2 and”.

MM. Delete Sub-subparagraph 33.3.3.4.8.2.

NN. Amend Sub-subparagraph 36.4.4.4.3.2 to add "where approved alternative visible means of occupant notification is provided".

OO. Amend Paragraph 38.2.4.4(3)(a) to replace “stories.” with “stories, with no other openings therein.”

PP. Amend Subparagraphs 42.3.4.1.2 and 42.3.4.1.3 to replace "Storage occupancies" with "Storage occupancies less than three stories".

.08 National Fire Protection Association 1 Fire Code.
The NFPA 1 Fire Code (2012 Edition) is incorporated by reference, except for the amendments in Regulation .09 of this chapter and the following amendments:

A. Delete Section 1.9.

B. Delete Section 1.10. (See COMAR 29.06.02)

C. Delete Subsection 1.11.3.

D. Amend Subsection 1.12.1 to add the following Paragraph: 1.12.1.1 Permits, certificates, notices, approvals, or orders required by this code shall be governed by the policies and procedures of the AHJ.

E. Amend Paragraph 1.12.6.13 to replace “Permits shall” with “Permits may”.

F. Amend Subsection 1.12.8 to replace "shall" with "may".

G. Amend Subsection 1.13.2 to delete “Mandatory.” and replace “shall” with “may”.

H. Delete Paragraphs 1.13.12.4 and 1.16.4.2.

I. Amend Section 2.2 to delete the referenced publication NFPA 5000 Building Construction and Safety Code, 2012 edition. Wherever NFPA 5000 is referenced, other than for extracted text, substitute the building code adopted by the AHJ. Delete the referenced publication NFPA 150 Standard on Fire and Life Safety in Animal Housing Facilities, 2009 edition.

J. Amend Paragraph 3.3.127 to add "and as referenced in Public Safety Article, §10-101, Annotated Code of Maryland".

K. Amend Paragraph 3.3.182.6 to delete "more than 3 but".

L. Amend Paragraphs 3.3.182.7 and 6.1.4.1 to delete "four or more".

M. Amend Paragraph 3.3.182.22 to replace "three" with "five" and delete ", if any, accommodated in rented rooms".

N. Amend Subparagraph 3.3.182.23.3 to replace “of 30.8.1.3” with “for open parking structures” and “NFPA 5000. (5000, 2012)” with “NFPA 88A”.

O. Amend Paragraphs 3.3.182.25 and 6.1.9.1 to replace "four" with "six".

P. Amend Paragraph 4.5.8.1 and Subsection 10.4.1 to delete "for compliance with the provisions of this Code".

Q. Amend Paragraph 4.5.8.3 and Subsection 10.4.3 to delete "by the Code".

R. Amend Subsection 10.1.2 to add "except as amended by COMAR 29.06.01.07, COMAR 29.06.01.08, and COMAR 29.06.01.09".

S. Amend Subsections 10.5.1 and 10.5.2 to replace "AHJ" with "AHJ or incident commander".

T. Amend Subsection 10.11.2 to replace “candles,” with “candles, sky lanterns,”.

U. Amend Subsection 10.11.6.1 to replace "grill" with "gas-fired grill, charcoal grill" and "10 ft (3 m)" with "15 ft (4.6 m)".

V. Amend Subsection 10.11.6.2 to replace “grill” with “gas-fired grill, charcoal grill”.

W. Delete Paragraph 10.11.6.3.

X. Amend Subsection 10.12.1 to add the following Subparagraph and Paragraph:
10.12.1.1.1 Subject to the approval of the AHJ, individual suites within structures and rear exterior entrances and/or access from service corridors shall be clearly identified.
10.12.1.4 Where required by the AHJ, symbols in compliance with NFPA 170 Standard for Fire Safety and Emergency Symbols shall be used.

Y. Amend Paragraphs 10.12.1.2 and 10.12.1.3 to replace "Address numbers" with "Premises identification".

Z. Amend Paragraph 10.14.1.1 to replace “Christmas” with “Unless otherwise approved by the AHJ, Christmas”.

AA. Amend Paragraph 10.14.3.1 to replace "by the manufacturer as being fire retardant" with "by a testing laboratory recognized by the Office of the State Fire Marshal".

BB. Amend Paragraph 10.14.9.1 to replace "½ in. (13 mm)" with "2 in. (50 mm)" and add the following sentence: "A natural cut tree shall not exceed 10 ft. (3 m) in height, excluding the tree stand."

CC. Amend Subsection 10.14.1 to add the following new Paragraph: 10.14.1.2 The AHJ shall:
(1) Approve the placement of a natural cut or balled tree;
(2) Limit the number of natural cut or balled trees displayed; and
(3) Order the removal of any tree if the tree poses a hazard to life or safety.

DD. Amend Subsection 10.15.2 to insert ", but not limited to," after "such as".

EE. Amend Subparagraph 10.15.11.2.6 to replace "any vehicles" with "any vehicles, buildings,".

FF. Amend Section 10.16 to add the following Subsection: 10.16.6 The AHJ shall have the authority to require that outdoor storage of any combustible material be enclosed by an approved fence or other protective enclosure to prevent unauthorized access.

GG. Amend Subsection 10.16.1 to replace "10 ft (3m)" with "15 ft (4.6m)" and "property line" with "property line, building, or adjacent pile of combustible material"; and add the following: The separation distance shall be allowed to be increased where the AHJ determines that a higher hazard to the adjoining property exists.

HH. Amend Subsection 10.16.5 to add "and 10,000 ft2 in area".

II. Amend Subsection 10.19.7 to replace “repaired” with “repaired on any balcony, under any overhanging portion, or”.

JJ. Amend Section 11.1 to add the following Subsection: 11.1.11 Clearance. A clear space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth, and 78 inches (1981 mm) in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches (762 mm), the clear space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated clear space. Exception: Where other specialized dimensions are required or permitted by NFPA 70.

KK. Amend Paragraph 11.1.9.3 to add the following Subparagraph: 11.1.9.3.2 Doors to electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM or similar approved wording in contrasting letters not less than 1 in. (25 mm) high and not less than ¼ in. (6.4 mm) in stroke width.

LL. Amend Paragraph 11.3.6.1.1 to delete the second sentence and replace with the following: All new keys shall be cut to a uniform key code to comply with the Maryland State Elevator Code.

MM. Amend Subsection 11.9.1 to replace "approved by the fire department" with "approved by the AHJ".

NN. Amend Subsection 11.12.1 to add the following Paragraph: 11.12.1.1 The provisions of this Section shall not apply to detached parking shade structures, carports, solar trellises, and similar structures.

OO. Amend Paragraph 13.3.1.2 to add the following Subparagraph: 13.3.1.2.1 For new ceiling installations, drop-out ceilings as referenced in NFPA 13, Subsection 8.15.14, shall be prohibited.

PP. Amend Paragraph 13.3.2.1 to add the following Subparagraph: 13.3.2.1.1 All new buildings shall be equipped with an automatic sprinkler system or other automatic fire suppression system where required by Section 903 of the International Building Code as incorporated by reference by the Maryland Building Performance Standards.

QQ. Amend Paragraphs 13.3.3.1 and 13.3.3.2 to delete "installed in accordance with this Code".

RR. Amend Subsection 13.4.1 to add the following Subparagraph: 13.4.1.1.1 No fire pump component, including the pump, driver, or controller, shall be permitted to be installed in below-ground vaults or pits unless otherwise approved by the AHJ.

SS. Amend Subsection 13.6.2 to add ", unless otherwise permitted by the AHJ."

TT. Amend Sub-subparagraph 13.6.9.1.2.1 to replace “certified” with “certified or licensed as required by the AHJ”.

UU. Delete Sub-subparagraphs 13.6.9.1.2.1.1, 13.6.9.1.2.1.2, 13.6.9.1.2.1.3, 13.6.9.1.2.1.4, 13.6.9.1.2.1.5, 13.6.9.1.2.1.6, and 13.6.9.1.2.2.

VV. Amend Sub-subparagraphs 13.7.2.22.1.2 and 13.7.2.22.1.3 to replace "Storage occupancies" with "Storage occupancies less than three stories".

WW. Amend Sub-subparagraph 13.7.2.24.4.4 to delete "existing".

XX. Amend Paragraph 14.13.1.2 to replace "only" in the first sentence with ", but not be limited to,".

YY. Amend Paragraphs 18.1.3.1 and 18.1.3.2 to replace "fire department" with "AHJ".

ZZ. Amend Subparagraph 18.2.3.2.1 to replace "exterior door" with "exterior door acceptable to the AHJ".

AAA. Amend Paragraph 18.4.5.2 to add the following Subparagraph: 18.4.5.2.3 Required fire flow shall be reduced by 75 percent for open parking structures of Type I or Type II construction that are not protected throughout by an automatic sprinkler system. The resulting fire flow shall not be less than 1,000 gpm (3,785 L/min.)

BBB. Amend Subparagraph 20.3.4.1.1 to delete "more than 3, but" and the "," after "12".

CCC. Amend Sub-subparagraph 20.3.4.2.3.5.4 to add the following exception: Exception: Day-care homes with not more than three clients for overnight lodging.

DDD. Amend Paragraph 25.2.2.1 to add "or other approved testing standard approved by the State Fire Marshal".

EEE. Amend Subparagraph 31.3.6.2.2 to add the following item:
(9) Piles containing leaves and other extraneous or hogged material, such as whole tree chip piles, shall be turned or reclaimed at least every 3 months.

FFF. Amend Subparagraph 31.3.6.3.1 to delete existing wording and replace with the following: Piles may not exceed 18 feet in height, 50 feet in width, and 350 feet in length. Piles shall be subdivided by fire lanes having at least 25 feet of clear space at the base of piles.

GGG. Delete Subparagraph 31.3.6.3.2 and Sub-subparagraphs 31.3.6.3.2.1, 31.3.6.3.2.2, and 31.3.6.3.2.3.

HHH. Delete Chapter 35.

III. Amend Subsection 42.7.5 to add the following Paragraphs:
42.7.5.7 Management/owner officials or employees shall conduct daily site visits to ensure that all equipment is operating properly.
42.7.5.8 Regular equipment inspection and maintenance at the unattended self-service facility shall be conducted.
42.7.5.9 Fuel dispensing equipment shall comply with one of the following:
(1) The amount of fuel being dispensed is limited in quantity by preprogrammed card; or
(2) Dispensing devices shall be programmed or set to limit uninterrupted fuel delivery of not more than 25 gallons and shall require a manual action to resume continued delivery.

JJJ. Amend Paragraph 42.7.5.5 to add the following: The following information shall be conspicuously posted in this area:

(1) The exact address of the unattended self-service facility.

(2) The telephone number of the owner or operator of the unattended self-service facility.

KKK. Amend Subsection 50.2.1 to add the following Paragraphs, Subparagraphs, and Sub-subparagraphs:

50.2.1.10 Commercial Outdoor Cooking Operations. These requirements apply to commercial outdoor cooking operations such as those that typically take place under a canopy or tent-type structure at fairs, festivals, and carnivals. This includes, but is not limited to, deep frying, sautéing, and grilling operations.

50.2.1.10.1 Tent and Canopy Requirements.

50.2.1.10.1.1 Tents or canopies where cooking equipment not protected in accordance with NFPA 96 is located shall not be occupied by the public and shall be separated from other tents, canopies, structures, or vehicles by a minimum of 10 ft. (3050 mm) unless otherwise approved by the AHJ.

50.2.1.10.1.2 All tent and canopy material shall comply with the flame resistance requirements of Subsection 25.2.2.

50.2.1.10.2 LP Gas Fuel Requirements.

50.2.1.10.2.1 LP gas tank size shall be limited to 60 pounds. The total amount of LP gas on site shall not exceed 60 pounds for each appliance that is rated not more than 80,000 btu/hr. and 120 pounds for each appliance rated more than 80,000 btu/hr.

50.2.1.10.2.2 Tanks shall be maintained in good physical condition and shall have a valid hydrostatic date stamp.

50.2.1.10.2.3 Tanks shall be secured in their upright position with a chain, strap, or other approved method that prevents the tank from tipping over.

50.2.1.10.2.4 Tanks shall be located so that they are not accessible to the public. LP gas tanks shall be located at least 5 feet from any cooking or heating equipment or any open flame device.

50.2.1.10.2.5 All LP gas equipment shall be properly maintained and comply with the requirements of NFPA 58.

50.2.1.10.2.6 Regulators. Single-stage regulators may not supply equipment that is rated more than 100,000 btu/hr. rating. Two-stage regulators shall be used with equipment that is rated more than 100,000 btu/hr.

50.2.1.10.3 General Safety Requirements.

50.2.1.10.3.1 All electrical cords shall be maintained in a safe condition and shall be secured to prevent damage.

50.2.1.10.3.2 Movable cooking equipment shall have wheels removed or shall be placed on blocks or otherwise secured to prevent movement of the appliance during operation.

50.2.1.10.3.3 Portable fire extinguishers shall be provided in accordance with NFPA 1, Section 13.6 and shall be specifically listed for such use.

.09 Fireworks and Explosive Materials.

The NFPA 1 Fire Code (2012 Edition) is incorporated by reference, except for the amendments in Regulation .08 of this chapter and the following amendments:

A. Permits shall be required for the following:

(1) Fireworks displays;

(2) Pyrotechnics before a proximate audience; and

(3) Flame effects before an audience.

B. Amend Sections 65.2, 65.3, and 65.4 to add the following:

(1) All applications for permits for display shall be filed at least 10 business days before the display is to be held.

(2) Under Public Safety Article, Title 10, Annotated Code of Maryland, the following requirements apply to public liability and property damage insurance:

(a) In order to meet the requirement of the statute, the State shall be named as an insured in the contract of insurance;

(b) Because the policy shall cover all damages to persons or property, a deductible form of coverage may not be accepted;

(c) The minimum amount of coverage that the State can accept on any display is $25,000 for the injury of one person, $50,000 for more than one person, and $10,000 for property damage; and

(d) A duplicate policy of a certificate of insurance shall be attached to the application.

(3) The policy or certificate shall provide that:

(a) The coverage may not be canceled without at least 30 days notice to the State Fire Marshal;

(b) The duplicate policy or certificate shall set forth all of the terms, conditions, endorsements, and riders which are or which will become part of the policy when issued;

(c) It is understood and agreed that limitations cannot be included in the policy which are not set forth in the duplicate policy or certificate of insurance which has been filed;

(d) If the policy is issued by an insurer authorized to do business in the State, it shall be validated by the signature of an agent licensed by the Maryland Insurance Administration to represent the insurer;

(e) If coverage is provided by an insurer who is not authorized to do business in the State, the duplicate policy or certificate of insurance shall be accompanied by a power of attorney or other satisfactory evidence that the person, firm, or corporation acting as agent in accepting the risk has authority to bind risks and issue policies for the insurer;

(f) The State Fire Marshal's Office specifically reserves the right to disapprove contracts issued by any authorized insurer if the Fire Marshal's Office determines the insurer is unsatisfactory; and

(g) If the policy issued by the unauthorized company is acceptable to the Fire Marshal's Office, it shall be registered and the registration fee and tax paid.

C. Amend Section 65.5 to add the following regarding the manufacture of fireworks:

(1) A building containing hazardous mixes or items may not be located closer than 20 feet to the property line.

(2) In §C(3) of this regulation, the following terms have the meanings indicated:

(a) "Trainees" means employees undergoing initial training in a specific process for a period not to exceed 24 consecutive work hours.

(b) "Transients" means:

(i) Supervisors not regularly assigned to the area;

(ii) Bona fide government agency personnel engaged in official business; and

(iii) Material-handling personnel actively engaged in the transfer of materials into or out of the area.

(3) The maximum number of workers, excluding one trainee and three transients, permitted in a building at one time shall be limited to one person per 100 square feet gross floor area or one person in buildings of less than 100 square feet gross floor area.

(4) The total amount of explosives or pyrotechnic composition including raw materials, material being processed, and finished products, that may be safely permitted in any

building at a given time, shall be determined by the enforcement agency based upon the American Table of Distances for Storage of Explosives, without recognition for barricades. However, distances may not be less than those required by Public Safety Article, §10-204(a), Annotated Code of Maryland. The amount of explosives or other pyrotechnic composition may not exceed the amount necessary for production for 4 hours.

(5) Before beginning work, all fireworks plants shall submit for approval accurate scale plot plans of their premises to the State Fire Marshal of all proposed changes of location of any of the structures, fences, and gates.

D. Amend Section 65.5 to add the following Subsection: 65.5.3 Sale or use of sparklers shall comply with the following:

(1) Before the sale, offering for sale, or use within the State, of any sparkler, every manufacturer of sparklers shall submit sufficient samples for inspection to the State Fire Marshal, with a laboratory report from a certified testing laboratory affirming that the analysis of these sparklers showed that they contain no chlorates or perchlorates.

(2) All sparklers sold in the State shall be sold in boxes, and each box shall be clearly marked that the sparklers contain no chlorates or perchlorates.

(3) The manufacturer shall furnish the State Fire Marshal with a current list of wholesalers, jobbers, retailers, or retail outlets, who handle or supply sparklers, or maintain a list of wholesalers, jobbers, retailers, or retail outlets, subject to inspection by the State Fire Marshal.

E. Amend Subsection 65.9.1 reference to NFPA 495 as follows:

(1) Delete Sections 11.1 and 11.2.

(2) Amend Section 3.3 to add the following definition: Demolition. The explosive razing of any manmade structure or any part thereof that cannot be covered with overburden or blasting mats.

(3) Amend Section 4.4 to add the following new Subsection: 4.4.7 Each applicant for a Demolition Class D permit shall possess 5 years of experience in the field of demolition and shall pass the demolition examination as approved by the Office of the State Fire Marshal.

F. Delete Subparagraph 65.10.6.4.5.

G. Amend Section 74.1 reference to NFPA 400 to delete Subsection 11.1.3.

.10 Control of Air Overpressure and Ground Vibration for Blasting Operations.

A. Control of Air Overpressure for Blasting Operations.

(1) This section applies to air overpressure effects as recorded at the location of a private dwelling, public building, school, church, and community or institutional building not owned or leased by the person conducting or contracting for the blasting operation.

(2) Written notification by e-mail or facsimile shall be provided to the Office of the State Fire Marshal Bomb Squad at least 24 hours prior to each blast. The name of company or contractor performing the blasting and the location date, and approximate time shall be identified. The geographical coordinates (longitude and latitude) shall be provided.

(3) Air overpressure from blasting shall be controlled so that the maximum allowable air overpressure at:

(a) An inhabited building, resulting from blasting operations, may not exceed 130 decibels peak when measured by an instrument having a flat frequency response, +/- 3 decibels, over a range of at least 6—200 hertz;

(b) A building not inhabited, resulting from blasting operations, may not exceed 140 decibels peak when measured by an instrument having a flat frequency response, +/- 3 decibels, over a range of at least 6—200 hertz;

(4) If requested by a property owner registering a complaint and considered necessary by the State Fire Marshal, measurements on three consecutive blasts, using approved instrumentation, shall be made near to the structure in question.

B. Control of Ground Vibration for Blasting Operations.

(1) This section provides for limiting ground vibrations at structures that are not owned or leased by the person conducting or contracting for the blasting operation. The requirements and monitoring methods of this section are intended to protect low rise structures including dwellings. Engineered structures may safely withstand higher vibration levels and, based on an approved engineering study, the State Fire Marshal may allow higher levels for engineered structures.

(2) When blasting operations, other than those conducted at a fixed site such as a quarry, are to be conducted within 200 feet of a pipe line or high voltage transmission line, the contractor shall take additional precautionary measures and shall notify the owner of the line, or the owner's agent, that blasting operations are intended.

(3) Methods. Each method described in §B(4)—(6) of this regulation, progressing from §B(4)—§B(6), has an increasing degree of sophistication and each can be implemented either by direction of the State Fire Marshal as a result of complaints or by the contractor to determine site specific vibration limits.

(4) Charge Weight Per Delay Dependent on Distance Method.

(a) When a seismograph is not used to record vibration effects, the explosive charge weight per delay, 8 milliseconds or greater, may not exceed the limits shown in Table A of this regulation. If charge weights per delay on any single delay period exceed 520 pounds, then ground vibration limits for structures shall comply with §B(5) or (6) of this regulation.

(b) Table A.

Distance Versus Weight of Explosives Method		
Distance to a Building		Weight of Explosive per Delay
Feet Over	Feet Not Over	Pounds
0 to 5		1/4
5 to 10		1/2
10 to 15		3/4
15 to 60		**
60 to 70		6
70 to 80		7-1/4
80 to 90		9
90 to 100		10-1/2
100 to 110		12

110 to 120	13-3/4
120 to 130	15-1/2
130 to 140	17-1/2
140 to 150	19-1/2
150 to 160	21-1/2
160 to 170	23-1/4
170 to 180	25
180 to 190	28
190 to 200	30-1/2
200 to 220	34
220 to 240	39
240 to 250	42
250 to 260	45
260 to 280	49
280 to 300	55
300 to 325	61
325 to 350	69
350 to 375	79
375 to 400	85
00 to 450	98
450 to 500	115
500 to 550	135
550 to 600	155
600 to 650	175
650 to 700	195
700 to 750	220
750 to 800	240
800 to 850	263
850 to 900	288
900 to 950	313
950 to 1,000	340
1,000 to 1,100	375
1,100 to 1,200	435
1,200 to 1,300	493

This table over 60 feet is based upon the formula: W = D1.5/90
** 1/10 of a pound of explosive per foot of distance to a building.

(5) Monitoring Method. If a blaster determines that the charge weights per delay given in Table A are too conservative, the blaster may choose to monitor at the closest conventional structure each blast with an approved seismograph and meet the standard in §C(6) of this regulation. When starting to monitor at a new blasting operation with instrumentation, the initial blasts shall contain explosive charge weights per delay close to the limits established in Table A. From this point onwards the explosive charge weight per delay may be increased but the vibration levels detailed in §C(6) may not be exceeded.

(6) Peak Particle Velocity Dependent on Distance Method.

(a) In this subsection, "peak particle velocity" means the maximum component of the three mutually perpendicular components of motion as recorded at the closest structure not owned or leased by the person conducting the blasting.

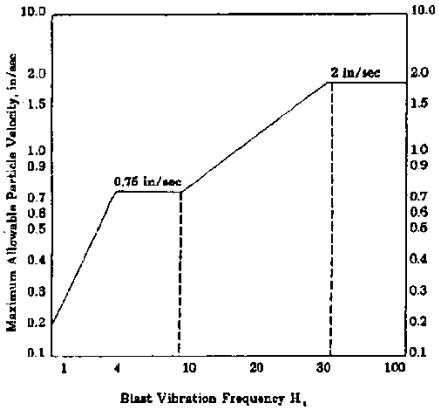
(b) Table B.

Distance Versus Peak Particle Velocity Method		
Distance		Peak Particle Velocity of Any One Component*
Feet Over	Feet Not Over	Inches Per Second
0 to 100		2.00
100 to 500		1.50
500 to 1,000		1.00
over 1,000		0.75

* The instrument's transducer shall be firmly coupled to the ground.

(7) Particle Velocity Criteria Dependent on Frequency Content. The following chart provides continuously variable particle velocity criteria dependent on the frequency content of the ground motion. The method of analysis shall be approved by the State Fire Marshal and provide an analysis showing all the frequencies present within the 1—50 hertz range:

Blast Vibration Frequency Hz, Maximum Allowable Particle Velocity, in/sec.



C. Instrumentation.

(1) A direct velocity recording seismograph capable of recording the continuous wave form of the three mutually perpendicular components of motions, in terms of particle velocity, shall be used. Each seismograph shall have a frequency response from 2 to 150 hertz or greater, and a velocity range from 0.0 to 2.0 inches per second or greater.

(2) All field seismographs shall be capable of internal dynamic calibration and shall be calibrated according to the manufacturers' specifications at least once per year.

(3) All seismographs shall be operated by competent individuals trained in the correct use of seismographs. Seismograph records shall be analyzed and interpreted by an independent third party approved by the State Fire Marshal.

D. Records.

(1) A record of each blast shall be kept. All records, including seismograph reports, shall be retained for at least 3 years, be available for inspection, and include the following items:

(a) Name of company or contractor;

(b) Location, date, and time of blast. The geographical coordinates (longitude and latitude) shall be identified;

(c) Name, signature, and Social Security number of blaster in charge;

(d) Type of material blasted;

(e) Number of holes, burden, and spacing;

(f) Diameter and depth of holes;

(g) Type of explosives used;

(h) Total amount of explosives used;

(i) Maximum amount of explosives per delay period of 8 milliseconds or greater;

(j) Method of firing and type of circuit;

(k) Direction and distance in feet to nearest dwelling house, public building, school, church, and commercial or institutional building not owned or leased by the person conducting the blasting;

(l) Weather conditions including such factors as wind direction, etc.;

(m) Height or length of stemming;

(n) If mats or other protection to prevent fly rock were used;

(o) Type of detonators used and delay period used;

(p) Seismograph records including seismograph readings when required containing:

(i) Name and signature of the individual operating the seismograph,

(ii) Name of the individual analyzing the seismograph records, and

(iii) Seismograph reading; and

(q) The maximum number of holes per delay period of 8 milliseconds or greater.

(2) The person taking the seismograph reading shall accurately indicate the exact location of the seismograph, if used, and shall also show the distance of the seismograph from the blast.

E. Liability Insurance for Explosives Handlers.

(1) As provided in Public Safety Article, Title 11, Annotated Code of Maryland, proof of liability insurance shall be provided by an applicant for a license to:

(a) Manufacture explosives;

(b) Engage in the business of dealing in explosives; or

(c) Possess any explosives other than for use in firearms.

(2) The minimum amount of liability insurance required for licensing for the activities specified in §E(1) of this regulation is $1,000,000.

.11 Portable Fire Extinguishers.
A. License to Service or Repair Portable Fire Extinguishers. A license shall be obtained from the State Fire Marshal's Office by every individual, firm, or corporation commercially servicing, repairing, filling, or refilling portable fire extinguishers, except fire departments.

B. Sale of Portable Fire Extinguishers.
(1) It is unlawful for a person, directly or through an agent, to sell or offer for sale in the State any make, type, or model of portable fire extinguisher, either new or used, unless the make, type, or model of extinguisher has been tested and listed by a testing laboratory accepted by the State Fire Marshal.
(2) An extinguisher is not approved even if it bears the label of an accepted testing laboratory if it contains any of the following liquids:
(a) Carbon tetrachloride, chlorobromomethane, azeotrophic chloromethane, dibromodifluoromethane, 1,2-dibromo-2-chloro-1,2-trifluoroethane;
(b) 1,2-dibromo-2,2-difluoroethane, methyl bromide, ethylene dibromide;
(c) 1,2-dibromotetrafluoroethane, hydrogen bromide, methylene bromide, bromodifluoromethane, dichlorodifluoromethane; or
(d) Any other toxic or poisonous liquid.

.11-1 Nonwater-based Fixed Fire Extinguishing Systems.
A license shall be obtained from the State Fire Marshal's Office by every individual, firm, or corporation commercially installing, servicing, or repairing nonwater-based fixed fire extinguishing systems.

.12 (Repealed)

.13 Smoke Detectors for the Deaf or Hearing Impaired—Signs.
A sign required under Public Safety Article, §9-102(c), Annotated Code of Maryland, shall:

A. Be conspicuously posted in such a manner that it is readily visible and legible to the public;

B. Be printed or typed in contrasting colors with respect to the background color of the sign or surface on which it is mounted; and

C. State "Smoke Detectors for the Deaf or Hearing Impaired are Available Upon Request", or other appropriate wording as may be specifically approved by the Fire Marshal, or by the Chief of the Baltimore City Fire Department if the building is located in Baltimore City.

.14 Sale and Use of Heaters and Stoves.
A. Gasoline Stoves. The sale or use of gasoline stoves or other similar fuel-burning cooking or heating appliances using Class I flammable liquids as defined in NFPA 1 Fire Code (2012 Edition) and NFPA 30 Flammable and Combustible Liquids Code (2012 Edition), is prohibited unless the appliance has been tested and listed by a testing laboratory accepted by the State Fire Marshal. The appliance shall be installed, operated, and maintained in a safe manner in accordance with the prescribed recommendation of the manufacturer and the conditions stated in the listing by the respective testing laboratory.

B. Unvented Portable Kerosene-Fired Heaters.

(1) The sale or use of unvented portable kerosene-fired heaters is permitted only if the heater or appliance meets the U.L. Subject 647 and bears the label of a testing laboratory accepted by the State Fire Marshal.

(2) The heaters shall only be used as permitted under Commercial Law Article, §14-1310, Annotated Code of Maryland.

(3) Each heater shall contain a warning label stating: "This device must not be operated while unattended". In addition, the heater shall contain the manufacturer's warning label required by Commercial Law Article, §14-1310, Annotated Code of Maryland.

.15 Sale or Use of Flame Retardant Chemicals.

An individual, firm, or corporation may not sell or offer for sale in the State any type of flame-retardant or flame-proofing compound, powder, or liquid, for fire-retardant purposes unless the product has been tested, listed, and bears the mark of a recognized testing laboratory accepted by the State Fire Marshal

.16 Visual Obscuration Systems.

Visual obscuration systems associated with security or burglar alarm systems may not be permitted.

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 02 PROCEDURAL REGULATIONS
Authority: Public Safety Article §6-206 and Title 6, Subtitle 5
Annotated Code of Maryland
(Amended Effective May 6, 1985)

.01 Hearings—Contested Cases Before the State Fire Prevention Commission.

A. Appeals.

(1) When a person is aggrieved by an order or decision of the State Fire Marshal, made in the course of the administration or enforcement of the State Fire Prevention Code and Public Safety Article, Title 6, Annotated Code of Maryland, the person shall file within 20 days a written petition of appeal with the State Fire Prevention Commission, setting forth the reason for the appeal.

(2) The 20-day period during which an appeal may be taken begins on the date the notice of the Fire Marshal's order or decision was received by the person or agent in accordance with Public Safety Article §6-319 , Annotated Code of Maryland.

(3) The original petition for appeal and nine copies of it shall be filed with the State Fire Prevention Commission, 18345 Colonel Henry K. Douglas Drive, Suite 240, Hagerstown, MD 21740.

B. Upon receipt of the petition for appeal, the secretary to the State Fire Prevention Commission shall mail a copy of the petition for appeal to each member of the Commission. The appellant shall be notified of the time and date of the hearing before the Commission at least 10 days before the hearing. At the hearing, there shall be at least five members of the Commission present, one of which shall be either the chairman or the vice-chairman.

C. Before the hearing and upon specific written request of any party or counsel, in accordance with Public Safety Article, §6-502, Annotated Code of Maryland, the State Fire Marshal may furnish for copying at the State Fire Marshal's office documents or other material in the State Fire Marshal's files relating to the matter at issue. Upon written request, the State Fire Marshal shall furnish the names of witnesses who have personal knowledge of matters material to the matter at issue.

D. The Commission shall provide for transcription of the hearing by electronic recording device or by a stenographer.

E. At the hearing, the State Fire Marshal, or the State Fire Marshal's agent or attorney, shall present to the Commission the evidence upon which the decision or order was based. The other party or counsel may cross-examine witnesses. The party aggrieved shall then present witnesses to testify, subject to cross-examination, and other evidence relative to the matter at issue. The State Fire Marshal and the party aggrieved shall be permitted to present:

(1) Additional evidence at any time during the hearing; and

(2) Oral arguments at the close of all of the evidence.

F. Upon request of a party, a party's counsel, or State Fire Marshal personnel, the Commission may postpone the hearing for any reason.

G. Unless the hearing is postponed, failure to appear at the time and place designated in the notice shall be deemed a default on the part of a party.

H. A decision shall be rendered by the Commission within 30 days of the hearing. Within that time the Commission shall notify all parties in writing of the decision. The decision shall be mailed to the last known address of each party. The mailing of the decision by the Commission is prima facie evidence of notification to a party of the Commission's decision.

.02 Administrative Procedure Act.
In addition to this chapter, State Government Article, Title 10, Subtitle 2, Annotated Code of Maryland, governs practice and procedure in a hearing before the Commission and an appeal from a hearing.

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 03 APPROVAL OF TESTING LABORATORIES
Authority: Public Safety Article §6-206 and Title 6, Subtitle 5 Annotated Code of Maryland
(Repealed Effective January 1, 2013)

COMAR 29.06.04
TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 04 FEES FOR FIRE PREVENTION SERVICES
Authority: Public Safety Article, §§6-206, 6-308, 9-701, and 9-702
Annotated Code of Maryland
(Amended Effective April 1, 2012)

.01 Scope.

A. This chapter establishes a schedule of fees to be used by the State Fire Marshal to at least cover the administrative costs associated with the review of building plans, inspection of new and existing buildings, and fire suppression, detection, and alarm systems to ensure compliance with applicable fire prevention codes.

B. This chapter does not apply to any municipal corporation or county that has adopted, before the effective date of this chapter, an ordinance or regulation that establishes a fee schedule for building inspections or plans review. The fee schedule established by the State Fire Prevention Commission may be used, amended, or referenced by a municipal or county corporation that chooses to establish its own fee schedule.

C. A municipal or county corporation establishing its own fee schedule shall be responsible for administering its own:
(a) Inspections;
(b) Fee Processing; and
(c) Payment collection.

.02 Incorporation by Reference.
A. Occupancies are defined and classified as required by the National Fire Protection Association (NFPA) 101 "Life Safety Code" as incorporated by reference in COMAR 29.06.01. In the case of mixed occupancies when it is impractical to distinguish individual occupancy classifications, the occupancy classification is based on the predominant use and occupancy of the building or structure.

B. Terminology and reference standards are defined and classified by the appropriate code or standard of the National Fire Protection Association as referenced in COMAR 29.06.01.

.03 Definitions.
A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.
(1) "Code" means the State Fire Laws, Public Safety Article, Titles 6 and 9, Annotated Code of Maryland, and the State Fire Prevention Code under COMAR 29.06.01.
(2) "Fire protection system" means:
(a) Fire alarm and detection systems with a fire alarm control panel;
(b) Sprinkler, water spray, and combined sprinkler and standpipe systems;
(c) Standpipe systems and hose systems;
(d) Fire pumps and associated valves, piping, controllers, driver, and related equipment;
(e) Gaseous and chemical extinguishing systems that use gases such as halon or carbon dioxide, or dry or wet chemical compounds as the primary extinguishing agent;

(f) Foam systems that use a foaming agent to control or extinguish a fire in a flammable liquid installation, aircraft hangar, and other recognized applications; and

(g) Smoke control systems that include smoke exhaust, stair pressurization, and other recognized air-handling systems specifically designed to exhaust or control smoke, or create pressure zones to minimize the hazard of smoke spread caused by fire.

(3) "Initial inspection" means an inspection conducted for fire code compliance not generated by a previously identified fire code violation.

(4) "Local fire authority" means those municipal or county fire officials specifically authorized under the Public Safety Article, Annotated Code of Maryland, to enforce the provisions of the State Fire Laws and Fire Prevention Code.

(5) "New building or condition" means a building, structure, installation, plant, equipment, renovation, or condition:

(a) For which a building permit is issued on or after the effective date of this chapter;

(b) On which actual construction is started on or after the effective date of this chapter in a jurisdiction where a building permit is not required;

(c) That represents a change from one occupancy classification to another on or after the effective date of this chapter; or

(d) That represents a situation, circumstance, or physical makeup of any structure, premise, or process that was commenced on or after the effective date of this chapter.

(6) "Reinspection" means an inspection conducted for fire code compliance generated by a previously identified fire code violation.

(7) "State fire authority" means the State Fire Marshal or legally appointed designee.

.04 Fees in General.

A. Fee Computation. The amount of the fee for the following services shall be computed in accordance with Regulations .05--.07 of this chapter:

(1) Plan review, and use and occupancy inspection;

(2) Fire protection system plan review and inspection; and

(3) Fire safety inspection.

B. Fee Payment for Plan Review and Use and Occupancy Inspections.

(1) Fees for plan review and use and occupancy inspections are payable upon receipt of an invoice from the State fire authority of:

(a) Preliminary or construction plans for the construction of a new building, addition, expansion, or renovation of an existing building or facility; and

(b) Plans for a fire protection system.

(2) Fee payments shall be reviewed by the State fire authority to ensure that they are in the proper amount. If a fee payment is incorrect, an invoice requesting the balance of the fee shall be sent to the person identified on the original invoice.

(3) Failure to pay the fee within the required time shall result in appropriate administrative or legal action. Further plan review or inspection action may not take place until the fee is paid in full. This may result in delay of the issuance of a building permit, or use and occupancy permit for the building or facility.

C. Fee Payment for Fire Safety Inspections.

(1) Fees for fire safety inspections are payable upon receipt of an invoice from the State fire authority upon completion of the inspection. Failure to pay this fee within the specified time may result in:

(a) Administrative or legal action;
(b) No further inspection activity;
(c) Denial of the issuance or renewal of a permit or license held by the facility being inspected; and
(d) Violation of Public Safety Article, §§6-601, 6-317, 9-109, 9-206, 9-905, Annotated Code of Maryland.

(2) The fire safety inspection fee may not be charged if the initial inspection is conducted in response to a specific complaint regarding an alleged violation of the Code. Any reinspection based on the initial inspection is subject to the fees outlined in Regulation .07C of this chapter.
(3) The fire safety inspection fee may not be charged if the initial inspection is initiated by the State fire authority. Any reinspection based on the initial inspection is subject to the fees outlined in Regulation .07C of this chapter.

D. Payment Method.
(1) Fee payments shall be made payable to the Office of the State Fire Marshal.
(2) Cash payment is not acceptable.
(3) Fee payment shall be in the form of a check, money order, or other approved means.

E. Disputes Over Fees.
(1) Disputes regarding the amount of the fee charged and any other matter related to the charging of a fee shall be resolved in accordance with administrative procedures adopted by the State fire authority.
(2) An appeal of an administrative finding by the State Fire Marshal may be made to the State Fire Prevention Commission in accordance with procedures in COMAR 29.06.02.

F. Technical Assistance, Unclassified Inspections, and Special Events.
Fees for technical assistance, unclassified inspections, and special events shall be based upon criteria required in Regulation .08 of this chapter.

.05 Fees for Plan Review and Use and Occupancy Inspection.
A. Fee Schedule.
(1) The fee schedule in this section is to be used to calculate the fee to be paid for the review of plans for and inspection of all new and existing buildings, including a change in use or occupancy.
(2) The review and inspection is required to obtain a building permit, or a use and occupancy permit from a State or local government agency or licensing authority in order to construct, renovate, or occupy a building or facility, or install a fire protection system.
(3) Fees are as follows:
(a) Assembly occupancy—8 cents per square foot;
(b) Educational occupancy—10 cents per square foot;
(c) Health care occupancy—10 cents per square foot;
(d) Detention or correctional occupancy—10 cents per square foot;
(e) Residential occupancy—8 cents per square foot;
(f) Mercantile occupancy—8 cents per square foot;
(g) Business occupancy—8 cents per square foot;
(h) Industrial occupancy—6 cents per square foot;
(i) Storage occupancy—6 cents per square foot; or
(j) $100 per plan review or use and occupancy inspection, whichever is greater;

(k) Flammable or combustible liquid storage tank—1 cent per gallon of maximum tank capacity or $200 per tank, whichever is greater, although tanks less than 660 gallons used to provide heating fuel or other utility service to a building or facility are exempt from the fee;
(l) Marina or pier—$120 plus $1.50 per slip; and
(m) Outside storage of flammable and combustible materials such as scrap tire, lumber, mulch, tree stumps, drums of flammable or combustible liquids, etc.—$120 per acre or fraction of an acre.

B. The fee due shall be calculated using the appropriate rate in §A of this regulation applied to:
(1) The gross square feet per floor for a new building or tenant space or a change in its use or occupancy;
(2) The gross square feet of an area being renovated or altered; or
(3) The gross square feet per floor for a storage occupancy when a shell building without a specific occupancy or tenancy is to be built.

C. When a shell building is built without a specific occupancy or tenancy, the appropriate occupancy fee applies when use or occupancy is determined as prescribed by a separate building permit or use and occupancy permit.

D. The fee for a mixed occupancy shall:
(1) Be based upon the fee schedule in §A of this regulation for each occupancy;
(2) Be the cumulative total of the fee for each occupancy; and
(3) Reflect the predominant classification of the building or structure when a separate fee for each occupancy cannot be determined.

E. A change in use or occupancy of a building or tenant space shall be calculated at the same rate as a new building.

F. The fee for a building or tenant space occupied without completion of a plan review shall be based upon the fee schedule in §A of this regulation.

G. A 50 percent refund of the fees in §§A—F of this regulation may be refunded if a permit to construct is denied by a permit or licensing authority, or if the applicant abandons the project before construction, for whatever reason. The applicant may request a refund within 6 months of official notification of the denial of the permit, license, or issuance of a building permit by the respective authority. A renewal of the permit or resumption of construction requires a new submittal of plans for the remaining work and payment of the full fee.

.06 Fees for Fire Protection System Plan Review and Inspection.

A. The fee schedule that follows in this section is to be used to calculate the fee to be paid for plan review and inspection of the fire protection systems specified:
(1) Fire alarm and detection system—$150 per fire alarm control panel, plus $2 per fire alarm initiating and indicating device;
(2) Sprinkler, water spray, and combined sprinkler and standpipe system
(a)$2 per sprinkler head and $3 per extended coverage sprinkler head or $150 per system, whichever is greater; and
(b) $100 for each additional hydrostatic test; or
(c) $75 per dwelling unit for one- and two-family dwellings;

(3) Standpipe and hose system—$50 per 100 linear feet of piping or fraction of 100 linear feet, or $150 per system, whichever is greater;
(4) Fire pump—50 cents per gallon per minute (gpm) of rated pump capacity or $300 per pump, whichever is greater, although this fee does not apply to limited service pumps for residential sprinkler systems as permitted for NFPA 13D systems;
(5) Water storage tanks – $100 per tank, although this fee does not apply to residential sprinkler system tanks as permitted for NFPA 13D systems;
(6) Gaseous and chemical extinguishing system—The greater of:
(a) $1 per pound of gaseous or dry chemical extinguishing agent, although this fee does not apply to a reserve supply of extinguishing agent;
(b) $100 per 30,000 cubic feet of volume of the portion of protected space; or
(c) $150 per system; and
(d) $150 per wet chemical extinguishing system;

(7) Foam system—$100 per nozzle or local applicator device plus $2 per sprinkler head for a combined sprinkler and foam system, or $150 per system, whichever is greater;
(8) Smoke control system—$100 per 50,000 cubic feet of volume or the portion of the protected or controlled space, up to a maximum of $1,500 per system, or $300 per system, whichever is greater.

B. The fees also include, for a:
(1) Fire alarm and detection system:
(a) Plan review and inspection of a complete system of:
(i) Wiring,
(ii) Controls,
(iii) Alarm and detection equipment, and
(iv) Related appurtenances; and
(b) One final acceptance test of the installed system;
(2) Sprinkler, water spray, and combined sprinkler and standpipe system:
(a) Plan review and inspection of:
(i) Shop drawings,
(ii) Hydraulic calculations,
(iii) Piping,
(iv) Control valves, and
(v) Connections and other related equipment and appurtenances;
(b) One underground flush test;
(c) One hydrostatic test ;
(d) One forward flow test of the backflow preventer; and
(e) One final acceptance test ;
(3) Standpipe and hose system:
(a) Plan review and inspection of a complete system of:
(i) Shop drawings,
(ii) Control valves,
(iii) Piping, and
(iv) Connections and other related equipment and appurtenances;
(b) One flush test;
(c) One hydrostatic test; and
(d) One final acceptance test ;

(4) Fire pump:
(a) Plan review and inspection of a complete system of:
(i) Pumps and all associated valves,
(ii) Piping,
(iii) Controllers,
(iv) Driver and other related equipment and appurtenances; and
(b) One pump acceptance test per pump;
(5) Gaseous or chemical extinguishing system:
(a) Plan review and inspection of a complete system of:
(i) Piping,
(ii) Controls, and
(iii) Equipment and other appurtenances; and
(b) One performance or acceptance test;
(6) Foam system:
(a) Plan review and inspection of a complete system of:
(i) Piping,
(ii) Controls,
(iii) Nozzles, and
(iv) Equipment and related appurtenances; and
(b) One flush test;
(c) One hydrostatic test; and
(d) One final acceptance test;
(7) Smoke control system:
(a) Plan review and inspection of system components; and
(b) One performance or acceptance test.

C. Final acceptance tests are to be witnessed by a State fire authority in accordance with administrative procedures established by that authority.

D. A fee applies if the tests outlined in §B of this regulation reveal that the system being inspected or tested does not meet applicable standards as follows:
(1) First reinspection or retest—$200; and
(2) Each additional reinspection or retest—$250.

.07 Fees for Fire Safety Inspections.
A. The fee schedule in this regulation is to be used to calculate the fee to be paid for a general fire safety inspection. Specific testing of certain specialized fire protection systems and equipment may be required by qualified maintenance personnel or a contractor at the owner's expense.

B. The following fees are to be applied based upon the occupancy classification for the building:
(1) Assembly occupancy:
(a) 1,001 or more individuals—$360;
(b) 301 to 1,000 individuals—$240;
(c) 50 to 300 individuals—$120;
(d) Fairgrounds for properties with:
(i) Nine buildings or less—$240;
(ii) Ten buildings or more—$480.

(2) Educational occupancy:
(a) Elementary school, which includes kindergarten and prekindergarten facilities—$120;
(b) Middle or junior high school—$180;
(c) Senior high school—$180;
(d) Family or group day care homes:
(i) Initial inspection—$75;
(ii) Renewal inspection—$50;
(e) Nursery or day care centers—$100;
(3) Health care occupancy:
(a) Ambulatory health care center—$180 per 3,000 square feet or fraction of 3,000 square feet;
(b) Hospital, nursing home and limited care facility—$120 per building plus $2.50 per patient bed;
(4) Detention and correctional occupancy—$120 per building plus $2.50 per rated bed capacity;
(5) Residential occupancy:
(a) Hotel and motel—$120 per building plus $2.50 per guest room or suite;
(b) Dormitory—$120 per building plus $2.50 per bed;
(c) Apartment—$120 per building plus $2.50 per apartment;
(d) Lodging or rooming house—$120 per building plus $2.50 per bed;
(e) One and two family dwelling, including alternate living units and foster care homes—$75;
(f) Board and care home—$120 per building plus $2.50 per bed;

(6) Mercantile occupancy:
(a) Class A—over 30,000 square feet—$300;
(b) Class B—3,000 to 30,000 square feet—$150;
(c) Class C—less than 3,000 square feet—$100;
(7) Business occupancy—$120 per 3,000 square feet or fraction of 3,000 square feet;
(8) Industrial or storage occupancy:
(a) Low or ordinary hazard—$120 per 5,000 square feet or fraction of 5,000 square feet;
(b) High hazard—$200 per 5,000 square feet or fraction of 5,000 square feet;
(9) Manufactured home sites and communities—$120 per facility plus $2.50 per site;
(10) Campgrounds:
(a) Vehicular campgrounds—$120 per facility plus $2.50 per campsite;
(b) Campgrounds with sleeping accommodations—$180 per facility plus $2.50 per bed;
(c) Campgrounds without sleeping accommodations—$120 per facility;
(11) Outside storage of combustible materials, for example, scrap tire, lumber, mulch, tree stumps, etc.—$60 per acre or fraction of an acre.
(12) Outside storage of flammable or combustible liquids/gases (drums or tanks)—$120 per 5,000 square feet or fraction of 5,000 square feet.
(13) Marinas and piers—$120 plus $1.50 per slip.

C. A fee applies if more than one reinspection outlined in §B of this regulation is required to correct a previously identified fire code violation as follows:
(1) Second reinspection—$200; and
(2) Each additional reinspection—$250.

.08 Fees for Technical Assistance, Unclassified Inspections, and Special Events.
A. The fee schedule in this regulation is used to calculate the fee to provide technical assistance or unclassified inspections, to include special events, in the form of plan review or on-sites inspections.

B. A separate technical assistance fee shall be charged at the following rate and prorated to the nearest 1/2 hour:
(1) Deputy fire marshal or fire safety inspector—$75 per hour; and
(2) Fire protection engineer—$100 per hour.

C. Travel time to and from the meeting or inspection site shall be included when computing the fee.

D. When requested, a reasonable time to prepare written reports or research subsequent Code-related issues shall be included when computing the fee.

E. The fee shall be charged to the person officially requesting assistance and is payable upon receipt of an itemized invoice submitted in accordance with administrative procedures established by State fire authorities.

F. Failure to pay the fee within the required time shall result in appropriate administrative or legal action. Further plan review or inspection action may not take place until the fee is paid in full. This may result in delay of the issuance of a building permit, or use and occupancy permit for the building or facility.

.09 Disposition of Fees.
A. Fees collected by the State shall be deposited in the general fund of the State for the services provided.

B. Fees shall be collected and processed in accordance with fiscal procedures established by the State for the collection, disbursement, and accounting of funds.

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 05 FIRE SPRINKLER CONTRACTOR LICENSING REGULATIONS
Authority: Public Safety Article §6-206 and §§9-901 to 9-905
Annotated Code of Maryland
(Amended Effective August 11, 2008)

.01 Purpose.
This chapter establishes licensing requirements for persons who inspect, test, perform maintenance on, install, repair, modify, or lay out fire sprinkler systems in any residential or commercial building in Maryland.

.02 Scope.
A. Except as provided in §B of this regulation, a person who inspects, tests, performs maintenance on, installs, repairs, modifies, or lays out fire sprinkler systems in any residential or commercial building in the State shall apply to, and obtain from, the State Fire Marshal, a Fire Sprinkler Contractor License, as provided for in Regulation .04 of this chapter.

B. A license is not required for the following activities:
(1) Inspections and tests by insurance representatives acting in the performance of their assigned duty;
(2) Inspections, tests, and repairs by a full-time maintenance employee of the property owner, knowledgeable about fire sprinkler systems, acting in the performance of the employee's assigned duty for the property owner;
(3) Inspections, tests, plan review, and ensuring the maintenance of, and any emergency maintenance activity on, a fire sprinkler system, or restoration of an operating, or recently operated, fire sprinkler system to active service by an individual acting in the individual's capacity as a member of a state, county, municipal, career, or volunteer fire department, or authority having jurisdiction;
(4) Installation of a limited area fire sprinkler system or emergency temporary repairs performed by a licensed master plumber in accordance with COMAR 29.06.01; or
(5) Inspections, tests, preparation of design and specification documents, hydraulic calculations, layout, and plan review of fire sprinkler systems by a Maryland-registered professional engineer knowledgeable about fire sprinkler systems.

C. These regulations are minimum statewide requirements which are not intended to prohibit any jurisdiction from adopting a more stringent local law or ordinance which establishes standards or qualifications for fire sprinkler contractors.

.03 Definitions.
A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.
(1) "Designated Qualified Individual" means an owner or employee of a fire sprinkler contractor who is responsible for overseeing work performed by other persons employed by the contractor and who possesses the required NICET qualification or professional engineer qualifications in accordance with the appropriate class of license as listed in this chapter.
(2) "Fire Sprinkler Contractor" means a person that inspects, tests, performs maintenance on, installs, repairs, modifies, or lays out a fire sprinkler system in accordance with standards adopted by reference in COMAR 29.06.01.

(3) "Fire Sprinkler System" means a sprinkler system for fire protection purposes which:
(a) Is an integrated system of piping laid out in accordance with standards adopted in COMAR 29.06.01;
(b) Includes, as the portion of the fire sprinkler system above ground, a network of specially sized or hydraulically designed piping and associated equipment installed in a building, structure, or area, generally overhead, and to which fire sprinklers are connected in a systematic pattern;
(c) Is activated by a device capable of detecting heat or combustion by-products produced by a fire, and which discharges water over the fire area; and
(d) Does not include the first connection to a potable water supply that is downstream of a backflow preventer, and the final connection that discharges indirectly into a public or private disposal system, sanitary drainage facility, or storm drainage facility.
(e) Includes potable water multipurpose piping systems as defined in NFPA 13D.
(4) " International Building Code" means the edition of the *International Building Code*, with amendments, which is currently adopted by reference in COMAR 29.06.01.
(5) "Layout" means the preparation of shop drawings implementing engineering contract documents and applicable codes and standards.
(6) "Limited Area Fire Sprinkler System" means a:
(a) Fire sprinkler system, except a system installed in a townhouse or other single family dwelling, which is laid out within one fire area, and which is enclosed within approved separation assemblies, with no more than 20 sprinklers based on the spacing limitations of NFPA 13, and laid out in accordance with the *International Building Code*, and which has a water supply that consists of one of the following:
(i) A standpipe system capable of supplying a 500 gallon/minute (1890 liters/minute) minimum flow and which has an automatic water supply, or
(ii) A connection in compliance with the Maryland State Plumbing Code to a domestic water system laid out to adequately support the design flow of the largest number of sprinklers required to be hydraulically calculated by NFPA 13 in any fire area plus the domestic demand; or
(b) Fire sprinkler system consisting of not more than six sprinklers for any isolated hazardous area connected to a domestic water supply having a capacity sufficient to provide 0.15 gallon/minute/square foot (6.1 liter/minute/square meter) of floor area throughout the entire enclosed area installed in accordance with NFPA 101.
(7) "NFPA" refers to standards produced by the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, which are currently adopted by reference in COMAR 29.06.01.
(8) "NICET" means the National Institute for the Certification in Engineering Technologies.
(9) "Person" means an individual, receiver, trustee, guardian, personal representative, fiduciary, representative of any kind, partnership, firm, association, corporation, or other entity.
(10) "State Fire Marshal" means the Fire Marshal for the State of Maryland or, in the Fire Marshal's absence, an individual who has been specially designated by the State Fire Marshal to enforce the provisions of this chapter.
(11) "Workmanlike Manner" means a quality of work typical of the standard recognized within the industry and befitting a skilled workman or craftsman.

.04 Licensure.
A. Each fire sprinkler contractor who performs work in Maryland shall possess a valid license of the appropriate class as listed in this regulation. A fire sprinkler contractor, except a person exempt under this chapter or Public Safety Article §9-903(b), Annotated Code of Maryland, who

inspects, tests, performs maintenance on, installs, repairs, modifies, or lays out a fire sprinkler system in a residential or commercial building in the State shall possess a valid license under this regulation. The following table illustrates the capabilities of each class of the sprinkler contractor license:

Function	Class I	Class IIa	Class IIb	Class IIc	Class IId	Class IIIa	Class IIIb	Class IIIc
Inspect	All							
Test	All							
Maintain	All							
Install		Res		Res	13D	All		All
Repair		Res		Res	13D	All		All
Modify		Res		Res	13D	All		All
Layout			Res	Res			All	All

Where: "All" indicates that the function may be performed on commercial or residential systems in accordance with NFPA 13, 13D, and 13R; "Res" indicates that the function may be performed on residential systems in accordance with NFPA 13D and 13R only; and “13D” indicates that the function may be performed on residential systems in accordance with NFPA 13D only.

B. Class I Fire Sprinkler Contractor License.

(1) A fire sprinkler contractor engaged in the inspection, testing, and performance of maintenance of residential or commercial fire sprinkler systems that are in accordance with NFPA 13, NFPA 13D, or NFPA 13R shall possess a class I fire sprinkler contractor license.

(2) To obtain a class I fire sprinkler contractor license, a person shall:

(a) Have not less than 3 years experience in the inspection, testing, and performance of maintenance of residential and commercial fire sprinkler systems as determined by the State Fire Marshal; and

(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, inspection, and testing of water-based systems.

C. Class IIa Fire Sprinkler Contractor License.

(1) A fire sprinkler contractor engaged in the installation, repair, or modification of residential fire sprinkler systems that are in accordance with NFPA 13D or NFPA 13R shall possess a class IIa fire sprinkler contractor license.

(2) To obtain a class IIa fire sprinkler contractor license, a person shall:

(a) Have not less than 3 years experience in the installation, repair, or modification of residential fire sprinkler systems as determined by the State Fire Marshal; and

(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.

(3) For potable water multipurpose piping systems, contractors shall also possess a Maryland master plumber license and shall comply with all applicable provisions of Business Occupations and Professions Article, Title 12, Annotated Code of Maryland.

D. Class IIb Fire Sprinkler Contractor License.

(1) A fire sprinkler contractor engaged in the layout of residential fire sprinkler systems that are in accordance with NFPA 13D or NFPA 13R shall possess a class IIb fire sprinkler contractor license.

(2) To obtain a class IIb fire sprinkler contractor license, a person shall:
(a) Have not less than 3 years experience in the layout of residential fire sprinkler systems as determined by the State Fire Marshal; and
(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.

E. Class IIc Fire Sprinkler Contractor License.
(1) A fire sprinkler contractor engaged in the installation, repair, modification and layout of residential fire sprinkler systems that are in accordance with NFPA 13D or NFPA 13R shall possess a class IIc fire sprinkler contractor license.
(2) To obtain a class IIc fire sprinkler contractor license, a person shall:
(a) Have not less than 3 years experience in the installation, repair, modification and layout of residential fire sprinkler systems as determined by the State Fire Marshal; and
(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.
(3) For potable water multipurpose piping systems, contractors shall also possess a Maryland master plumber license and shall comply with all applicable provisions of Business Occupations and Professions Article, Title 12, Annotated Code of Maryland.

F. Class IId Fire Sprinkler Contractor License.
(1) A fire sprinkler contractor engaged in the installation, repair, or modification of residential fire sprinkler systems that are in accordance with NFPA 13D shall possess a class IId fire sprinkler contractor license.
(2) To obtain a class IId fire sprinkler contractor license, a person shall:
(a) Possess a Maryland master plumber license and comply with all applicable provisions of Business Occupations and Professions Article, Title 12, Annotated Code of Maryland; and
(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.

G. Class IIIa Fire Sprinkler Contractor License.
(1) A fire sprinkler contractor engaged in the installation, repair, or modification of commercial and residential fire sprinkler systems that are in accordance with NFPA 13, 13D, or 13R shall possess a class IIIa fire sprinkler contractor license.
(2) To obtain a class IIIa fire sprinkler contractor license, a person shall:
(a) Have not less than 5 years experience in the installation, repair or modification of commercial and residential fire sprinkler systems as determined by the State Fire Marshal; and
(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level II or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.
(3) For potable water multipurpose piping systems, contractors shall also possess a Maryland master plumber license and shall comply with all applicable provisions of Business Occupations and Professions Article, Title 12, Annotated Code of Maryland.

H. Class IIIb Fire Sprinkler Contractor License.

(1) A fire sprinkler contractor engaged in the layout of commercial or residential fire sprinkler systems that are in accordance with NFPA 13, 13D, or 13R shall possess a class IIIb fire sprinkler contractor license.

(2) To obtain a class IIIb fire sprinkler contractor license, a person shall:

(a) Have not less than 5 years experience in the layout of commercial and residential fire sprinkler systems as determined by the State Fire Marshal; and

(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level III or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.

I. Class IIIc Fire Sprinkler Contractor License.

(1) A fire sprinkler contractor engaged in the installation, repair, modification, and layout of commercial or residential fire sprinkler systems that are in accordance with NFPA 13, 13D or 13R shall possess a class IIIc fire sprinkler contractor license.

(2) To obtain a class IIIc fire sprinkler contractor license, a person shall:

(a) Have not less than 5 years experience in the installation, repair, modification and layout of commercial and residential fire sprinkler systems as determined by the State Fire Marshal; and

(b) Employ at least one designated qualified individual who possesses and maintains a NICET Engineering Technician Level III or higher certification or equivalent in the field of fire protection, automatic sprinkler system layout.

(3) For potable water multipurpose piping systems, contractors shall also possess a Maryland master plumber license and shall comply with all applicable provisions of Business Occupations and Professions Article, Title 12, Annotated Code of Maryland.

J. A person may not be permitted to serve as a designated qualified individual for more than three licensed fire sprinkler contractors.

K. Additional Authorized Work.

(1) A fire sprinkler contractor in possession of a class IIIa fire sprinkler contractor license may engage in any fire sprinkler system work covered by a class IIa or class IId fire sprinkler contractor license.

(2) A fire sprinkler contractor in possession of a class IIIb fire sprinkler contractor license may engage in any fire sprinkler system work covered by a class IIb fire sprinkler contractor license.

(3) A fire sprinkler contractor in possession of a class IIIc fire sprinkler contractor license may engage in any fire sprinkler system work covered by all other classes of fire sprinkler contractor licenses except class I.

(4) A fire sprinkler contractor in possession of a class IIa fire sprinkler contractor license may engage in any fire sprinkler system work covered by a class IId fire sprinkler contractor license only on residential fire sprinkler systems that are in accordance with NFPA 13D or NFPA 13R.

(5) A fire sprinkler contractor in possession of a class IIc fire sprinkler contractor license may engage in fire sprinkler system work covered by a class IIa, class IIb, or class IId fire sprinkler contractor license only on residential fire sprinkler systems that are in accordance with NFPA 13D or NFPA 13R.

L. Fire Sprinkler System Layout.

(1) Layout of plans and preparation for automatic fire sprinkler systems shall be prepared under the supervision of one of the following:

(a) The designated qualified individual employed by a fire sprinkler contractor who meets the qualification listed for the appropriate license classification under §D, E, H, or I of this regulation; or

(b) A Maryland registered professional engineer, knowledgeable in areas about fire sprinkler systems.

(2) Plans shall be marked with the fire sprinkler contractor license number and one of the following:

(a) The designated qualified individual's original signature, NICET level, certification number, and expiration date; or

(b) The original signature and seal of a professional engineer who is registered in Maryland.

M. Notification Requirements.

(1) Within 14 days of any change of address, the fire sprinkler contractor shall:

(a) Notify the Office of the State Fire Marshal in writing of the change;

(b) Return the license certificate requiring the revision; and

(c) Submit the fee as specified in §Q of this regulation for a revised license certificate.

(2) Within 5 business days from the termination of a designated qualified individual, the fire sprinkler contractor shall notify the Office of the State Fire Marshal in writing of the termination.

(3) Within 30 days of termination of the designated qualified individual, or prior to the expiration of a current license, whichever occurs first, the fire sprinkler contractor shall submit a new application to the Office of the State Fire Marshal identifying the new designated qualified individual as defined in Regulation .03 of this chapter.

(4) Within 14 days of any change to information submitted on the license application, the fire sprinkler contractor shall notify the Office of the State Fire Marshal in writing of the change.

N. License Expiration.

All fire sprinkler contractor licenses expire 2 years after the date issued.

O. Liability Insurance Requirements.

(1) To hold any class fire sprinkler contractor license, a person shall maintain continuous comprehensive general liability insurance coverage and provide proof of this coverage in the form of a certificate of insurance with a 30-day cancellation notification provision. The Office of the State Fire Marshal shall be named as the certificate holder. Coverage under this subsection shall include:

(a) A minimum of $1,000,000 combined single limit bodily injury or death and property damage liability insurance; and

(b) Products and completed operations insurance.

(2) Failure to maintain the required coverage is considered sufficient grounds for suspension or revocation of the license.

P. Application.

(1) An application for an initial fire sprinkler contractor license shall be made to the State Fire Marshal on a form designated by the State Fire Marshal.

(2) An application for renewal of a fire sprinkler contractor license shall be submitted to the Office of the State Fire Marshal at least 30 days before the expiration date of the license on a form designated by the State Fire Marshal.
(3) The application shall be signed by the sole proprietor, by each partner of a partnership, or by an officer of the corporation or organization.
(4) Proof of the required insurance coverage, in the form of a certificate of insurance with a 30-day cancellation notification provision shall be submitted with the application. The Office of the State Fire Marshal shall be named as the certificate holder.
(5) Proof of current NICET qualification or professional engineer registration status shall be submitted with the application.
(6) The appropriate nonrefundable fee as specified in §Q of this regulation shall be submitted with the application.

Q. Fees.
(1) A nonrefundable fee set by the State Fire Prevention Commission shall be paid to the Office of the State Fire Marshal to obtain or renew a fire sprinkler contractor license or for services as follows:
(a) Initial application – $300;
(b) Renewal application – $200;
(c) Duplicate or revised license certificate – $25.
(2) A fire sprinkler contractor who does not submit a renewal application on or prior to the expiration date of the license shall pay a late fee of $300 in addition to the license renewal fee.
(3) The State Fire Marshal shall collect the fees, keep all records of fees paid, and pay all fees collected to the General Fund of the State.

.05 Denial, Suspension, and Revocation of Applications and Licenses.
A. The State Fire Marshal may deny a license to an applicant, reprimand a licensee, or suspend or revoke a fire sprinkler contractor license if the applicant or licensee:
(1) Willfully makes any false statement or misrepresentation in an initial or renewal license application;
(2) Assists a person in fraudulently or deceptively obtaining, or attempting to obtain, a license;
(3) Fails to satisfy or maintain any of the requirements set forth in Regulation .04 of this chapter;
(4) While unlicensed, performs fire sprinkler work that requires a license under this chapter;
(5) Signs or affixes the licensee's seal to any plan, print, specification, or report that has not been prepared by the licensee, either personally or under the licensee's immediate supervision;
(6) Violates COMAR 29.06.01 or any other regulation adopted by the State Fire Prevention Commission (by the fire sprinkler contractor or any employee of the fire sprinkler contractor); or
(7) Is convicted of any felony or misdemeanor violation of the State Fire Code or the fire code of any other state or the District of Columbia (by the fire sprinkler contractor or applicant, or any employee of the fire sprinkler contractor or applicant).

B. In determining whether the criminal conviction may serve as the basis for denial, suspension, revocation, or the issuance of a reprimand, the State Fire Marshal shall consider the following factors:

(1) The nature of the crime;
(2) The relationship of the crime to the activities authorized by the license;
(3) The relevance of the conviction to the fitness and qualification of the applicant or licensee to perform work authorized by the license;
(4) Any other crimes of which the applicant or licensee has been convicted;
(5) The length of time since the conviction; and
(6) The conduct of the applicant or licensee before and after the conviction.

.06 Hearings for Denied, Suspended, and Revoked Applications and Licenses.
A. Except as provided in Regulation .07 of this chapter, and before any action is taken under Regulation .05 of this chapter, the State Fire Marshal shall mail to the applicant or fire sprinkler contractor at the last known address of the applicant or fire sprinkler contractor written notice stating:
(1) The basis for the contemplated action; and
(2) That the applicant or fire sprinkler contractor may request a hearing before the State Fire Prevention Commission by mailing or delivering a written request to the Commission within 20 days of the date of the written notice.

B. If an applicant or fire sprinkler contractor requests a hearing, the hearing shall be conducted by the State Fire Prevention Commission in accordance with COMAR 29.06.02.

C. Except as provided in Regulation .07 of this chapter, the State Fire Marshal may not act to deny, suspend, revoke, or reprimand until after the decision of the State Fire Prevention Commission or until after the time for requesting a hearing has expired.

.07 Summary Suspension.
A. The State Fire Marshal may order summarily the suspension of a license if the State Fire Marshal finds that the public health, safety, or welfare imperatively requires emergency action.

B. The State Fire Marshal shall promptly give the fire sprinkler contractor/licensee:
(1) Written notice of the suspension, the finding, and the reasons that support the finding; and
(2) An opportunity for a hearing before the State Fire Marshal.

.08 Appellate Procedure.
A person aggrieved by a final decision of the State Fire Prevention Commission is entitled to judicial review, as provided in State Government Article, Title 10, Subtitle 2, Annotated Code of Maryland.

.09 Penalties.
A. Unless otherwise exempt, a person may not inspect, test, perform maintenance on, install, repair, modify, or lay out any fire sprinkler system in a residential or commercial building in the State without first obtaining the appropriate license required under this chapter.

B. A person who violates any provision of this chapter is guilty of a misdemeanor and, upon conviction, is subject to a fine of $1,000 or imprisonment for not more than 10 days, or both.

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 06 FRESH CUT AND LIVE TREE FIRE SAFETY REGULATIONS
Authority: Public Safety Article §6-206
Annotated Code of Maryland
REPEALED - JANUARY 1, 2010

TITLE 29 DEPARTMENT OF STATE POLICE
SUBTITLE 06 FIRE PREVENTION COMMISSION
CHAPTER 07 GROUND BASED SPARKLING DEVICES
Authority: Public Safety Article, §§6-206 and 10-109
Annotated Code of Maryland
(Amended Effective January 1, 2013)

.01 Purpose.
This chapter establishes minimum requirements for the wholesale, retail sale, and distribution of ground-based sparkling devices.

.02 Application and Scope.
A. This chapter applies to the wholesale, retail sale, and distribution of ground-based sparkling devices.

B. This chapter does not apply to a municipal corporation or county which has adopted more stringent regulations.

.03 Definitions.
A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.
(1) "Class C mercantile occupancy" means a mercantile occupancy of not more than 3,000 square feet gross area used for sales purposes on one story only, excluding mezzanines.
(2) "Ground-based sparkling device" means a device that is:
(a) Nonaerial;
(b) Nonexplosive;
(c) Labeled in accordance with the requirements of the U.S. Consumer Products Safety Commission; and
(d) Considered consumer fireworks as defined in NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01.
(3) "Open-air mercantile operation" means an operation conducted outside of all structures, with the operations area devoid of all walls and roofs except for small, individual, weather canopies.
(4) "Prepackaged ground-based sparkling device merchandise" means ground-based sparkling device items or groups of ground-based sparkling device items that have been packaged by the manufacturer or distributor before they are offered for sale to the consumer.

.04 Registration of Distributors and Wholesalers.
A. A distributor or wholesaler of sparklers or sparkling devices that intends to conduct business in the State, or sells, ships, or assigns for sale in the State the products of the distributor or wholesaler, shall register annually with the Office of the State Fire Marshal on forms prescribed by the State Fire Marshal.

B. Registration forms may be obtained at the Office of the State Fire Marshal Headquarters, 1201 Reisterstown Road, Building C, Pikesville, MD 21208 and at State Fire Marshal installations throughout the State.

C. Completed registration forms and a nonrefundable annual fee of $750 shall be forwarded to the Office of the State Fire Marshal Headquarters.

D. Upon confirmation of registration, the registrant shall submit to the Office of the State Fire Marshal a list of all retail sales facilities located in the State receiving ground-based sparkling devices for sale to the general public and the locations of the facilities.

.05 Sales and Storage of Ground-Based Sparkling Devices.
A. Wholesalers and distributors of ground-based sparkling devices shall comply with the permits and approvals requirements and Chapter 65 “Explosives, Fireworks, and Model Rocketry” of NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01, unless otherwise modified by this chapter.

B. Ground-based sparkling devices may be sold or distributed in any of the following buildings or structures:
(1) Permanent buildings or structures constructed in accordance with the codes enforced by the authority having jurisdiction;
(2) Tents, canopies, or temporary membrane structures complying with NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01;
(3) Temporary structures measuring 800 square feet or less, constructed in accordance with this chapter; and
(4) Temporary ground-based sparkling device sales or distribution stands greater than 800 square feet in area which meet the requirements for a permanent structure.

C. All storage of ground-based sparkling devices:
(1) Shall be secured to prevent unauthorized access by the public;
(2) May not be located in direct sunlight; and
(3) May not exceed 5 percent of the basement floor area if located in a basement.

D. Ground-based sparkling devices sales and distribution facilities may not be located in basements.

.06 Quantities.
A. Except for permanent buildings and structures used exclusively for sale and distribution of ground-based sparkling devices, permanent buildings and structures may not have more than 5 percent of their gross sales or distribution floor area for ground-based sparkling devices display.

B. Open-air mercantile operations may not exceed:
(1) 200 pounds pyrotechnic composition; or
(2) If the pyrotechnic composition weight is not known, 800 pounds gross weight.

.07 Displays.
A. All ground-based sparkling devices merchandise offered for sale or distribution shall be prepackaged with a packaging arrangement which completely encapsulates the ground-based sparkling device item or items with paperboard, cardboard, plastic wrap, or similar materials or combinations of materials. The encapsulation shall ensure that an individual must puncture, tear, unseal, or break open the package, or otherwise damage or destroy the packaging materials in order to gain access to, and directly handle, each individual ground-based sparkling

device item to expose its fuse. Exceptions allowed in Chapter 65 “Explosives, Fireworks, and Model Rocketry” of NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01 are not permitted.

B. A display may not exceed 3,000 square feet unless the building or structure in which it is located is protected throughout by an approved automatic sprinkler system.

C. Height and Clearance. Ground-based sparkling devices on display or located on shelves, counters, or other fixtures may only be displayed with at least an 18-inch clearance from the ceiling and in temporary sales or distribution stands where the interior is not accessible to the general public, not higher than 8 feet from the floor surface.

.08 Fire Protection.
Portable fire extinguishers shall be installed as required for extra-hazard occupancy protection and shall comply with NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01.

.09 Means of Egress.
A. Means of egress in ground-based sparkling devices sales or distribution facilities shall comply with the requirements of NFPA 101 Life Safety Code as incorporated by reference in COMAR 29.06.01, unless otherwise modified by this regulation.

B. Means of egress in tents and membrane structures used for the sales or distribution of ground-based sparkling devices shall comply with NFPA 101 Life Safety Code as incorporated by reference in COMAR 29.06.01 and NFPA 102 Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures, unless otherwise modified by this regulation.

C. An approved fire safety and evacuation plan shall:
(1) Be in writing;
(2) Be maintained current; and
(3) Be posted in a conspicuous location that is accessible to the public as well as to persons employed or otherwise working in the facility.

D. Exit openings from tents shall have a clear opening width of at least 44 inches.

.10 Sources of Ignition.
Electrical wiring shall be in accordance with NFPA 1 Fire Code as incorporated by reference in COMAR 29.06.01.

.11 (Repealed)

.12 Temporary Heating Sources.
Temporary heating units shall be listed by a testing laboratory approved by the Office of the State Fire Marshal and used in accordance with their listing.

.13 Generators.
A. Scope. This regulation does not limit the type and quantity of fuel for generators and their fuel storage located not less than 50 feet from the exterior of the sales or distribution facility.

B. Generators using flammable or combustible liquid or gas fuels supplying power to ground-based sparkling devices sales or distribution facilities may not be located less than 20 feet from the exterior of the sales or distribution facility.

C. Combustible and flammable liquid generator fuel may not:
(1) Exceed 5 gallons; or
(2) Be stored less than 20 feet from the exterior of a sales or distribution facility.

D. Flammable gas generator fuel may not:
(1) Exceed 20 pounds; or
(2) Be stored less than 20 feet from the exterior of a sales or distribution facility.

.14 Personnel.
A. At least one individual 18 years old or older shall be:
(1) Present at all times in sales and distribution facilities during the hours of sale and distribution to the public; and
(2) Responsible for supervision of the facility and its operation.

B. All personnel handling ground-based sparkling devices shall be 16 years old or older.

C. All personnel handling ground-based sparkling devices shall receive safety training related to the performance of their duties. Training shall include, but not be limited to, safe handling instructions, emergency procedures, and the use of portable fire extinguishers.

D. The distributor shall provide detailed safe handling instruction guidelines for sales and distribution personnel with all packing information for ground-based sparkling devices.

E. The distributor shall provide the retailer with a list of ground-based sparkling devices approved for sale by the Office of the State Fire Marshal.

F. Personnel may not sell ground-based sparkling devices to a person younger than 16 years old as set forth in Public Safety Article, §10-112, Annotated Code of Maryland.

.15 Signs.
A. In facilities used exclusively for the sale or distribution of ground-based sparkling devices, a sign reading "PERSONS UNDER 16 MUST BE ACCOMPANIED BY, AND UNDER THE SUPERVISION OF, A RESPONSIBLE PERSON AT LEAST 18 YEARS OLD" shall be conspicuously posted in letters not less than 1 inch high, on a contrasting background, at each entrance to the sales or distribution facility to which the general public has access to the interior.

B. Where not otherwise required by local or state laws, ordinances, or regulations, a sign reading "NO GROUND-BASED SPARKLING DEVICE SALES OR DISTRIBUTION TO PERSONS UNDER 16 YEARS OLD. PHOTO I.D. REQUIRED" shall be conspicuously posted in letters not less than 1 inch high at:
(1) Each entrance of the sales or distribution facility or in the vicinity of the ground-based sparkling device sales or distribution display; and
(2) The point of sale or distribution.

C. At least one sign reading "NO SMOKING OR OPEN FLAME DEVICES WITHIN 50 FEET", in letters at least 2-inches high on a contrasting background, shall be conspicuously posted at each entrance or within 10 feet of every aisle directly serving the ground-based sparkling device sale or distribution display area in the facility.

D. At least one sign reading "NO GROUND-BASED SPARKLING DEVICE DISCHARGE WITHIN 300 FEET", in letters at least 2-inches high on a contrasting background, shall be conspicuously posted in the vicinity of the ground-based sparkling device sales or distribution display, or as otherwise required by the authority having jurisdiction.

.16 (Repealed)

.17 Penalties.
A person who violates any provision of this chapter is guilty of a misdemeanor and, upon conviction, is subject to a fine of $1,000, imprisonment for not more than 10 days, or both, as set forth in Public Safety Article, §6-601, Annotated Code of Maryland.

APPENDIX H

CADD STANDARDS MANUAL

MARTIN STATE AIRPORT

BWI BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT

Maryland Aviation Administration

CADD Standards Manual

VERSION 3.0, DATED: AUGUST 2009

MARTIN STATE AIRPORT

BWI

Thurgood Marshall

Maryland Department of Transportation

PREFACE

This standard is updated and maintained by the Maryland Aviation Administration (MAA), Office of Engineering and Construction, Management Division of Facilities Design and has adopted the nationally accepted drawing practices of the U. S. National CADD Standards for *CADD Layering Guidelines, Uniform Drawing System and Plotting Guidelines*. It will assist in the production of uniform engineering documents, and provide efficient and effective means for management and technical data control.

This standard provides:

a) Drawing practices for the preparation of architectural, engineering and space allocation drawings.

b) Definitions and examples of the types of facility drawings to be prepared by and for the MAA.

c) Guidelines for the creation of titles for drawings.

d) Numbering, coding and identification procedures for standard and space allocation drawings, associated lists and documents referenced on these drawings and associated lists.

e) Practices applicable to Computer Aided Design and Drafting (CADD).

Changes from the previous version of this standard focus on:

a) Current technology trends that have gained widespread acceptance in government and industry.

b) Use of electronic deliverables and delivery media.

c) Synchronization with standard industry practices.

d) Greater MAA-wide standardization to take full advantage of technological opportunities.

e) Use of raster images in drawings.

This manual will be updated periodically. The manual is intended to be dynamic and will change to conform to future engineering drawing practices. The users of this manual are encouraged to use the "Manual Revision Form" on page ii to suggest revision(s) / addition(s) to the manual.

MANUAL REVISION FORM
SUGGESTED REVISION/ADDITION TO THE MANUAL

Date:_____ **Log Number:**_____

To: _____

_____

_____

From: _____

_____

_____

REVISION/ADDITION to Section: ☐ **Engineering Documents** ☐ **Space Allocation**

Manual Section(s): _____

_____

_____

Manual Paragraph(s): _____

_____

_____

Manual Page(s): _____

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Existing: _____

_____

_____

_____

_____

_____

Proposed: _____

_____

_____

_____

_____

Background: _____

_____

_____

_____

TABLE OF CONTENTS

List of Figures

List of Tables

1.0 SCOPE

This manual outlines the requirements for the delivery of Computer Aided Design and Drafting (CADD) data files to the Maryland Aviation Administration (MAA) by its consultants. This manual establishes standard layers, title blocks, file names, line types and other conventions to be applied to all CADD files delivered to, used by or provided from MAA. This manual does not define design and drafting procedures for consultants to follow when developing files that are complaint with this standard. This manual will cover standard naming, object properties, delivery format and plotting. Standard naming and delivery format will allow for efficient storage and retrieval of files. Standard layer naming facilitates sharing of information between drawings and better visibility control of drawing objects. Standard object properties will help provide uniform appearance to CADD drawings. Standard plot settings will help overcome problems associated with producing similar looking plots from different plotters.

This document comprises of two parts, the first part up to and including section 4.0 Drawing Requirements addresses MAA's requirements applicable to construction drawings, installation permits, building permits and space allocation drawings. The second part, 5.0 addresses MAA's requirements specific to space allocation data.

1.1 Standard Definition

This standard prescribes general requirements for the preparation and revision of architectural, engineering and space allocation drawings that are prepared for facilities by and for the MAA.

MAA has implemented a series of standards, a spatial data repository, applications, policies and procedures that constitute the Airport Engineering Information System (AEIS). The AEIS serves as a central catalog and repository for engineering information used by MAA. This data is used within AEIS applications as well as other MAA systems that require this type of data. The AEIS also providesa structured workflow and a means of cataloging, archiving and retrieving project documents and information.

As the requirements of this process evolves and criterion are established for file, data attributes and protocols this standard will be updated to ensure CADD and engineering documentation conformance.

1.2 Document Classification

This standard shall apply, but not be limited, to the following drawing types regardless of source:

a) Construction drawings for new and existing facilities.
b) Installation permit drawings.
c) Building permit drawings.
d) Space Allocation drawings.
e) Design, planning and record drawings

1.3 Manual Revisions

Where MAA CADD Standards do not contain the required detail for the work to be performed by the consultant/sub consultant, CADD Standards shall be developed by the consultant/sub consultant and transmitted to the MAA Project Engineer for approval using the provided MANUAL REVISION FORM. These addenda will become part of the project specific CADD standards. This manual will be subject to revision in response to changes in technology and by the incorporation of changes to support consultant requirements at MAA's discretion.

1.4 Software Requirements

The MAA requires that all CADD files be in AutoCAD DWG format, the version number to be specified by the MAA Project Engineer and selected from the Approved Software Lists provided in this section. The standards defined in this manual are specifically for AutoCAD environments, for those consultants/sub consultants who do not use AutoCAD, it is their responsibility to ensure that files translated to AutoCAD adhere to these standards before delivery.

1.4.1 Approved Software, CADD

AutoCAD Version 2010, or later Versions as approved by MAA.

1.4.2 Approved Software, CADD Vertical Products

Autodesk Architectural Desktop	Autodesk Field Survey	Autodesk Map
Autodesk Civil Design	Autodesk Land Desktop	Autodesk QuickCAD
Autodesk Civil Series	Autodesk Location Services Products	Autodesk Raster Design

2.0 APPLICABLE STANDARDS and PUBLICATIONS

When generating CADD documents the following standards and publications may be referenced for guidance.

2.1 MAA Manuals

This manual is to be used in conjunction with:
MAA's Design Standards Manual
MAA's GIS Data Standard, which includes a crosswalk between approved CADD and GIS layers
AEIS Data Quality Standard
AEIS Data Security Standard
AEIS Naming, Identification & Addressing Standard

2.2 Government Documents

Standards - Military
A/E/C CADD Standard Release 3.0 (September 2006) from the U.S.CADD/GIS Technology Center

Standards - Other Publications

- ASME-Y14.38M ASME Drawing & Terminology Standards
- NAS-SS-1000 Vol. 6 Facility Requirements for the National Airspace System
- FAA 7350.6 Location Identifiers
- FAA FSEP Facilities, Services and Equipment Profile Orders
- DOT Order 1360.6 Graphic Standards
- FAA Order 1000.15 Glossary
- FAA Order 7340.1 Contractions

2.3 Commercial Documents

- ANSI/AWS A2.4 Symbols for Welding & Nondestructive Testing
- ANSI/AWS A3.0 Welding Terms and Definitions
- ANSI B1.1 Unified Screw Threads
- ANSI/1EEE 2.16 Reference Designations for Electrical and Electronics Parts and Equipment
- ANSI/1EEE 91 Graphic Symbols for Logic Functions
- ANSI Y1.1 Abbreviations for use on Drawings and Text
- ANSI Y14.1 Drawing Sheet Size and Format
- ANSI Y14.2 Line Conventions and Lettering
- ANSI Y14.5 Dimensioning and Tolerance
- ANSI Y14.6 Screw Thread Representation
- ANSI Y14.7.1 Gear Drawing Standards - Part 1 for Spur, Helical, Double Helical and Rack
- ANSI Y14.7.2 Gear and Spline Drawing Standards Part 2 - Bevel and Hypoid Gears
- ANSI Y14.13 Mechanical Spring Representation
- ANSI Y14.15 Electrical and Electronics Diagrams
- ANSI Y14.15 Interconnection Diagrams
- ANSI Y14.17 Fluid Power Diagrams
- ANSI Y14.26.3 Dictionary of Terms for Computer- Aided Preparation of Product Definition Data
- ANSI Y32.2 Graphic Symbols for Electrical and Electronic Diagrams
- ANSI Y32.4 Graphic Symbols for Plumbing Fixture for Diagram used in Architecture & Building Construction
- ANSI Y 32.9 Graphic Symbols for Electrical Wiring and Layout Diagrams Used in Architecture and Building Construction

2.4 Order of Precedence

In the event of conflict between the documents referenced in Sections 2.2 Government Documents and 2.3 Commercial Documents, and the contents of this manual, the contents of this manual shall be considered the superseding requirement.

3.0 GENERAL

3.1 Drawing Definitions

The following sections define general A/E/C drawing types.

3.1.1 Engineering Drawings

Engineering Drawings are formal representations used to convey the physical and functional end product design and/or installation requirements of an item. They may include pictorial, graphical, schematic or textual presentations.

3.1.2 Construction Drawings

Construction Drawings are engineering drawings, which show the design of buildings, structures, or the related construction, and are normally associated with the architectural, construction and civil engineering operations. Construction drawings establish all the interrelated elements of the pertinent services, equipment, utilities, and other engineering skills.

3.1.3 Installation Drawings

Installation drawings are engineering drawings, which show the installation requirements of equipment in facilities.

3.1.4 Space Allocation Drawings

Space Allocation Drawings are used to provide an accurate record of existing space, identify tenants, square footages of occupancy.

3.2 Glossary

The following are definitions of terms used in this standard:

AEIS	Airport Engineering Information System.
EDMS	Electronic Data Management System
EDRS	Electronic Document Retrieval System
AutoCAD	AutoCAD is a full-featured CADD tool produced by Autodesk Inc. that handles both 2D and 3D (with additional add on) design. The native file format is DWG and it reads and writes DXF files.
CADD	Computer Aided Design & Drafting. Graphic software used by engineers and drafters to create and modify drawings in 2D and 3D.
Drawing Sheet Format	The sheet boundary lines, and title block geometry used to record administrative information about a CADD file.
Drawing Sheet Sizes	Standard sheet sizes are determined by the American National Standards Institute. Alphabetic characters name sheet sizes such as D, E and F.
DWG	AutoCAD's native CADD file format.
DXF	AutoCAD drawing exchange format for CADD files.
Model File	Model files are to be used to describe the facility's physical layout and components. This includes the building's walls, doors, windows, structural system, mechanical system, etc. All model files are drawn at full size (1-to-1). Model files can be 2D or 3D.
Model Space	AutoCAD Model Space is where the user creates a 2D or 3D full size (1-to-1) drawing. Model file types are created in Model Space.
Paper Space	AutoCAD Paper Space is where the user organizes different layouts for the purpose of plotting to an appropriate drawing scale through the use of viewports.
Plot Stamp	Plots of CADD drawing files should include a plot stamp, which should include the file name and path, date, time and the user name.
Project Copy	A project copy drawing is part of the project copy process, which manages concurrent design updates to a single released drawing.
Raster	Digital image process producing lines made of rectangular dots. Examples of raster formats are TIFF, JPG, BMP, GIF, etc.
Reference File	A CADD software capability that allows vector or raster files to be attached to sheet files and displayed, plotted, and (in the case of reference design files)

	used for construction purposes. This capability is generally used as a project organization tool to segregate the sources of project drawing files. Additionally, it allows designers to share drawing information electronically.
Revised Drawing	A drawing that has been revised or modified after submission.
Sheet File	Sheet files are to be used to assemble model files, text, title block and other information for plotting purposes. Each sheet file represents one plotted drawing. Generally, sheet files are plotted at 1-to-1 scale.
SSI	Sensitive Security Information, as defined by the Code of Federal Regulations (49 CFR 1520)
TIFF	Tagged Image File Format. Raster graphics format
Vector	Computer graphics comprised of mathematical representation of points, lines and other geometric entities.
Workflow	Automatic routing of documents to the users responsible for working on them.
2D	Two Dimensional
3D	Three Dimensional
A/E/C	Architectural, Engineering and Construction
AIA	American Institute of Architects
ANSI	American National Standards Institute
GIS	Geographical Information System
CD-R	Recordable Compact disk

3.3 Glossary of Acronyms for Use in Airport Documents

-See Appendix C

4.0 DRAWING REQUIREMENTS

4.1 Drawing Production

MAA requires that all CADD files be in AutoCAD DWG format (compatible with AutoCAD version 2006, or later Versions if approved by MAA). The standards defined in this manual are specifically for AutoCAD environments, for those consultants/sub consultants who do not use AutoCAD, it is their responsibility to ensure that files translated to AutoCAD adhere to these standards before delivery.

4.1.1 Drawing File Format

Electronic drawings shall be created and maintained in native AutoCAD vector file format (DWG); translations between vector file formats (DWG and DGN) should be avoided.
The following should be avoided:

a) Drawing Exchange Format (DXF) - unless mandated by special requirement in this manual.
b) Use of the following CADD entities: doughnuts, segments, solids and traces, point entities, custom fonts, patterns or line types or styles, special characters such as nested blocks, nested or circular Xrefs (reference files) and infinite lines.

All drawings shall be void of duplicate entities.

4.1.2 Creation of CADD Files

All CADD drawing files should be created at full-scale (1-to-1). Drawing borders are referenced into paper space with insertion point 0, 0 and a scale of 1. Refer to Table 4-1, Scale Factor and Text Height Conversion Chart for standard engineering, architectural and mapping scale factors and text heights to be used in model space for full size drawings.

Plotted Scale	Scale Factor	Plotted Text Height			
		1/10"	1/8"	3/16"	1/4"
1/8"=1'-0"	96	9.6"	12"	18"	24"
3/16"= 1'-0"	64	6.4"	8"	12"	16"
1/4"=1'-0"	48	4.8"	6"	9"	12"
3/8"= 1'-0"	32	3.2"	4"	6"	8"
1/2"=1'-0"	24	2.4"	3"	4.5"	6"
3/4"=1'-0"	16	1.6"	2"	3"	4"
1"= 1'-0"	12	1.2"	1.5"	2.25"	3"
1 1/2"=1'-0"	8	.8"	1"	1.5"	2"
3"= 1'-0"	4	.4"	.5"	.75"	1"
6"= 1'-0"	2	.2"	.25"	.375"	.5"
12"= 1'-0"	1	.1"	.125"	.1875"	.25"
1"= 10'	120	1"	1.25'	1.875'	2.5625'
1"=20'-0"	240	2'	2.5'	3.75'	5'
1"=25'-0"	300	2.5'	3.125'	4.6875'	6.26'
1"=30'-0"	360	3'	3.75'	5.625'	7.5'
1"=50'-0"	600	5'	6.25'	9.375'	12.5'
1"=100'-0"	1200	10'	12.5'	18.75'	25.0'
1=10	10	1	1.25	1.875	2.5
1=20	20	2	2.5	3.75	5
1=30	30	3	3.75	5.625	7.5

Table 4-1, Scale Factor and Text Height Conversion Chart

4.1.2.1 Drawing Sheet Format

MAA-approved drawing formats include common drawing features such as boundary geometry, title block data, filename, pathname, and title block geometry.

4.1.2.2 Drawing Size

The MAA standard drawing size is D (24" X 36") full size and B (12" X 18") half size. Other sizes are allowed only as needed. Drawing sheet size and margins must follow the specifications shown in Table 4-2, Standard Drawing Sizes. Apply ANSI Y14.1 for any information not provided in this standard, but required on drawing sheet size.

Size Designation	Vertical	Horizontal	Margin		
			Horizontal	Vertical	
				Left	Right
B	12"	18"	0.25"	0.75"	0.25"
D	24"	36"	0.50"	1.50"	0.50"

Table 4-2, Standard Drawing Sizes

4.1.2.3 Sizing Drawing Formats for Scaled Drawings

Each facility shall be drawn in the CADD model file at full size (1 to 1). The CADD user then scales the data to fit the desired paper size at the correct scale through a view port in paper space using the zoom command and entering *nXP* where *n* is the scale factor required and *XP* remains constant. Table 4-3 provides the necessary scale factors needed to calculate the reduced plot size.

Plot Scale	Drawing Area Size (H x W) *		Scale Factor nXP
	B (9.5" x 13.25")	D (19" x 26.5")	
1/8"=1'-0"	76' x 106'	152' x 212'	0.0104XP
3/16"= 1'-0"	50.7' x 70.7'	101.3' x 141.3'	0.0156XP
¼"=1'-0"	38' x 53'	76' x 106'	0.0208XP
3/8"= 1'-0"	25' x 35'	50.7' x 70.7'	0.0312XP
½"=1'-0"	19' x 26.5'	38' x 53'	0.0416XP
¾"=1'-0"	12.7' x 17.7'	25.3' x 35.3'	0.0625XP
1"= 1'-0"	9.5' x 13'	19' x 26.5'	0.0833XP
1 ½"=1'-0"	6' x 8.9'	12.7' x 17.7'	0.125XP
3"= 1'-0"	3' x 4.4'	6.3' x 8.8'	0.25XP
6"=1'-0"	1.6' x 2.2'	3.2' x 4.4'	0.50XP
12"=1'-0"	0.8' x 1.1'	1.6' x 2.2'	1XP
1"= 10'-0"	95' x 132.5'	190' x 265'	10XP
1"=20'-0"	190' x 265'	380' x 530'	20XP
1"=25'-0"	237.5' x 331'	475' x 662.5'	25XP
1"=30'-0"	285' x 397.5'	570' x 795'	30XP
1"=50'-0"	475' x 662.5'	950' x 1325'	50XP
1"=100'-0"	950' x 1325'	1900' x 2650'	100XP

Architectural Units

Decimal Units

* NOTE: The area for the title block, notes, legend and key plan have been deducted from the sheet total area.

Table 4-3, Sheet Sizes, Drawing Field, and Scale Factors Examples

4.1.3 Borders

Figure 4-1 shows the standard MAA border. Figure 4-2 shows the title block portion of the MAA border. The bubble call-outs in Figure 4-2 refer to Table 4-4, where each item is described. An example of the standard *border sheet* is available in AutoCAD format as part of this manual. It is included on the MAA CADD Standards CD accompanying this manual. The standard border includes the following features:

- Border
- Title Block
- Consultant Ident. Block
- Drawing Field
- P.E. Stamp Box
- Notes
- Legend
- Key Plan
- Graphic Scales
- North Arrow
- Plot Stamp (Full path name, User name,Date, Time)

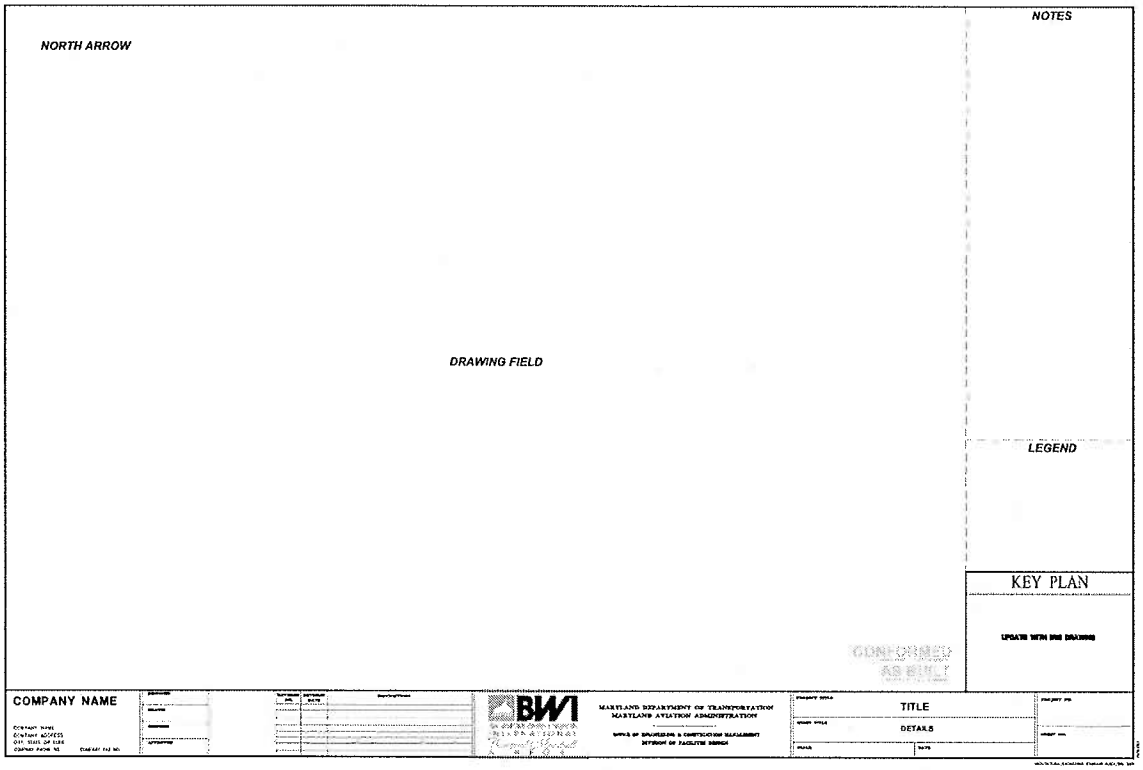


Figure 4-1, Standard Border

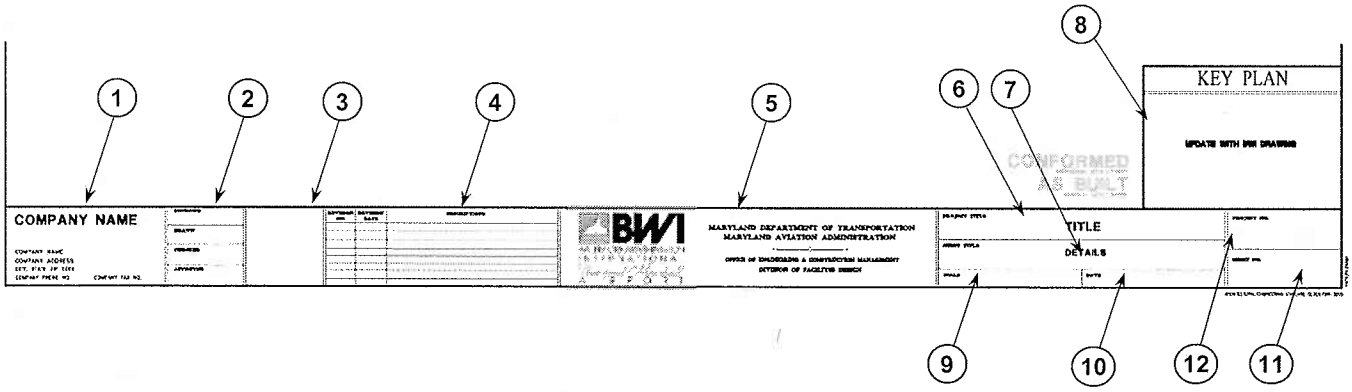


Figure 4-2, Title Block

The following statement must be placed on all sheets that contain SSI as defined in the Code of Federal Regulations (49 CFR 1520). This statement should be placed in the area above the drawing title shown as item 6 in Figure 4-2 above.

> *Warning: This document contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.*

All borders shall include the following information with the exception of the key plan, which applies to plan sheets only:

Item	Block Description	Text Style	Text Size
1	Consultant Name and Address		
2	Initial Block	ROMANS	0.1250
3	Engineers Stamp Block		
4	Revision Date and Description Block	ROMANS	0.1250
5	Airport Logo and Name Block	ROMAND	0.1535
6	Project Title	ROMAND	0.2000
7	Sheet Title	ROMAND	0.1535
8	Key Plan		
9	Scale	ROMANS	0.1250
10	Date	ROMANS	
11	Drawing Number	ROMAND	0.1535
12	Contract Number	ROMAND	0.1535

Table 4-4, Drawing Title Block Descriptions

4.1.4 Title Sheets

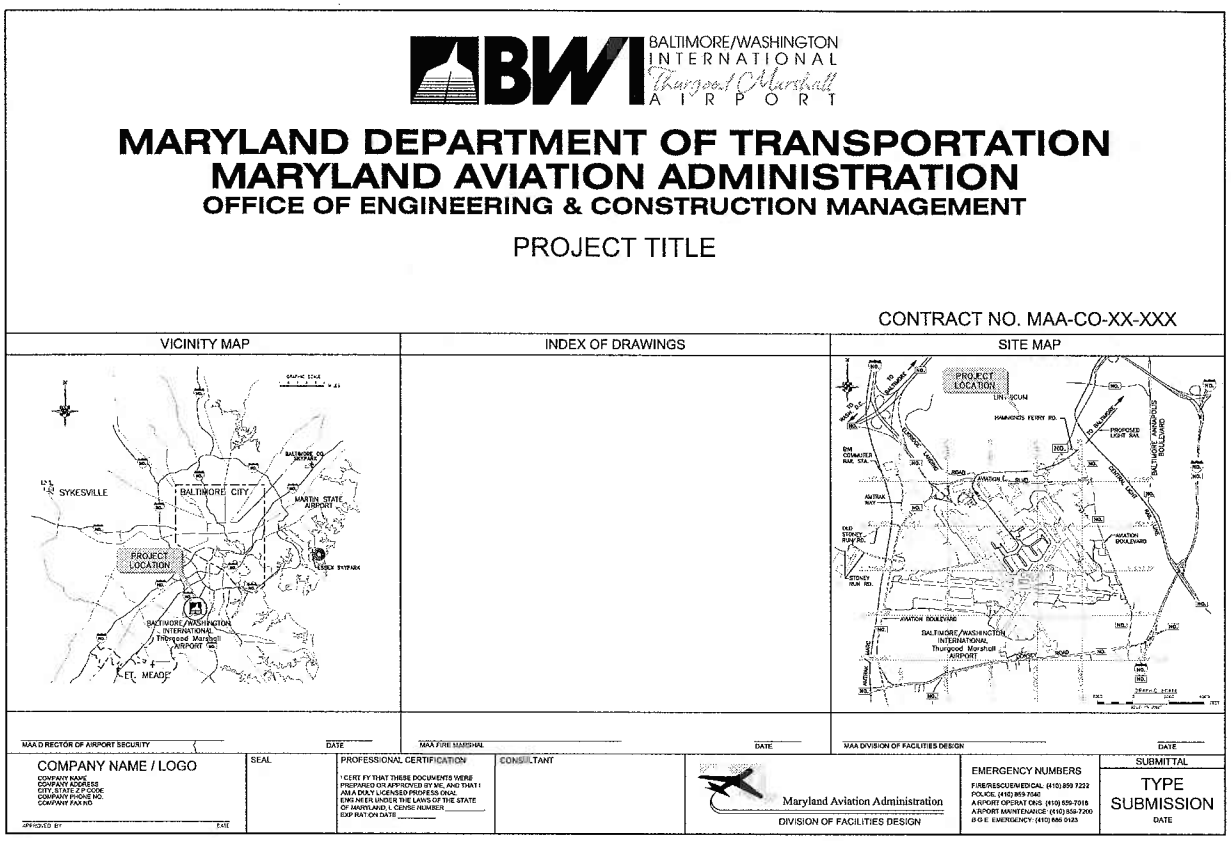
Figure 4-3 shows the standard title sheets for projects at both BWI and Martin State Airport. An example of each standard *title sheet* is available in AutoCAD format as part of this manual. They are included on the MAA CADD Standards CD accompanying this manual.

The following information will be included on all title/cover sheets:

- Airport Logo and Name
- Maryland Department of Transportation
- Maryland Aviation Administration, Office of Engineering & Construction Management
- ***MAA CONTRACT NAME*** (assigned by MAA)
- Contract No, MAA-CO-00-000 (last five digits assigned by MAA OP&E)
- Submission Name (e.g. 30% Design, Bid Documents, Conformed, As Built etc.) and date
- Sensitive Security Information (SSI, as defined by 49 CFR 1520) statement (if the document set contains SSI).
- Vicinity Map and Site Map. The site map should include gridlines that conform to the grid layout defined in the AEIS Naming & Addressing Standard. The combined extent of the area covered by all sheets provided should be clearly indicated on the site map.
- Consultant Name Block and Stamp Block
- Signature Blocks Including Signature Line and Date Line for: Airport Security, Fire Marshall and MAA Division of Facilities Design
- Drawing Index
  Should additional space be required provide separate index sheet immediately behind cover sheet. The comment '(contains SSI)' should be added after the title of any documents that contain SSI.

The following statement must be placed on the title sheet of drawing sets that contain SSI as defined in the Code of Federal Regulations (49 CFR 1520).

Warning: This document contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.



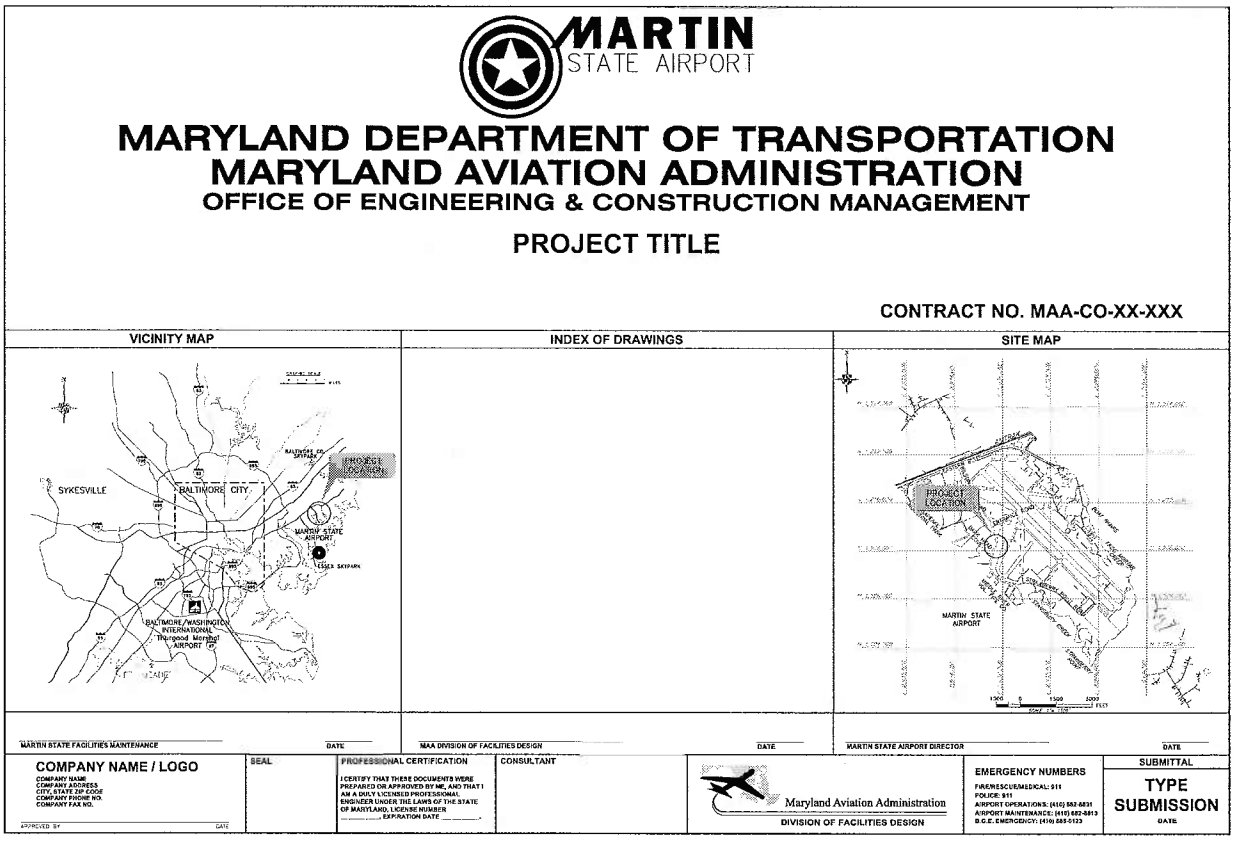


Figure 4-3, Title/Cover Sheet Layout Examples

Modifications to the standard cover sheet and border require prior approval of the Office of Planning and Engineering.

4.1.5 Drawing Numbering

The drawing sequence number for CADD drawing starts with an upper case letter specifying the discipline followed by a three digit sequential number, starting with 001 within each discipline code (i.e. C001, C002 .., C00n; A001, A002 ... A00n). The discipline codes are listed below:

Discipline Code	Discipline	Discipline Code	Discipline	Discipline Code	Discipline
A	Architectural	G	General	P	Plumbing
C	Civil	H	Hazardous materials	Q	Equipment-Baggage
D	Demolition	I	Interiors	R	Real estate/lease
E	Electrical	L	Landscaping	S	Structural
F	Fire protection	M	Mechanical	T	Telecommunication
				Z	Contractor/shop drawing

Table 4-5, Drawing Number Discipline Codes

4.1.6 Arrangement of Drawings

The drawings in a construction drawing set are listed by discipline in Table 4-6, Construction Drawing Set.

4.1.6.1 Construction Drawing Sets

The drawings in Table 4-6 are commonly used in identifying a complete set of drawings for the construction of a new facility. Drawing sets for the construction of facility modifications must consist of a subset of the drawings listed in this table. Construction drawing sets shall be arranged by discipline in the following order.

DISCIPLINE	DRAWING CODE	DESCRIPTION
General	G	Cover, Index, Abbreviations, Symbols, Staging & Safety Plans
Real Estate/Lease	R	Property Boundaries And Legal Descriptions
Civil	C	Legend
Civil	C	Site
Civil	C	Boring Log
Civil	C	Under Slab Drainage
Civil	C	Building Site Plan
Civil	C	Grading Plan
Civil	C	Utility Plan
Civil	C	Details, Elevations And Sections
Civil	C	Site Improvements
Civil	C	Structural Canopy Details
Civil	C	Layout, Grading, Draining and Landscaping
Civil	C	Structural Details
Demolition	D	Removal of Existing Construction
Hazardous Materials	H	Hazardous Materials
Landscaping	L	Legend, Symbols and Abbreviations
Landscaping	L	Irrigation Plan
Landscaping	L	Planting
Landscaping	L	Irrigation and Planting Details
Architectural	A	Legend, Symbols and Abbreviations
Architectural	A	Floor Plan
Architectural	A	Reflected Ceiling Plan
Architectural	A	Roof Plan
Architectural	A	Elevations
Architectural	A	Sections
Architectural	A	Details
Architectural	A	Millwork
Architectural	A	Equipment

DISCIPLINE	DRAWING CODE	DESCRIPTION
Architectural	A	Furniture
Interiors	I	Interior Building Elements
Structural	S	Legend, Symbols And Abbreviations
Structural	S	Structural Foundation Plan
Structural	S	Framing and Decking Plan
Structural	S	Roof Framing Plan
Structural	S	Structural Details
Structural	S	Structural Steel Grounding
Structural	S	Erection Drawings
Mechanical	M	Legend, Symbols And Abbreviations
Mechanical	M	Equipment Schedule
Mechanical	M	Elevations
Mechanical	M	Generator and Fan Room Plan
Mechanical	M	Chiller Room Plan
Mechanical	M	Mechanical Room Plan
Mechanical	M	Roof Plan
Mechanical	M	Sections and Details
Mechanical	M	Details
Mechanical	M	Hot and Cold Piping Diagrams
Mechanical	M	Miscellaneous
Mechanical	M	Steam Piping Systems
Mechanical - HVAC	M	Under Floor Plan
Mechanical - HVAC	M	Floor Plan (Room Area)
Mechanical - HVAC	M	Ceiling Plan
Baggage Handling System	Q	General Notes, Legend and Abbreviations
Baggage Handling System	Q	Floor Plans
Baggage Handling System	Q	Enlarged Floor Plans
Baggage Handling System	Q	Sections
Baggage Handling System	Q	Details
Baggage Handling System	Q	Controls
Plumbing	P	Legend, Symbols and Abbreviations
Plumbing	P	Foundation Plan
Plumbing	P	Piping Plan
Plumbing	P	Riser Diagram
Plumbing	P	Sanitary Riser Diagram
Plumbing	P	Storm Riser Diagram
Plumbing	P	Roof Drain System
Plumbing	P	Details
Electrical	E	Legend, Symbols and Abbreviations
Electrical	E	Single Line Diagrams
Electrical	E	First Floor Lighting Plan
Electrical	E	Power and Communications Plan
Electrical	E	Grounding Plan
Electrical	E	Security Plan
Electrical	E	Equipment
Electrical	E	Motor Control Schematics
Electrical	E	Miscellaneous
Electrical	E	Details
Electrical	E	Panel Schedules
Telecommunications	T	Legend, Symbols And Abbreviations
Telecommunications	T	1st Floor Communications Plan
Telecommunications	T	Details
Telecommunications	T	Manhole and Cable Diagrams
Fire Protection	F	Legend, Symbols And Abbreviations
Fire Protection	F	Sprinkler System
Fire Protection	F	Fire Pump Location Plan
Fire Protection	F	Alarm Systems
Fire Protection	F	Fire Fighting Equipment
Fire Protection	F	Stand Pipe System
Z-Contractor	Z	Shop Drawings

Table 4-6, Construction Drawing Set

4.1.7 Typical Sheets and Layouts for Construction Drawing Sets

The following sections provide examples of drawing sheets that are always included in a drawing set.

4.1.7.1 Cover Sheet

See Figure 4-3, Title/Cover Sheet Layout Example.

4.1.7.2 Index Sheet

The index sheet shows a continuation of the drawing list from the title sheet, if required, all abbreviations used in the document set and a legend depicting all existing and proposed symbols. Reference Contracts pertaining to the active task document are to be included in the provided attributed block. The design firm is to contact the Contract Division of Facilities Design Document Management/Technical Support Section of MAA to assist in gathering this list of reference contracts and to obtain copies of the documents from the reference contracts. An example of each standard Index Sheet is available in AutoCAD format as part of this manual. They are included on the MAA CADD Standards CD accompanying this manual.

An example is shown in Figure 4-4, Index Sheet Example, the columns shown are for illustration only and may be adjusted to accommodate more or less of one type of information.

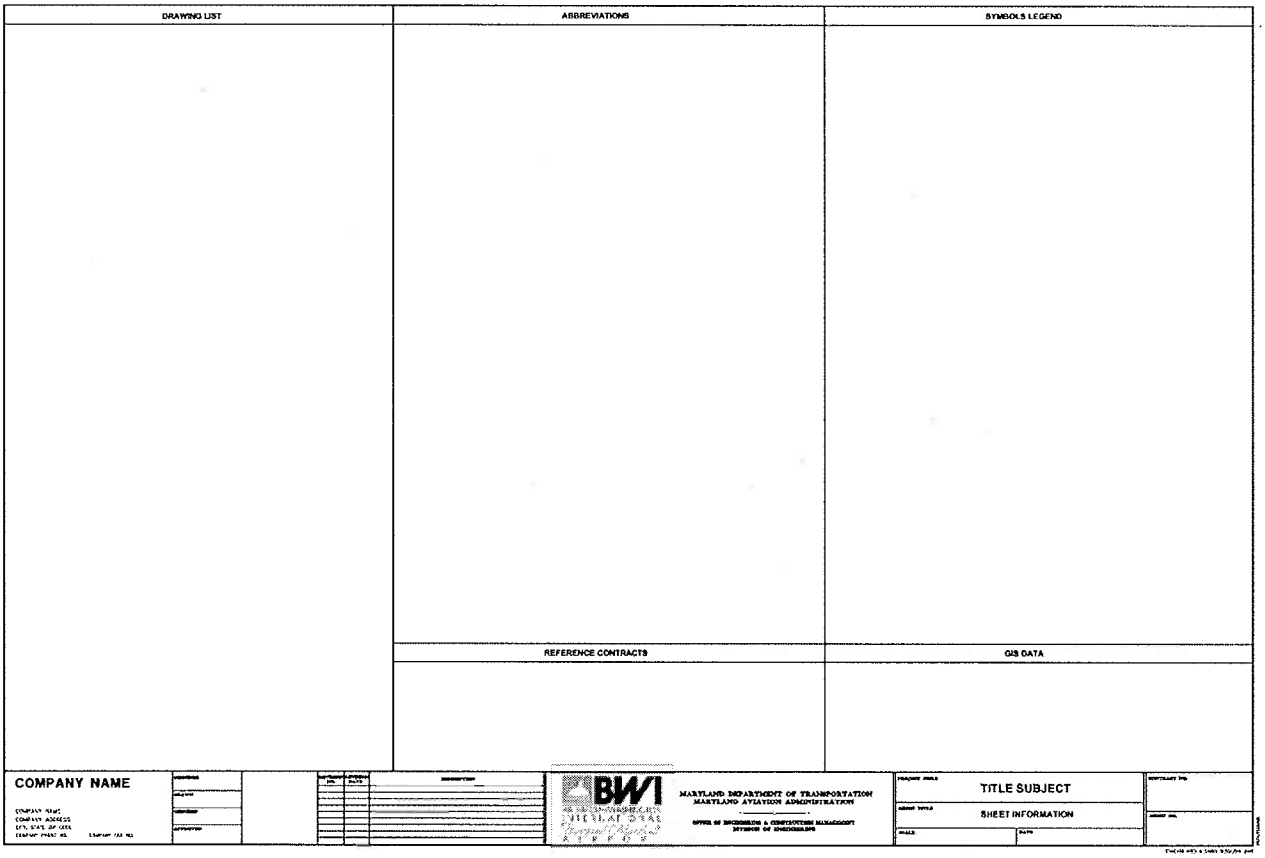


Figure 4-4, Index Sheet Example

4.1.7.3 Other Sheets

MAA has developed standard General Notes sheets for airside and landside construction projects. These are available through the MAA Design Standards publication. The remainder of the drawing

sheets are discipline specific and to provide an example of all the sheets is beyond the intent of this standard.

4.1.8 MDOT/MAA Logo Art

MAA provides the following logos in *electronic format* for use in CADD documents, included on the MAA CADD Standards CD:

- MDOT/MAA Logo
- MAA Logo
- BWI Logo
- Martin State Airport Logo

4.1.9 Layers

For layer conventions, MAA has adopted the *CADD LAYER GUIDELINES*, NCS Edition, 2001, published by the American Institute of Architects (AIA). This document is a constituent of the National CADD Standards. Refer to Appendix A for additional layer names that may be used.

4.1.9.1 Sheet File Layer Assignment

A sheet file is synonymous with a plotted CADD drawing file. A sheet file is a selected view or portion of referenced model files within a border sheet. The addition of sheet-specific information (e.g., text, dimensions, and symbols) completes the construction of the document. Table 4-7, Common Sheet File Layers, outlines layers that will be common in all sheet files in a set of construction drawings:

General Layer Names	General Layer Descriptions	Color #
G-ANNO-DIMS	Dimensions and Leaders	5
G-ANNO-IDEN	Identification Tags: Floor Id. #s; Room #s; Door #s; hardware group; Window #s; Equipment Id. #s; Furniture #s; Tenant Identification; Area calculations; Occupant or employee names; Elevation Id. #s; Component Id. #s	7
G-ANNO-KEYN	Key Notes	7
G-ANNO-LEGN	Legends	4
G-ANNO-NOTE	Notes	7
G-ANNO-NPLT	Construction Lines, non-plotting information	8
G-ANNO-PATT	Cross-hatching, patterns, poche	5
G-ANNO-REDL	Redline Annotations	10
G-ANNO-REFR	Reference Files	7
G-ANNO-REVS	Revisions	4
G-ANNO-SCHD	Schedules	7
G-ANNO-SYMB	Miscellaneous Symbols	4
G-ANNO-TEXT	Miscellaneous text and callouts with associated leaders	7
G-ANNO-TITL	Drawing Component Titles, Detail Titles, Section Titles, Elevations	3
G-ANNO-TTLB	Border and title block information	2

Table 4-7, Common Sheet File Layers

4.1.9.2 Model File Layer Assignment

A model file contains the physical components of a building or site (e.g., columns, walls, windows, ductwork, piping, etc.). To facilitate the set up of layers in model files in conformance with AIA guidelines, AutoCAD has included this layering standard in its software. Using AutoCAD, open the Layer Manager, right click and then select *New Layer from Standard.* At the *New Layer from Standard* dialog box select for Discipline Designator, Major class, Minor classes and status as required (see Figures 4-5, 4-6, 4-7 and 4-8).

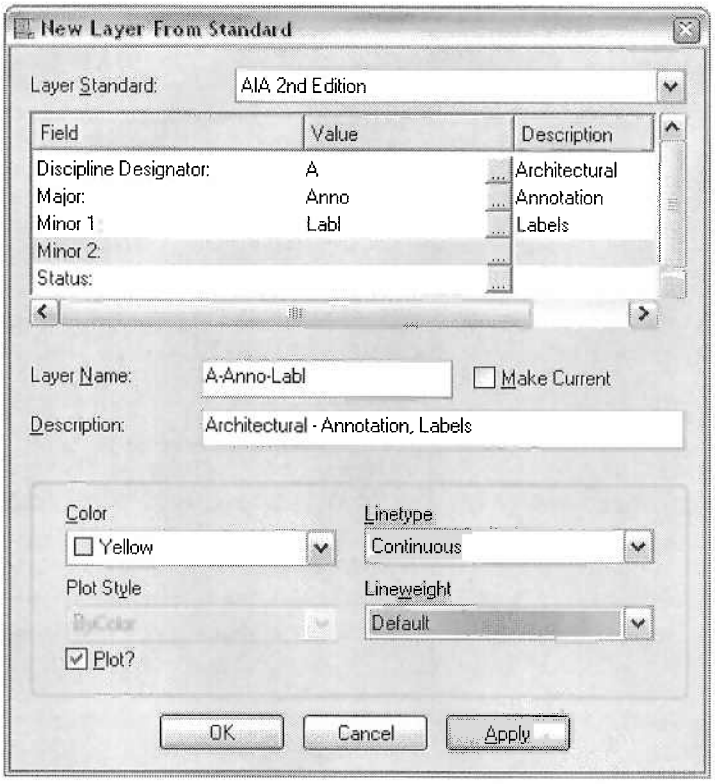


Figure 4-5, Layers - Layer Key Style Dialog Box

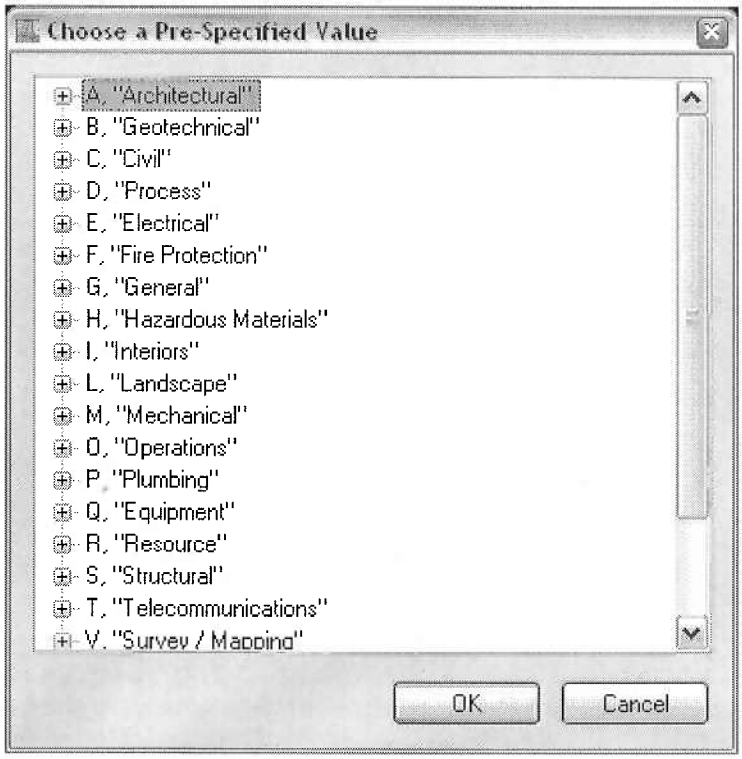


Figure 4-6, Layers - Discipline Designator Dialog Box

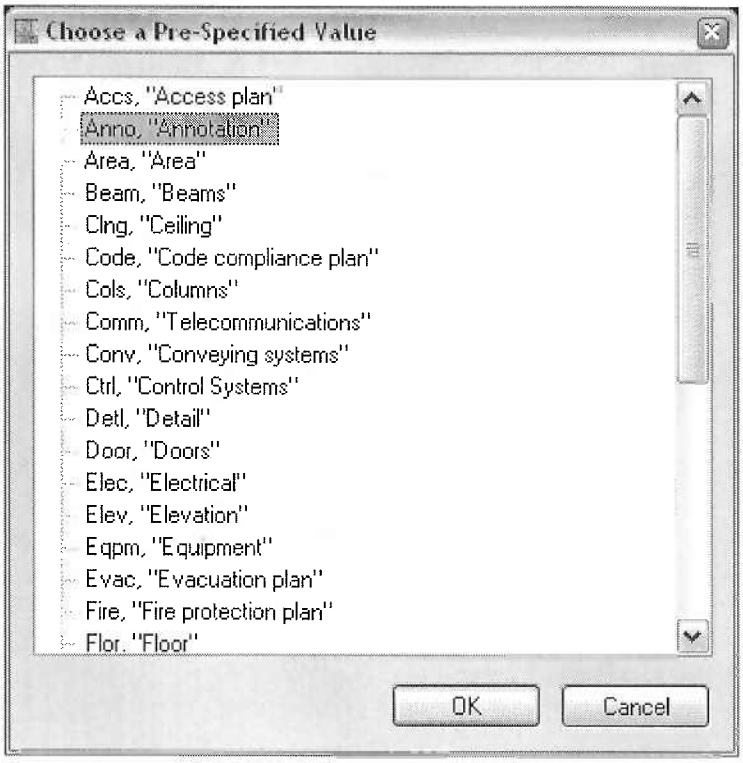


Figure 4-7, Layers - Major Category Dialog Box

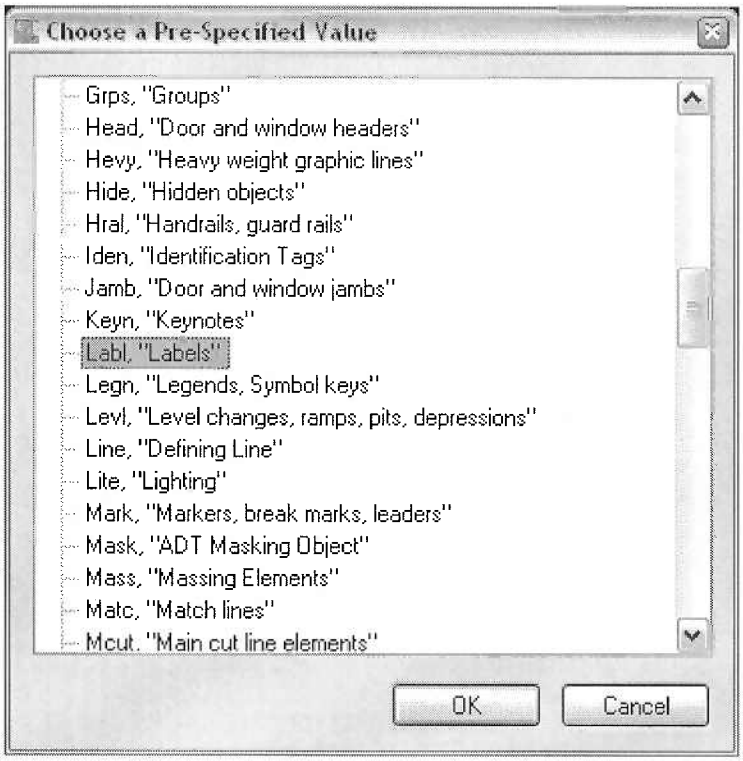


Figure 4-8, Layers - Minor Category Dialog Box

Once the discipline designator, major and minor categories have been chosen, the final portion of the layer name is the status. This describes to the user what the disposition is of the entities on that layer, and helps to determine if that layer should or should not be shown on a particular drawing sheet. Note that AutoCAD uses a single letter abbreviation for its status categories. MAA prefers to use a four-letter abbreviation to stay consistent with the Major and Minor group names, and provide a more intuitive description for the status. Below is a list of common status categories:

PHS#	Phase of project (#=1-9)
DEMO	Existing item to be demolished
EXST	Existing item to remain
FUTR	Future work
MOVE	Existing item to be moved
NEWW	New work
TEMP	Temporary work
NICN	Not in contract (not included in AutoCAD layer naming routine)
RELO	Existing item to be relocated (not included in AutoCAD layer naming routine)
ABND	Abandoned item (not included in AutoCAD layer naming routine)

4.1.10 Text Styles/Fonts

The MAA standard fonts include only "out of the box" *fonts;* these are fonts that ship with every installment of *AutoCAD*. Any font not meeting this criterion must be submitted to the MAA Project Engineer for approval and inclusion in the project specific standard *Font Library* (.shx) file.

All ***Text Styles*** shall use the naming convention, (font name) (_) (text height in decimal equivalent of inches) e.g. *ROMANS_120*

4.1.11 Text Justification

All annotation text shall be left justified.

4.1.12 Text Heights and Colors

The following text heights and colors must be used on all drawings to ensure uniformity in the contract documents.

ENTITY	PLOTTED TEXT HEIGHT (IN INCHES)	COLOR
Titles	0.25	3
Subtitles	175	3
Normal Text	0.125 or 0.1	2
Notes, callouts etc.	0.125 or 0.1	2

Table 4-8, Text Heights and Colors

4.1.13 Line Widths and Colors

In AutoCAD, each color represents a different line width when plotted. It is preferable to control the line widths in a drawing by assigning a specific color to the layer, instead of assigning a specific color to a single element/entity (line, polyline, arc, etc.). The color of a single element/entity should be set to "BYLAYER", so the layer's color setting can be used to globally change all elements/entities on that layer, both in the model files and sheet files.

Each "sheet file" submitted to the MAA, must be able to create a monochrome plot, matching the appearance of the submitted corresponding hard copy contract document, by using the MAA Standard Pen Settings in Table 4-9, MAA Standard Pen Settings. Pen widths are specified for only the AutoCAD index colors. Colors 1-9 plot as solid lines, and colors 250-254 plot as screened lines. There is a pen table for both full size drawings (B) and half-size drawings (D):

MAA Full Size.ctb

AutoCAD Color No.	Plotted Pen Width in Inches	Plotted Color	Plotted Line Width
1	0.010	Black	
2	0.012	Black	
3	0.014	Black	
4	0.020	Black	
5	0.024	Black	
6	0.031	Black	
7	0.007	Black	
8	0.005	Black	
9	0.047	Black	
250	0.010	Dark Grey	
251	0.010	Dark Grey	
252	0.010	Medium Grey	
253	0.010	Light Grey	
254	0.010	Light Grey	

Solid Lineweights

Screened Lineweights

MAA Half Size.ctb

AutoCAD Color No.	Plotted Pen Width in Inches	Plotted Color	Plotted Line Width
1	0.005	Black	
2	0.006	Black	
3	0.007	Black	
4	0.010	Black	
5	0.012	Black	
6	0.015	Black	
7	0.004	Black	
8	0.003	Black	
9	0.024	Black	
250	0.010	Dark Grey	
251	0.010	Dark Grey	
252	0.010	Medium Grey	
253	0.010	Light Grey	
254	0.010	Light Grey	

Solid Lineweights

Screened Lineweights

Table 4-9, MAA Standard Pen Settings

As an alternative to using the MAA Standard Pen Settings, the consultant may include one color-dependent plot style table (*CTB) File* called *PLOT.CTB*. This *CTB File* must define the pen number and pen width for all color numbers and be capable of producing monochrome plots for all submitted *Sheet Files*.

If the consultant does not submit a file named PLOT.CTB, along with the *Sheet Files*, it will be assumed that the files use the MAA standard plot settings.

4.1.14 Line Types

The MAA standard linetypes include "out of the box" linetypes (these are linetypes that ship with every installment of *AutoCAD*) and linetypes available from *The CADD/GIS Technology Center*. Linetypes from *The CADD/GIS Technology Center* have been included on the CD accompanying the MAA CADD Standards manual. Follow the instructions carefully in the README file to install the files and load the linetypes correctly. Any new linetypes created by a consultant must be submitted to the MAA Project Engineer for approval and inclusion in the project specific standard linetype (.lin) file.

It is preferable to control the linetypes in a drawing by assigning a specific linetype to the layer, instead of assigning a specific linetype to a single element/entity (line, polyline, arc, etc.). The linetype of a single element/entity should be set to "BYLAYER", so the layer's linetype settings can be used to globally change all elements/entities on that layer, both in the model files and sheet files.

4.1.15 Units

The units for all A/E/C drawings shall be U.S. Survey Foot, inches and fractions of an inch, with the smallest fraction normally being 1/8" or as decimals. Dimensions of less than a foot must be shown in inches or fractions of inches, or as decimals.

4.1.16 Working Units, Coordinate Systems and Drawing Origins

Units should be selected according to the discipline of the drawing, architectural (feet and inches), engineering (feet and tenths), or decimal. References to feet in this document are specifically to the U.S. Survey Foot (1200/3937 meters).

All topography and topography related design including structural and architectural building footprints shall be submitted to, maintained by, and provided by MAA in the Maryland Coordinate System of 1987, also referred to as Maryland State Plane. Following are the parameters of the Maryland Coordinate System of 1987:

Map Projection:	Lambert conic conformal projection of the geodetic reference system of 1980
Horizontal Datum:	NAD83 (2001)
Latitude of Origin*:	37°40 North latitude
Central Meridian:	77°00' West longitude
Standard Parallel 1:	38°18' North latitude
Standard Parallel 2:	39°27' North latitude
False Easting*:	400,000 meters
False Northing*:	0 meters
Latitude**:	37°34' 38.14264" N
Longitude**:	81°31' 45.07877" W

* at the 77th meridian
** at artificial origin (0,0)

Vertical spatial data shall be submitted to, maintained by, and provided by MAA based on the National Geodetic Vertical Datum of 1988 (NGVD88).

The lower left corner of all other drawings should be positioned at the Cartesian coordinate point of 0, 0, 0.

4.1.17 Externally Referenced Files

Figure 4-9, Externally Referenced Files Example, illustrates the concept of how a sheet file drawing is composed using model/design and informational xref files.

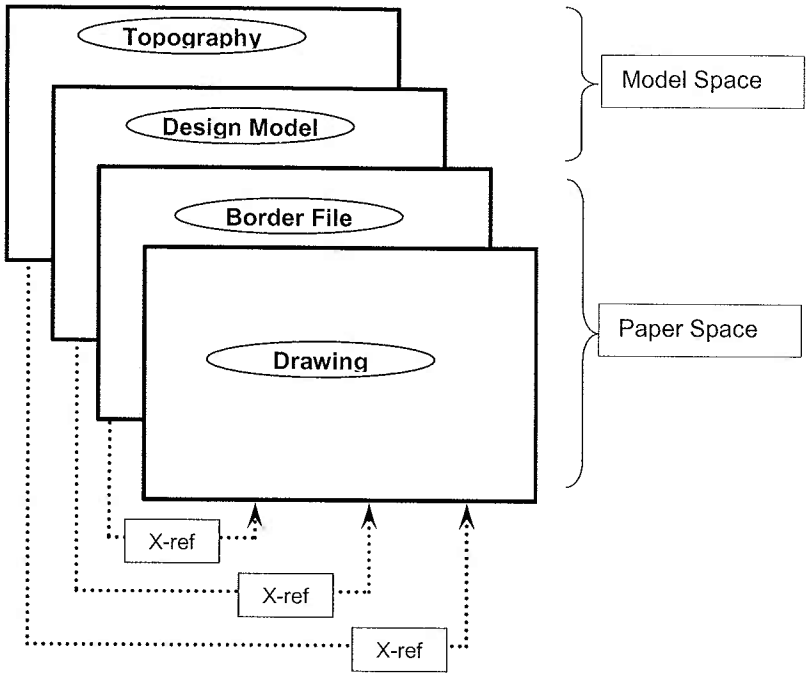


Figure 4-9, Externally Referenced Files Example

4.1.17.1 Specific Use of AutoCAD Reference Files

All files referenced in the host file shall use the "Attach" option within the XREF command, when reference files are merged into the final drawing package, AutoCAD users shall use the "Bind" option. Nested or circular xref files are not allowed.

Reference files shall be added to all drawings using no saved paths. These paths do not include the drive letter and reflect the location of the reference file as it relates to the active file (the reference file is in the same folder/directory as the active file).

Reference files shall be added on a specific layer and the prefix for that layer shall be "G-ANNO-REFR-" followed by the reference file name.

4.1.18 Patterning

The patterns (hatching) to be used on MAA drawings include only "out of the box" hatch patterns, customized patterns must not be used.

4.1.19 Dimensioning

Refer to the ANSI Y14.5M for additional dimensioning information not provided in this standard.

The distance from the object for the first dimension is 1/2" and each additional dimension is 3/8" further apart. See Figure 4-10, Dimension Directions and Spacing Example, and Figure 4-11, Dimension and Extension Line Spacing Example for dimension examples.

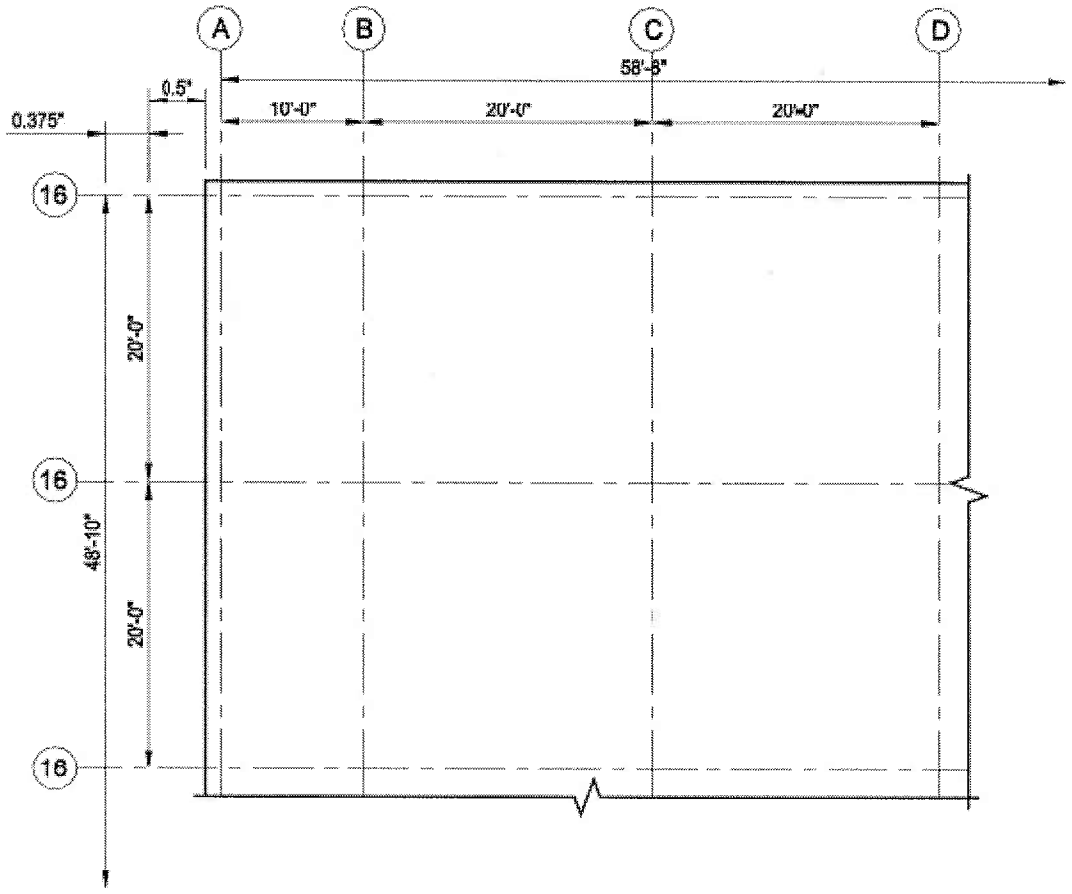


Figure 4-10, Dimension Directions and Spacing Example

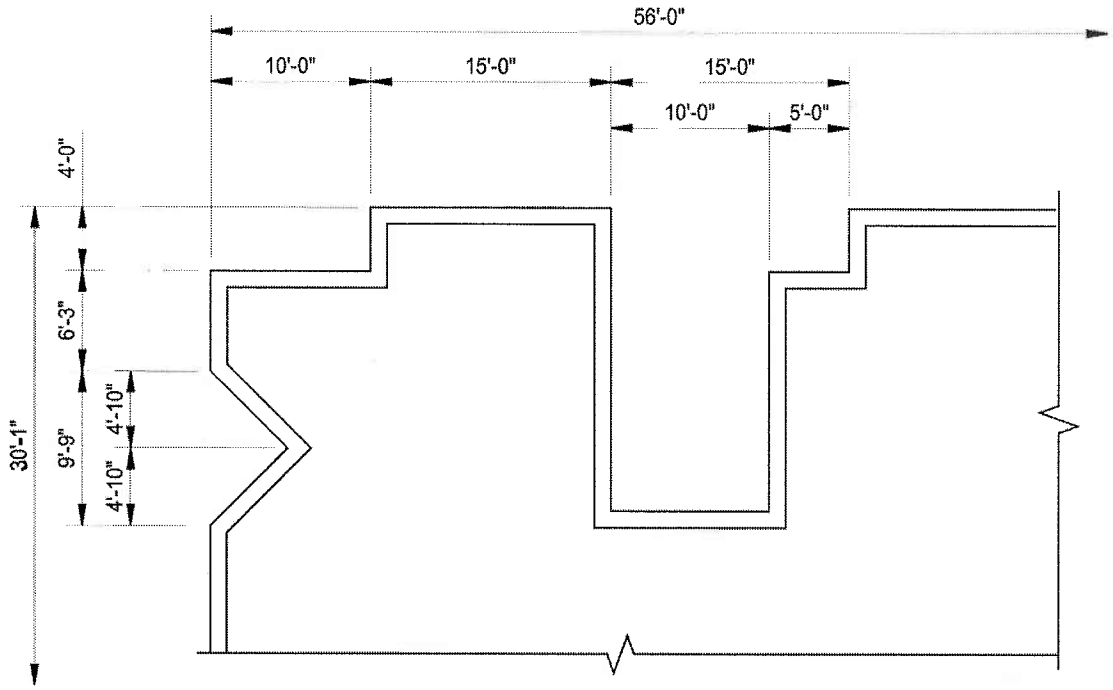


Figure 4-11, Dimension and Extension Line Spacing Example

4.1.19.1 Dimension Text Size

All dimensioning text must be placed into the dimension layer. The size of dimension text is the same as the drawing field text (no smaller than 1/10" height, with 1/8" being preferable).

Refer to Table 4-1, Scale Factor and Text Height Conversion Chart for scaling factors and text height.

4.1.19.2 Positioning Dimensions

Figure 4-10, Dimension Directions and Spacing Example and Figure 4-11, Dimension and Extension Line Spacing Example. Refer to these figures for examples.

The following guidelines shall apply:

- Avoid crossing dimension lines.
- Centerlines may be extended and used as extension lines.
- Place longer dimensions outside of shorter ones.
- Do not cover dimensions with patterns in sectioned areas.
- Whenever possible, arrange dimensions so they can be read easily on one continuous line.
- Dimensions are always placed on the drawing so that the text may be read from the bottom or the right.
- Locate dimension lines so that they do not cross extension lines. If it is necessary to dimension at an angle, that angle should be in quadrant between the horizontal and vertical so text may be read between 0 and 90 degrees.
- All text must be located above or centered on the dimension lines.
- The location of text on the dimension line shall be consistent throughout the drawing set.
- Fractions must be located on one line with a space between the whole inch and fraction.
- Make fractions with a slant bar with numbers the same height as text, for example, 1/4".
- All dimension and extension lines shall be created using the "Color 1" line weight.
- Arrowheads and dimension text shall be created using the "Color 1" line weight.
- All text shall be left justified per standard drafting standards.

4.1.19.3 Leaders

When a note or dimension cannot be placed close to an object, a leader may be used. A leader consists of a short horizontal line, an angled line and a terminator. When placing a leader to the left side of a note the horizontal line must be place in line with the top of the note. If the leader is on the right side, the horizontal line is placed at the bottom of the note, see Figure 4-12, Placement of Leaders Example. When a leader points to an object, the angled line must terminate with an arrowhead at its first object line. When the information refers to (applies to, or points to) a surface of an object, use a small filled dot or tilde. When the information refers to a bundle or grouping of wires or cables, use a lasso. An example is shown in Figure 4-13, Typical Leaders Example

All leader lines and arrowheads shall be created using the "Color 1" line weight.

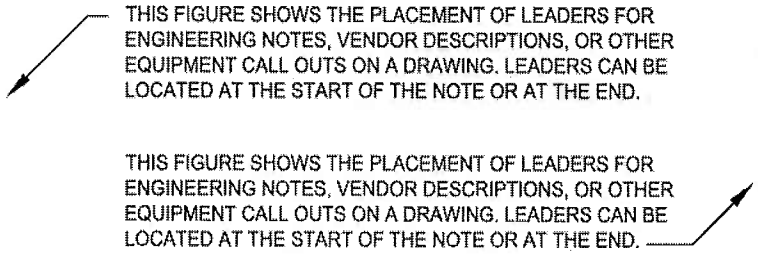


Figure 4-12, Placement of Leaders Example

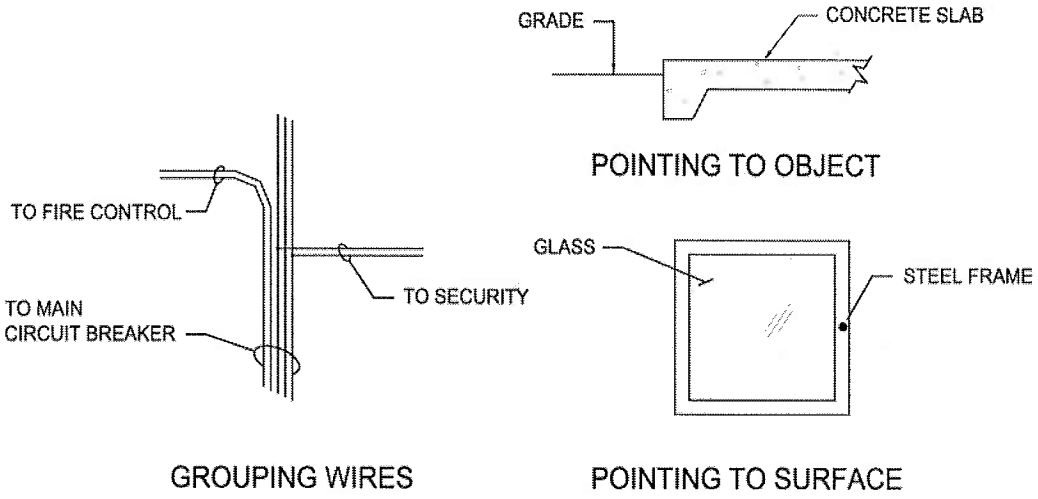


Figure 4-13, Typical Leaders Example

4.1.19.4 Arrowheads

Arrowheads denote termination of dimensions and leader lines and show direction. They must be filled, and must be the same size and style as the arrowheads used in other dimensions. Arrowhead size should be a 3:1 ratio for length to width, and in proportion to any associated text.

4.1.20 Symbols

Symbols used in drawings should comply with the U.S. National CADD Standard or ANSI and all symbols used in a drawing must be indicated in a legend. Symbols available from *The CADD/GIS Technology Center*, and miscellaneous signage symbols and topographic symbols that are commonly used in preparing construction drawings for MAA projects are included on the MAA CADD Standards CD.

4.1.21 Drawing Subtitles

Subtitles must be used on drawings with more than one view or when sections or details are required for clarity and must also be used on drawings with a single view when title block information is inadequate and additional identification is required. Subtitles are always located below and centered on the view to which they apply, except for detail drawings where the title shall be located to the lower left.

Subtitles for plans, standard details, typical details, etc., which are not referenced in other views, consist of two lines. The first line shows the exact title of the view or detail and the second line indicates the scale of the view or detail, along with bar scale, see Figure 4-14, Standard Subtitle Annotation Example.

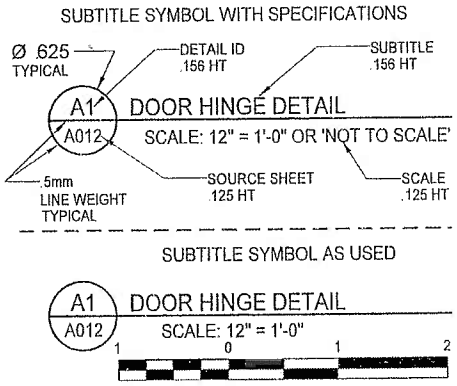


Figure 4-14, Standard Subtitle Annotation Example

4.1.22 Sections and Details

Sections must be drawn when additional clarification is warranted and details must be created whenever additional clarification is required and a section cannot readily be cut.

4.1.22.1 Sections

Sections must be drawn using the drafting standards shown in Figure 4-15, Standard Section Annotation Example. The three types of section indicators to be used are short sections, extended sections, and offset sections as shown in Figure 4-16, Section Types Example. All sections must be cut toward the top or left side of the drawing, except in unusual situations. In some cases, it may be necessary to cut a short section reading from the left, but this should be avoided if possible.

Sections must appear on the same drawing on which they are cut, if possible. If the section cannot be drawn on the same drawing, it must appear on a separate drawing reserved for sections. Under no circumstances are sections to be scattered indiscriminately throughout the set of drawings.

Section cuts shall be lettered in alphabetical order on each drawing. The letter in the top half of the circle marker must indicate the section letter. The alphanumeric number in the lower half of the circle marker must indicate the drawing on which the section is shown. Heavy dark lines located in the position where the section is cut must indicate the location of the cutting plane.

Offset sections may be used only when section clarity requires adjustment of a portion of the cutting plane. On all section cuts, the circle markers must be placed so they can be read from the direction of cut.

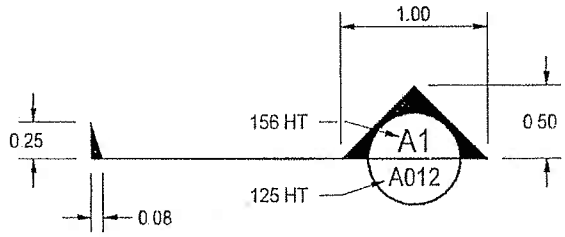


Figure 4-15, Standard Section Annotation Example

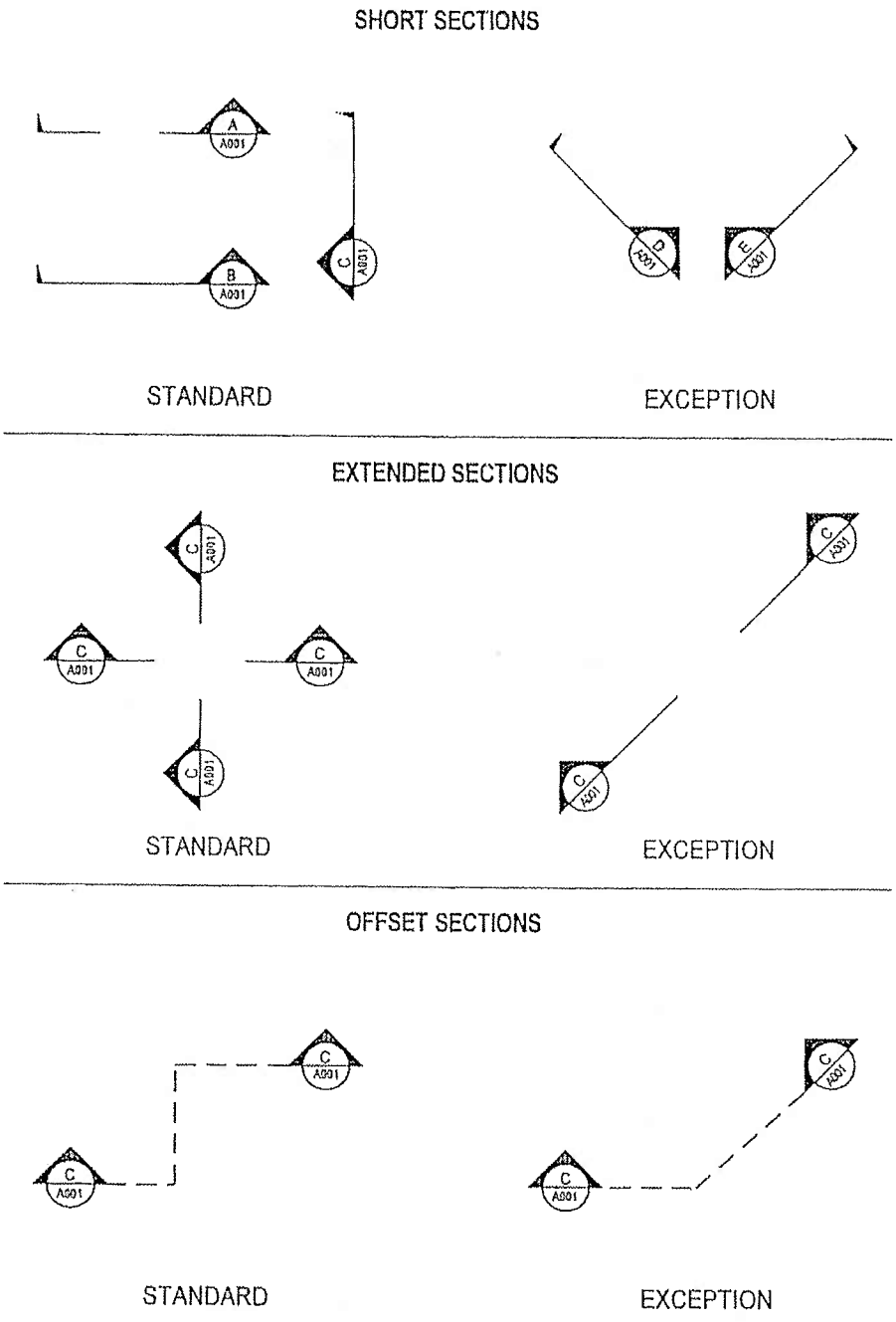


Figure 4-16, Section Types Example

4.1.22.2 Detail Drawings

The detail must be a section, a plan view, an elevation, or an enlargement. Details must have an alphanumeric (e.g. A1) designation in the upper half of the circle marker. When details are intermixed with sections and it would be difficult to locate a lettered detail on a drawing, the details must be numbered consecutively with the sections. The alphanumeric number in the lower half of the circle marker must indicate the sheet number on which the details reside (see Figure 4-17, Standard Detail Symbol Example).

When a detail appears more than once on the same drawing, extend a line off the detail, abbreviate the word typical (TYP), and indicate the quantity in parentheses.

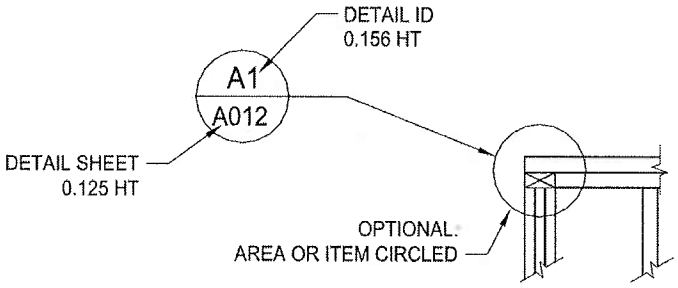


Figure 4-17, Standard Detail Symbol Example

4.1.23 Revision of Drawings

Changes to contract drawings must be clearly identified and tracked. The following sections outline the required methodologies for incorporating changes to the drawing set.

4.1.23.1 Required Revisions

Once a drawing has been approved and submitted as final, all subsequent changes shall be recorded as a revision.

4.1.23.2 Revision Methods

Revisions shall be made by the addition or deletion of information and the changes annotated on drawings.

4.1.23.3 Drawing Practices

When revising an existing drawing the most recently approved graphic symbols, abbreviations, and drawing practices shall be used to incorporate changes or revisions.

4.1.23.4 Identifying Revisions on Drawings

All revisions shall be identified with a revision cloud and revision number within a triangle for addenda and a square for redline revisions. The revision number in the title block must correspond to the revision number in the drawing area where the change was made.

4.1.23.5 Revision Locations

The revision location is identified by the revision cloud and only additions or modifications are to be included within the revision cloud.

4.1.23.6 Revision Numbers

Revisions are to be identified by a sequential number starting at 1. Letters are not to be used for revision identification.

4.1.23.7 Multiple Changes

The same revision number shall identify all changes made to a drawing regardless of number of locations modified that are incorporated at the same time.

4.1.23.8 Revision Block

The revision block size and format shall conform to that in the standard border sheet provided. Only the five most current revisions shall be shown in the revision block and each revision shall be recorded in accordance with the following:

a) The identifying number pertaining to the revision shall be entered in the "REV" column.
b) The date the CADD file changes revision shall be entered in the "DATE" column.
c) A brief description of the change shall be entered in the "DESCRIPTION" column.

4.1.23.9 Redrawn or Replaced Drawings

Drawings are redrawn when manual drawings are converted to CADD, when there are extensive changes to a CADD file. The new drawing shall contain a note referencing the superseded drawing. The note shall be located above the revision block on the new drawing stating: "THIS DRAWING SUPERSEDES DRAWING _____, REVISION___, DATED_____." Subsequent revisions to the new drawing shall start with the number 1, regardless of the revision number of the drawing being superseded. A note shall also be located above the revision block on the superseded drawing stating: "THIS DRAWING SUPERSEDED BY DRAWING _____, DATED _____." The statements shall be in letters not less than 125 inches high.

4.2 File Naming

CADD file names should start with the MAA project number (i.e. MAA-tt-yy-nnn where tt is the type of contract, yy are the last two digits of the year the contract was issued and nnn is a sequential number). Next, should be an underscore (i.e. "_") followed by the drawing discipline letter and three digit sheet sequence number (as defined in Section 4.1.5). Following this set of characters, the consultant or sub consultant can add an underscore (i.e. "_") followed by optional alphanumeric characters as desired.

5.0 Space Allocation Data

5.1 Introduction

Space allocation data describes how interior and exterior space is used and by whom. This information is important for property management, emergency response, planning and many other critical airport functions. Space allocation data is often created and maintained using CADD software. Due to its unique nature and purpose there are certain CADD requirements that pertain specifically to this important type of data. These requirements are defined in this section.

5.2 Layer Naming

Space allocation data should be drawn on specific layers in CADD drawings. Specifically, the polygons which form space allocation boundaries should be drawn on the C-PROP-LEAS layer for exterior data and the A-PROP-LEAS layer for interior data. Following this standard sequence of discipline, major and minor codes, should be a dash (i.e. "-") followed by TOOOUU where:

- T represents a one-letter code indicating whether the space is leasable or not. It has one of two values:

  L = Leasable Space N = Non-leasable Space

- OOO represents a three-character code identifying the occupant of the space. For airline tenants, the code is based on the International Air Transport Association (IATA) listing of airline codes. For non-airline tenants, an attempt has been made to create three letter codes that are an intuitive extrapolation of the tenants' names. A complete list of occupant codes for tenants can be found in Appendix B (Occupant Codes for Airline Tenants) and Occupant Codes for Other Tenants. These codes represent tenant, vacant space, or common (public) space. The $ sign should be used as a placeholder when airline identifier codes consist of only two characters. Following are some examples:
-

  $US = US Airways (tenant) VAC = vacant
  COM = common

- UU represent a two-letter code that describes the specific use of the occupant. A complete list of designation codes can be found in Appendix B.

To illustrate the use of this convention, the layer name for a US Airways hold room would be A-PROP-LEAS-L$USHR, where the L designates leasable space, the $US indicates US Airways as the occupant, and the HR indicates the use as a hold room. Similarly, the layer name for an electrical room would be A-PROP-LEAS-NCOMUE.

5.3 Identification via Hatch Patterns

Space allocation CADD drawings shall utilize two hatch layers per tenant to segregate occupants according to space designation and specific use. The first hatch layer contains a solid hatch distinguishing the major types of space designations. The color of the solid hatch is controlled by-layer using the color number identified in Table 5-10. The second hatch layer contains the patterned hatch overlay subdividing the tenant's space according to the various uses. The patterned hatch is always color 251 and is on a separate layer from the solid hatch. The layer naming convention for the patterned hatches is to create a new layer for each tenant by appending '–H' to the end of the layer name containing the solid hatch.

For example, layer A-PROP-LEAS-L$UATC contains United Airlines solid hatching for ticket counters. Layer A-PROP-LEAS-L$UATC-H contains the patterned hatch for the same space.

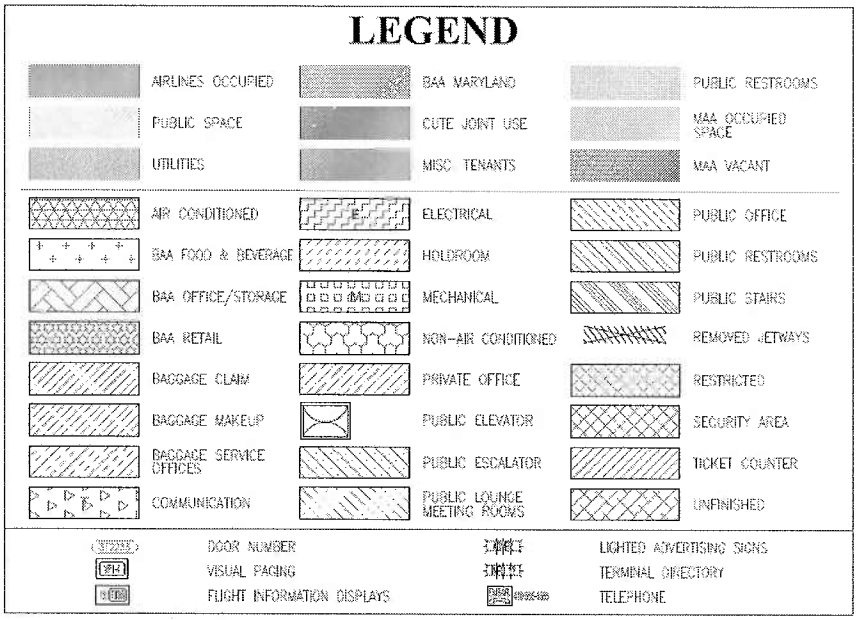


Table 5-10, Space Allocation Hatching Guidelines

5.4 Viewing Hatched Lease Areas

In some instances, the patterned hatch may be hidden beneath the solid hatch. In order to view the patterned hatches in both the AutoCAD drawings and in subsequent plots, use the *Bring to Front* or *Send to Back* commands found under *Tools → Display Order* in AutoCAD's pull-down menu on the patterned hatch or solid hatch, respectively. If you still cannot view the patterned hatch on top of the solid hatch, invoking the *Regen* command should solve the problem. If these steps do not give the correct view, use the *Send under Object* command found under the *Tools → Display Order* pull down menu command, and send the solid hatching under the layer A-wall-full.

5.5 Occupant Identification via Polygons

Every occupant area, public area, and all other miscellaneous spaces in the Terminal Building are enclosed by an AutoCAD polygon. This *Occupant Polygon* is used for multiple purposes:

1.) To facilitate the hatching of the area.
2.) To permit listing the square footage via the AutoCAD *Area → Entity* command.

These *Occupant Polygons* do not surround individual rooms within the leased space, but rather they surround the entire tenant space as long as that tenant space is for the same use and at the same lease rate. For example, an airline's office space behind ticketing counters will be enclosed by one *Occupant Polygon* but will be separate from the *Occupant Polygon* surrounding the same airline's ticketing counters. The *Occupant Polygon* is generally not intended to be visible, but at times is turned on to enable visual differentiation between adjacent occupants. When plotting in color, the polygon appears as a thick, fuchsia border. When plotting in black and white, the polygon appears as a thick, phantom linestyle, gray line.

The lines that form occupant polygons should be placed on the outside face of exterior walls. For interior walls, the lines should be placed in the center of each interior wall where tenants occupy the space on either side. If MAA is using the adjacent space or it is unoccupied, the lines should be placed on the edge of the wall that is closest to the side occupied by the tenant. These guidelines establish the square footage quantities that will be calculated based on space allocation drawings (square footages in the lease agreement may vary).

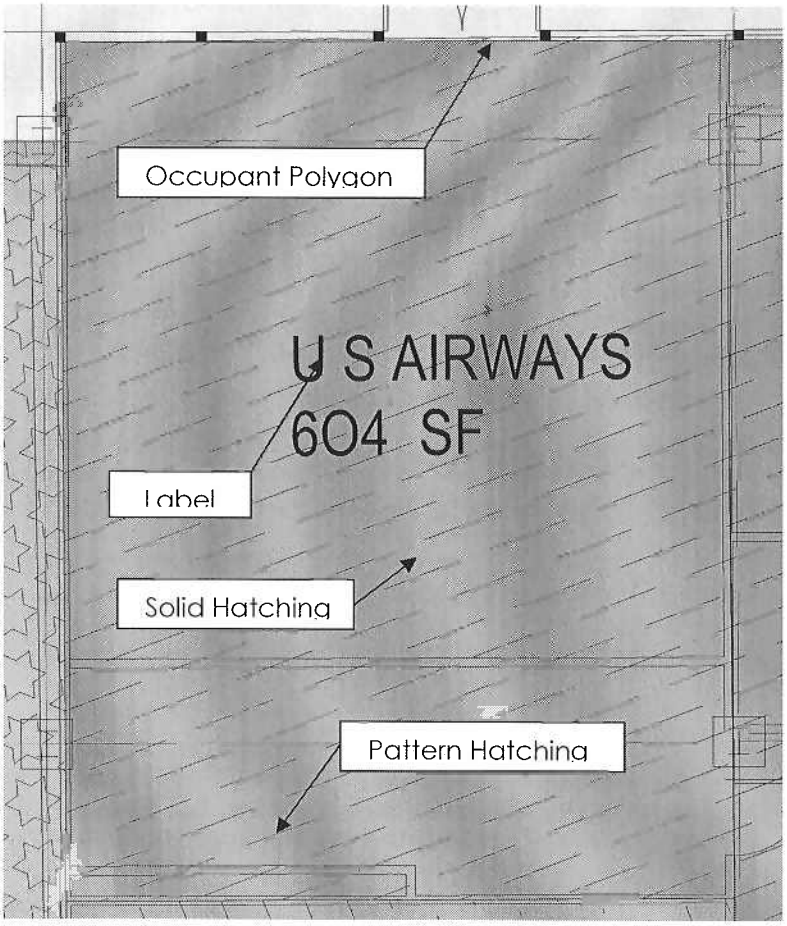


Figure 5-18, Example of Hatching, Polygons and Labels

5.6 Labeling Terminal Spaces

Within each *Occupant Polygon* mentioned in the previous section, an identifying label is provided. That label is defined as an AutoCAD attributed block. The information contained within this attribute block is the tenant name or type of space and the area in square feet, which that polygon encloses. Each label may be edited using the AutoCAD *DDATTE or ATE* command. A dialog box will appear with the various items of information, which can be edited for that label. Figure 1 illustrates the use of polylines, solid hatching, and pattern hatching to identify a lease space.

5.7 Attribute Blocks

The architectural model also contains lease information that is not contained within the *Occupant Polygon.* This includes public telephones by AT&T and Verizon also lighted advertising signs by Sky Sites. For these tenants the layer naming convention defined in Section 4.1 holds, however, their representation in the AutoCAD drawing model is done through the use of editable attribute blocks. Editable attribute blocks are also used for a variety of non-leasable spaces and objects such as flight information displays, terminal directories, visual paging monitors, as well as for the representation of door identification numbers. Table 5-2 summarizes the additional information blocks considered critical to the space allocation drawings.

Block File Name	Usage
Litesign.dwg	lighted advertising signs (Sky Sites) and terminal directories
Pubphone.dwg	public telephones and courtesy phones
VP.dwg	visual paging terminals
FIDS.dwg	flight information displays
Doornum.dwg	door and elevator numbers
Info2.dwg	occupant labels

Table 5-111, Summary of Critical Information Blocks

5.8 Drawing Origins and Units for Space Allocation Drawings

To facilitate the interoperability and re-use of information, the guidelines in the following sections must be adhered to.

5.8.1 Drawing Coordinate System and Origin

All space allocation drawings shall be submitted to, maintained by, and provided by MAA in the Maryland Coordinate System of 1987, also referred to as Maryland State Plane. Following are the parameters of the Maryland Coordinate System of 1987:

Map Projection:	Lambert conic conformal projection of the geodetic reference system of 1980
Horizontal Datum:	NAD83 (2001)
Latitude of Origin*:	37°40 North latitude
Central Meridian:	77°00' West longitude
Standard Parallel 1:	38°18' North latitude
Standard Parallel 2:	39°27' North latitude
False Easting*:	400,000 meters
False Northing*:	0 meters
Latitude**:	37°34' 38.14264" N
Longitude**:	81°31' 45.07877" W

* at the 77th meridian
** at artificial origin (0,0)

The lower left corner of all other drawings should be positioned at the Cartesian coordinate point of 0, 0, 0.

5.8.2 Units

The units for all space allocation drawings shall be units of feet (U.S. Survey Foot = 1200/3937 meters) and inches and fractions of an inch, with the smallest fraction normally being 1/8". Dimensions of less than a foot must be shown in inches or fractions of inches.

5.9 Externally Referenced Files

Space Allocation Drawings require that xref's be handled in a slightly different manner than normal engineering drawings by nature of their content, content manipulation and intended use. The following section outlines the requirements.

Each of the drawings in the Space Allocation series, covers a portion of the Terminal Building floor space with some overlap between adjacent sheets. Every square foot of space has been documented. Each drawing contains an easy to follow key plan, which identifies the extent of coverage within the Terminal Building for that particular drawing. Each individual space allocation drawing sheet consists of a common border sheet (border-U.dwg or borderL.dwg) with specific title block information. The architectural information shown in each individual drawing is merely a graphical representation of the floor plan and is not editable within that drawing file. The architectural model is contained in a separate drawing file (bldg-up.dwg or bldg-lo.dwg) which is brought into each individual space allocation drawing as an *Xref* (external reference). Each individual drawing incorporates a group of Xrefs including the border file, a legend appropriate to that drawings orientation, and an architectural model

(see Section 4.1.17). Therefore, all updates, corrections, or additions to the architectural features must be made in the appropriate Xref model.

5.10 Plotting

5.10.1 Layer Manager (Express Tools)

To simplify the process of plotting drawings, it is time-efficient to use the layer manager option under *Express → Layers → Layer Manager...* pull-down menu to create a *snapshot* of the information contained in the *Layer Properties Manager* dialog box. This resulting *Layer State* is to be restored in the architectural models bldg-up.dwg or bldg-lo.dwg, and not in the individual space allocation drawing sheet to be plotted. When plotting is desired, the appropriate *Layer State* is restored prior to saving and exiting the architectural model. No particular convention is used in naming *Layer States*. However, the names are intended to be intuitive. NOTE: Be sure to re-save all *Layer States* if any layers are added or changes are made to existing layers to ensure that plots set up through the Layer Manager reflect the correct information.

5.10.2 Default Layer Settings

Certain information within the space allocation drawings is typically not intended to be visible. Additional information may be added to the architectural model that, except in certain instances, is not displayed on the space allocation drawings. Table 5-3 lists the 13 layers that contain default settings. All layers are assumed to be on.

Layer	Default Setting
A-COLS-DIM	Frozen
A-COLS-OLD	Frozen
A-FURN-OBSV	Frozen
A-FURN-PLNT	Frozen
A-ROOM-DIMS	Frozen
A-ROOM-DIMS-MISC	Frozen
A-WALL-OBSV	Frozen
L-COM-PT-N	Frozen
N-COM-RR-H	Frozen
N-MAA-FD	Thawed
N-MAA-VP	Thawed
N-MAA-DR	Thawed
N-MAA-CP	Thawed

Table 5-122, Layers with Default Setting

These 13 individual layer settings are considered constant in any layer state defined via the Layer Manager, including those listed in Section 5.14.3.

5.10.3 Existing Layer States

Existing *Layer States* include the following:

NO_HATCH: Used for editing *Occupant Polygons* and floor plans, this configuration does not contain hatching.
PRINTABLE-COLOR: Used for plotting full color copies.
PRINTABLE-B/W: Used for plotting black-and-white copies.
SQUARE_FOOTAGE: Used for determining and verifying square footage of lease space.

There has been no attempt to create *Layer States* that allow a multitude of management options.

It would be very cumbersome to attempt to cover all potential options a user may utilize.

A standard *Layer State* naming convention makes it easy to globally set the desired view. One example would be to save a *Layer State* configured to isolate an individual occupant. The layer naming convention is intended to allow the use of wildcards (* and ?) to easily isolate tenants in the AutoCAD *Layer*

command. The user is encouraged to create or delete *Layer States* deemed necessary to facilitate the viewing and editing of occupant information.

5.10.4 Plotting Individual Space Allocation Drawings

Each individual space allocation drawing can be plotted in a variety of ways, depending on the intended use.

There are four primary uses anticipated:

1) Full Color, hatch patterns displayed, excluding *Occupant Polygons*.
2) Full Color, hatch patterns displayed, including *Occupant Polygons*.
3) Black-and-white, hatch patterns displayed, excluding *Occupant Polygons*.
4) Black-and-white, hatch patterns displayed, including *Occupant Polygons*.

The color plots will offer the clearest presentation in regards to differentiating tenant occupancy and are best plotted on bond paper. However, color plots can be expensive in large quantity. Therefore, black-and-white plots shall be plotted on reproducible paper when large quantities of prints are required for distribution.

Prior to opening and printing an individual space allocation drawing sheet, the user must restore the appropriate Layer and linetype property settings in the architectural model either manually or via the layer states defined in the 5.10.1 Layer Manager (Express Tools)

As previously mentioned, prior to opening and printing an individual sheet of a space allocation drawing, the user must restore the appropriate Layer and Line type property settings in the *Architectural Model Xref*, either manually or via the *Layer States* defined in 5.2.1 Layer Manager (Express Tools).

This is necessary because the AutoCAD variable *VisRetain* (see note below) for the space allocation drawings is set to 0. Therefore, the *Xref* files' *Layer States* will control the appearance of the final plots and not the individual sheets. Once settings are completed in the Architectural Model, save the drawing and:

1) Open the appropriate space allocation drawing.
2) Invoke the PLOT command.
3) Load the bwi-cl.ctb file (for color plots) or bwi.ctb (for black and white plots).
4) Choose the plot window using the circles in the bottom left and top right hand corner of the border sheet. Create a user-defined sheet size of 24" x 36" if necessary.
5) Choose OK.

Note:
The System Variable *VisRetain*: Controls the visibility, color, linetype, lineweight, and plot styles (if PSTYLEPOLICY is set to 0) of *Xref*-dependent layers; specifies whether nested xref path changes are saved.

When set to 0, the layer table as stored in the reference drawing (*Xref*) takes precedence. Changes made to *Xref*-dependent layers in the current drawing are valid in the current session only and are not saved with the drawing. When the current drawing is reopened, the layer table is reloaded from the reference drawing and the current drawing reflects those settings. The layer settings affected are On, Off, Freeze, Thaw, Color, Ltype, LWeight, and PStyle (if PSTYLEPOLICY is set to 0). This setting also specifies that changes made to the paths of nested *Xrefs* are for the current session only and are not saved with the drawing.

When set to 1 *Xref*-dependent layer changes made in the current drawing take precedence. Layer settings are saved with the current drawing's layer table and persist from session to session. Nested *Xref* path changes are saved with the current drawing and persist from session to session.

6.0 ELECTRONIC DELIVERABLES

6.1 General

The need to exchange electronic drawing or data files, between the MAA and the A/E/C community, necessitates the requirements stated in this section. All CADD drawing files shall be delivered in AutoCAD DWG and PDF and TIFF format, the version to be specified by the MAA Project Engineer and selected from the list of approved software provided in Section 2.0 of this manual.

6.1.1 Delivery Media

All drawings produced for a Conformed Set or Record Drawings shall be submitted to MAA in accordance with the requirements set forth in the MAA Design Standards.

6.1.2 Compression Software

As general practice MAA prefers not to receive any compressed or zip files.

6.1.3 Media Labeling

The submitted CD will include a CD cover and label with the following information:

- Contract No MAA-XX-XX-XXX
- Contract/Task Title: _____
- Consultant: XXXXXXXXXXXX
- Airport: BWI and/or MTN AIRPORT
- Submittal Date: MONTH, DAY, YEAR
- No. of Documents/Sheets: XX
- CD # / Total in Set: X or XX

Media that contains Sensitive Security Information (SSI) as defined in the Code of Federal Regulations (49 CFR 1520) must include the following statement on the label:

> *Warning: This media contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.*

This requirement shall apply to CADD and Non-CADD deliverables.

6.1.4 Directory Structure

The root directory of the delivered CD should contain a text file named ReadMe.txt that repeats the information contained on the label as well as the following:

- Contact information for the individual responsible for submitting the document(s);
- Brief explanation of CD directory structure if subdirectories are used;
- Any other comments necessary to convey the contents of the CD.

Subdirectories should be provided for each project for which deliverables are being provided (even if deliverables are only being provided for a single project). Project subdirectories should be named using just the MAA contract number (i.e. MAA-XX-XX-XXX). If no contract number has been assigned a task number and name can be used, preceded by 'Task -'. The task number can be omitted if no task number has been assigned.

Project subdirectories should contain all drawings, as well as any externally referenced drawings. Related documents, information, detail drawings and other electronic files related to these drawings should be placed in a subsirectory called 'Details'.

6.1.4 Electronic File Preparation

All electronic files shall be delivered in a format that is directly readable and compatible with the MAA's software and hardware platforms without conversion.

Before a file is placed on the electronic delivery media, the following procedures shall be performed:

a) All CADD drawing files shall be *purged*, *audited* and all extraneous objects in the file removed prior to delivery.
b) Drawing files shall be in their native format, not DXF, or other neutral format.
c) Remove all extraneous graphics outside the drawing border area.

For Record Contract Documents, one sheet file representing each contract drawing shall be submitted in accordance with the MAA Design Standards. The consultant shall *bind* all reference files residential to each *sheet file,* each *sheet file* shall be ready to plot at full-size (1:1) in paper space, and layers controlled properly to reflect document's intended appearance.

6.1.5 Documentation

All drawing packages submitted to the MAA shall include, but not limited to, a transmittal containing the same information as on the external media label, and instructions for the restoring/transferring of files from the media.

a)

6.1.6 Ownership

A statement similar to the following should be included in each contract with electronic drawing deliverables:

> *MAA shall have unlimited rights under this contract to all information and materials developed under this contract and furnished to the MAA and documentation thereof, reports and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright. Unlimited rights under this contract are rights to use, duplicate, or disclose data and information, in whole or part in any manner and for any purpose whatsoever without compensation to or approval from Contractor. The MAA will at all reasonable times have the right to inspect the work and will have access to and the rights to make copies of the above-mentioned items. All digital files and data, and other products generated under this contract shall become the property of the MAA.*

6.2 Quality Assurance

This section lists the requirements for the inspection of drawings before they are submitted to MAA, and the engineering data quality assurance system for consultants and contractors must have in place

6.2.1 Responsibility for Quality

The consultant is responsible for seeing that the electronic files are in compliance with MAA standards.

6.2.2 Quality Assurance Testing

Quality assurance testing carried out by consultants and contractors should include examining files for entities placed in the proper layer or level, proper drawing and plot parameters, title block is filled out and set correctly, and the drawing is free of unwanted entities. Where specific spatial accuracy is required, additional checking to ensure the accuracy of the data being submitted is required. Procedures that MAA will use for acceptance testing and a recommended for consultant and contractor quality assurance are detailed in the AEIS Data Quality Standard.

6.2.3 Engineering Data Quality Assurance Process

Unless otherwise specified in the contract or order, the contractor/supplier must have an effective quality assurance process for the detailed quality assurance and technical accuracy of all engineering drawings and associated lists to be supplied under the terms of the contract. The procedures of the quality

assurance system shall assure the conformance of the engineering drawings and associated lists to the applicable contract provisions. The quality assurance system shall be documented, and subject to the approval of MAA's Contracting Officer.

APPENDIX A

LAYER NAMING

COMMON LAYER NAMES

Discipline Layer Naming

The layer name format is organized as a hierarchy. This arrangement allows users to select from a number of options for naming layers according to the level of detailed information desired. Layer names consist of distinct data fields separated from one another by dashes. A detailed list of abbreviations, or field codes, is prescribed to define the content of layers. Most field codes are mnemonic English abbreviations of construction terminology that are easy to remember.

Layer naming generally follows the *CADD LAYER GUIDELINES*, NCS Edition, published by the American Institute of Architects (AIA). There are five defined layer name data fields: Discipline Designator, Major Group, two Minor Groups, and Status. Each data field is separated from adjacent fields by a dash ("-") for clarity. Below are guidelines for compiling a layer name, followed by a table of common layer names.

Free software is available from *The CADD/GIS Technology Center* website that works with AutoCAD, which allows users to choose the proper standard layer names from a list. The layer names are easily found by defining the discipline, the type of drawing you are creating, and the types of entities that will be placed on the layer. Software can be downloaded at *https://tsc.wes.army.mil/products/*. Note that the colors that are automatically assigned to the layers may not meet the MAA standard pen table, and may have to be adjusted.

Common Discipline Designators

Discipline Designator	Discipline	Discipline Designator	Discipline
A	Architectural	I	Interiors
B	Geotechnical	L	Landscaping
C	Civil	M	Mechanical
E	Electrical	P	Plumbing
F	Fire Protection	S	Structural
G	General	T	Telecommunications
H	Hazardous Materials	V	Surveying/Mapping

Common Major and Minor Groups

A four-letter major group and either one or two four-letter minor groups follow the discipline designator in a layer name. Common major and minor groups are listed below:

A	
ACID	Industrial waste piping
AERI	Aerial
AFFF	Aqueous film forming foam
AFRZ	Anti-freeze
AIRF	Airfield
AIRS	Airspace, approach surface
ALGN	Alignment
ALRM	Alarm
ANNO	Annotation
APRN	Apron
AREA	Area
B	
BAGS	Baggage system information
BCNS	Beacons
BEAM	Beam
BELL	Bell systems
BLDG	Building
BORE	Bore
BORW	Borrow
BRAC	Brace
BRIN	Brine
C	
CABL	Cable
CATH	Cathode
CATV	Cable TV
CCTV	Closed Circuit TV
CHAN	Channel
CHEM	Chemical
CIRC	Circuit
CLNG	Ceiling
CLOK	Clock systems
CMPA	Compressed air
CNDW	Condenser water
CO2S	Carbon Dioxide system
COLS	Columns
COMM	Communications
COND	Condensate piping
CONT	Controls
CTRL	Control panels
CWTR	Chilled water
D	
DECK	Deck
DECN	Decontamination
DETL	Details
DIAG	Diagram
DICT	Central dictation
DISC	Discipline
DISP	Displaced
DOOR	Door
DOMW	Domestic Water
DRED	Dredge

DUAL	Dual
DUCT	Duct
DUST	Dust and fume collection
E	
ELEC	Electrical
ELEV	Elevation
EMER	Emergency Systems
EMCS	Emergency Monitoring Control System
EQPM	Equipment
EXHS	Exhaust
F	
FEAT	Feature
FIXT	Fixture
FLOR	Floor
FNDN	Foundation
FUEL	Fuel lines
FURN	Furnishing
G	
GLAZ	Glazed
GRAD	Grade
GRAT	Grating
GRDL	Ground/grade level
GRID	Grid
GRND	Ground
GTHP	Geothermal heat pump
H	
HALN	Halon
HELI	Heliport
HTCW	High temperature/chilled water
HVAC	Heating, ventilation and air conditioning
HWTR	Hot water
HYDR	Hydraulics
I	
IGAS	Inert gas
INDW	Industrial waste
INSL	Insulation
INTC	Intercom/PA systems
IRRG	Irrigation
J	
JOIN	Joints
JOIS	Joists
JACK	Jacks
K	
L	
LGAS	Liquid gas
LITE	Lighting
LSFT	Life safety / egress requirements
LTNG	Lightning protection
LUBE	Lubrication
M	
MACH	Machinery
MATL	Materials

METL	Metal
MDGS	Medical/Dental gas
MNST	Monitoring stations
N	
NGAS	Natural gas
NURS	Nurse call/paging systems
O	
OPEN	Opening
OVRN	Overrun
P	
PADS	Pads
PATT	Pattern (hatching)
PENE	Penetrations
PIPE	Piping
PKNG	Parking
PLAN	Plan, blueprint
PLNT	Plants/vegetation
POLE	Utility pole
POLL	Pollution
POWR	Power
PRIM	Primary electrical cable
PROC	Process piping
PROF	Profile
PROP	Property
PROT	Protection
PVMT	Pavement
Q	
R	
RAIL	Railroad
RATE	Rating
RCOV	Recovery
REFG	Refrigeration
REIN	Reinforcement
ROAD	Roadway
ROOF	Roof
RUNW	Runway
RWTR	Raw water
S	
SAFE	Safety
SAMP	Sample
SANR	Sanitary
SEAP	Seaplane
SECD	Secondary electrical cable
SECT	Section
SERT	Security systems
SITE	Sitework
SLAB	Slab
SOUN	Sound systems
SPCL	Special
SPPT	Support
S	
SPRN	Sprinkler
SSWR	Sanitary sewer
STAT	Status

STEM	Steam
STOR	Storage
STRC	Structures
STRM	Storm sewers/drain
STRS	Stairways
SURV	Survey
SYST	System
T	
TAXI	Taxiway
TOPO	Topography
TRAF	Traffic
TRUS	Trusses
TVAN	TV antenna systems
U	
UTIL	Utilities
V	
W	
WALL	Wall
WATR	Water
X	
Y	
Z	

Common Status Categories

Once the discipline designator, major and minor categories have been chosen, the final portion of the layer name is the status. This describes to the user what the disposition is of the entities on that layer, and helps to determine if that layer should or should not be shown on a particular drawing sheet. Note that AutoCAD uses a single letter abbreviation for its status categories. MAA prefers to use a four-letter abbreviation to stay consistent with the Major and Minor group names, and provide a more intuitive description for the status. Below is a list of common status categories:

PHS#	Phase of project (#=1-9)
DEMO	Existing item to be demolished
EXST	Existing item to remain
FUTR	Future work
MOVE	Existing item to be moved
NEWW	New work
TEMP	Temporary work
NICN	Not in contract (not included in AutoCAD layer naming routine)
RELO	Existing item to be relocated (not included in AutoCAD layer naming routine)
ABND	Abandoned item (not included in AutoCAD layer naming routine)

Common Layer Names – Architectural (A)

Discipline	Major	Minor1	Minor2	Status	Layer Description
GENERAL INFORMATION					
A	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
A	ANNO	KEYN			Reference keynotes with associated leaders
A	ANNO	NOTE			General notes and general remarks
A	ANNO	NPLT			Non-plotting graphic information
A	ANNO	PATT			Miscellaneous patterning and hatching
A	ANNO	REFR			Reference files
A	ANNO	SYMB			Miscellaneous symbols
A	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
AREA INFORMATION					
A	AREA	IDEN			Room numbers, tenant identifications, area calculations
A	AREA	LINE			Architectural area calculation boundary lines
A	AREA	OCCP			Occupant or employee names
A	AREA	PATT			Area cross hatching
BAGGAGE SYSTEM INFORMATION					
A	BAGS	CART			Cart/Tug
A	BAGS	CATW			Catwalk
A	BAGS	CLMD			Claim Device
A	BAGS	CONV			Baggage Conveyor
A	BAGS	CRBS			Curbside Baggage Conveyor
A	BAGS	CTRL			Control
A	BAGS	DIMM			Dimension
A	BAGS	DOOR			Doors
A	BAGS	ELEV			Elevation
A	BAGS	EQPM			Equipment
A	BAGS	ICNV			Inbound Baggage Conveyor
A	BAGS	IOSZ			Inbound Oversized Baggage Conveyor
A	BAGS	MKUP			Make-Up Device
A	BAGS	MTCH			Match Lines
A	BAGS	NOTE			Notes
A	BAGS	OCNV			Outbound Baggage Conveyor
A	BAGS	OOSZ			Outbound Oversized Baggage Conveyor
A	BAGS	RAIL			Guardrail
A	BAGS	ROWY			Right-of-Way
A	BAGS	SCDR			Security Door
A	BAGS	SCNU			Screening Unit
A	BAGS	TBLK			Title Block
A	BAGS	TCBC			Ticket Counter Baggage Conveyor
A	BAGS	TEMP			Temporary
A	BAGS	TTRY			Tilt-Tray Baggage System
A	BAGS	VPRT			View Port Layer for Paper Space
A	BAGS	XFER			Transfer Baggage Conveyor
A	BAGS	XRAY			X-Ray Unit
CEILING INFORMATION					
A	CLNG	ACCS			Access panels
A	CLNG	CTLJ			Ceiling control joints

Discipline	Major	Minor1	Minor2	Status	Layer Description
A	CLNG	GRID			Ceiling grid
A	CLNG	LEVL			Level Changes
A	CLNG	OPEN			Openings, ceiling/roof penetrations (see also A-FLOR-OVHD in Model File Type: Floor Plan)
A	CLNG	PATT			Ceiling patterns
A	CLNG	REFL			Reflective Ceiling
A	CLNG	SUSP			Suspended elements, ceiling mounted specialties (e.g., clocks, fans, etc.)
A	CLNG	TEES			Main tees
A	COLS	ENCL			Column enclosures/fire protection
DETAIL INFORMATION					
A	DETL	GRPH			Graphics, gridlines, non-text items
A	DETL	INPD			Inch-pound-specific dimensions and notes
A	DETL	METR			Metric-specific dimensions and notes
DOORS					
A	DOOR	FULL			Full height (to ceiling) door: swing and leaf
A	DOOR	IDEN			Door number and symbol, hardware group, etc.
A	DOOR	PRHT			Partial height door: swing and leaf
A	DOOR	SECR			Security Door
A	DOOR	SYMB			Miscellaneous door symbols (e.g., overhead, bifold, pocket, etc.)
ELEVATIONS					
A	ELEV	CASE			Wall-mounted casework
A	ELEV	FIXT			Miscellaneous fixtures
A	ELEV	FNSH			Finishes, woodwork, trim
A	ELEV	IDEN			Component identification numbers
A	ELEV	OTLN			Building outlines
A	ELEV	PATT			Textures and hatch patterns
A	ELEV	PFIX			Plumbing fixtures
A	ELEV	SIGN			Signage
EQUIPMENT					
A	EQPM	ACCS			Equipment access
A	EQPM	BELW			Equipment below Floor
A	EQPM	CLRN			Equipment clearance
A	EQPM	FIXD			Fixed equipment
A	EQPM	IDEN			Equipment identification numbers
A	EQPM	JETB			Aircraft Jet bridge
A	EQPM	MOVE			Moveable equipment
A	EQPM	NICN			Not in contract equipment
A	EQPM	OVHD			Overhead, ceiling mounted, or suspended equipment
FLOOR INFORMATION					
A	FLOR	CASE			Casework (manufactured cabinets)
A	FLOR	ESCL			Escalators
A	FLOR	EVTR			Elevator cars and equipment
A	FLOR	EXPJ			Expansion and Seismic Joints
A	FLOR	FIXT			Floor mounted/Free standing miscellaneous fixtures
A	FLOR	FURN			Furniture Layers
A	FLOR	HRAL			Stair and balcony handrails, guard rails
A	FLOR	IDEN			Room name, space identification text
A	FLOR	LADR			Ladders

Discipline	Major	Minor1	Minor2	Status	Layer Description
A	FLOR	LEVL			Level changes, shafts, ramps, pits, breaks in construction, and depressions
A	FLOR	MOVS			Moving sidewalks
A	FLOR	NUMB			Room/space identification number and symbol
A	FLOR	OTLN			Floor outline/perimeter/building footprint
A	FLOR	OTLN	RPRM		Room perimeter shape (Interior walls)
A	FLOR	OVHD			Overhead items (skylights, overhangs etc.)
A	FLOR	PATT			Paving, tile, carpet patterns
A	FLOR	RAIS			Access (raised) flooring
A	FLOR	SIGN			Signage
A	FLOR	SPCE			Interior space not delineated by walls
A	FLOR	SPCL			Architectural specialties (e.g., toilet room accessories, display cases)
A	FLOR	STRS			Stair risers/treads
A	FLOR	TPTN			Toilet partitions
A	FLOR	WDWK			Architectural woodwork (field built cabinets and counters)
WINDOWS					
A	GLAZ	FULL			Full height glazed walls and partitions (see A-WALL-CWMG for curtain walls)
A	GLAZ	IDEN			Window number and symbol
A	GLAZ	PRHT			Windows and partial height glazed partitions
A	GLAZ	SILL			Window sills
LIGHTING					
A	LITE	CLNG			Specialty ceiling lights not shown on Electrical Lighting Plan
PROPERTY INFORMATION					
A	PROP	LEAS			Lease line (interior)
ROOFING INFORMATION					
A	ROOF	CRTS			Crickets flow arrows flow info
A	ROOF	EXPJ			Expansion joints
A	ROOF	GUTR			Roof internal gutters
A	ROOF	HRAL			Stair handrails, nosings, guard rails
A	ROOF	LEVL			Level changes
A	ROOF	OPEN			Roof Open Below ('X' line symbol)
A	ROOF	OTLN			Roof perimeter/edge, roof geometry
A	ROOF	PATT			Roof surface patterns, hatching
A	ROOF	RFDR			Roof drains
A	ROOF	SPCL			Roof specialties, accessories, access hatches, dormers
A	ROOF	STRS			Stair risers/treads, ladders
A	ROOF	WALK			Roof walkways
A	ROOF	WALL			Parapet walls and wall caps
SECTIONS					
A	SECT	IDEN			Component identification numbers
A	SECT	MBND			Material beyond section cut
A	SECT	MCUT			Material cut by section
A	SECT	PATT			Textures and hatch patterns
WALLS					
A	WALL	CAVI			Cavity wall lines
A	WALL	CNTR			Wall centerlines
A	WALL	CWMG			Curtain wall mullions and glass

Discipline	Major	Minor1	Minor2	Status	Layer Description
A	WALL	FIRE			Fire wall designators (patterning)
A	WALL	FULL	EXTR		Exterior full height walls
A	WALL	FULL	INTR		Interior full height walls
A	WALL	HEAD			Door and window headers (appear on Reflected Ceiling Plan)
A	WALL	IDEN			Wall identification/type text or tags
A	WALL	JAMB			Door and window jambs (do not appear on Reflected Ceiling Plan)
A	WALL	MOVE			Moveable walls/partitions
A	WALL	PATT			Wall insulation, hatching, and fill
A	WALL	PRHT			Partial height walls (do not appear on Reflected Ceiling Plan)
A	WALL	SPCL			Wall-hung/attached specialties (e.g., fixtures, grab bars (incl. handicap), telephone booths)

Common Layer Names – Borings (B)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
B	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
B	ANNO	KEYN			Reference keynotes with associated leaders
B	ANNO	NOTE			General notes and general remarks
B	ANNO	NPLT			Non-plotting graphic information
B	ANNO	PATT			Miscellaneous patterning and hatching
B	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
B	ANNO	SYMB			Miscellaneous symbols
B	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
GEOPHYSICAL BORINGS					
B	BORE	ELEV			Boring elevations
B	BORE	FDTA			Field data
B	BORE	HOLE			Bore/perc hole number
B	BORE	IDEN			Component identification numbers
B	BORE	LDTA			Laboratory data
B	BORE	PATT			Soil/rock patterns

Common Layer Names – Civil (C)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
C	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
C	ANNO	KEYN			Reference keynotes with associated leaders
C	ANNO	NOTE			General notes and general remarks
C	ANNO	NPLT			Non-plotting graphic information
C	ANNO	PATT			Miscellaneous patterning and hatching
C	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
C	ANNO	SYMB			Miscellaneous symbols
C	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
AIRFIELD					
C	AIRF	AHOA			Air Operations Area
C	AIRF	AIDS	CRIT		Airfield Navigational Aid - Critical Area
C	AIRF	AIDS	OTHR		Other airfield navigational aides
C	AIRF	AIDS	SITE		Airfield Navigational Aid - Site
C	AIRF	AIDS	RADI		Radio airfield navigational aides
C	AIRF	AIDS	ILS_		Airfield Instrument Landing System
C	AIRF	AIDS	RADR		Radar airfield navigational aides
C	AIRF	AIDS	COMM		Communications airfield navigational aides
C	AIRF	AIDS	GPS_		GPS airfield navigational aides
C	AIRF	AIDS	MCWV		Microwave airfield navigational aides
C	AIRF	AIDS	WTHR		Weather airfield navigational aides
C	AIRF	AIDS	RMTE		Remote airfield navigational aides
C	AIRF	AIDS	SYST		NAVAID system
C	AIRF	ARWY			Airway
C	AIRF	DSRF	BLDR		Building Restriction Line
C	AIRF	DSRF	RSA_		Runway Safety Area
C	AIRF	DSRF	RPZ_		Runway Protection Zone
C	AIRF	DSRF	OFA_		Object Free Area
C	AIRF	DSRF	OFZ_		Object Free Zone
C	AIRF	DSRF	POFA		Precision Object Free Area
C	AIRF	DSRF	KEYH		Key holes
C	AIRF	DSRF	NMOV		Aircraft Non-Movement Area
C	AIRF	FAAR			FAA Region
C	AIRF	FREQ			Frequency Area
C	AIRF	GLCL	PIPE		Glycol pipes
C	AIRF	GLCL	MHOL		Glycol manholes
C	AIRF	GLCL	BUBL		Glycol bubble callout
C	AIRF	PAVE			Airfield pavement section
C	AIRF	PROP			Airport property
C	AIRF	SECR	SIDA		Security Identification Display Area
C	AIRF	SECR	SECA		Airfield security area
C	AIRF	SECR	STER		Airfield sterile area
C	AIRF	SECR	RSTR		Military restricted access boundary
C	AIRF	TRKL			Flight Track Line
C	AIRF	TRKP			Flight Track Point

Discipline	Major	Minor1	Minor2	Status	Description
AIRFIELD TRAFFIC AREAS					
C	TRAF	IDEN			Airfield traffic area annotation
C	TRAF	TYPA			Type A traffic area
C	TRAF	TYPB			Type B traffic area
C	TRAF	TYPC			Type C traffic area
AIRSPACE					
C	AIRS	ISOC			Approach surface isoclines
C	AIRS	LNDM			Landmark segment
C	AIRS	OBSC			Airfield obstruction
C	AIRS	OBST	LINE		Airspace obstructions - Line
C	AIRS	OBST	PPNT		Airspace obstructions - Point
C	AIRS	OBST	POLY		Airspace obstructions - Polygon
C	AIRS	OTHR			Other airspace surfaces
C	AIRS	PART	PRIM		FAR Part 77 Primary Surface
C	AIRS	PART	HORZ		FAR Part 77 Horizontal Surface
C	AIRS	PART	CONL		FAR Part 77 Conical Surface
C	AIRS	PART	TRNS		FAR Part 77 Transitional Surface
C	AIRS	PART	APRC		FAR Part 77 Approach Surface
C	AIRS	TERP			TERPS surfaces
ALIGNMENTS					
C	ALGN	DATA			Alignment coordinates and curve data
C	ALGN	LINE			Alignments
C	ALGN	STAT			Stationing and tick marks
APRONS					
C	APRN	ACPK			Aircraft gate/stand parking area
C	APRN	ANOM			Aircraft non-movement area
C	APRN	CNTR			Centerlines
C	APRN	CNTR	IDEN		Centerline annotation
C	APRN	DEIC			Aircraft Deicing Area
C	APRN	GRND			Grounding points
C	APRN	HOLD			Holding position markings
C	APRN	IDEN			Annotation
C	APRN	JOIN			Apron joints
C	APRN	MOOR			Mooring points
C	APRN	MRKG			Apron markings
C	APRN	OTLN			Airfield apron
C	APRN	SECU			Security zone markings
C	APRN	SHLD	MRKG		Shoulder markings
C	APRN	SIGN			Airfield signs on the apron
BUILDINGS AND PRIMARY STRUCTURES					
C	BLDG	IDEN			Building and other structure annotation
C	BLDG	OTLN			Buildings and other structures
C	BLDG	OVHD			Building overhang
C	BLDG	PATT			Building hatching and patterns
BORROW AREAS					
C	BORW	IDEN			Borrow/Spoil area annotation
C	BORW	LINE			Borrow/Spoil area

Discipline	Major	Minor1	Minor2	Status	Description
CHANNELS					
C	CHAN	AIDS			Navigation aids and text
C	CHAN	CNTR			Channel centerline and survey report lines
C	CHAN	CNTR	IDEN		Channel centerline and survey report lines - annotation
C	CHAN	DACL			De-authorized channel limits, anchorages, etc.
C	CHAN	DACL	IDEN		De-authorized channel limits, anchorages, etc. - annotation
C	CHAN	IDEN			Channel limits, anchorages, turning basins, disposal areas, etc. - annotation
C	CHAN	LIMT			Channel limits, anchorages, turning basins, disposal areas, etc.
C	CHAN	TURN			Turning points
DETAIL INFORMATION					
C	DETL	CONC			Concrete
C	DETL	COVR			Covers and fittings
C	DETL	ERTH			Earth
C	DETL	FAST			Fasteners
C	DETL	FENC			Fencing
C	DETL	FENC	SECU		Security Fencing
C	DETL	FILL			Fill
C	DETL	GENF			General features (miscellaneous items)
C	DETL	GRPH			Graphics, gridlines, non-text items
C	DETL	INPD			Inch-pound-specific dimensions and notes
C	DETL	METR			Metric-specific dimensions and notes
C	DETL	PAVE			Pavements
C	DETL	PIPE			Piping
C	DETL	SPCF			Special features
C	DETL	STRC			Structural metal
C	DETL	TANK			Tanks
C	DETL	VLVE			Valves and fittings
DITCHES					
C	DTCH	BOTD			Bottom of ditch
C	DTCH	CNTR			Centerline of ditch
C	DTCH	EWAT			Edge of water
C	DTCH	IDEN			Ditch annotatior
C	DTCH	TOPD			Top of ditch
DOMESTIC WATER					
C	DOMW	PIPE		ABND	Abandoned piping
C	DOMW	DEVC			Connectors, faucets, reducers, regulators, vents, intake points, tanks, taps, backflow presenters, and valves
C	DOMW	DEVC	ANOD		Anode
C	DOMW	DEVC	ANOT		Anode test station
C	DOMW	DEVC	FIRE		Fire connection pint other than hydrants
C	DOMW	DEVC	INTK		Intake point
C	DOMW	DEVC	INTK		The location where water is allowed into the water distribution system
C	DOMW	DEVC	PIGL		Pig launch point
C	DOMW	DEVC	PUMP		Pump
C	DOMW	DEVC	RECT		Rectifier
C	DOMW	DEVC	REGL		Regulator, reducer
C	DOMW	DEVC	SMPL		Sample location
C	DOMW	DEVC	TRET		Treatment unit

Discipline	Major	Minor1	Minor2	Status	Description
C	DOMW	FIRE			Fire lines
C	DOMW	FTTG			Caps, cleanouts, crosses, and tees
C	DOMW	HYDR			Hydrants
C	DOMW	IDEN			Identifier tags, symbol modifier, and text
C	DOMW	JBOX			A box or small vault (usually concrete, brick, or cast iron) in water systems located below grade with above grade access where pipes intersect. Manhole also houses associated fittings, valves, meters, etc.
C	DOMW	MAIN			Main domestic water piping
C	DOMW	METR			Meters
C	DOMW	NHYD			Non-potable hydrants/flushing hydrants
C	DOMW	NPOT			Non-potable water piping
C	DOMW	PITS	IDEN		Identifier tags, symbol modifier, and text
C	DOMW	PLNT			A water treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment
C	DOMW	PUMP			Booster pump stations
C	DOMW	REDC			Pressure reducing stations
C	DOMW	RSVR			Reservoirs
C	DOMW	RSVR	IDEN		Identifier tags, symbol modifier, and text
C	DOMW	SERV			Domestic water service piping
C	DOMW	SIGN			Surface markers/signs
C	DOMW	SITE			A water utility company or organization's certificated area of jurisdiction or responsibility as approved by a federal, state, or local utility regulatory authority
C	DOMW	SRCE			The point from which water is supplied for processing and distribution
C	DOMW	STNS	IDEN		Identifier tags, symbol modifier, and text
C	DOMW	TANK			Water storage tanks
C	DOMW	VENT			Vent pits
C	DOMW	VLVE			Valve pits/vaults
C	DOMW	WELL			Water well houses
DREDGING					
C	DRED	LIMT			Dredge limit lines
C	DRED	OHWM			Ordinary high water marks
ELEVATIONS					
C	ELEV	FIXT			Miscellaneous fixtures
C	ELEV	IDEN			Component identification numbers
C	ELEV	OTLN			Building outlines
C	ELEV	PATT			Textures and hatch patterns
C	ELEV	SIGN			Signage
EROSION AND SEDIMENTATION CONTROL					
C	EROS	CIPR			Culvert inlet protection
C	EROS	CNST	ENTR		Construction entrance
C	EROS	DDIV			Drainage divides
C	EROS	DVDK			Diversion dike
C	EROS	IDEN			Erosion and sediment control annotation
C	EROS	INLT	PROT		Inlet protection
C	EROS	LOD			Limit of Division
C	EROS	SILT	FENC		Silt fence
C	EROS	SILT	TRAP		Silt trap
C	EROS	SSLT	FENC		Super silt fence

Discipline	Major	Minor1	Minor2	Status	Description
LIQUID FUEL					
C	FUEL	PIPE		ABND	Abandoned piping
C	FUEL	DEFL			Defueling piping
C	FUEL	DEVC			Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves
C	FUEL	DEVC	AIRE		Air eliminator
C	FUEL	DEVC	ANOD		Anode
C	FUEL	DEVC	ANOT		Anode test station
C	FUEL	DEVC	FILT		Filter strainer point
C	FUEL	DEVC	OILW		Oil water separator
C	FUEL	DEVC	PUMP		Pump
C	FUEL	DEVC	RECT		Rectifier
C	FUEL	DEVC	REDC		Reducer
C	FUEL	DEVC	SRCE		Source point
C	FUEL	DEVC	VLVE		Valve
C	FUEL	FARM			Fuel farm site
C	FUEL	FLOW			Flow direction arrows
C	FUEL	FTTG			Caps, crosses, and tees
C	FUEL	HYDR			Hydrant control pits
C	FUEL	IDEN			Identifier tags, symbol modifier, and text
C	FUEL	JBOX			Junction boxes, manholes, handholes, test boxes
C	FUEL	MAIN			Main fuel piping
C	FUEL	METR			Meters
C	FUEL	REFN			Refinery site
C	FUEL	PIPL			Pipe line
C	FUEL	PIPS			Pipeline segment line
C	FUEL	PITS	IDEN		Identifier tags, symbol modifier, and text
C	FUEL	PUMP			Booster pump stations
C	FUEL	SERV			Service piping
C	FUEL	STNS	IDEN		Identifier tags, symbol modifier, and text
C	FUEL	TANK			Fuel tanks
C	FUEL	TRCH			Fuel line trench
C	FUEL	VENT			Vent pits
C	FUEL	VLVE			Valve pits
GRADE LINEWORK					
C	GRAD	EXST			Existing grade, ground line
C	GRAD	FNSH			Finished grade
GRID LINES					
C	GRID	FRAM			Frame (bounding frame of an area referenced by a grid)
C	GRID	MAJR			Major grid lines
C	GRID	MINR			Minor grid lines
C	GRID	TEXT			Border text, annotation
HELIPORTS					
C	HELI	BLST			Helipad blast pad and stopway markings
C	HELI	CNTR			Centerline
C	HELI	CNTR	MRKG		Centerline markings
C	HELI	DISP			Displaced threshold markings
C	HELI	DIST			Fixed distance markings

Discipline	Major	Minor1	Minor2	Status	Description
C	HELI	DSRF			Helipad design surface
C	HELI	FATO			Helipad FATO
C	HELI	IDEN			Heliport numbers and letters
C	HELI	SHLD			Shoulder
C	HELI	SIDE			Side stripes
C	HELI	TDZM			Touchdown zone markers
C	HELI	THRS			Threshold markers
C	HELI	TLOF			Helipad take off and landing area
INDUSTRIAL WASTE WATER					
C	INDW	PIPE		ABND	Abandoned piping
C	INDW	DEVC			Grit chambers, meters, flumes, neutralizers, oil/water separators, ejectors, tanks, and valves
C	INDW	DEVC	ANOD		Anode
C	INDW	DEVC	ANOT		Anode test station
C	INDW	DEVC	DISC		Discharge point
C	INDW	DEVC	GRIT		Grit chamber
C	INDW	DEVC	INLT		Inlet
C	INDW	DEVC	NEUT		Neutralizer
C	INDW	DEVC	PUMP		Pump
C	INDW	DEVC	RECT		Rectifier
C	INDW	DEVC	OILW		Oil water separator
C	INDW	DEVC	WFIT		Waste fitting
C	INDW	FLOW			Flow direction arrows
C	INDW	FTTG			Caps and cleanouts
C	INDW	HEAD	LINE		Headwall line
C	INDW	HEAD	PONT		Headwall point
C	INDW	IDEN			Identifier tags, symbol modifier, and text
C	INDW	JBOX			Junction boxes and manholes
C	INDW	LAGN			Lagoons
C	INDW	LIFT			Lift stations
C	INDW	MAIN			Main industrial waste water piping
C	INDW	METR			Meters
C	INDW	PLNT			Treatment plants
C	INDW	RSVR	IDEN		Identifier tags, symbol modifier, and text
C	INDW	SERV			Industrial waste water service piping
C	INDW	SIGN			Surface markers/signs
C	INDW	STNS	IDEN		Identifier tags, symbol modifier, and text
JOINTS					
C	JOIN	CNSL			Construction joints - longitudinal
C	JOIN	CNST			Construction joints - transverse
C	JOIN	CNTL			Contraction joints - longitudinal
C	JOIN	CNTT			Contraction joints - transverse
C	JOIN	EDGE			Thickened edges
C	JOIN	EXPN			Expansion joints
C	JOIN	IDEN			Joint annotation
NATURAL GAS					
C	NGAS	PIPE		ABND	Abandoned piping

Discipline	Major	Minor1	Minor2	Status	Description
C	NGAS	DEVC			Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves
C	NGAS	DEVC	ANOD		Anode
C	NGAS	DEVC	ANOT		Anode test station
C	NGAS	DEVC	FILL		Fill point
C	NGAS	DEVC	IDEN		Identifier tags, symbol modifier, and text
C	NGAS	DEVC	LITE		Light
C	NGAS	DEVC	PUMP		Pump
C	NGAS	DEVC	RECT		Rectifier
C	NGAS	DEVC	SRCE		Source point
C	NGAS	FLOW			Flow direction arrows
C	NGAS	FTTG			Caps, crosses, and tees
C	NGAS	IDEN			Identifier tags, symbol modifier, and text
C	NGAS	MAIN			Main natural gas piping
C	NGAS	METR			Meters
C	NGAS	PITS	IDEN		Identifier tags, symbol modifier, and text
C	NGAS	PUMP			Compressor stations
C	NGAS	REDC			Reducing stations
C	NGAS	SERV			Service piping
C	NGAS	SIGN			Surface markers/signs
C	NGAS	STNS	IDEN		Identifier tags, symbol modifier, and text
C	NGAS	VENT			Vent pits
C	NGAS	VLVE			Valve pits/boxes
OVERRUN AREAS					
C	OVRN	CNTR			Centerlines
C	OVRN	CNTR	IDEN		Centerline annotation
C	OVRN	IDEN			Airfield overrun area - annotation
C	OVRN	JOIN			Airfield overrun joints
C	OVRN	OTLN			Airfield overrun area - outlines
C	OVRN	SHLD			Shoulder markings
PADS (arm / disarm / calibration, etc.)					
C	PADS	CNTR			Centerlines
C	PADS	CNTR	IDEN		Centerline annotation
C	PADS	IDEN			Pads - annotation
C	PADS	OTLN			Pad - outlines
C	PADS	SHLD			Shoulders with annotation
PARKING LOTS					
C	PKNG	CARS			Graphic illustration of cars
C	PKNG	CNTR			Centerlines
C	PKNG	CNTR	IDEN		Centerline annotation
C	PKNG	CURB			Curbs and gutters
C	PKNG	DRAN			Parking lot drainage slope indications
C	PKNG	EQPM			Parking Equipment (I.e. booths, gates, etc.)
C	PKNG	FIXT			Parking lot fixtures (e.g., wheel stops, parking meters)
C	PKNG	IDEN			Parking lot, minor road, and curb annotation
C	PKNG	ISLD			Parking islands
C	PKNG	MRKG			Parking lot striping, handicapped symbols, pavement markings
C	PKNG	OTLN			Parking lot outline

Discipline	Major	Minor1	Minor2	Status	Description
C	PKNG	SIGN			Parking lot signage
C	PKNG	SBMP			Speed bumps in parking areas
PROFILES					
C	PROF	CUID			Existing grade and grading cuts - annotation
C	PROF	FILL			New work, grading fills
C	PROF	INLT			Curb and surface inlets, catch basins
C	PROF	MHOL			Manholes
C	PROF	PIPE			Piping
C	PROF	ROAD			Roads
PROPERTY					
C	PROP	CONS			Construction limits/controls, staging area
C	PROP	ESMT			Easements
C	PROP	IDEN			Property annotation
C	PROP	LEAS			Lease line (exterior / ground lease)
C	PROP	RWAY			Right of ways
PAVEMENTS					
C	PVMT	ASPH			Pavement pattern - asphalt
C	PVMT	CONC			Pavement pattern - concrete
C	PVMT	GROV			Pavement Grooving
C	PVMT	GRVL			Pavement pattern - gravel
C	PVMT	IDEN			Road, parking lot, railroad, airfield pavement annotation
C	PVMT	MRKG			Pavement markings
C	PVMT	MRKG	WHIT		Roadway markings (white)
C	PVMT	MRKG	YELO		Roadway markings (yellow)
C	PVMT	PATT			Joint patterns, text and dimensions
C	PVMT	ROAD			Roads, parking lots, railroads, airfield pavements
C	PVMT	SBMP			Speed bumps on roadways
C	PVMT	SIGN			Other signs
RAILROADS					
C	RAIL	BRDG			Railroad bridge area
C	RAIL	BRDG	CNTR		Railroad bridge centerline
C	RAIL	CNTR			Centerlines
C	RAIL	CNTR	IDEN		Centerline annotation
C	RAIL	EQPM			Railroad equipment (e.g., gates, signals)
C	RAIL	IDEN			Railroad - annotation
C	RAIL	TRAK			Railroads
C	RAIL	YARD			Railroad Yard
ROADS, STREETS, HIGHWAYS					
C	ROAD	ASPH			Road outlines-asphalt surface
C	ROAD	CNTR			Centerlines
C	ROAD	CNTR	IDEN		Centerline annotation
C	ROAD	CONC			Road outlines-concrete surface
C	ROAD	CURB			Curbs
C	ROAD	DRIV			Driveway edge of pavement
C	ROAD	DRIV	CNTR		Driveway centerline
C	ROAD	GRAL			Guardrails
C	ROAD	GRVL			Road outlines-gravel surface
C	ROAD	IDEN			Road, curb, and guardrail annotation

Discipline	Major	Minor1	Minor2	Status	Description
C	ROAD	MRKG			Pavement markings
C	ROAD	SHLD			Roadway shoulder
C	ROAD	SIGN			Roadway signs
C	ROAD	UPVD			Road outlines-unpaved
RUNWAYS					
C	RUNW	ARST			Runway Arresting Gear Location
C	RUNW	ARST			Runway arresting area
C	RUNW	BLST			Runway blast pad
C	RUNW	CLRW			Runway clearway
C	RUNW	CNTR			Runway Centerline
C	RUNW	CNTR	MRKG		Centerline markings
C	RUNW	DISP			Displaced threshold
C	RUNW	DIST			Fixed distance markings
C	RUNW	EDGE			Airfield runway edges
C	RUNW	ENDP			Runway endpoint
C	RUNW	ENDP	MRKG		Runway label marking point
C	RUNW	IDEN			Runway numbers and letters
C	RUNW	INTS			Runway intersection
C	RUNW	LAHS			Runway land and hold short area
C	RUNW	SAFT			Runway Safety Area
C	RUNW	SEGM			Runway segment
C	RUNW	SHLD			Shoulder markings
C	RUNW	SHLD			Runway Shoulder
C	RUNW	SIDE			Side stripes
C	RUNW	SIGN			Airfield signs on the runway such as distance remaining signs
C	RUNW	STWY			Runway stopway markings
C	RUNW	TDZM			Touchdown zone markers
C	RUNW	THRS			Threshold markers
SEAPLANES					
C	SEAP	BUOY			Seaplane navigation buoy
C	SEAP	DOCK			Seaplane dock
C	SEAP	LNDA			Seaplane landing area
C	SEAP	RAMP	CNTR		Seaplane ramp centerline
C	SEAP	RAMP			Seaplane ramp site
SECTIONS					
C	SECT	IDEN			Component identification numbers
C	SECT	MBND			Material beyond section cut
C	SECT	MCUT			Material cut by section
C	SECT	PATT			Textures and hatch patterns
SITE FEATURES					
C	SITE	EROS			Riprap, revetments/stone protection, breakwaters, dikes, jetties, and drains
C	SITE	EROS	IDEN		Riprap, revetment/stone protection, breakwater, dike, jetty, and drain annotation
C	SITE	FENC			Fences and handrails
C	SITE	FENC	IDEN		Fence, handrail, ramp, sign, and trail annotation
C	SITE	FENP			Fence Posts
C	SITE	GATE			Gates along fences or other barriers intended to restrict access

Discipline	Major	Minor1	Minor2	Status	Description
C	SITE	IDEN			Site improvement annotation
C	SITE	IMPR			Site improvements (channel or levee features)
C	SITE	SECU	CMRA		Security camera locations outside of buildings
C	SITE	STRC			Structures (bridges, sheds, foundation pads, footings, etc.)
C	SITE	STRS			Stairs and ramps
C	SITE	WALK			Walks, trails and bicycle paths
SANITARY SEWER					
C	SSWR	PIPE		ABND	Abandoned piping
C	SSWR	DEVC			Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves
C	SSWR	DEVC	ANOD		Anode
C	SSWR	DEVC	ANOT		Anode test station
C	SSWR	DEVC	DNWS		Downspout point
C	SSWR	DEVC	DSCH		Discharge point
C	SSWR	DEVC	GRIT		Grit chamber
C	SSWR	DEVC	GRSE		Grease trap
C	SSWR	DEVC	IDEN		Identifier tags, symbol modifier, and text
C	SSWR	DEVC	INLT		inlet
C	SSWR	DEVC	METR		Meters
C	SSWR	DEVC	NEUT		Neutralizer
C	SSWR	DEVC	OILW		Oil water separator
C	SSWR	DEVC	PUMP		Pump
C	SSWR	DEVC	RECT		rectifier
C	SSWR	DEVC	TRET		Treatment unit
C	SSWR	DEVC	VLVE		valve
C	SSWR	FILT			Filtration beds
C	SSWR	FILT	IDEN		Identifier tags, symbol modifier, and text
C	SSWR	FLOW			Flow direction arrows
C	SSWR	FTTG			Caps and cleanouts
C	SSWR	IDEN			Identifier tags, symbol modifier, and text
C	SSWR	JBOX			Junction boxes and manholes
C	SSWR	JBOX	IDEN		Identifier tags, symbol modifier, and text
C	SSWR	LAGN			Lagoons
C	SSWR	LEAC			Leach field
C	SSWR	LEAC	LAGN		Lagoon
C	SSWR	LEAC	SBED		Sludge bed
C	SSWR	MAIN			Sanitary sewer piping
C	SSWR	MHOL			Sanitary sewer manholes
C	SSWR	NITF			Nitrification drain fields
C	SSWR	PLNT			Treatment plants
C	SSWR	PUMP			Booster pump stations
C	SSWR	RSVR	IDEN		Identifier tags, symbol modifier, and text
C	SSWR	SERV			Sanitary sewer service piping
C	SSWR	SIGN			Surface markers/signs
C	SSWR	SITE			A wastewater utility company or organization's certificated area of jurisdiction of responsibility as approved by a federal, state, or local utility regulatory authority
C	SSWR	STNS	IDEN		Identifier tags, symbol modifier, and text
C	SSWR	TANK			Septic tanks

Discipline	Major	Minor1	Minor2	Status	Description
C	SSWR	TANK	DISP		Disposal tanks
C	SSWR	TRET			A wastewater treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment
STRUCTURES					
C	STRC	IDEN			Bridges, piers, breakwaters, docks, floats, etc. - annotation
C	STRC	OTLN			Bridges, piers, breakwaters, docks, floats, etc. - outlines
C	STRC	TOWR			Tower
STORM SEWER					
C	STRM	PIPE		ABND	Abandoned piping
C	STRM	AFFF			AFFF lagoon/detention pond
C	STRM	CHUT			Chutes and concrete erosion control structures
C	STRM	CULV			Culverts
C	STRM	CULV	CLIN		Culvert centerline
C	STRM	CULV	LINE		Culvert line
C	STRM	DEVC			Downspouts, flumes, oil/water separators, and flap gates
C	STRM	DRAN	DIVL		Drainage divide line
C	STRM	DRAN	IDEN		Identifier tags, symbol modifier, and text
C	STRM	DRAN	LINE		Open drainage line
C	STRM	EROS			Erosion control (riprap)
C	STRM	FLOD			Flood area
C	STRM	FLOW			Flow direction arrows
C	STRM	FMON			Flow monitoring station
C	STRM	FTTG			Caps and cleanouts
C	STRM	HDWL			Headwalls and endwalls
C	STRM	IDEN			Identifier tags, symbol modifier, and text
C	STRM	INLT			Inlets (curb, surface, and catch basins)
C	STRM	JBOX			Junction
C	STRM	LAGN			Lagoons, ponds, watersheds, and basins
C	STRM	LAGN	BASN		Drainage basin
C	STRM	LAGN	OPEN		Open drainage area
C	STRM	LAGN	STIL		Stilling basin
C	STRM	LAGN	RPNT		Reservoir point
C	STRM	MAIN			Storm sewer piping
C	STRM	MHOL			Manholes
C	STRM	PUMP			Pump stations
C	STRM	ROOF			Roof drain line
C	STRM	RSVR	IDEN		Identifier tags, symbol modifier, and text
C	STRM	SERV			Storm sewer service piping
C	STRM	SIGN			Surface markers/signs
C	STRM	STAT	PUMP		Pump station
C	STRM	STNS	IDEN		Identifier tags, symbol modifier, and text
C	STRM	STRC			Storm drainage, headwalls, inlets, manholes, culverts, and drainage structures
C	STRM	SUBS			Subsurface drain piping
SURVEY					
C	SURV	DATA			Survey data (benchmarks and horizontal control points or monuments)
C	SURV	IDEN			Survey, baseline, and control line annotation
C	SURV	LINE			Survey, baseline, and control lines
TAXIWAYS					

Discipline	Major	Minor1	Minor2	Status	Description
C	TAXI	CNTR			Taxiway centerline
C	TAXI	CNTR	IDEN		Centerline annotation
C	TAXI	CNTR	MRKG		Centerline markings
C	TAXI	EDGE			Edge markings
C	TAXI	HOLD			Holding lines
C	TAXI	IDEN			Annotation
C	TAXI	INTS			Taxiway intersection
C	TAXI	JOIN			Taxiway joints
C	TAXI	OTLN			Taxiway - outlines
C	TAXI	SHLD			Shoulder transverse stripes
C	TAXI	SIGN			Airfield signs on the taxiway such as taxiway designator, hold short and directional signs
TOPOGRAPHY					
C	TOPO	AUCO			Noise Complaint
C	TOPO	AUST			Noise Monitoring Station
C	TOPO	AUZN			Noise Contour/Zone
C	TOPO	BKLN			Breaklines
C	TOPO	BORE			Boring locations
C	TOPO	COOR			Coordinate grid ticks and text
C	TOPO	DTMP			DTM points
C	TOPO	DTMT			DTM triangles
C	TOPO	FLZN			Flood Zone
C	TOPO	MAJR			Major contours
C	TOPO	MAJR	IDEN		Major contours - annotation
C	TOPO	MINR			Minor contours
C	TOPO	MINR	IDEN		Minor contours - annotation
C	TOPO	MINR	ONEF		Minor contours - One Foot Intervals
C	TOPO	MINR	TWOF		Minor contours - Two Foot Intervals
C	TOPO	RNYE			Runway centerline elevation point
C	TOPO	RTWL			Retaining wall
C	TOPO	SHOR			Shorelines, land features, and references
C	TOPO	SHOR			Shoreline
C	TOPO	SLOP			Cut/fill slopes
C	TOPO	SLOP	FILL		Cut/fill slopes
C	TOPO	SLOP	IDEN		Cut/fill slope, top/toe slope annotation
C	TOPO	SLOP	TOPT		Top/toe slopes
C	TOPO	SLTP			Top/toe slopes
C	TOPO	SOUN			Soundings
C	TOPO	SPOT			Spot elevations
C	TOPO	SPOT	IDEN		Spot elevations - annotation
C	TOPO	WATR			Water area
UTILITIES GENERAL					
C	UTIL	AREA			Utility area
C	UTIL	COND			Conduit centerline
C	UTIL	DIST			Energy distribution control facility
C	UTIL	SOLR			Solar panel
C	UTIL	TANK			Tank
C	UTIL	TUNL			Tunnel centerline

Discipline	Major	Minor1	Minor2	Status	Description
C	UTIL	UDEF			Undefined feature
C	UTIL	UDOR			Utility utilidor line
C	UTIL	UNDL			Undefined utility line

Common Layer Names – Electrical (E)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
E	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
E	ANNO	KEYN			Reference keynotes with associated leaders
E	ANNO	NOTE			General notes and general remarks
E	ANNO	NPLT			Non-plotting graphic information
E	ANNO	PATT			Miscellaneous patterning and hatching
E	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
E	ANNO	SYMB			Miscellaneous symbols
E	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
AIRFIELDS					
E	AFLD	CIRC	CTRL		Control and monitoring circuits
E	AFLD	CIRC	MULT		Multiple circuits
E	AFLD	CIRC	SERS		Series circuits
E	AFLD	VALT			Airfield lighting vaults
ALARM SYSTEMS					
E	ALRM	EQPM			Alarm system equipment
E	ALRM	IDEN			Identifier tags, symbol modifier, and text
E	ALRM	SYMB			Miscellaneous alarm system symbols
BEACONS					
E	BCNS	IDEN			Identifier tags, symbol modifier, and text
E	BCNS	MISC			Miscellaneous navaids - windcones and beacons
E	BCNS	STRB			Strobe beacons
BELL SYSTEMS					
E	BELL	EQPM			Bell system equipment
E	BELL	IDEN			Identifier tags, symbol modifier, and text
E	BELL	SYMB			Bell system symbols
CABLE SYSTEMS					
E	CABL	COAX			Coax cable
E	CABL	FIBR			Fiber optics cable
E	CABL	IDEN			Cable identifiers
E	CABL	MULT			Multi-conductor cable
E	CABL	TRAY			Cable trays and wireways
CATHODIC PROTECTION SYSTEM					
E	CATH	ANOD			Sacrificial anode system
E	CATH	CURR			Impress current system
E	CATH	IDEN			Identifier tags, symbol modifier, and text
E	CATH	TEST			Test stations
E	CATV	IDEN			Identifier tags, symbol modifier, and text
E	CATV	SYMB			Cable television system symbols
CLOSED-CIRCUIT TELEVISION SYSTEM					
E	CCTV	IDEN			Identifier tags, symbol modifier, and text
E	CCTV	SYMB			Closed-circuit television system symbols
CIRCUITS					
E	CIRC	CTRL			Control and monitoring circuits
E	CIRC	IDEN			Identifier tags, symbol modifier, and text
E	CIRC	MULT			Multiple circuits

Discipline	Major	Minor1	Minor2	Status	Description
E	CIRC	SERS			Series circuits
CLOCK SYSTEMS					
E	CLOK	IDEN			Identifier tags, symbol modifier, and text
E	CLOK	SYMB			Clock system symbols
COMMUNICATIONS					
E	COMM	ACCS			Access point
E	COMM	AIRP			Air pipe line
E	COMM	COVR			Access coverage area
E	COMM	DUCT			Duct line
E	COMM	EQPM			Other communications distribution equipment
E	COMM	EQPM	AIRP		Air pressure device
E	COMM	EQPM	AMPL		Amplifier
E	COMM	EQPM	ANTL		Antenna line
E	COMM	EQPM	ANTS		Antenna site
E	COMM	EQPM	ATTN		Attenuator
E	COMM	EQPM	BOTH		Telephone booth site
E	COMM	EQPM	CLAD		Cable ladder
E	COMM	EQPM	CRCK		Cable rack line
E	COMM	EQPM	DSPL		Dbsplice site
E	COMM	EQPM	GPLN		Ground plane
E	COMM	EQPM	GPNT		Ground point
E	COMM	EQPM	GWAV		Ground wave
E	COMM	EQPM	IMPD		Impedance matching point
E	COMM	INET	SITE		Internet center site
E	COMM	EQPM	PULB		Pullbox site
E	COMM	EQPM	RELY		Relay station
E	COMM	EQPM	RISR		Riser
E	COMM	EQPM	RPTR		Repeater
E	COMM	EQPM	SATE		Satellite
E	COMM	EQPM	SENS		Sensor
E	COMM	EQPM	SPKR		Speaker
E	COMM	EQPM	SPLC		Splice
E	COMM	EQPM	SPLT		Splitter
E	COMM	EQPM	TELE		Telephone
E	COMM	EQPM	TERM		Terminator
E	COMM	EQPM	TRML		Terminal
E	COMM	EQPM	TWIS		Twisted pair line
E	COMM	HAND			Handhole
E	COMM	JBOX			Communication junction or pull boxes, man/handholes, pedestals, splices
E	COMM	LCAP			Load capacitor
E	COMM	LCOL			Load coil
E	COMM	LINE	CBRG		Cable bridge line
E	COMM	LINE	LOOP		Service loop
E	COMM	LINE	SEGL		Segmented cable line
E	COMM	LINE	SEGS		Segmented cable site
E	COMM	LOSL			Line of sight line
E	COMM	MCNV			Media converter
E	COMM	MHOL			Manhole site

Discipline	Major	Minor1	Minor2	Status	Description
E	COMM	MHOP			Multihop polygon area
E	COMM	NETS			Network systems site
E	COMM	OVHD			Overhead communications/telephone lines
E	COMM	OVHD	IDEN		Identifier tags, symbol modifier and text
E	COMM	PATH	SITE		Path node site
E	COMM	PATH	SLIN		Path segment line
E	COMM	PEDS			Pedestal site
E	COMM	RADI			Radio
E	COMM	RADI	RCVR		Radio receiver site
E	COMM	RADI	TRNS		Radio transmitter site
E	COMM	RADR			Radar site
E	COMM	SIGN			Marker
E	COMM	UNDR			Underground communications/telephone lines
E	COMM	UNDR	IDEN		Identifier tags, symbol modifier and text
E	COMM	VALT			Communications vault site
E	COMM	VIDS			Video site
E	COMM	VOIC			Voice switch site
E	COMM	VSIT			Vertical site
E	COMM	WAVG			Waveguide line
DETAIL INFORMATION					
E	DETL	GRPH			Graphics, gridlines, non-text items
E	DETL	INPD			Inch-pound-specific dimensions and notes
E	DETL	METR			Metric-specific dimensions and notes
DIAGRAM INFORMATION					
E	DIAG	GRPH			Graphics, gridlines, non-text items
E	DIAG	IDEN			Identifier tags, symbol modifier and text
E	DIAG	INPD			Inch-pound-specific dimensions and notes
E	DIAG	METR			Metric-specific dimensions and notes
CENTRAL DICTRATION SYSTEMS					
E	DICT	IDEN			Identifier tags, symbol modifier, and text
E	DICT	SYMB			Central dictation system symbols
E	DISC	INFO			Clearances and working space information (NEC code, etc.)
UNDERGROUND DUCTBANKS (to be used when multiple systems are in one ductbank system)					
E	DUCT	MULT			Ductbank
E	DUCT	MULT	IDEN		Identifier tags, symbol modifier and text
ELECTRIC					
E	ELEC	DEVC			Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
E	ELEC	JBOX			Junction boxes, pull boxes, manholes, handholes, pedestals, splices
E	ELEC	SUBS			Other substation equipment
E	ELEC	SWCH			Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches
E	ELEC	VALT			Vaults
ENERGY MONITORING CONTROL SYSTEMS					
E	EMCS	EQPM			Energy monitoring control system equipment
E	EMCS	EQPM	DUCT		Ductbank line
E	EMCS	EQPM	JBOX		Junction
E	EMCS	EQPM	SIGN		Marker
E	EMCS	IDEN			Identifier tags, symbol modifier, and text

Discipline	Major	Minor1	Minor2	Status	Description
E	EMCS	SYMB			Energy monitoring control system symbols
E	EMER	EMER			Emergency systems equipment
FLOOR INFORMATION					
E	FLOR	IDEN			Room name, space identification text (copied from Architectural - Floor Plan model file)
E	FLOR	NUMB			Room/space identification number and symbol (copied from Architectural - Floor Plan model file)
GROUND SYSTEM					
E	GRND	CIRC			Circuits
E	GRND	DIAG			Ground system diagram
E	GRND	EQUI			Equipotential ground system
E	GRND	REFR			Reference ground system
INTERCOM SYSTEM					
E	INTC	IDEN			Identifier tags, symbol modifier, and text
E	INTC	SYMB			Intercom/PA system symbols
LIGHTING					
E	LITE	APPR			Approach lights
E	LITE	APRN			Apron Lighting
E	LITE	CIRC			Lighting circuits (including crosslines and homeruns)
E	LITE	CIRC	NUMB		Lighting circuit numbers (e.g., panel/circuit number, wire/conduit size)
E	LITE	CLNG			Ceiling mounted (surface/pendant) fixtures
E	LITE	CONS			Constant Current Regulators
E	LITE	DIST			Distance and arresting gear markers and lights
E	LITE	EMER			Emergency fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)
E	LITE	EXIT			Exit fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)
E	LITE	EXTR			Exterior lights
E	LITE	EXTR	IDEN		Identifier tags, symbol modifier, and text
E	LITE	FLOR			Floor mounted fixtures (e.g., stage)
E	LITE	IDEN			Light fixture identifier tags
E	LITE	JBOX			Junction boxes
E	LITE	LANE			Hoverlane, taxilane, and helipad lights
E	LITE	OBST			Obstruction lights
E	LITE	PANL			Main distribution panels, switchboards, lighting panels
E	LITE	RNWY	GARD		Runway guard lights
E	LITE	ROOF			Roof lighting
E	LITE	RUNW	EDGE		Runway edge lights
E	LITE	RUNW	TDZN		Runway Touchdown Zone lights
E	LITE	RUNW	CNTR		Runway Centerline lights
E	LITE	RUNW	DTGS		Runway Distance to go lights
E	LITE	SIGN			Taxiway guidance signs
E	LITE	SPCL			Special fixtures
E	LITE	SWCH			Lighting contactors, photoelectric controls, low-voltage lighting controls, etc.
E	LITE	TAXI	CNTL		Taxiway centerline lights
E	LITE	TAXI	EDGE		Taxiway edge lights
E	LITE	THRS			Threshold lights
E	LITE	WALL			Wall mounted fixtures
LIGHTNING PROTECTION SYSTEM					

Discipline	Major	Minor1	Minor2	Status	Description
E	LTNG	COND			Lightning protection conductors
E	LTNG	TERM			Lightning protection terminals
NURSE CALL / PAGING SYSTEMS					
E	NURS	IDEN			Identifier tags, symbol modifier, and text
E	NURS	SYMB			Nurse call/paging system symbols
POLES					
E	POLE	GUYS			Guying equipment
E	POLE	GUYS	IDEN		Guying equipment identifier tags, symbol modifiers, and text
E	POLE	IDEN			Utility pole identifier tags, symbol modifier, and text
E	POLE	UTIL			Utility poles
POWER					
E	POWR	BUSW			Busways and wireways
E	POWR	CABL			Cable trays
E	POWR	CIRC			Power circuits (including crosslines and homeruns)
E	POWR	CIRC	NUMB		Power circuit numbers (e.g., panel/circuit number, wire/conduit size)
E	POWR	CLNG			Ceiling outlets (receptacles and switches)
E	POWR	FEED			Feeders
E	POWR	GENR			Generators and auxiliary equipment
E	POWR	JBOX			Junction boxes
E	POWR	MOTR			Motors and utilization equipment
E	POWR	PANL			Panelboards, switchboards, MCC, unit substations
E	POWR	POLE	COND		Utility pole conduit
E	POWR	POLE	GUYP		Utility pole guy point
E	POWR	SUBS			Other substation equipment
E	POWR	SWCH			Fuse cutouts, motor starters, contactors, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches
E	POWR	URAC			Underfloor raceways
E	POWR	XFMR	PADM		Pad mounted transformers
E	POWR	XFMR	POLE		Pole mounted transformers
E	POWR	WALL			Wall/floor outlets (receptacles and switches)
PRIMARY ELECTRICAL CABLES					
E	PRIM	OVHD			Overhead electrical utility lines
E	PRIM	OVHD	IDEN		Identifier tags, symbol modifier, and text
E	PRIM	UNDR			Underground electrical utility lines
E	PRIM	UNDR	IDEN		Identifier tags, symbol modifier, and text
SECONDARY ELECTRICAL CABLES					
E	POWR	CAPC			Capacitor
E	POWR	HBLT			Head bolt outlet
E	POWR	METR			Meter
E	POWR	PEDS			Pedestal
E	POWR	REGL			Regulator
E	POWR	RISR			Riser
E	POWR	SIGN			Marker
E	POWR	SITE			Utility electric utility site
E	POWR	SPLC			Splice
E	SECD	OVHD			Overhead electrical utility lines
E	SECD	OVHD	IDEN		Identifier tags, symbol modifier, and text
E	SECD	UNDR			Underground electrical utility lines

Discipline	Major	Minor1	Minor2	Status	Description
E	SECD	UNDR	IDEN		Identifier tags, symbol modifier, and text
SECURITY SYSTEMS					
E	SERT	ACCS			Access control system symbols
E	SERT	BURD			Buried sensors
E	SERT	CLNG			Ceiling mounted sensors
E	SERT	FLOR			Floor mounted sensors
E	SERT	IDEN			Identifier tags, symbol modifier, and text
E	SERT	UNDR			Buried sensors
E	SERT	WALL			Wall mounted sensors
SOUND / PA SYSTEMS					
E	SOUN	IDEN			Identifier tags, symbol modifier, and text
E	SOUN	SYMB			Sound system symbols
SPECIAL SYSTEMS					
E	SPCL	IDEN			Special systems (UMCS, EMCS, CATV, etc.) identifier tags, symbol modifier, and text
E	SPCL	JBOX			Junction boxes
E	SPCL	PANL			Panelboards, backing boards, patch panel racks
E	SPCL	SRFS			Surface Sensor System
E	SPCL	SYST			Special systems (UMCS, EMCS, CATV, etc.)
E	SPCL	TRAF			Traffic signal system
E	SPCL	TRAF	IDEN		Traffic signal identifier tags, symbol modifier, and text
TV ANTENNA SYSTEMS					
E	TVAN	IDEN			Identifier tags, symbol modifier, and text
E	TVAN	SYMB			TV antenna system symbols

Common Layer Names – Fire Protection (F)

Discipline	Major	Minor1	Minor2	Status	Description
AQUEOUS FILM FORMING FOAM SYSTEM					
F	AFFF	EQPM			Equipment
F	AFFF	PIPE			Piping
ALARM SYSTEM					
F	ALRM	DTCT			Smoke/heat/other detectors
F	ALRM	INDC			Indicating appliances
F	ALRM	MANL			Manual fire alarm pull stations
F	ALRM	PHON			Fire service or emergency telephone stations
GENERAL INFORMATION					
F	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
F	ANNO	KEYN			Reference keynotes with associated leaders
F	ANNO	NOTE			General notes and general remarks
F	ANNO	NPLT			Non-plotting graphic information
F	ANNO	PATT			Miscellaneous patterning and hatching
F	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
F	ANNO	SYMB			Miscellaneous symbols
F	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
CO2 SPRINKLER SYSTEM					
F	CO2S	EQPM			Equipment
F	CO2S	PIPE			CO2 piping or CO2 discharge nozzle piping
CONTROL PANELS					
F	CTRL	PANL			Control panels
DETAIL INFORMATION					
F	DETL	GRPH			Graphics, gridlines, non-text items
F	DETL	INPD			Inch-pound-specific dimensions and notes
F	DETL	METR			Metric-specific dimensions and notes
FLOOR INFORMATION					
F	FLOR	IDEN			Room name, space identification text (copied from Architectural - Floor Plan model file)
F	FLOR	NUMB			Room/space identification number and symbol (copied from Architectural - Floor Plan model file)
HALON SYSTEM					
F	HALN	EQPM			Halon equipment
F	HALN	PIPE			Halon piping
INERT GAS					
F	IGAS	EQPM			Inert gas equipment
F	IGAS	PIPE			Inert gas piping
LIGHTING					
F	LITE	EMER			Emergency fixtures
F	LITE	EXIT			Exit fixtures
EGRESS REQUIREMENTS					
F	LSFT	EGRE			Egress requirements designator
F	LSFT	OCCP			Occupant load for egress capacity
F	LSFT	TRVL			Maximum travel distances
FIRE PROTECTION / SUPPRESSION / ALARM / DETECTION EQUIPMENT					
F	PROT	CABN			Fire hose cabinets
F	PROT	EXTN			Fire extinguishers and fire extinguisher cabinets

Discipline	Major	Minor1	Minor2	Status	Description
F	PROT	HOSE			Fire hoses
FIRE RATINGS					
F	RATE	DOOR			Door fire ratings
F	RATE	WALL			Wall fire ratings
SMOKE / PRESSURIZATION CONTROL					
F	SMOK	DAMP			Dampers
SPRINKLER SYSTEM					
F	SPRN	CLHD			Sprinkler - ceiling heads
F	SPRN	COMB			Combination system
F	SPRN	OTHD			Sprinkler - other heads
F	SPRN	OTHR			Sprinkler - other
F	SPRN	PEND			Sprinkler - pendant
F	SPRN	PIPE			Sprinkler piping
F	SPRN	STAN			Standpipe system
WATER SUPPLY AND DISTRIBUTION					
F	WATR	CONN			Fire department connections
F	WATR	HYDR			Hydrants
F	WATR	PIPE			Piping
F	WATR	PUMP			Fire pumps

Common Layer Names – Geotechnical (G)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
G	ANNO	NPLT			Non-plotting graphic information
G	ANNO	PATT			Miscellaneous patterning and hatching
G	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
G	ANNO	SYMB			Miscellaneous symbols
G	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
G	ANNO	TTLB			Border and title block linework
GRIDS					
G	GRID	EXTR			Column grid outside building
G	GRID	IDEN			Column grid tags
PLAN / OUTLINE					
G	PLAN	OTLN			Floor outline/perimeter/building footprint
SITE INFORMATION					
G	SITE	OTLN			Site plan - key map

Common Layer Names – Hazardous Materials (H)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
H	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
H	ANNO	KEYN			Reference keynotes with associated leaders
H	ANNO	NPLT			Non-plotting graphic information
H	ANNO	PATT			Miscellaneous patterning
H	ANNO	SYMB			Reference bubbles, matchlines and breaklines
H	ANNO	TEXT			Detail title text, text and associated leaders, notes
BUILDINGS					
H	BLDG	IDEN			Annotation
H	BLDG	OTLN			Command posts, information centers
DECONTAMINATION					
H	DECN	EQPM			Decontamination equipment
H	DECN	IDEN			Annotation
DETAIL INFORMATION					
H	DETL	GRPH			Graphics, gridlines, non-text items
H	DETL	INPD			Inch-pound-specific dimensions and notes
H	DETL	METR			Metric-specific dimensions and notes
DISPOSAL AREAS					
H	DISP	HAZW			Hazardous waste
H	DISP	IDEN			Annotation
H	DISP	MUNT			Munitions
H	DISP	TANK			Spill containment tanks
FIXTURES					
H	FIXT	EYEW			Emergency eyewashes
H	FIXT	SHOW			Emergency showers
MONITORING SYSTEMS					
H	MNST	AIRQ			Air quality
H	MNST	GWTR			Ground water
H	MNST	IDEN			Annotation
H	MNST	LAND			Landfill gas
H	MNST	SOIL			Soil gas
H	MNST	SWTR			Surface water
POLLUTION AREAS					
H	POLL	CONC			Polluted area of concern
H	POLL	IDEN			Annotation
H	POLL	ORIG			Point of pollution origin
H	POLL	POTN			Potential spill, emission, or release source
SAMPLE POINTS					
H	SAMP	AIRS			Air samples
H	SAMP	BIOL			Biological samples
H	SAMP	GWTR			Ground water samples
H	SAMP	IDEN			Annotation
H	SAMP	MAGN			Magnetometer location points
H	SAMP	SEDI			Sediment samples
H	SAMP	SOIL			Soil samples
H	SAMP	SOLI			Solid material samples

Discipline	Major	Minor1	Minor2	Status	Description
H	SAMP	SWTR			Surface water samples
H	SAMP	WAST			Waste samples
SECTIONS					
H	SECT	IDEN			Component identification numbers
H	SECT	MBND			Material beyond section cut
H	SECT	MCUT			Material cut by section
H	SECT	PATT			Textures and hatch patterns
STORAGE FACILITIES					
H	STOR	HAZM			Hazardous materials
H	STOR	HAZW			Hazardous waste
H	STOR	IDEN			Annotation

Common Layer Names – Interiors (I)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
I	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
I	ANNO	KEYN			Reference keynotes with associated leaders
I	ANNO	NOTE			General notes and general remarks
I	ANNO	NPLT			Non-plotting graphic information
I	ANNO	PATT			Miscellaneous patterning
I	ANNO	SYMB			Reference bubbles, matchlines and breaklines
I	ANNO	TEXT			Detail title text, text and associated leaders, notes
DETAIL INFORMATION					
I	DETL	GRPH			Graphics, gridlines, non-text items
I	DETL	INPD			Inch-pound-specific dimensions and notes
I	DETL	METR			Metric-specific dimensions and notes
ELEVATIONS					
I	ELEV	CASE			Wall mounted casework
I	ELEV	FIXT			Miscellaneous fixtures
I	ELEV	FNSH			Finishes, woodwork and trim
I	ELEV	IDEN			Component identification numbers
I	ELEV	PATT			Textures and hatch patterns
I	ELEV	PFIX			Plumbing fixtures in elevation
I	ELEV	SIGN			Signage
EQUIPMENT					
I	EQPM	ACCS			Equipment access
I	EQPM	CHLD			Child development (play toys, teaching rugs, play forms)
I	EQPM	COPY			Copiers, fax machines, office equipment
I	EQPM	FIXD			Fixed equipment
I	EQPM	IDEN			Equipment identification numbers
I	EQPM	MEDI			Medical (exam beds, dental chairs, etc.)
I	EQPM	MOVE			Moveable equipment
I	EQPM	NICN			Not in contract equipment
I	EQPM	OVHD			Overhead, ceiling mounted, and suspended equipment
I	EQPM	STOR			Storage equipment
FLOORING ITEMS AND MATERIALS					
I	FLOR	SIGN			Signage
FURNISHINGS					
I	FURN	ACCS			Accessories (vestibule matts, partitions, draperies, clocks, trashcans, lecturns, lamps, etc.)
I	FURN	ADPC			Automated Data Processing Components
I	FURN	ARTW			Artwork
I	FURN	CASE			Case goods (desks, credenzas, beds, dressers, nightstands, wardrobes, etc.)
I	FURN	FLOR			Flooring (carpet, rugs, etc.)
I	FURN	FREE			Free-standing furnishings (desks, beds, tables, dressers, credenzas, case goods)
I	FURN	GRID			Planning grid/modular outline
I	FURN	IDEN			Furniture code identification
I	FURN	MISC			Miscellaneous furniture
I	FURN	PLNT			Plants

Discipline	Major	Minor1	Minor2	Status	Description
I	FURN	SEAT			Chairs, sofas, etc.
I	FURN	STOR			File cabinets, high density storage, shelving, storage cabinets
SYSTEM FURNITURE					
I	SYST	BIDS			Baggage information display system equipment used in an airport terminal
I	SYST	CUTE			Common use terminal equipment in an airport terminal
I	SYST	FIDS			Flight information display system equipment used in an airport terminal
I	SYST	FURN			Furniture
I	SYST	IDEN			Code identification
I	SYST	LITE			Lighting components
I	SYST	PATT			Patterns
I	SYST	PNLS			Panels
I	SYST	POWR			Power, communication components
I	SYST	SECU	CMRA		Security camera locations inside buildings
I	SYST	STOR			Storage components
I	SYST	WALL			Systems furniture partition walls
I	SYST	WKSF			Work surface components

Common Layer Names – Landscaping (L)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
L	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
L	ANNO	KEYN			Reference keynotes with associated leaders
L	ANNO	NOTE			General notes and general remarks
L	ANNO	NPLT			Non-plotting graphic information
L	ANNO	PATT			Miscellaneous patterning
L	ANNO	SYMB			Reference bubbles, matchlines and breaklines
L	ANNO	TEXT			Detail title text, text and associated leaders, notes
DETAIL INFORMATION					
L	DETL	CABS			Cabinets, enclosures
L	DETL	CONC			Concrete
L	DETL	ERTH			Earth
L	DETL	FENC			Fencing
L	DETL	FILL			Fill/cover material
L	DETL	FURN			Furniture, furnishings
L	DETL	GATE			Gate
L	DETL	GENF			General features (miscellaneous items)
L	DETL	GRAS			Grass, sod
L	DETL	GRPH			Graphics, gridlines, non-text items
L	DETL	INPD			Inch-pound-specific dimensions and notes
L	DETL	METR			Metric-specific dimensions and notes
L	DETL	STRC			Structural metal, supports
L	DETL	TKST			Tank Site
L	DETL	VEGI			Planting details
L	DETL	VLVE			Valves, fittings
L	DETL	WIRE			Wiring
IRRIGATION SYSTEM					
L	IRRG	COVR			Irrigation coverage, spray distribution patterns
L	IRRG	EQPM			Equipment (e.g., controllers, valves, RPBPs, etc.)
L	IRRG	HEAD			Irrigation heads, bubblers, and drip irrigation emitters
L	IRRG	IDEN			Annotation
L	IRRG	PIPE			Piping
L	IRRG	SPKL			Sprinklers
PLANT AND LANDSCAPING MATERIAL					
L	PLNT	BEDS			Planting beds
L	PLNT	BUSH			Bushes and shrubs (e.g., evergreen, deciduous)
L	PLNT	BUSH	LINE		Bush and shrub line
L	PLNT	CTNR			Containers or planters
L	PLNT	GRND			Groundcover and vines
L	PLNT	IDEN			Annotation
L	PLNT	MLCH			Mulches - organic and inorganic
L	PLNT	PLTS			Planting plants (e.g., ornamental annuals and perennials)
L	PLNT	SHAD			Shadow areas
L	PLNT	SPRG			Sprigs
L	PLNT	TREE			Trees (e.g., evergreen, deciduous, etc.)
L	PLNT	TREE	LINE		Tree line

Discipline	Major	Minor1	Minor2	Status	Description
L	PLNT	TURF			Lawn areas (turfing limits)
SITE IMPROVEMENTS					
L	SITE	BRDG			Bridges
L	SITE	DECK			Decks
L	SITE	FENC			Fencing
L	SITE	FURN			Furnishings
L	SITE	GATE			Gate
L	SITE	IDEN			Annotation
L	SITE	PLAY			Play structures
L	SITE	POOL			Pools and spas
L	SITE	ROCK			Boulders and cobble
L	SITE	RTWL			Retaining walls
L	SITE	SPRT			Sports fields
L	SITE	TUNL			Tunnels
L	SITE	WALK			Walks and steps

Common Layer Names – Mechanical (M)

Discipline	Major	Minor1	Minor2	Status	Description
INDUSTRIAL WASTE PIPING					
M	ACID	EQPM			Acid, alkaline, and oil waste equipment
M	ACID	PIPE			Acid, alkaline, and oil waste piping
M	ACID	VENT			Acid, alkaline, and oil waste vent piping
ANTI-FREEZE					
M	AFRZ	PIPE			Anti-freeze piping
M	AFRZ	WAST			Waste anti-freeze piping
ALIGNMENTS					
M	ALGN	DATA			Alignment coordinates and curve data
M	ALGN	LINE			Alignments
M	ALGN	STAT			Alignment stationing and tick marks
GENERAL INFORMATION					
M	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
M	ANNO	KEYN			Reference keynotes with associated leaders
M	ANNO	NOTE			General notes and general remarks
M	ANNO	NPLT			Non-plotting graphic information
M	ANNO	PATT			Miscellaneous patterning and hatching
M	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
M	ANNO	SYMB			Miscellaneous symbols
M	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
BRINE SYSTEM					
M	BRIN	EQPM			Brine system equipment
M	BRIN	PIPE			Brine system piping
CHEMINCAL TREAMENT SYSTEM					
M	CHEM	EQPM			Equipment
M	CHEM	PIPE			Piping (includes fittings, valves)
COMPRESSED AIR					
M	CMPA	EQPM	AIRD		Air drain separator point
M	CMPA	EQPM	VLVP		Valve point
M	CMPA	EQPM	VLVE		Valve
M	CMPA	FTTG			Fitting
M	CMPA	TANK			Tank
CONDENSER WATER SYSTEM					
M	CNDW	EQPM			Condenser water equipment
M	CNDW	PIPE			Condenser water piping
M	COND	PIPE			Condensate piping (includes fittings, valves)
M	CONT	THER			Thermostats, controls, instrumentation, and sensors
M	CONT	WIRE			Low voltage wiring
CHILLED WATER SYSTEM					
M	CWTR	EQPM			Equipment
M	CWTR	PIPE			Piping (includes fittings, valves)
DETAIL INFORMATION					
M	DETL	ACCS			Accessories
M	DETL	BOIL			Boilers
M	DETL	CABS			Cabinets
M	DETL	COIL			Coils and fin tubes

Discipline	Major	Minor1	Minor2	Status	Description
M	DETL	DUCT			Ducts
M	DETL	EQPT			Equipment and fixtures
M	DETL	FANS			Fans
M	DETL	GENF			General features (miscellaneous items)
M	DETL	GRLS			Grilles and louvers
M	DETL	GRPH			Graphics, gridlines, non-text items
M	DETL	INPD			Inch-pound-specific dimensions and notes
M	DETL	INSL			Insulation and coverings
M	DETL	METR			Metric-specific dimensions and notes
M	DETL	MOTR			Motors
M	DETL	PIPE			Piping
M	DETL	PUMP			Pumps and compressors
M	DETL	STRC			Structural support features
M	DETL	TANK			Tanks
M	DETL	TRAP			Traps and drains
M	DETL	VENT			Vents
M	DETL	VLVE			Valves and fittings
M	DETL	WIRE			Electrical wiring
DIAGRAM INFORMATION					
M	DIAG	GRPH			Graphics, gridlines, non-text items
M	DIAG	INPD			Inch-pound-specific dimensions and notes
M	DIAG	METR			Metric-specific dimensions and notes
OTHER DISCIPLINE					
M	DISC	INFO			Clearances and working space information
DUAL TEMPERATURE SYSTEM					
M	DUAL	EQPM			Equipment
M	DUAL	PIPE			Piping (includes fittings, valves)
DUST AND FUME COLLECTION SYSTEMS					
M	DUST	DUCT			Dust and fume ductwork
M	DUST	EQPM			Dust and fume collection equipment
ELEVATIONS					
M	ELEV	FIXT			Miscellaneous fixtures
M	ELEV	IDEN			Component identification numbers
M	ELEV	OTLN			Building outlines
M	ELEV	PATT			Textures and hatch patterns
M	ELEV	PFIX			Plumbing fixtures
EXHAUST AIR SYSTEM					
M	EXHS	CDFF			Exhaust air ceiling registers and grilles
M	EXHS	DUCT			Exhaust ductwork
M	EXHS	EQPM			Equipment
FLOOR INFORMATION					
M	FLOR	IDEN			Room name, space identification text (copied from Architectural - Floor Plan model file)
M	FLOR	NUMB			Room/space identification number and symbol (copied from Architectural - Floor Plan model file)
GEOTHERMAL HEAT PUMP SYSTEM					
M	GTHP	EQPM			Equipment
M	GTHP	PIPE			Piping (includes fittings, valves)
GLYCOL SYSTEM					

Discipline	Major	Minor1	Minor2	Status	Description
M	GLYC	CULV	LINE		Culvert line
M	GLYC	CULV	SITE		Culvert site
M	GLYC	DRAN	BASN		Deicing drainage basin
M	GLYC	DRAN	DIVD		Deicing drainage divide
M	GLYC	EQPM	COUT		Clean out
M	GLYC	EQPM	DSCH		Discharge point
M	GLYC	EQPM	FLOW		Flow control point
M	GLYC	EQPM	INLT		inlet
M	GLYC	EQPM	LIFT		Lift station
M	GLYC	EQPM	PUMP		pump
M	GLYC	EQPM	VLVE		Valve
M	GLYC	FTTG			Fitting
M	GLYC	JBOX			Junction
M	GLYC	RESV			Reservoir point
M	GLYC	REVR			Recovery point
M	GLYC	SIGN			Marker
M	GLYC	STAT	PUMP		Pump station
M	GLYC	TANK			Tank
M	GLYC	VALT			Vault
HIGH TEMPERATURE / CHILLED WATER SYSTEM					
M	HTCW	PIPE		ABND	Abandoned piping
M	HTCW	CHLL			Main chilled water piping
M	HTCW	CHLP			Chilled water plant
M	HTCW	CHLS			Chilled water service piping
M	HTCW	DEVC			Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
M	HTCW	FLOW			Flow direction arrows
M	HTCW	FTTG			Caps and flanges
M	HTCW	HTPL			Main high temperature piping
M	HTCW	HTPP			High temperature water plant
M	HTCW	HTPS			High temperature service piping
M	HTCW	IDEN			Identifier tags, symbol modifier, and text
M	HTCW	JBOX			Junction boxes, manholes, handholes, test boxes
M	HTCW	LTPL			Main low temperature piping
M	HTCW	LTPS			Low temperature service piping
M	HTCW	PITS			Valve pits/vaults, steam pits
M	HTCW	PLNT	IDEN		Identifier tags, symbol modifier, and text
M	HTCW	PUMP			Pump stations
M	HTCW	RTRN			Return for all HTCW lines
M	HTCW	STML			Main steam piping
M	HTCW	STMS			Steam service piping
M	HTCW	STNS	IDEN		Identifier tags, symbol modifier, and text
HVAC SYSTEM					
M	HVAC	ACCS			Equipment access doors
M	HVAC	CDFF			Ceiling diffusers, registers, and grilles
M	HVAC	DAMP			Fire and smoke dampers
M	HVAC	EQPM			Air system equipment
M	HVAC	EQPM	ANCH		Anchor point

Discipline	Major	Minor1	Minor2	Status	Description
M	HVAC	EQPM	ANOD		Anode
M	HVAC	EQPM	ANOT		Anode test station
M	HVAC	EQPM	PUMP		Pump
M	HVAC	EQPM	RECT		Rectifier
M	HVAC	EQPM	REGL		Regulator
M	HVAC	EQPM	VLVE		Valve
M	HVAC	FDFF			Floor diffusers, registers, and grilles
M	HVAC	FTTG			Fitting
M	HVAC	IDEN			Duct sizes
M	HVAC	JBOX			Junction
M	HVAC	METR			Meters
M	HVAC	RETN			Return ductwork
M	HVAC	ROOF			Roof mounted HVAC equipment
M	HVAC	SIGN			Marker
M	HVAC	SUPP			Supply ductwork
M	HVAC	TAGS			Diffuser/register/grille tags and air flow arrows
M	HVAC	WDFF			Wall diffusers, registers, and grilles
HOT WATER HEATING SYSTEM					
M	HWTR	EQPM			Equipment
M	HWTR	PIPE			Piping (includes fittings, valves)
HYDRAULIC SYSTEMS					
M	HYDR	EQPM			Hydraulic system equipment
M	HYDR	PIPE			Hydraulic system piping
INSULATING (TRANSFORMER) OIL SYSTEM					
M	INSL	EQPM			Insulating oil equipment
M	INSL	PIPE			Insulating oil piping
LUBRICATION OIL					
M	LUBE	EQPM			Lubrication oil equipment
M	LUBE	PIPE			Lubrication oil piping
MACHINE DESIGN					
M	MACH	BASE			Machinery bases
M	MACH	COMP			Miscellaneous machinery parts and components
M	MACH	EXST			Existing machinery
M	MACH	FAST			Fasteners, nuts, and bolts
M	MACH	LROT			Large rotating machinery (turbine and pump outlines)
M	MACH	MOTR			Machinery motors
M	MATL	CRAN			Bridge cranes, jib cranes, and monorails
M	MATL	HOIS			Hoists and hooks
M	MATL	LIFT			Miscellaneous lifting equipment
PENETRATIONS					
M	PENE	FLOR			Floor penetrations
M	PENE	ROOF			Roof penetrations
PROCESS PIPING					
M	PROC	EQPM			Equipment
M	PROC	PIPE			Process piping
ENERGY RECOVERY SYSTEM					
M	RCOV	EQPM			Equipment
M	RCOV	PIPE			Piping (includes fittings, valves)

Discipline	Major	Minor1	Minor2	Status	Description
REFRIDGERATION SYSTEM					
M	REFG	EQPM			Equipment
M	REFG	PIPE			Piping (includes fittings, valves)
RAW WATER PIPING					
M	RWTR	EQPM			Raw water equipment
M	RWTR	PIPE			Raw water piping
SECTIONS					
M	SECT	IDEN			Component identification numbers
M	SECT	MBND			Material beyond section cut
M	SECT	MCUT			Material cut by section
M	SECT	PATT			Textures and hatch patterns
STEAM SYSTEM					
M	STEM	EQPM			Equipment
M	STEM	PIPE			Steam piping

Common Layer Names – Plumbing (P)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
P	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
P	ANNO	KEYN			Reference keynotes with associated leaders
P	ANNO	NOTE			General notes and general remarks
P	ANNO	NPLT			Non-plotting graphic information
P	ANNO	PATT			Miscellaneous patterning and hatching
P	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
P	ANNO	SYMB			Reference bubbles, matchlines and breaklines
P	ANNO	TEXT			Detail title text, text and associated leaders, notes
COMPRESSED AIR					
P	CMPA	EQPM			Equipment
P	CMPA	PIPE			Piping
DETAIL INFORMATION					
P	DETL	GRPH			Graphics, gridlines, non-text items
P	DETL	INPD			Inch-pound-specific dimensions and notes
P	DETL	METR			Metric-specific dimensions and notes
DIAGRAM INFORMATION					
P	DIAG	GRPH			Graphics, gridlines, non-text items
P	DIAG	INPD			Inch-pound-specific dimensions and notes
P	DIAG	METR			Metric-specific dimensions and notes
OTHER DISCIPLINE					
P	DISC	INFO			Information and notes for other disciplines
DOMESTIC WATER					
P	DOMW	ACCS			Equipment access doors
P	DOMW	CPIP			Domestic cold water piping
P	DOMW	EQPM			Hot and cold water equipment
P	DOMW	FPIP			Domestic filtered water piping
P	DOMW	HPIP			Domestic hot water piping
P	DOMW	RISR			Domestic hot and cold water risers
P	DOMW	RPIP			Domestic hot water recirculation piping
FLOOR INFORMATION					
P	FLOR	IDEN			Room name, space identification text (copied from Architectural - Floor Plan model file)
P	FLOR	NUMB			Room/space identification number and symbol (copied from Architectural - Floor Plan model file)
LIQUID FUEL					
P	FUEL	EQPM			Equipment
P	FUEL	FGAS			Fuel gas piping
P	FUEL	FOIL			Fuel oil piping
P	FUEL	NGAS			Natural gas piping
LIQUID GAS					
P	LGAS	EQPM			Equipment
P	LGAS	PIPE			Piping
MEDICAL / DENTAL GAS					
P	MDGS	EQPM			Medical/Dental Gas Equipment
P	MDGS	PIPE			Medical/Dental Gas Piping

Discipline	Major	Minor1	Minor2	Status	Description
PENETRATIONS					
P	PENE	FLOR			Floor penetrations
P	PENE	ROOF			Roof penetrations
SANITARY DRAINAGE					
P	SANR	COND			Sanitary Condensate piping
P	SANR	EQPM			Sanitary Equipment (e.g., sand/oil/water separators)
P	SANR	FIXT			Sanitary Plumbing fixtures
P	SANR	FLDR			Sanitary Floor drains, sinks, and cleanouts
P	SANR	PIPE			Sanitary Piping
P	SANR	RISR			Sanitary risers
P	SANR	VENT			Sanitary Vent piping
STORM DRAINAGE SYSTEM					
P	STRM	PIPE			Storm drain piping
P	STRM	RFDR			Roof drains
P	STRM	RISR			Storm drain risers

Common Layer Names – Structural (S)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
S	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text, welding symbols
S	ANNO	KEYN			Reference keynotes with associated leaders
S	ANNO	NOTE			General notes and general remarks
S	ANNO	NPLT			Non-plotting graphic information
S	ANNO	PATT			Miscellaneous patterning and hatching
S	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
S	ANNO	SYMB			Reference bubbles, matchlines and breaklines
S	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
BEAMS					
S	BEAM	CNTR			Beam centerlines
S	BEAM	PRIM			Primary beams, girders
S	BEAM	SECD			Secondary beams, girders
BRACING					
S	BRAC	LATL			Lateral bracing
S	BRAC	SHEA			Shear walls
S	BRAC	VERT			Vertical bracing
COLUMNS					
S	COLS	CNTR			Column centerlines/working lines
S	COLS	MSC1			Miscellaneous columns (Type 1)
S	COLS	MSC2			Miscellaneous columns (Type 2)
S	COLS	MSC3			Miscellaneous columns (Type 3)
S	COLS	MSC4			Miscellaneous columns (Type 4)
S	COLS	PRIM			Primary columns
S	COLS	SCND			Secondary columns
DECKING					
S	DECK	FLOR			Floor deck
S	DECK	OPEN			Openings and penetrations
S	DECK	RBAR			Deck/slab reinforcing
S	DECK	ROOF			Roof deck
DETAIL INFORMATION					
S	DETL	GRPH			Graphics, gridlines, non-text items
S	DETL	INPD			Inch-pound-specific dimensions and notes
S	DETL	METR			Metric-specific dimensions and notes
FEATURES					
S	FEAT	CMUW			CMU outline (no patterning)
S	FEAT	CNTR			Feature centerlines
S	FEAT	CONC			Concrete outline (no patterning)
S	FEAT	GENL			General features (miscellaneous items)
S	FEAT	WOOD			Wood outline (no patterning)
FOUNDATIONS					
S	FNDN	CNTR			Beam centerlines
S	FNDN	FTNG			Footings
S	FNDN	GRBM			Grade beams
S	FNDN	PEDS			Column pedestals

Discipline	Major	Minor1	Minor2	Status	Description
S	FNDN	PILE			Piles (steel sheet, concrete, wood), piers, caisson piers, drilled piers
S	FNDN	RBAR			Foundation reinforcing
GRATING					
S	GRAT	ELEV			Elevated grating (catwalks)
S	GRAT	FLOR			Floor grating
S	GRAT	SUBS			Subsurface grating
GRADE LINES					
S	GRDL	EXGL			Existing ground
S	GRDL	FNGR			Finished grade
S	GRDL	WATR			Water surface
GRIDS					
S	GRID	HORZ			Primary grid lines (horizontal)
S	GRID	IDEN			Column I.D. tags
S	GRID	MSC			Miscellaneous grid lines (Type 1)
S	GRID	MSC2			Miscellaneous grid lines (Type 2)
S	GRID	MSC3			Miscellaneous grid lines (Type 3)
S	GRID	MSC4			Miscellaneous grid lines (Type 4)
S	GRID	VERT			Primary grid lines (vertical)
JOINTS					
S	JOIN	CNST			Construction joints
S	JOIN	CTRL			Control/expansion joints
JOISTS					
S	JOIS	BRDG			Bridging
S	JOIS	PRIM			Primary joists
S	JOIS	SECD			Secondary joists
METAL					
S	METL	MISC			Miscellaneous metal
OPENINGS					
S	OPEN	MISC			Openings and penetrations
PADS					
S	PADS	EQPM			Equipment pads
PIPING					
S	PIPE	GATE			Gates (flap gates, sluice gates, other)
S	PIPE	MISC			Miscellaneous piping/culverts
S	PIPE	TRSH			Trash racks
REINFORCEMENT					
S	REIN	RBAR			Rebar, welded wire mesh
SAFETY FEATURES					
S	SAFE	FENC			Fencing
S	SAFE	HRAL			Handrails
SECTIONS					
S	SECT	CMUW			CMU outline (no patterning)
S	SECT	CNTR			Centerlines
S	SECT	CONC			Concrete outline (no patterning)
S	SECT	FNGR			Finished grade
S	SECT	GENF			General features (miscellaneous items)
S	SECT	JOIN			Joint materials (e.g., felt), vapor barrier, other
S	SECT	MISC			Miscellaneous fasteners, anchor bolts, supports

Discipline	Major	Minor1	Minor2	Status	Description
S	SECT	PRIM			Primary beams/girders outlines
S	SECT	RBAR			Rebar, welded wire mesh
S	SECT	SHPS			Miscellaneous shapes, plates
S	SECT	STLS			Wide flange shapes, plates, open web joists, decking
S	SECT	WOOD			Wood outline (no patterning)
SLABS					
S	SLAB	EDGE			Edge of slab
S	SLAB	OPEN			Openings and penetrations
S	SLAB	RBAR			Slab reinforcing
SUPPORTS					
S	SPPT	MISC			Miscellaneous fasteners, anchor bolts, supports
S	SPPT	SHPS			Miscellaneous shapes, plates
STAIRWAYS					
S	STRS	FRAM			Stair/elevator framing
S	STRS	LADD			Ladders, ladder handrails, safety guard, grab bars
S	STRS	RBAR			Stair reinforcing
TRUSSES					
S	TRUS	PRIM			Primary trusses
S	TRUS	SECD			Secondary trusses
WALLS					
S	WALL	CONC			Concrete walls
S	WALL	HBAR			Horizontal/secondary reinforcement
S	WALL	LOAD			Load bearing CMU walls
S	WALL	NONL			Non-load bearing CMU walls
S	WALL	OPEN			Openings and penetrations
S	WALL	OTLN			Wall outline
S	WALL	PCST			Precast walls
S	WALL	RBAR			Wall reinforcing
S	WALL	STUD			Stud walls
S	WALL	VBAR			Vertical/primary reinforcement

Common Layer Names - Telecommunications (T)

Discipline	Major	Minor1	Minor2	Status	Description
ALARM SYSTEMS					
T	ALRM	EQPM	SECU		Security Alarm Equipment
T	ALRM	IDEN			Identifier tags, symbol modifier, and text
T	ALRM	SYST			Miscellaneous alarm system symbols
GENERAL INFORMATION					
T	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
T	ANNO	KEYN			Reference keynotes with associated leaders
T	ANNO	NOTE			General notes and general remarks
T	ANNO	NPLT			Non-plotting graphic information
T	ANNO	PATT			Miscellaneous patterning and hatching
T	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
T	ANNO	SYMB			Miscellaneous symbols
T	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
CABLE SYSTEMS					
T	CABL	COAX			Coax cable
T	CABL	FIBR			Fiber optics cable
T	CABL	IDEN			Cable identifiers
T	CABL	MULT			Multi-conductor cable
T	CABL	TRAY			Cable trays and wireways
CLOCK SYSTEMS					
T	CLOK	IDEN			Identifier tags, symbol modifier, and text
T	CLOK	SYST			Clock system symbols
COMMUNICATIONS					
T	COMM	ANTN			Telecommunications antennae
T	COMM	APSY			Audio paging system
T	COMM	ATMS			Advanced traffic management system
T	COMM	AVID			Automatic vehicle identification system
T	COMM	BIDS			Baggage information display system
T	COMM	FIDS			Flight information display system
T	COMM	GIDS			Gate information display system
T	COMM	JBOX			Junction boxes
T	COMM	PMRC			Parking management and revenue control
T	COMM	VPSY			Visual paging system
DIAGRAM INFORMATION					
T	DIAG	GRPH			Graphics, gridlines, non-text items
T	DIAG	IDEN			Identifier tags, symbol modifier and text
T	DIAG	INPD			Inch-pound-specific dimensions and notes
T	DIAG	METR			Metric-specific dimensions and notes
OTHER DISCIPLINE INFORMATION					
T	DISC	INFO			Information and notes for other disciplines
EQUIPMENT					
T	EQPM	COMB			Distribution equipment for both copper and fiber optics
T	EQPM	COPP			Distribution equipment for copper
T	EQPM	FIBR			Distribution equipment for fiber optic
T	EQPM	OTHR			Other telecommunications equipment
T	EQPM	RELA			Relays, resistors, capacitors, and inducers

Discipline	Major	Minor1	Minor2	Status	Description
FLOOR INFORMATION					
T	FLOR	IDEN			Room name, space identification text (copied from Architectural - Floor Plan model file)
T	FLOR	NUMB			Room/space identification number and symbol (copied from Architectural - Floor Plan model file)
JACKS					
T	JACK	COMB			Combination telephone and data/LAN jacks
T	JACK	DATA			Data/LAN jacks
T	JACK	IDEN			Identifier tags, symbol modifier, and text
T	JACK	PHON			Telephone jacks
NURSE CALL SYSTEMS					
T	NURS	IDEN			Identifier tags, symbol modifier, and text
T	NURS	SYST			Nurse call system symbols
SOUND SYSTEMS					
T	SOUN	IDEN			Identifier tags, symbol modifier, and text
T	SOUN	SYST			Sound system symbols

Common Layer Names – Survey (V)

Discipline	Major	Minor1	Minor2	Status	Description
GENERAL INFORMATION					
V	ANNO	DIMS			Witness/extension lines, dimension terminators, dimension text
V	ANNO	KEYN			Reference keynotes with associated leaders
V	ANNO	NOTE			General notes and general remarks
V	ANNO	NPLT			Non-plotting graphic information
V	ANNO	PATT			Miscellaneous patterning and hatching
V	ANNO	REFR			Reference files (AutoCAD users only, see Chapter 4)
V	ANNO	SYMB			Miscellaneous symbols
V	ANNO	TEXT			Miscellaneous text and callouts with associated leaders
AERIAL SURVEY					
V	AERI	BNDY			Aerial photography boundaries
V	AERI	INDX			Aerial photo index
V	AERI	PATH			Aerial flight lines/paths
AIFIELD					
V	AIRF	BCNS	IDEN		Identifier tags, symbol modifiers, and text
V	AIRF	BCNS	MISC		Miscellaneous navaids-windcones and beacons
V	AIRF	BCNS	STRB		Strobe beacons
V	AIRF	CIRC	CTRL		Control and monitoring circuits
V	AIRF	CIRC	IDEN		Circuit identifier tags, symbol modifier, and text
V	AIRF	CIRC	MULT		Multiple circuits
V	AIRF	CIRC	SERS		Series circuits
V	AIRF	DEVC			Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
V	AIRF	DUCT			Ductbanks
V	AIRF	IDEN			Airfield annotation
V	AIRF	JBOX			Junction boxes, pull boxes, manholes, handholes, pedestals, splices
V	AIRF	LITE	APPR		Approach lights
V	AIRF	LITE	DIST		Distance and arresting gear markers
V	AIRF	LITE	LANE		Hoverlane, taxilane and helipad lights
V	AIRF	LITE	OBST		Obstruction lights
V	AIRF	LITE	RUNW		Runway lights
V	AIRF	LITE	SIGN		Taxiway guidance signs
V	AIRF	LITE	TAXI		Taxiway lights
V	AIRF	LITE	THRS		Threshold lights
V	AIRF	VALT			Airfield lighting vaults
ALIGNMENTS					
V	ALGN	DATA			Alignment coordinates and curve data
V	ALGN	LINE			Alignments
V	ALGN	MRKG			Alignment tick marks
V	ALGN	STAT			Alignment stationing and tick marks
BUILDINGS					
V	BLDG	IDEN			Building and other structure annotation
V	BLDG	OTLN			Buildings and other structures outline
V	BLDG	OVHD			Building overhangs
CATHODIC PROTECTION SYSTEM					
V	CATH	ANOD			Sacrificial anode system

Discipline	Major	Minor1	Minor2	Status	Description
V	CATH	CURR			Impress current system
V	CATH	IDEN			Identifier tags, symbol modifier, and text
V	CATH	TEST			Test stations
CHANNELS					
V	CHAN	AIDS			Navigation aids and text
V	CHAN	CNTR			Channel centerline and survey report lines
V	CHAN	CNTR	IDEN		Channel centerline and survey report lines - annotation
V	CHAN	DACL			De-authorized channel limits, anchorages, etc.
V	CHAN	DACL	IDEN		De-authorized channel limits, anchorages, etc. - annotation
V	CHAN	IDEN			Channel limits, anchorages, turning basins, disposal areas, etc. - annotation
V	CHAN	LIMT			Channel limits, anchorages, turning basins, disposal areas, etc.
CIRCUITS					
V	CIRC	CTRL			Control and monitoring circuits
V	CIRC	IDEN			Identifier tags, symbol modifier, and text
V	CIRC	MULT			Multiple circuits
V	CIRC	SERS			Series circuits
COMMUNICATIONS					
V	COMM	EQPM			Other communications distribution equipment
V	COMM	JBOX			Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices
V	COMM	OVHD			Overhead communications/telephone lines
V	COMM	OVHD	IDEN		Identifier tags, symbol modifier and text
V	COMM	UNDR			Underground communications/telephone lines
V	COMM	UNDR	IDEN		Identifier tags, symbol modifier and text
V	COMM	VALT			Communications vault
CONTROL					
V	CTRL	BMRK			Benchmarks
V	CTRL	GRID			Grid
V	CTRL	HCPT			Horizontal control points
V	CTRL	IDEN			Control point annotatior
V	CTRL	TRAV			Traverse points
V	CTRL	VCPT			Vertical control points
DITCHES					
V	DTCH	BOTD			Bottom of ditch
V	DTCH	CNTR			Centerline of ditch
V	DTCH	EWAT			Edge of water
V	DTCH	IDEN			Ditch annotatior
V	DTCH	TOPD			Top of ditch
DOMESTIC WATER					
V	DOMW	PIPE		ABND	Abandoned piping
V	DOMW	DEVC			Connectors, faucets, reducers, regulators, vents, intake points, tanks, taps, backflow preventers, and valves
V	DOMW	FIRE			Fire lines
V	DOMW	FTTG			Caps, cleanouts, crosses, and tees
V	DOMW	HYDR			Hydrants
V	DOMW	IDEN			Identifier tags, symbol modifier, and text
V	DOMW	MAIN			Main domestic water piping
V	DOMW	METR			Meters

Discipline	Major	Minor1	Minor2	Status	Description
V	DOMW	NHYD			Non-potable hydrants/flushing hydrants
V	DOMW	NPOT			Non-potable water piping
V	DOMW	PITS	IDEN		Identifier tags, symbol modifier, and text
V	DOMW	PUMP			Booster pump stations
V	DOMW	REDC			Pressure reducing stations
V	DOMW	RSVR			Reservoirs
V	DOMW	RSVR	IDEN		Identifier tags, symbol modifier, and text
V	DOMW	SERV			Domestic water service piping
V	DOMW	SIGN			Surface markers/signs
V	DOMW	STNS	IDEN		Identifier tags, symbol modifier, and text
V	DOMW	TANK			Water storage tanks
V	DOMW	VENT			Vent pits
V	DOMW	VLVE			Valve pits/vaults
V	DOMW	WELL			Water well houses
DUCTBANKS					
V	DUCT	MULT			Ductbank
V	DUCT	MULT	IDEN		Identifier tags, symbol modifier and text
ELECTRICAL					
V	ELEC	DEVC			Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers
V	ELEC	JBOX			Junction boxes, pull boxes, manholes, handholes, pedestals, splices
V	ELEC	SUBS			Other substation equipment
V	ELEC	SWCH			Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches
V	ELEC	VALT			Vaults
LIQUID FUEL					
V	FUEL	PIPE		ABND	Abandoned piping
V	FUEL	DEFL			Defueling piping
V	FUEL	DEVC			Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves
V	FUEL	FLOW			Flow direction arrows
V	FUEL	FTTG			Caps, crosses, and tees
V	FUEL	HYDR			Hydrant control pits
V	FUEL	IDEN			Identifier tags, symbol modifier, and text
V	FUEL	JBOX			Junction boxes, manholes, handholes, test boxes
V	FUEL	MAIN			Main fuel piping
V	FUEL	METR			Meters
V	FUEL	PITS	IDEN		Identifier tags, symbol modifier, and text
V	FUEL	PUMP			Booster pump stations
V	FUEL	SERV			Service piping
V	FUEL	STNS	IDEN		Identifier tags, symbol modifier, and text
V	FUEL	TANK			Fuel tanks
V	FUEL	TRCH			Fuel line trench
V	FUEL	VENT			Vent pits
V	FUEL	VLVE			Valve pits
GRADE LINEWORK					
V	GRAD	EXST			Existing grade, ground line
V	GRAD	FNSH			Finished grade
V	GRID	FRAM			Frame

Discipline	Major	Minor1	Minor2	Status	Description
V	GRID	MAJR			Major grid lines
V	GRID	MINR			Minor grid lines
V	GRID	TEXT			Border text, annotation
V	GTHP	EQPM			Equipment
V	GTHP	PIPE			Piping (includes fittings, valves)
HIGH TEMPERATURE / CHILLED WATER					
V	HTCW	PIPE		ABND	Abandoned piping
V	HTCW	CHLL			Main chilled water piping
V	HTCW	CHLP			Chilled water plant
V	HTCW	CHLS			Chilled water service piping
V	HTCW	DEVC			Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves
V	HTCW	FLOW			Flow direction arrows
V	HTCW	FTTG			Caps and flanges
V	HTCW	HTPL			Main high temperature piping
V	HTCW	HTPP			High temperature water plant
V	HTCW	HTPS			High temperature service piping
V	HTCW	IDEN			Identifier tags, symbol modifier, and text
V	HTCW	JBOX			Junction boxes, manholes, handholes, test boxes
V	HTCW	LTPL			Main low temperature piping
V	HTCW	LTPS			Low temperature service piping
V	HTCW	PITS			Valve pits/vaults, steam pits
V	HTCW	PLNT	IDEN		Identifier tags, symbol modifier, and text
V	HTCW	PUMP			Pump stations
V	HTCW	RTRN			Return for all HTCW lines
V	HTCW	STML			Main steam piping
V	HTCW	STMS			Steam service piping
V	HTCW	STNS	IDEN		Identifier tags, symbol modifier, and text
INDUSTRIAL WASTE					
V	INDW	PIPE		ABND	Abandoned piping
V	INDW	DEVC			Grit chambers, meters, flumes, neutralizers, oil/water separators, ejectors, tanks, and valves
V	INDW	FLOW			Flow direction arrows
V	INDW	FTTG			Caps and cleanouts
V	INDW	IDEN			Identifier tags, symbol modifier, and text
V	INDW	JBOX			Junction boxes and manholes
V	INDW	LAGN			Lagoons
V	INDW	LIFT			Lift stations
V	INDW	MAIN			Main industrial waste water piping
V	INDW	PLNT			Treatment plants
V	INDW	RSVR	IDEN		Identifier tags, symbol modifier, and text
V	INDW	SERV			Industrial waste water service piping
V	INDW	SIGN			Surface markers/signs
V	INDW	STNS	IDEN		Identifier tags, symbol modifier, and text
LIGHTS					
V	LITE	APPR			Approach lights
V	LITE	DIST			Distance and arresting gear markers
V	LITE	FIXT			Exterior Lights
V	LITE	FIXT	IDEN		Identifier tags, symbol modifier, and text

Discipline	Major	Minor1	Minor2	Status	Description
V	LITE	LANE			Hoverlane, taxilane, and helipad lights
V	LITE	OBST			Obstruction lights
V	LITE	RUNW			Runway lights
V	LITE	RUNW	TDZN		Runway Touchdown Zone lights
V	LITE	RUNW	CNTL		Runway Centerline lights
V	LITE	SIGN			Taxiway guidance signs
V	LITE	TAXI			Taxiway lights
V	LITE	THRS			Threshold lights
NATURAL GAS					
V	NGAS	PIPE		ABND	Abandoned piping
V	NGAS	DEVC			Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves
V	NGAS	DEVC	IDEN		Identifier tags, symbol modifier, and text
V	NGAS	FLOW			Flow direction arrows
V	NGAS	FTTG			Caps, crosses, and tees
V	NGAS	IDEN			Identifier tags, symbol modifier, and text
V	NGAS	MAIN			Main natural gas piping
V	NGAS	METR			Meters
V	NGAS	PITS	IDEN		Identifier tags, symbol modifier, and text
V	NGAS	PUMP			Compressor stations
V	NGAS	REDC			Reducing stations
V	NGAS	SERV			Service piping
V	NGAS	SIGN			Surface markers/signs
V	NGAS	STNS	IDEN		Identifier tags, symbol modifier, and text
V	NGAS	VENT			Vent pits
V	NGAS	VLVE			Valve pits/boxes
POLES					
V	POLE	GUYS			Guying equipment
V	POLE	GUYS	IDEN		Guying equipment identifier tags, symbol modifiers, and text
V	POLE	IDEN			Utility pole identifier tags, symbol modifier, and text
V	POLE	UTIL			Utility poles
POWER					
V	POWR	XFMR	PADM		Pad mounted transformers
V	POWR	XFMR	POLM		Pole mounted transformers
PRIMARY ELECTRICAL CABLES					
V	PRIM	OVHD			Overhead electrical utility lines
V	PRIM	OVHD	IDEN		Identifier tags, symbol modifier, and text
V	PRIM	UNDR			Underground electrical utility lines
V	PRIM	UNDR	IDEN		Identifier tags, symbol modifier, and text
PROFILES					
V	PROF	CUID			Existing grade and grading cuts - annotation
V	PROF	FILL			New work, grading fills
V	PROF	INLT			Curb and surface inlets, catch basins
V	PROF	MHOL			Manholes
V	PROF	PIPE			Piping
V	PROF	ROAD			Roads
PROPERTY					
V	PROP	BRNG			Bearings and distance labels

Discipline	Major	Minor1	Minor2	Status	Description
V	PROP	CNTY			County Boundary
V	PROP	ESMT			Government easements/property lines
V	PROP	IDEN			Property annotation
V	PROP	LEAS			Lease line (surveyed)
V	PROP	LINE			Property lines (Existing recorded plats)
V	PROP	LUSE			Land Use Area
V	PROP	MUNI			Municipal Boundary
V	PROP	QTRS			Quarter lines
V	PROP	RWAY			Right of ways
V	PROP	SECT			Section lines
V	PROP	STAT			State Boundary
V	PROP	SXTS			Sixteenth lines (40 lines)
V	PROP	ZONG			Zoning Areas
PAVEMENT					
V	PVMT	IDEN			Road, parking lot, railroad, airfield pavement annotation
V	PVMT	MRKG			Pavement markings
V	PVMT	PATT			Joint patterns, text and dimensions
V	PVMT	ROAD			Roads, parking lots, railroads, airfield pavements
ROADS, STREETS AND HIGHWAYS					
V	ROAD	ASPH			Road outlines-asphalt surface
V	ROAD	CNTR			Road centerlines
V	ROAD	CNTR			Road centerlines annotatior
V	ROAD	CONC			Road outlines-concrete surface
V	ROAD	CURB			Curbs and gutters
V	ROAD	GRAL			Guard rails
V	ROAD	GRVL			Road outlines-gravel surface
V	ROAD	IDEN			Road, street, highway annotatior
V	ROAD	MRKG			Pavement markings
V	ROAD	OTLN			Road outlines
V	ROAD	PATT			Joint patterns, text and dimensions
V	ROAD	SHLD			Roadway shoulders
V	ROAD	SIGN			Signs
V	ROAD	UPVD			Road outlines-unpaved surface
RUNWAYS					
V	RUNW	BLST	MRKG		Blast pad markings
V	RUNW	CNTR	MRKG		Centerline markings
V	RUNW	DISP	MRKG		Displaced threshold markings
V	RUNW	DIST	MRKG		Fixed distance markings
V	RUNW	EDGE	MRKG		Edge markings
V	RUNW	IDEN	MRKG		Runway identifier markings
V	RUNW	SHLD	MRKG		Shoulder markings
V	RUNW	TDZM	MRKG		Touchdown zone markers
V	RUNW	THRS	MRKG		Threshold markers
SECONDARY ELECTRICAL CABLES					
V	SECD	OVHD			Overhead electrical utility lines
V	SECD	OVHD	IDEN		Identifier tags, symbol modifier, and text
V	SECD	UNDR			Underground electrical utility lines
V	SECD	UNDR	IDEN		Identifier tags, symbol modifier, and text

Discipline	Major	Minor1	Minor2	Status	Description
SECTIONS					
V	SECT	IDEN			Component identification numbers
V	SECT	MBND			Material beyond section cut
V	SECT	MCUT			Material cut by section
V	SECT	PATT			Textures and hatch patterns
SITE FEATURES					
V	SITE	EROS			Riprap, revetments/stone protection, breakwaters, dikes, jetties, and drains
V	SITE	EWAT			Water features
V	SITE	FENC			Fences and handrails
V	SITE	FENC	IDEN		Fence, handrail, ramp, and trail annotation
V	SITE	IDEN			Existing site feature/structure annotation
V	SITE	OTLN			Existing site features (play structures, bike racks, benches, recreational equipment)
V	SITE	STRC			Structures (bridges, sheds, foundation pads, footings, etc.)
V	SITE	STRS			Stairs and ramps
V	SITE	VEGE			Existing treelines and vegetation
V	SITE	WALK			Walks, trails, and bicycle paths
V	SITE	WATR			Water features
SPECIAL SYSTEMS					
V	SPCL	IDEN			Special systems (UMCS, EMCS, CATV, etc.) identifier tags, symbol modifier, and text
V	SPCL	SYST			Special systems (UMCS, EMCS, CATV, etc.)
V	SPCL	TRAF			Traffic signal system
V	SPCL	TRAF	IDEN		Traffic signal identifier tags, symbol modifier, and text
SANITARY SEWER					
V	SSWR	PIPE		ABND	Abandoned piping
V	SSWR	DEVC			Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves
V	SSWR	DEVC	IDEN		Identifier tags, symbol modifier, and text
V	SSWR	FILT			Filtration beds
V	SSWR	FILT	IDEN		Identifier tags, symbol modifier, and text
V	SSWR	FLOW			Flow direction arrows
V	SSWR	FTTG			Caps and cleanouts
V	SSWR	IDEN			Identifier tags, symbol modifier, and text
V	SSWR	MHOL			Manholes
V	SSWR	MHOL	IDEN		Identifier tags, symbol modifier, and text
V	SSWR	JBOX			Junction boxes
V	SSWR	JBOX	IDEN		Identifier tags, symbol modifier, and text
V	SSWR	LAGN			Lagoons
V	SSWR	LEAC			Leach field
V	SSWR	MAIN			Sanitary sewer piping
V	SSWR	NITF			Nitrification drain fields
V	SSWR	PLNT			Treatment plants
V	SSWR	PUMP			Booster pump stations
V	SSWR	RSVR	IDEN		Identifier tags, symbol modifier, and text
V	SSWR	SERV			Sanitary sewer service piping
V	SSWR	SIGN			Surface markers/signs
V	SSWR	STNS	IDEN		Identifier tags, symbol modifier, and text

Discipline	Major	Minor1	Minor2	Status	Description
V	SSWR	TANK			Septic tanks
STRUCTURES					
V	STRC	IDEN			Bridges, piers, breakwaters, docks, floats, etc. - annotation
V	STRC	OTLN			Bridges, piers, breakwaters, docks, floats, etc. - outlines
V	STRC	TOWR			Tower
STORM SEWER					
V	STRM	PIPE		ABND	Abandoned piping
V	STRM	AFFF			AFFF lagoon/detention pond
V	STRM	CHUT			Chutes and concrete erosion control structures
V	STRM	CULV			Culverts
V	STRM	DEVC			Downspouts, flumes, oil/water separators, and flap gates
V	STRM	DRAN	IDEN		Identifier tags, symbol modifier, and text
V	STRM	EROS			Erosion control (riprap)
V	STRM	FLOW			Flow direction arrows
V	STRM	FMON			Flow monitoring station
V	STRM	FTTG			Caps and cleanouts
V	STRM	HDWL			Headwalls and endwalls
V	STRM	IDEN			Identifier tags, symbol modifier, and text
V	STRM	INLT			Inlets (curb, surface, and catch basins)
V	STRM	LAGN			Lagoons, ponds, watersheds, and basins
V	STRM	MAIN			Storm sewer piping
V	STRM	MHOL			Manholes
V	STRM	PUMP			Pump stations
V	STRM	ROOF			Roof drain line
V	STRM	RSVR	IDEN		Identifier tags, symbol modifier, and text
V	STRM	SERV			Storm sewer service piping
V	STRM	SIGN			Surface markers/signs
V	STRM	STNS	IDEN		Identifier tags, symbol modifier, and text
V	STRM	SUBS			Subsurface drain piping
SURVEY					
V	SURV	DATA			Survey data (benchmarks and horizontal control points or monuments)
V	SURV	IDEN			Survey, baseline, and control line annotation
V	SURV	LINE			Survey, baseline, and control line
V	SURV	SYMB			Survey line symbol
TAXIWAYS					
V	TAXI	CNTR			Centerlines
V	TAXI	CNTR	IDEN		Centerline annotatior
V	TAXI	CNTR	MRKG		Centerline markings
V	TAXI	EDGE			Edge markings
V	TAXI	HOLD			Hold lines
V	TAXI	IDEN			Taxiway-annotatior
V	TAXI	OTLN			Taxiway outlines
V	TAXI	SHLD			Taxiway shoulder
TOPOGRAPHY					
V	TOPO	BKLN			Breaklines
V	TOPO	BORE			Boring locations
V	TOPO	COOR			Coordinate grid ticks and text

Discipline	Major	Minor1	Minor2	Status	Description
V	TOPO	DTCH			Ditches and swales
V	TOPO	DTMP			DTM points
V	TOPO	DTMT			DTM triangles
V	TOPO	MAJR			Major contours
V	TOPO	MAJR	IDEN		Major contours - annotation
V	TOPO	MINR			Minor contours
V	TOPO	MINR	IDEN		Minor contours - annotation
V	TOPO	SHOR			Shorelines, land features, and references
V	TOPO	SLOP	TOPT		Top/toe slopes
V	TOPO	SOUN			Soundings
V	TOPO	SPEC			Species Site
V	TOPO	SPOT			Spot elevations
V	TOPO	WETL			Wetland
UTILITIES					
V	UTIL	ELEC			Power lines, lights, telephone poles, communication lines
V	UTIL	ELEC	IDEN		Power/communication annotation
V	UTIL	IDEN			Utility annotation
V	UTIL	LINE			Utilities
V	UTIL	NGAS			Gas lines, features, and valves
V	UTIL	NGAS	IDEN		Gas annotation
V	UTIL	SSWR			Sanitary lines and manholes
V	UTIL	SSWR	IDEN		Sanitary annotation
V	UTIL	STEM			Steam lines
V	UTIL	STRM			Storm sewer lines, culverts, manholes, and headwalls
V	UTIL	STRM	IDEN		Storm sewer annotation
V	UTIL	WATR			Water lines, hydrants, tanks
V	UTIL	WATR	IDEN		Water annotation

APPENDIX B

AIRLINE CODES

Airline Name and Codes

3 Digit Code	2 Digit Code	Name	Ticketing Code
	6M	40-MILE AIR	
	VY	A.C.E.	
		A.S. NORVING	
		AARON AIRLINES PTY	
	SM	ABERDEEN AIRWAYS	731
	GB	ABX AIR (CARGO)	832
	VX	ACES	137
	XQ	ACTION AIRLINES	410
	ZY	ADALBANAIR	121
	IN	ADIRONDACK AIRLINES	
	JP	ADRIA AIRWAYS	165
REA	RE	AER ARANN	684
EIN	EI	AER LINGUS	053
		AEREOS SERVICIOS DE TRANSPORTE	278
	DU	AERIAL TRANSIT COMPANY(CARGO)	892
	JR	AERO CALIFORNIA	078
	DF	AERO COACH AVIATION INT	868
	2G	AERO DYNAMICS (CARGO)	
		AERO EJECUTIVOS	681
	YP	AERO LLOYD	633
		AERO SERVICIOS	243
		AERO TRANSPORTES PANAMENOS	155
	QA	AEROCARIBE	723
		AEROCHAGO AIRLINES	198
	3Q	AEROCHASQUI	298
		AEROCOZUMEL	686
AFL	SU	AEROFLOT	555
	FP	AEROLEASING S.A.	
ARG	AR	AEROLINEAS ARGENTINAS	044
	YU	AEROLINEAS DOMINICANAS	
	VG	AEROLINEAS EL SALVADOR (CARGO)	680
		AEROLINEAS URUGUAYAS	966
	BQ	AEROMAR (CARGO)	926
	AM	AEROMEXICO	139
		AEROMONTERREY	722
	XX	AERONAVES DEL PERU (CARGO)	624
	RL	AERONICA	127
	PO	AEROPELICAN AIR SERVICES	
	WL	AEROPERLAS	
	PL	AEROPERU	210
	6P	AEROPUMA, S.A. (CARGO)	
	AW	AEROQUETZAL	291
	XU	AEROVIAS (CARGO)	316
		AEROVIAS COLOMBIANAS (CARGO)	158
		AFFRETAIR (PRIVATE) (CARGO)	292
		AFRICAN INTERNATIONAL AIRWAYS	648
	ZI	AIGLE AZUR	
AMM	DP	AIR 2000	
	RK	AIR AFRIQUE	092
DAH	AH	AIR ALGERIE	124
	3J	AIR ALLIANCE	188
	4L	AIR ALMA	248
		AIR ALPHA	
		AIR AQUITAINE	
	FQ	AIR ARUBA	276
	9A	AIR ATLANTIC LTD.	
AAG	ES	AIR ATLANTIQUE	
	OU	AIR ATONABEE/CITY EXPRESS	253

3 Digit Code	2 Digit Code	Name	Ticketing Code
	AX	AIR AURORA (CARGO)	386
	ZX	AIR B.C.	742
	AJ	AIR BELGIUM	
	KF	AIR BOTNIA	
	BP	AIR BOTSWANA	636
		AIR BRASIL	853
		AIR BRIDGE CARRIERS (CARGO)	912
	VH	AIR BURKINA	226
	PB	AIR BURUNDI	919
	TY	AIR CALEDONIE	190
	SB	AIR CALEDONIE INTERNATIONAL	063
ACA	AC	AIR CANADA	014
	XC	AIR CARIBBEAN	918
	SF	AIR CHARTER	
		AIR CHARTER (CHARTER)	
		AIR CHARTER SYSTEMS	272
CCA	CA	AIR CHINA	999
	CE	AIR CITY S.A.	
CNB		AIR COLUMBUS	
	OR	AIR COMORES	687
	YN	AIR CREEBEC	219
	DJ	AIR DJIBOUTI	611
	EN	AIR DOLOMITI	
	RQ	AIR ENGIADINA	834
		AIR ENTERPRISE INTERNATIONAL	
AEA	AE	AIR EUROPA	803
	UX	AIR EUROPA (AIR ESPANA S.A.)	
	BS	AIR EXCHANGE (CARGO)	595
	VJ	AIR EXEL	900
	DN	AIR EXEL (BELGIQUE)	
	NE	AIR EXEL (UK) LTD.	
	GS	AIR FOYLE	
AFR	AF	AIR FRANCE	057
FUA		AIR FUTURA	
	GN	AIR GABON	185
	IV	AIR GAMBIA	
	OG	AIR GUADELOUPE	937
	GI	AIR GUINEE	093
	ID	AIR GUYANE	694
		AIR HAITI (CARGO)	623
	GG	AIR HOLLAND B.V	
AHK		AIR HONG KONG (CARGO)	152
	OX	AIR HUDIK	
AIC	AI	AIR INDIA	098
	9J	AIR INTEGRA	
	IT	AIR INTER	279
	3H	AIR INUIT	
	VU	AIR IVOIRE	084
	JM	AIR JAMAICA	
	YH	AIR JET	
	UV	AIR KANGAROO ISLAND	
	QP	AIR KENYA AVIATION	
		AIR KOREA CO. LTD.	
AIS	UE	AIR L.A.	396
ALK	UL	AIR LANKA	603
	VD	AIR LIBERTE	718
	FU	AIR LITTORAL	659
	MD	AIR MADAGASCAR	258
	QM	AIR MALAWI	167
KMC		AIR MALTA	
AMC	KM	AIR MALTA	643

3 Digit Code	2 Digit Code	Name	Ticketing Code
	7N	AIR MANITOBA	268
	NN	AIR MARTINIQUE	606
	MR	AIR MAURITANIE	174
MAU	MK	AIR MAURITIUS	239
		AIR MERCURY INT (CARGO)	
	ZV	AIR MIDWEST	471
		AIR MOLOKAI	437
	OM	AIR MONGOL	289
	QE	AIR MOOREA	067
	SW	AIR NAMIBIA	186
		AIR NATIONAL	417
	ON	AIR NAURU	123
	LW	AIR NEVADA	568
	NZ	AIR NEW ZEALAND	086
	DB	AIR NIAGARA (CARGO)	296
	EL	AIR NIPPON	
	PX	AIR NIUGINI	656
	4N	AIR NORTH	287
	HS	AIR NORTH INTERNATIONAL LTD	935
	QK	AIR NOVA	983
	GX	AIR ONTARIO	368
	QN	AIR OUTRE MER	676
	FJ	AIR PACIFIC	260
	GZ	AIR RAROTONGA	755
	UZ	AIR RESORTS AIRLINES	
	UU	AIR REUNION	760
	ZJ	AIR ROUTING	
	RY	AIR RWANDA	178
	5W	AIR SAN JUAN CHARTAIR	529
	7W	AIR SASK AVIATION	
	QR	AIR SATELLITE	
	9V	AIR SCHEFFERVILLE	
	UJ	AIR SEDONA	
	DS	AIR SENEGAL	223
SEY	HM	AIR SEYCHELLES	061
	4D	AIR SINAI	903
	WV	AIR SOUTH	399
	NY	AIR ST. VINCENT	
	OJ	AIR ST.BARTHELEMY	981
	PJ	AIR ST.PIERRE	638
		AIR STORD	
	YI	AIR SUNSHINE	806
	GK	AIR SWAZI (CARGO)	097
	VT	AIR TAHITI	135
ATC	TC	AIR TANZANIA CORPORATION	197
	HT	AIR TCHAD	095
	CS	AIR TORONTO	777
		AIR TRANSAT (CHARTER)	
	TF	AIR TRANSPORT PYRENEES	655
		AIR TRANSPORT SCHIPHOL	
	VK	AIR TUNGARU CORP	715
	QW	AIR TURKS & CAICOS	254
UKL	UK	AIR UK	130
LEI		AIR UK LEISURE	
	NF	AIR VANUATU	218
	6V	AIR VEGAS	
	VM	AIR VENDEE	982
		AIR VIA BULGARIAN AIRWAYS	699
	8K	AIR VITKOVICE	
	ZW	AIR WISCONSIN	303
AZR	QC	AIR ZAIRE	207

3 Digit Code	2 Digit Code	Name	Ticketing Code
	UM	AIR ZIMBABWE CORPORATION	168
	ZF	AIRBORNE OF SWEDEN	
	4C	AIRES	
	XL	AIR-GLACIERS	
	FL	AIRLEC	
		AIR-LIFT INTERNATIONAL (CARGO)	
	CW	AIRLINE OF THE MARSHALL ISLAND	778
	IP	AIRLINES OF TASMANIA	
		AIRPAC AIRLINES (CARGO)	856
	5S	AIRSPEED AVIATION	
AIH		AIRTOURS INTERNATIONAL	
	3N	AIRVANTAGE (CARGO)	
	HO	AIRWAYS INTERNATIONAL	372
AWD		AIRWORLD	
	6L	AKLAK AIR	709
		ALAS DE TRANSPORTES INT (CARGO)	791
	AS	ALASKA AIRLINES	027
	6D	ALASKA ISLAND AIR	
	2L	ALBERNI AIRWAYS	
		ALIADRIATICA	
	AZ	ALITALIA	055
	TO	ALKAN AIR	751
ANA	NH	ALL NIPPON AIRWAYS	205
		ALL SEASONS AIR PACIFIC	525
		ALLEGHENY COMMUTER AIRLINES	358
	3A	ALLIANCE AIRLINES	317
	QQ	ALLIED AIRLINES INC	446
	LM	ALM	119
	AQ	ALOHA AIRLINES	327
	WP	ALOHA ISLANDAIR	347
LPN		ALPENAIR (CHARTER)	
	7V	ALPHA AIR	895
	5A	ALPINE AVIATION	511
	AL	ALSAIR S.A	
	DY	ALYEMDA-DEMOCRATIC YEMEN AIR	607
AMY		AMBASSADOR	
AWA	HP	AMERICA WEST AIRLINES	401
AAL	AA	AMERICAN AIRLINES	001
AMT	TZ	AMERICAN TRANS AIR INC	366
		AMERIJET INTERNATIONAL (CARGO)	810
		AMTRAK	554
	OB	ANDALUCIA INTERNATIONAL AIRWAY	
	ED	ANDES AIRLINE (CARGO)	215
		ANGLO AIRLINES	
	VF	ANGLO ROMANIAN AIRLINE	
		ANSETT AIR FREIGHT	964
AAA	AN	ANSETT AUSTRALIA AIRLINES	090
	WX	ANSETT EXPRESS	187
	ZQ	ANSETT NEW ZEALAND	941
	MV	ANSETT W.A.	181
		ANSETT WORLDWIDE AVIATION	757
	7P	APA INTERNATIONAL AIR	917
	VZ	AQUATIC AIRWAYS	
	5F	ARCTIC CIRCLE AIR	
FGA	FG	ARIANA AFGHAN AIRLINES	255
	XA	ARINC	545
	OQ	ARIZONA PACIFIC AIRWAYS	503
	IZ	ARKIA ISRAEL AIRLINES	238
	JW	ARROW AIR (CARGO)	404
	UH	ARUBAIR N.V.	
	OZ	ASIANA AIRLINES	988

3 Digit Code	2 Digit Code	Name	Ticketing Code
	AP	ASPEN AIRWAYS	
		ASTRO AIR INTERNATIONAL	769
	9T	ATHABASKA AIRWAYS	909
	BM	ATI-AERO TRANSPORTI ITALIANI	
		ATLANTIC AIR TRANSPORT	
		ATLANTIC AIRLINES	336
	RC	ATLANTIC AIRWAYS, FAROE ISLES	767
		ATLANTIC ISLAND AIR	
	EV	ATLANTIC SOUTHEAST AIRLINES	862
	PT	ATLAS AIR SERVICE	
	BH	AUGUSTA AIRWAYS	
AUR	GR	AURIGNY AIR SERVICES	924
	NO	AUS-AIR	
	AU	AUSTRAL	143
	IM	AUSTRALIA-ASIA AIRLINES	
	TN	AUSTRALIAN AIRLINES	102
	SO	AUSTRIAN AIR SERVICES	
AVA	OS	AUSTRIAN AIRLINES	257
		AUSTRIAN AIRTRANSPORT	663
	CG	AVAIKI AIR	
	VE	AVENSA	128
	JZ	AVIA AB	752
	5T	AVIACION DEL NOROESTE	661
	AO	AVIACO	110
		AVIAEXPRESS AIRLINES	732
	5V	AVIAIR AVIATION	
	AV	AVIANCA COLOMBIA	134
	RD	AVIANOVA	
	GU	AVIATECA	240
		AVIOGENEX	
	2B	B. AIRWAYS (CARGO)	817
		B0-S-AIRE AIRLINES	871
BHS	UP	BAHAMASAIR	111
	8B	BAKER AVIATION	
		BALAIR	290
LAZ	LZ	BALKAN BULGARIAN AIRLINES	196
	BT	BALTIA AIR LINES	
	TI	BALTIC INTERNATIONAL AIRLINES	
	PG	BANGKOK AIRWAYS CO	829
		BANKAIR (CARGO)	
	QO	BAR HARBOR AIRLINES	473
	6Q	BARROW AIR	
	6B	BAXTER AVIATION	
BYU	DD	BAYU INDONESIA AIR	
	JV	BEARSKIN LAKE AIR SERVICE	632
		BELIZE AIR INT (CARGO)	986
	LL	BELL AIR	
	5B	BELLAIR	
	CH	BEMIDJI AIRLINES	872
	8E	BERING AIR	
	WZ	BERLIN EUROPEAN U.K.	758
	GQ	BIG SKY AIRLINES	387
BBC	BG	BIMAN BANGLADESH AIRLINES	997
	NT	BINTER CANARIES	
		BIRGENAIR CHARTER GROUP	
	VB	BIRMINGHAM EUROPEAN AIRWAYS	702
		BLACKHAWK (CARGO)	536
	BV	BOPAIR	928
	3B	BORINQUEN AIR (CARGO)	433
	BO	BOURAQ INDONESIA AIRLINES	666
	BU	BRAATHENS S.A.F.E	154

3 Digit Code	2 Digit Code	Name	Ticketing Code
		BRANIFF INTERNATIONAL A/L	577
	JJ	BRASIL CENTRAL LINHA AEREA REG	
DZH	DB	BRIT AIR	750
BAL	BY	BRITANNIA AIRWAYS	754
BAF		BRITISH AIR FERRIES LTD	
BAW	BA	BRITISH AIRWAYS	125
	RX	BRITISH INDEPENDENT AIRWAYS	
BIH	UR	BRITISH INT HELICOPTERS	
BMA	BD	BRITISH MIDLAND AIRWAYS	236
BWL	VF	BRITISH WORLD AIRLINES	762
		BRITT AIRWAYS	565
	BC	BRYMON AVIATION	657
	FR	BURLINGTON AIR EXPRESS	934
	II	BUSINESS AIR	
		BUSINESS AIR TRAVEL	664
	HQ	BUSINESS EXPRESS	357
	DR	BUSINESS FLIGHT OF SCANDINAVIA	244
	CT	C.A.V.E	
		CAICOS CARIBBEAN AIR. (CARGO)	
CKT	KT	CALEDONIAN AIRWAYS	
	MO	CALM AIR INT	622
	3C	CAMAI AIR	451
	UY	CAMEROON AIRLINES	604
CMM		CANADA 3000	
CDN		CANADIAN AIRLINES INT	018
	4A	CANADIAN EAGLE AIRLINES	
	KG	CANAFRICA TRANSPORTES AEREOS	
		CANAIR (CARGO)	
	9K	CAPE AIR	306
	6C	CAPE SMYTHE AIR SERVICE	879
		CARGO AIRLINES	700
	CV	CARGOLUX AIRLINES (CARGO)	172
	OW	CARGOSUR (CARGO)	
		CARIBBEAN AIR CARGO (CARGO)	749
		CARIBBEAN AIRWAYS	
	KW	CARNIVAL AIR LINES	521
	CX	CATHAY PACIFIC AIRWAYS	160
	KX	CAYMAN AIRWAYS	378
		CAYUGA AIR (CARGO)	402
		CC AIR (US AIR COMMUTER)	354
CNA		CENTENIAL AIRLINES	
	GW	CENTRAL AMERICAN AIRLINES	712
	9M	CENTRAL MOUNTAIN AIR	634
	BK	CHALK'S/PARADISE ISLAND AIRWAY	522
		CHALLENGE AIR CARGO (CARGO)	307
		CHANNEL EXPRESS(AIR SER)(CARGO	
	NK	CHARTER ONE	487
		CHAUTAUQUA AIRLINES	363
		CHICAGO AIR TAXI	439
		CHILCOTIN-CARIBO AVIATION	116
CAL	CI	CHINA AIRLINES	297
	MU	CHINA EASTERN AIRLINES	781
		CHINA GENERAL AVIATION	
	CJ	CHINA NORTHERN AIRLINES	782
	WH	CHINA NORTHWEST AIRLINES	783
	CZ	CHINA SOUTHERN AIRLINES	784
	SZ	CHINA SOUTHWEST AIRLINES	785
	JS	CHOSONMINHANG KOREAN AIRWAYS	120
	SX	CHRISTMAN AIR SYSTEM	509
	QI	CIMBER AIR A/S	647
		CIRCLE AIR FREIGHT	

3 Digit Code	2 Digit Code	Name	Ticketing Code
	CC	CISKEI INTERNATIONAL	222
	BX	COAST AIR	970
	DQ	COASTAL AIR TRANSPORT	457
		COASTAL AIRWAYS	819
	LQ	COHLMIA AVIATION (CARGO)	
	7C	COLUMBIA PACIFIC AIRLINES	
	OH	COMAIR	886
	MN	COMMERCIAL AIRWAYS	161
	XK	COMPAGNIE CORSE MEDITERRANEE	146
CFP	CF	COMPANIA DE AVIACION FAUCETT	163
MXA	MX	COMPANIA MEXICANA	132
	YM	COMPASS AIRLINES	612
		CONNECTAIR CHARTERS	
	4S	CONNER AIR LINES	575
	5C	CONQUEST AIRLINES	355
	DD	CONTI-FLUG	
COA	CO	CONTINENTAL AIRLINES	005
	KC	COOK ISLANDS INTERNATIONAL	
	KO	COOK STRAIT SKYFERRY	
	CM	COPA-COMPANIA PANAMENA DE AVCN	230
		CORDOBA AIR CARGO	660
		CORPORATE AIR (CARGO)	
		CROATIA AIRLINES	
	LX	CROSSAIR	724
		CROWN AIRWAYS	501
	SC	CRUZEIRO DO SUL	049
CSA	OK	CSA CZECHOSLOVAK AIRLINES	064
	CU	CUBANA	136
CYP	CY	CYPRUS AIRWAYS	048
	YK	CYPRUS TURKISH AIRLINES	056
		DAIRO AIR SERVICES (CARGO)	761
	DX	DANAIR A/S	609
	DA	DAN-AIR SERVICES	062
	2D	DAWN AIR	551
	9D	DELTA AIR CHARTER	689
DAL	DL	DELTA AIR LINES	006
	DI	DELTA AIR REGIONAL FLUGVERKEHR	944
DLH	LH	DEUTSCHE LUFTHANSA AG.	220
	ER	DHL AIRWAYS	423
	UO	DIRECT AIR	418
	DH	DISCOVERY AIRWAYS	438
	DW	DLT DEUTSCHE LUFTVERK.	683
	YU	DOMINAIR	725
	DO	DOMINICANA	113
	DZ	DOUGLAS AIRWAYS	275
	KA	DRAGONAIR	043
	KB	DRUK AIR	787
	8D	DULLES EXPRESS	506
	QG	DYNAMIC AIR	
	EX	EAGLE AVIATION	
	XZ	EASTAIR (ICELAND)	
	UN	EASTERN AUSTRALIA AIRLINES	
	EW	EAST-WEST AIRLINES	088
	EU	ECUATORIANA	341
	3D	EDGARTOWN AIR	
	MS	EGYPTAIR	077
	LY	EL AL ISRAEL AIRLINES	114
	EB	EMERY WORLDWIDE (CARGO)	
	EK	EMIRATES	176
	EM	EMPIRE AIRLINES	464
	BE	ENTERPRISE AIRLINES	409

3 Digit Code	2 Digit Code	Name	Ticketing Code
		ENVIROSALES CORPORATION	959
	3P	EQUATOR AIRLINES	
	GJ	EQUATORIAL INT AIR OF SAO TOME 980	
	7H	ERA AVIATION	808
ETH	ET	ETHIOPIAN AIRLINES	071
	RN	EURALAIR INTERNATIONAL	836
	YQ	EURO AIR HELICOPTER SERVICE AB	
	EE	EURO BERLIN	770
ECA		EUROCYPRAIR	
EUC		EURO-CYPRIA (CHARTER)	
EEZ		EUROFLY	
		EUROFLY (CHARTER)	
	EY	EUROPE AERO SERVICE	546
		EUROPEAN EXPEDITE	256
		EUROWORLD	844
	BR	EVA AIR	
	OT	EVERGREEN HELICOPTERS ALASKA	
EXC	EQ	EXCALIBUR AIRWAYS	
	AD	EXEC EXPRESS	504
	NA	EXECUTIVE AIR CHARTER	
	FX	EXPRESS AIR	569
	9E	EXPRESS AIRLINES	430
		EXPRESS ONE INTERNATIONAL INC	
	IH	FALCON CARGO AB.	759
	EF	FAR EASTERN AIR TRANSPORT	265
	UD	FAST AIR CARRIER (CARGO)	726
FDX	FM	FEDERAL EXPRESS CORP. (CARGO)	023
	PC	FIJI AIR	677
FIN	AY	FINNAIR	105
	FA	FINNAVIATION	
	7F	FIRST AIR	245
	9R	FLAGSHIP EXPRESS SERV (CARGO)	359
	FK	FLAMENCO AIRWAYS	580
	IX	FLANDRE AIR	972
	VV	FLEXAIR	
	EC	FLIGHT LINE	452
	YC	FLIGHT WEST AIRLINES	060
	GM	FLITESTAR	805
		FLORIDA EXPRESS	456
	OP	FLYING BOAT	370
	FT	FLYING TIGER LINE (CARGO)	
	GE	FOSHING AIRLINES	
		FOUR STAR AIR CARGO (CARGO)	861
	ZU	FREEDOM AIR	221
	3F	FRESH AIR CORP. (CARGO)	815
	WR	FRIENDLY ISLANDS AIRWAYS	971
	SI	FRIESENFLUG	SI
	4F	FRONTIER AIR	233
	2F	FRONTIER FLYING SERVICE	517
	GO	GAMBIA AIR SHUTTLE	216
	CK	GAMBIA AIRWAYS	866
GIA	GA	GARUDA INDONESIAN AIRWAYS	126
		GAS AIR CARGO	271
		GATEWAY PACE AVIATION	807
GBL	GT	GB AIRWAYS	171
	GP	GEMINI (CARGO)	625
GHA	GH	GHANA AIRWAYS CORPORATION	237
	9C	GILL AVIATION	786
	DC	GOLDEN AIR COMMUTER	
		GOLDEN STAR AIR CARGO	
	LK	GOLDFIELDS AIR SERVICES	

3 Digit Code	2 Digit Code	Name	Ticketing Code
	8G	GP EXPRESS AIRLINES INC.	825
	QD	GRAND AIRWAYS	475
	YE	GRAND CANYON AIRLINES	374
		GREAT BARRIER AIRLINES	
		GREAT CHINA AIRLINES	
	ZK	GREAT LAKES AVIATION	846
GRN	WK	GREEN AIR (CHARTER)	
	GL	GREENLANDAIR (GRONLANDSFLY)	631
GFA	GF	GULF AIR	072
	XF	GULF FLITE CENTER	383
	3M	GULFSTREAM INTERNATIONAL A/L	449
	GY	GUYANA AIRWAYS CORPORATION	206
	7A	HAINES AIRWAYS	
		HAITI AIR FREIGHT INTERNAT.	671
		HAITI NATIONAL AIRLINES	284
	TV	HAITI TRANS AIR	362
	WD	HAITIAN AVIATION LINE	851
HAS	HX	HAMBURG AIRLINES	099
	VN	HANG KHONG VIETNAM	738
	4H	HANNA'S AIR SALTSPRING	
	8H	HARBOR AIR SERVICE	458
	HG	HARBOR AIRLINES	495
	HA	HAWAIIAN AIRLINES	173
	ZL	HAZELTON AIRLINES	
		HEAVYLIFT CARGO AIRL. (CARG0)	
	YO	HELI AIR MONACO	747
	OI	HELI TRANSPORT	764
	MY	HELIFRANCE	
	IU	HELIFRANS AIR SERVICE	860
	CN	HELIJET	
	JB	HELIJET AIRWAYS	613
		HENSON AVIATION	531
	2E	HERMANS/MARKAIR EXPRESS	325
		HEX'AIR	848
	ZS	HISPANIOLA AIRWAYS (CARGO)	263
	HJ	HOLMSTROEM AIR AB	
		HONDURAS INTERCARGO AIRLINE	669
	QX	HORIZON AIRLINES	481
ABR	AK	HUNTING CARGO AIRLINES	
		HUTCHAIR	863
	HZ	HUTCHINSON AIR (CARGO)	
		I.L.P.O/ARUBA CARGO (CARGO)	564
IBE	IB	IBERIA	075
ICE	FI	ICELANDAIR FLUGLEIDIR	108
	LS	ILIAMNA AIR TAXI	
	IC	INDIAN AIRLINES	058
	ND	INTAIR	330
IEA		INTER EUROPEAN AIRWAYS	
		INTERAMERICANA DE AVIACION	601
	RS	INTERCONTINENTAL DE AVIACION	
	IF	INTERFLUG	107
		INTER-ISLAND AIR	882
		INTERNACIONAL DE AVIACION	420
	IQ	INTEROT AIR SERVICES	614
		IPEC AVIATION (CARGO)	717
IRA	IR	IRAN AIR	096
	IA	IRAQI AIRWAYS	073
	4M	ISLAND AIR	
	AK	ISLAND AIR, SA	
	IS	ISLAND AIRLINES	
	2S	ISLAND EXPRESS	

3 Digit Code	2 Digit Code	Name	Ticketing Code
	2N	ISLANDER AIR/AIR NEWARK	
	WC	ISLENA AIRLINES	282
	FW	ISLES OF SCILLY SKYBUS	
	IL	ISTANBUL AIRLINES	
ITJ		ITALJET (CHARTER)	
	LN	JAMAHIRIYA LIBYAN ARAB AIRLINE	148
		JAMAICA AIR FREIGHTERS	605
		JANAIR (CARGO)	462
	JN	JAPAN AIR COMMUTER	
JAL	JL	JAPAN AIR LINES	131
	JD	JAPAN AIR SYSTEM	234
	EG	JAPAN ASIA AIRWAYS	688
	JT	JARO INTERNATIONAL	
JAT	JU	JAT YUGOSLAV AIRLINES	115
JEA	JY	JERSEY EUROPEAN AIRWAYS	267
	JX	JES AIR	691
		JET AIRWAYS	
	9W	JET AIRWAYS (INDIA) LTD	
		JET ALSACE	716
		JET EXECUTIVE INTERNATIONAL	310
	JI	JET EXPRESS	878
	8J	JETALL	662
	DK	KAMPUCHEA AIRLINES	
	KR	KARAIR	261
	6K	KEEWATIN AIR	157
	KD	KENDELL AIRLINES	678
	5K	KENMORE AIR	
	4K	KENN BOREK AIR	652
	KQ	KENYA AIRWAYS	706
	6S	KETCHIKAN AIR SERVICE	469
	HE	KEYSTONE AIR SERVICE	921
		KING ISLAND AIRLINES	
	2K	KITTY HAWK AIRWAYS (CARGO)	352
	KL	KLM CITYHOPPER (KLM COMMUTER)	
KLM	KL	KLM ROYAL DUTCH AIRLINES	074
KAL	KE	KOREAN AIR	180
	2Y	KOYUKON AIR	
KAC	KU	KUWAIT AIRWAYS	229
	KH	KYRNAIR	
	JF	L.A.B. FLYING SERVICE	510
	7J	L.A.P.S.A	213
LAB		LAB AIRLINES	
	WJ	LABRADOR AIRWAYS	927
	LR	LACSA	133
	LD	LADE (LINEAS AER DEL ESTADO)	177
	UC	LADECO	145
		LAKE UNION AIR	461
	7L	LAKE UNION AIR SERVICE	461
	TM	LAM-LINHAS AEREAS MOCAMBIQUE	068
	LA	LAN-CHILE	045
	QV	LAO AVIATION	627
	PZ	LAP(LINEAS AEREAS PARAGUAYAS)	705
	MJ	LAPA	069
	TH	LAR TRANSREGIONAL	259
	7K	LARRY'S FLYING SERVICE	
	TQ	LAS VEGAS AIRWAYS	540
	NG	LAUDA AIR	231
	LV	LAV LINEA AERO VENEZOLANA	046
	QL	LESOTHO AIRWAYS	721
	4X	L'EXPRESS AIRLINES	534
	LI	LIAT	140

3 Digit Code	2 Digit Code	Name	Ticketing Code
	QB	LIGNES AERIENNES INTER-QUEBEC	968
	GC	LINA CONGO	246
	RT	LINCOLN AIRLINES	
	LC	LINEAS AER DEL CARIBE (CARGO)	029
	LF	LINJEFLYG	247
	JK	LINK AIRWAYS	
	LE	LINK AIRWAYS (SOUTH AFRICA)	600
		LINK AMERICA (CARGO)	474
LAL	TE	LITHUANIAN AIRLINES	
LLB	LB	LLOYD AEREO BOLIVIANO	051
LOG	LC	LOGANAIR	122
		LOKEN AVIATION INC	
	YL	LONG ISLAND AIRLINES LTD	443
LOT	LO	LOT POLISH AIRLINES	080
	L2	LOVE AIR	
	LT	LTU INTERNATIONAL AIRWAYS	266
LTE		LUFTANSA TRANS ESPANA	
	LG	LUXAIR LUXEMBOURG AIRLINES	149
	CD	M.K. AIRLINES	
	3R	MACAIR	812
	MT	MACKNIGHT AIRLINES	
DMA	DM	MAERSK AIR (DANISH AIRLINES)	349
	2J	MAJESTIC AIRLINES (CARGO)	
		MAKUNG AIRLINES	
MAS	MH	MALAYSIA AIRLINES	232
MAH	MA	MALEV HUNGARIAN AIRLINES	182
	FH	MALI AIRWAYS	
	HB	MALI-TINBOUCTOU AIR SERVICE	679
	6E	MALMO AVIATION	984
MXE	JE	MANX AIRLINES INC.	916
	BF	MARKAIR	478
	MP	MARTINAIR HOLLAND NV	
	MW	MAYA AIRWAYS	
	IG	MERIDIANA	191
	MZ	MERPATI NUSANTARA AIRLINES	621
	YV	MESA AIRLINES	533
	XJ	MESABA AIRLINES	582
		METAVIA AIRLINES	873
		METHOW AVIATION	519
	HY	METRO AIRLINES	380
		METRO AIRLINES NORTHEAST	450
		METRO EXPRESS	887
	FY	METROFLIGHT AIRLINES	
	MG	MGM GRAND AIR	558
		MICHIGAN PENINSULA AIRWAYS	574
MEA	ME	MIDDLE EAST AIRLINES	076
	ML	MIDWAY AIRLINES	557
	WV	MIDWEST AVIATION	896
	YX	MIDWEST EXPRESS AIRLINES	453
		MILLON AIR (CARGO)	034
	IW	MINERVE	646
		MISR. OVERSEAS AIRWAYS (CARGO)	931
	FS	MISSIONARY AVIATION FELLOWSHIP	
	ZO	MOHAWK AIRLINES	390
MON	ZB	MONARCH AIRLINES	974
		MONTAIR FLIGHT SERVICE	319
MNT		MONTSERRAT AIRWAYS	
	NM	MOUNT COOK LINE OF NEW ZEALAND	445
	ZR	MUK AIR	796
	UB	MYANMA AIRWAYS CORPORATION	209
	JO	N.V LUCHTVAARTMAATSCHAPPIJ TWN	

3 Digit Code	2 Digit Code	Name	Ticketing Code
	NJ	NAMAKWALAND LUGDIENS	
	DV	NANTUCKET AIRLINES	
		NASA SOYUZ AVIATION (CARGO)	
	8N	NASHVILLE EAGLE	
	HC	NASKE AIR	
NXA	NX	NATIONAIR CANADA	151
	YJ	NATIONAL AIRLINES	
	9L	NATIONAL CAPITAL AIRWAYS	426
	XV	NATURE ISLAND EXPRESS	
	EJ	NEW ENGLAND AIRLINES	367
	HD	NEW YORK HELICOPTER CORP	814
	WA	NEWAIR	797
		NEWFOUNDLAND/LABRADOR AIR TRAN	645
	NS	NFD LUFTVERKEHRS	104
NGA	WT	NIGERIA AIRWAYS	087
	KZ	NIPPON CARGO AIRLINES	933
	FN	NIUE AIRLINES	
	HN	NLM DUTCH AIRLINES	195
	HK	NOBLE AIR	
		NORCANAIR	
	JH	NORDESTA LINHAS AER REG	
	EO	NORDIC & SWEDEN AIRWAYS	650
	UI	NORLANDAIR (ICELAND)	
	NR	NORONTAIR	066
	NC	NORSKAIR	665
		NORTH CROSS AIRWAYS	
	5N	NORTHCOAST EXECUTIVE AIRLINES	497
	2V	NORTHEAST EXPRESS REGIONAL	463
		NORTHERN AIR CARGO (CARGO)	345
	RU	NORTHERN COMMUTER AIRLINES	
NWA	NW	NORTHWEST AIRLINES	012
	NV	NORTHWEST TERRITORIAL AIRWAYS	668
	3E	NORTHWESTERN AIR LEASE	
	HW	NORTH-WRIGHT AIR	
	JA	NORWAY AIRLINES	
	6N	NUNASI-NORTHLAND AIRLINES	
	LP	NYGE-AERO	
AAN		OASIS INTERNATIONAL AIRLINES	
	5H	ODIN AIR	
	4B	OLSON AIR SERVICE	
	OL	OLT OSTFRIESISCHE LUFTRANSPORT	704
OAL	OA	OLYMPIC AIRWAYS	050
	WY	OMAN AVIATION SERVICES	910
	9X	ONTARIO EXPRESS	940
	VQ	OXLEY AIRLINES	
	RI	P.T MANDALA AIRLINES	
		PACIFIC AIRLINES	
	PQ	PACIFIC COAST AIRLINES	561
	8P	PACIFIC COASTAL AIRLINES	905
	2W	PACIFIC MIDLAND AIRLINES	763
PIA	PK	PAKISTAN INT AIRLINE	214
PAF		PANAF AIRWAYS (CHARTER)	
		PANAMA AIRWAYS	421
	PV	PANORAMA AIR	311
	HI	PAPILLON AIRWAYS	563
PGT		PEGASUS AIRLINES	
	9P	PELANGI AIR	
	PD	PEM AIR	329
	KS	PENINSULA AIRWAYS	339
		PENNSYLVANIA AIRLINES	395
	4P	PEOPLES AIR	906

3 Digit Code	2 Digit Code	Name	Ticketing Code
	UW	PERIMETER AIRLINES	711
PAL	PR	PHILIPPINE AIRLINES	079
	NP	PICCOLO AIRLINES	
	PU	PLUNA URUGUAYIAN AIRLINES	286
	WO	POLARWING	
	PH	POLYNESIAN AIRLINES	162
	NI	PORTUGALIA	685
	2P	PRAIRIE FLYING SERVICE	094
	RP	PRECISION AIRLINES	544
		PREMIERE AIRLINES	350
		PRIME AIR	514
	FB	PROMAIR AUSTRALIA	
	YS	PROTEUS	
	AG	PROVINCIAL AIRWAYS	967
	PE	PROVINICIAL AIR SERVICES	
	5P	PTARMIGAN AIRWAYS	697
QFA	QF	QANTAS AIRWAYS	081
		QUEBEC AVIATION	911
	QJ	QUEENSLAND PACIFIC AIRLINES	
	QH	QWESTAIR	
		RACE CARGO AIRLINES	765
	4R	RAVEN AIR	
	7R	REDWING AIRWAYS	594
	RV	REEVE ALEUTIAN AIRWAYS	338
	7S	REGION AIR	
		RENTA-JET FLUGDIENST	
		RFG-REGIONALFLUG	637
	WE	RHEINTALFLUG SEEWALD	915
	6R	RICHARDS AVIATION (CARGO)	552
	SL	RIO-SUL SERVICOS AEREOS REGION	293
	IK	ROADAIR FEEDER SERVICE	
	JC	ROCKY MOUNTAIN AIRWAYS	428
	ZD	ROSS AVIATION	
	WI	ROTTNEST AIRBUS	
	5R	ROVER AIRWAYS (CARGO)	376
	RR	ROYAL AIR FORCE	
	AT	ROYAL AIR MAROC	147
	BI	ROYAL BRUNEI AIRLINES	672
RJA	RJ	ROYAL JORDANIAN AIRLINE	512
RNA	RA	ROYAL NEPAL AIRLINES	285
	ZC	ROYAL SWAZI NATIONAL AIRWAYS	141
		RWL-LUFTFAHRT GMBH & CO	801
	XY	RYAN AIR (ALASKA)	251
RYR	FR	RYANAIR	224
		S.A.R. AVIONS TAXIS	
	ZG	SABAIR AIRLINES	
SAB	SN	SABENA WORLD AIRLINES	082
		SABER AVIATION (CARGO)	854
	9S	SABOURIN LAKE AIRWAYS	
	EH	SAETA	156
	KP	SAFAIR	103
	SH	SAHSA	274
	8S	SALAIR (CARGO)	477
	YD	SALAIR AB	947
	TS	SAMOA AVIATION	
	WB	SAN	739
	BB	SANSA	907
	UF	SARO AIRLINES	
	SP	SATA AIA ACORES	737
	ZT	SATENA	
SVA	SV	SAUDI ARABIAN	065

3 Digit Code	2 Digit Code	Name	Ticketing Code
SAS	SK	SCANDINAVIAN AIRLINES	117
	SY	SCANJET	
	YR	SCENIC AIRLINES	398
	ZM	SCIBE AIRLIFT	939
	WW	SCOTTISH EUROPEAN AIRWAYS	626
		SEAGREEN AIR TRANSPORT	308
	RW	SEAIR PACIFIC	
	XT	SECTOR AIRLINES (CARGO)	987
		SERVICE AERIEN FRANCAIS	
	8L	SERVICIO AEREO LEO LOPEZ	
	2Z	SERVICIOS AEREOS LITORAL	642
		SERVICIOS DE CARGA AEREA	641
	VC	SERVIVENSA	985
	SS	SHABAIR	
	NL	SHAHEEN AIR INTERNATIONAL	740
	3S	SHUSWAP FLIGHT CENTRE	
		SIERRA PACIFIC AIRLINES	
		SIGI AIR CARGO COMPANY	714
	MI	SILKAIR	
	MQ	SIMMONS AIRLINES	
	7B	SIMPSON AIR	166
	SQ	SINGAPORE AIRLINES	618
	5U	SKAGWAY AIR SERVICE	
	OO	SKY WEST AIRLINES	302
	9F	SKYCRAFT AIR TRANSPORT	973
	8M	SKYMASTER	581
	YT	SKYWEST AIRLINES	674
	HU	SLOV-AIR	
	MM	SOCIEDAD AERONAUTICA MEDELLIN	334
	IE	SOLOMON ISLANDS AIRLINES	193
	HH	SOMALI AIRLINES	089
SAA	SA	SOUTH AFRICAN AIRWAYS	083
	XE	SOUTH CENTRAL AIR	301
	SG	SOUTHEAST AIRLINES LIMITED	
		SOUTHERN AIR	
	SJ	SOUTHERN AIR TRANPORT (CARGO)	351
	NU	SOUTHWEST AIRLINES (JAPAN)	353
	WN	SOUTHWEST AIRLINES (U.S.A.)	526
SPP		SPAN AIR	
	YW	STATESWEST AIRLINES	454
	NB	STERLING AIRWAYS	194
SAY	CB	SUCKLING AIRWAYS	969
	SD	SUDAN AIRWAYS	200
		SULTAN AIR (CHARTER)	
		SUMO AIRLINES (CARGO)	541
	VL	SUN PACIFIC AIRLINES	
	EZ	SUN-AIR OF SCANDINAVIA	
SMB		SUNBEAM AIRLINE (CHARTER)	
	PI	SUNFLOWER AIRLINES	252
	OC	SUNSHINE AVIATION	938
	OF	SUNSTATE AIRLINES	620
	PY	SURINAM AIRWAYS	192
	JG	SWEDAIR	616
SWR	SR	SWISSAIR TRANSPORT COMPANY	085
	FD	SYDNEY AIRLINES	
	RB	SYRIAN ARAB AIRLINES	070
	EQ	T.A.M.E.	269
	DT	TAAG ANGOLA AIRLINES	118
	TA	TACA INTERNATIONAL AIRLINES	202
	CQ	TAHITI CONQUEST AIRLINES	
		TAIWAN AIRLINES COMPANY	710

3 Digit Code	2 Digit Code	Name	Ticketing Code
	GV	TALAIR	447
	KK	TAM	
	QT	TAMPA AIRLINES (CARGO)	729
	TX	TAN AIRLINES	208
	4E	TANANA AIR SERVICE	
TAP	TP	TAP AIR PORTUGAL	047
	9Q	TAQUAN AIR SERVICE	
	RO	TAROM ROMANIAN AIR TRANSPORT	281
	TJ	TAS AIRWAYS S.P.A	667
	3K	TATONDUK AIR SERVICE	
	QS	TATRA AIR	904
		TEDDY AIR	
	CL	TEMPLEHOF AIRWAYS U.S.A.	175
	KN	TEMSCO HELICOPTERS	876
	TG	THAI AIRWAYS INTERNATIONAL	217
	LU	THERON AIRWAYS	
TRS		TIA	
		TIKAL JETS (CARGO)	489
		TIME AIR SWEDEN	
		TNT SAVA S.A.	849
	AB	TORRES AIR	
TUR		TOUR EUROPE (CHARTER)	
TOW	NC	TOWER AIR	305
		TPI INTER. AIRWAYS (CARGO)	587
		TRANS AIR	499
		TRANS ARABIAN AIR TRANS(CARGO)	
	YB	TRANS CONTINENTAL A/L (CARGO)	837
	7T	TRANS COTE	
TEI		TRANS EUROPEAN AIR (CHARTER)	
		TRANS EUROPEAN AIRWAYS (CHART)	
	JQ	TRANS JAMAICAN AIRLINES	100
	TL	TRANS MEDITERRAREAN AIR(CARGO)	270
	4Q	TRANS NORTH AVIATION	
	9N	TRANS STATES AIRLINES	414
TWA	TW	TRANS WORLD AIRLINES	015
		TRANS-AIR-LINK (CARGO)	348
TRA	HV	TRANSAVIA AIRLINES	979
	TD	TRANSAVIO	
	TR	TRANSBRASIL S/A LINHAS AEREAS	653
		TRANSCARGO (CARGO)	978
	KV	TRANSKEI AIRWAYS	264
	IO	TRANSPORT AERIEN TRANS EXPORT	153
	IJ	TRANSPORT AERIEN TRANSREGIONAL	936
		TRANSPORT AIR CENTRE	203
	VR	TRANSPORTES AEREOS CABO VERDE	696
	GD	TRANSPORTES AEREOS EJECUTIVOS	838
	VW	TRANSPORTES AEROMAR	942
	YZ	TRANSPORTES DE GUINE BISSAU	241
	8T	TRAVELAIR	
	BW	TRINIDAD & TOBAGO BWIA INT	106
	PM	TROPIC AIR	
	BN	TROPICAL SEA AIRLINES	922
	TB	TRUMP SHUTTLE	857
	UG	TUNINTER	
	TU	TUNIS AIR	199
	TT	TUNISAVIA	720
		TURK HAVA TASIMACILIGI	929
	TK	TURKISH AIRLINES	235
	KT	TURTLE AIRWAYS	
	6T	TYEE AIRWAYS	
	VO	TYROLEAN AIRWAYS	734

3 Digit Code	2 Digit Code	Name	Ticketing Code
UGA	QU	UGANDA AIRLINES CORPORATION	673
	PS	UKRAINE INTERNATIONAL AIRLINES	
UAL	UA	UNITED AIRLINES	016
	5X	UNITED PARCEL SERVICE (CARGO)	406
	9U	UNIVERSAL AIRLINES (CARGO)	598
		US EXPRESS (CARGO)	
	US	USAIR	037
	UT	UTA	142
		VALLEY AIR SERVICES INC	482
	J7	Valuejet	
	5J	VALUJET	
BRG	RG	VARIG BRAZILIAN AIRLINES	042
	VP	VASP	343
	PF	VAYUDOOT	925
VIA	VA	VENEZUELAN INTL AIRWAYS	164
	VI	VIEQUES AIR LINK	381
	ZP	VIRGIN AIR	315
VIR	VS	VIRGIN ATLANTIC AIRWAYS	932
	FV	VIVA AIR	728
	4V	VOYAGEUR AIRWAYS	908
	3V	WAGLISLA AIR	
	XW	WALKERS CAY AIRLINE	360
		WALLISAIR	
	4W	WARBELOW'S AIR VENTURES	
	KY	WATERWINGS AIRWAYS (TE ANAU)	914
	KJ	WEST AIR EXECUTIVE	
	3L	WEST ISLE AIR	
	OE	WESTAIR COMMUTER AIRLINES	460
	WS	WESTATES AIRLINES	573
	MB	WESTERN AIRLINES	
	FO	WESTERN NEW SOUTH WALES AIR	
		WESTPAC AIRLINES (CARGO)	
	WF	WIDEROE'S FLYVESELSKAP	701
	8F	WILBURS FLIGHT OPERATIONS	442
	6W	WILDERNESS AIRLINE (1975)	
	WM	WINDWARD ISLANDS AIRWAYS	295
	WQ	WINGS AIRWAYS	842
	SE	WINGS OF ALASKA	397
	RM	WINGS WEST AIRLINES	
		WORLD AIRWAYS (CHARTER)	
	WG	WORLDWAYS CANADA LTD	
	8R	WRA	393
		WRANGLER AVIATION (CARGO)	490
	8V	WRIGHT AIR SERVICE	
	MF	XIAMEN AIRLINES	
	XO	XINJIANG AIRLINES	
	ST	YANDA AIRLINES	
IYE	IY	YEMEN AIRWAYS	635
	9Y	YUTANA AIRLINES	
	4Y	YUTE AIR ALASKA	476
ZAC	QZ	ZAMBIA AIRWAYS	169
		ZANTOP INT AIRLINES (CARGO)	391
	ZA	ZAS AIRLINES OF EGYPT	708
	OD	ZULIANA DE AVIACION (CARGO)	822

Occupant Codes for Airline Tenants

The $ symbol is used as a placeholder in order to conform to the aforementioned layering convention.

Airline	Y - designation
Air Ghana	$GH
Air Jamaica	$JM
Aer Lingus	$EI
Air Mobility Command	$MC
Air Ontario/Air Canada	$AC
American Airlines	$AA
America West	$HP
British Airways	$BA
Continental Airlines	$CO
Delta Airlines	$DL
Frontier Airlines	$F9
Icelandair	$FI
Northwest Airlines	$NW
Pro Air	$P9
Ryan Int'l Airlines	$XY
Trans World Airlines	$TW
United Airlines	$UA
US Airways	$US
MetroJet	USM
Southwest Airlines	L$WN

Occupant Codes for Other Tenants

Baltimore/Washington International Airport lessees and their corresponding layer codes.

Y - designation	Company
AEX	A-1 Express
AGR	United States Department of Agriculture
ALA	Alamo Rent-a-Car
ARC	Arinc
AVS	Avis Car Rental
BUD	Budget Car Rental
CEX	Currency Exchange
CHM	Chimes
CMD	Celebrate Maryland
CUS	U.S. Customs
DEA	Drug Enforcement Agency
DOL	Dollar Car Rental
DUT	Duty Free
MAA	Federal Aviation Administration
GLO	Globe Airport Security
HNT	Huntleigh
HTZ	Host International, Inc.
INS	Herb Car Rental
HST	Immigration and Naturalization Service

Y - designation	Company
ITS	International Total Services, Inc.
LHD	Lockheed
MAA	Maryland Aviation Administration
MAA	Millar Elevator (MAA)
MAS	Service Master
MTA	Maryland Transportation Authority Police
NAT	National Car Rental
PHS	Public Health Service
SIG	Signature Flight Support, Inc.
SKY	Sky Sites
SMT	SmarteCarte
SUS	Super Shuttle
TRX	Travelex
TRA	Travelers Aid Society
USM	U.S. Mail
USO	USO
VAC	Vacant
WAC	Wackenhut Security Services

Usage Codes for Layering Convention

Z-Designation	Description	Patterned Hatch	Scale/Angle
DR	Directory	-none-	-
FB	Food and beverages (retail)	CROSS	96/0°
FD	flight information directory	- none -	-
HR	holdroom	DASH	00/45°
LS	lighted sign	- none -	-
MS	Merchandising space (retail)	STARS	50/0°
ON	office, no public	ANS136	100/0°
OP	office, public access	ANS133	100/90°
PM	Public meeting/lounge	ACRD.IS014W100	3/315°
PS	public stairs	ANS134	50/90°
PL	public elevator	- none -	-
PE	public escalator	SACNCR	200/90°
PC	public corridor	- none -	-
PC	restricted corridor	ANGLE	60/45°
PT	public telephones	- none -	-
RR	restroom	AN S132	50/90°
SF	special, finished	- matches usage -	
SU	special, unfinished	ANS138	120/0°
SC	security checkpoint	ANS137	150/0°
SS	Special, storage	ANS138	120/0°
TC	ticket counter	ANS131	100/0°
UM	utility, mechanical	SQUARE	100/0°
UE	utility, electrical	ZIGZAG	100/0°
UT	utility, telecommunications	TRIANG	100/90°
VP	visual paging	- none -	

APPENDIX C

GLOSSARY

Glossary of Acronyms for Use in Airport Documents

-A-	
A/C –Aircraft	ARINC -Aeronautical Radio, Inc.
A/H -Altitude/Height	A/G -Air to Ground
AAF -Army Air Field	AAC -Mike Monroney Aeronautical Center
AAP -Advanced Automation Program	AAI -Arrival Aircraft Interval
ABDIS -Automated Data Interchange System Service B	AAR -Airport Acceptance Rate
ACAS -Aircraft Collision Avoidance System	ACAIS -Air Carrier Activity Information System
ACCT -Accounting Records	ACC -Area Control Center
ACDO -Air Carrier District Office	ACD -Automatic Call Distributor
ACFO -Aircraft Certification Field Office	ACF -Area Control Facility
ACID -Aircraft Identification	ACFT -Aircraft
ACLT -Actual Landing Time Calculated	ACLS -Automatic Carrier Landing System
ADA -Air Defense Area	ACO -Aircraft Certification Office
ADAS -AWOS Data Acquisition System	ADAP -Airport Development Aid Program
ADDA -Administrative Data	ADCCP -Advanced Data Communications Control Procedure
ADI -Automatic De-Ice and Inhibitor	ADF -Automatic Direction Finding
ADIZ -Air Defense Identification Zone	ADIN -AUTODIN Service
ADLY -Arrival Delay	ADL -Aeronautical Data-Link
ADP -Automated Data Processing	ADO -Airline Dispatch Office
ADSIM -Airfield Delay Simulation Model	ADS -Automatic Dependent Surveillance
ADTN -Administrative Data Transmission Network	ADSY -Administrative Equipment Systems
ADVO -Administrative Voice	ADTN2000 -Administrative Data Transmission Network 2000
AEIS – Airport Engineering Information System	AEG -Aircraft Evaluation Group
AERA -Automated En-Route Air Traffic Control	AEX -Automated Execution
AF -Airway Facilities	AFB -Air Force Base
AFIS -Automated Flight Inspection System	AFP -Area Flight Plan
AFRES -Air Force Reserve Station	AFS -Airways Facilities Sector
AFSFO -AFS Field Office	AFSFU -AFS Field Unit
AFSOU -AFS Field Office Unit (Standard is AFSFOU)	AFSS -Automated Flight Service Station
AFTN -Automated Fixed Telecommunications Network	AGL -Above Ground Level
AID -Airport Information Desk	AIG -Airbus Industries Group
AIM -Airman's Information Manual	AIP -Airport Improvement Plan
AIRMET -Airmen's Meteorological Information	AIRNET -Airport Network Simulation Model
AIS -Aeronautical Information Service	AIT -Automated Information Transfer
ALP -Airport Layout Plan	ALS -Approach Lighting System
ALSF1 -ALS with Sequenced Flashers I	ALSF2 -ALS with Sequenced Flashers II
ALSIP -Approach Lighting System Improvement Plan	ALTRV -Altitude Reservation
AMASS -Airport Movement Area Safety System	AMCC -ACF/ARTCC Maintenance Control Center
AMOS -Automated Meteorological Observation Station	AMP -ARINC Message Processor (OR) Airport Master Plan
AMVER -Automated Mutual Assistance Vessel Rescue System	ANC -Alternate Network Connectivity
ANG -Air National Guard	ANGB -Air National Guard Base
ANMS -Automated Network Monitoring System	ANSI -American National Standards Group
AP -Acquisition Plan	APP -Approach
APS -Airport Planning Standard	AQAFO -Aeronautical Quality Assurance Field Office
ARAC -Army Radar Approach Control (AAF)	ARAC -Aviation Rulemaking Advisory Committee
ARCTR -FAA Aeronautical Center or Academy	ARF -Airport Reservation Function
ARLNO -Airline Office ARO -Airport Reservation Office	AWS -Air Weather Station
ARO -Airport Reservation Office	ARP -Airport Reference Point
ARSA -Airport Service Radar Area	ARSR -Air Route Surveillance Radar
ARTCC -Air Route Traffic Control Centre	ARTS -Automated Radar Terminal System
ASAS -Aviation Safety Analysis System	ASC -AUTODIN Switching Center
ASCP -Aviation System Capacity Plan	ASD -Aircraft Situation Display
ASDA -Accelerate - Stop Distance Available	ASLAR -Aircraft Surge Launch And Recovery
ASM -Available Seat Mile	ASP -Arrival Sequencing Program
ASOS -Automatic Surface Observation System	ASQP -Airline Service Quality Performance
ASR -Airport Surveillance Radar	ASTA -Airport Surface Traffic Automation

ASV -Airline Schedule Vendor	AT -Air Traffic
ATA -Air Transport Association of America	ATAS -Airspace and Traffic Advisory Service
ATCAA -Air Traffic Control Assigned Airspace	AT&T -American Telephone and Telegraph
AT&T ASDC -AT&T Agency Service Delivery Center	AT&T CSA -AT&T Customer Support Associate
ATC -Air Traffic Control	ATCBI -Air Traffic Control Beacon Indicator
ATCCC -Air Traffic Control Command Center	ATCO -Air Taxi Commercial Operator
ATCRB -Air Traffic Control Radar Beacon	ATCRBS -Air Traffic Control Radar Beacon System
ATCSCC -Air Traffic Control Systems Command Center	ATCT -Airport Traffic Control Tower
ATIS -Automated Terminal Information Service	ATISR -ATIS Recorder
ATM -Air Traffic Management	ATM -Asynchronous Transfer Mode
ATMS -Advanced Traffic Management System	ATN -Aeronautical Telecommunications Network
ATODN -AUTODIN Terminal (FUS)	ATOVN -AUOTVON (Facility)
ATOMS -Air Traffic Operations Management System	ATS -Air Traffic Service
ATSCCP -ATS Contingency Command Post	ATTIS -AT&T Information Systems
AUTODIN -DoD Automatic Digital Network	AUTOVON -DoD Automatic Voice Network
AVON -AUTOVON Service	AVN -Aviation Standards National Field Office, Oklahoma City
AWIS -Airport Weather Information	AWOS -Automated Weather Observation System
AWP -Aviation Weather Processor	AWPG -Aviation Weather Products Generator
-B-	
BANS-BRITE Alphanumeric System	BART -Billing Analysis Reporting Tool (GSA software tool)
BASIC -Basic Contract Observing Station	BASOP -Military Base Operations
BCA -Benefit/Cost Analysis	BCR -Benefit/Cost Ratio
BDAT -Digitized Beacon Data	BMP -Best Management Practices
BOC -Bell Operating Company	bps -bits per second
BRI -Basic Rate Interface	BRITE -Bright Radar Indicator Terminal Equipment
BRL -Building Restriction Line	BUEC -Back-up Emergency Communications
BUECE -Back-up Emergency Communications Equipment	
-C-	
CAA -Civil Aviation Authority	CAB -Civil Aeronautics Board
CARF -Central Altitude Reservation Facility	CASFO -Civil Aviation Security Office
CAT –Category	CAT -Clear - Air Turbulence
CAU -Crypto Ancillary Unit	CBI -Computer Based Instruction
CCC -Communications Command Center	CCCC -Staff Communications
CCCH -Central Computer Complex Host	CC&O -Customer Cost and Obligation
CCSD -Command Communications Service Designator	CCS7-NI -Communication Channel Signal-7 - Network Interconnect
CCU -Central Control Unit	CD -Common Digitizer
CDR -Cost Detail Report	CDT -Controlled Departure Time
CDTI -Cockpit Display of Traffic Information	CENTX -Central Telephone Exchange
CEQ -Council on Environmental Quality	CERAP -Central Radar Approach
CFC -Central Flow Control	CFCF -Central Flow Control Facility
CFCS -Central Flow Control Service	CFWP -Central Flow Weather Processor
CFWU -Central Flow Weather Unit	CGAS -Coast Guard Air Station
CLC -Course Line Computer	CLIN -Contract Line Item
CLT -Calculated Landing Time	CM -Commercial Service Airport
CNMPS -Canadian Minimum Navigation Performance Specification Airspace	CNS -Consolidated NOTAM System
CNSP -Consolidated NOTAM System Processor	CO -Central Office
COE -U.S. Army Corps of Engineers	COMCO -Command Communications Outlet
CONUS -Continental United States	CORP -Private Corporation other than ARINC or MITRE
CPE -Customer Premise Equipment	CPMIS -Consolidated Personnel Management Information System
CRA -Conflict Resolution Advisory	CRDA -Converging Runway Display Aid
CRT -Cathode Ray Tube	CSA -Communications Service Authorization
CSIS -Centralized Storm Information System	CSO -Customer Service Office
CSR -Communications Service Request	CSS -Central Site System
CTA -Controlled Time of Arrival	CTA -Control Area
CTA/FIR -Control Area/Flight Information Region	CTAF -Common Traffic Advisory Frequency
CTAS -Center - Tracon Automation System	CTMA -Center Traffic Management Advisor
CUPS -Consolidated Uniform Payroll System	CVFR -Controlled Visual Flight Rules
CVTS -Compressed Video Transmission Service	CW -Continuous Wave

CWSU -Central Weather Service Unit	CWY -Clearway
-D-	
DA-Direct Access	DA -Decision Altitude/Decision Height
DA -Descent Advisor	DABBS -DITCO Automated Bulletin Board System
DAIR -Direct Altitude and Identity Readout	DAR -Designated Agency Representative
DARC -Direct Access Radar Channel	dBA -Decibels A-weighted
DBCRC -Defense Base Closure and Realignment Commission	DBMS -Data Base Management System
DBRITE -Digital Bright Radar Indicator Tower Equipment	DCA -Defense Communications Agency
DCAA -Dual Call, Automatic Answer Device	DCCU -Data Communications Control Unit
DCE -Data Communications Equipment	DDA -Dedicated Digital Access
DDD -Direct Distance Dialing	DDM -Difference in Depth of Modulation
DDS -Digital Data Service	DEA -Drug Enforcement Agency
DEDS -Data Entry and Display System	DEIS -Draft Environmental Impact Statement
DEP –Departure	DEWIZ -Distance Early Warning Identification Zone
DF -Direction Finder	DFAX -Digital Facsimile
DFI -Direction Finding Indicator	DGPS -Differential Global Positioning Satellite (System)
DH -Decision Height	DID -Direct Inward Dial
DIP -Drop and Insert Point	DIRF -Direction Finding
DITCO -Defense Information Technology Contracting Office Agency	DME -Distance Measuring Equipment
DME/P -Precision Distance Measuring Equipment	DMN -Data Multiplexing Network
DNL -Day-Night Equivalent Sound Level (Also called Ldn)	DOD -Direct Outward Dial
DoD -Department of Defense	DOI -Department of Interior
DOS -Department of State	DOT -Department of Transportation
DOTS -Dynamic Ocean Tracking System	DOTCC -Department of Transportation Computer Center
DSCS -Digital Satellite Compression Service	DSUA -Dynamic Special Use Airspace
DTS -Dedicated Transmission Service	DUAT -Direct User Access Terminal
DVFR -Defense Visual Flight Rules	DVFR -Day Visual Flight Rules
DVOR -Doppler Very High Frequency Omni-Directional Range	DYSIM -Dynamic Simulator
-E-	
E-MSAW -En-Route Automated Minimum Safe Altitude Warning	EARTS -En Route Automated Radar Tracking System
ECOM -En Route Communications	ECVFP -Expanded Charted Visual Flight Procedures
EDCT -Expedite Departure Path	EFAS -En Route Flight Advisory Service
EFC -Expect Further Clearance	EFIS -Electronic Flight Information Systems
EIAF -Expanded Inward Access Features	EIS - Environmental Impact Statement
ELT -Emergency Locator Transmitter	ELWRT -Electrowriter
EMPS -En Route Maintenance Processor System	ENAV -En Route Navigational Aids
EPA -Environmental Protection Agency	EPS -Engineered Performance Standards
EOF -Emergency Operating Facility	EPSS -Enhanced Packet Switched Service
ERAD -En Route Broadband Radar	ESEC -En Route Broadband Secondary Radar
ESP -En Route Spacing Program	ESYS -En Route Equipment Systems
ESF -Extended Superframe Format	ETA -Estimated Time of Arrival
ETE -Estimated Time En Route	ETG -Enhanced Target Generator
ETMS -Enhanced Traffic Management System	ETN -Electronic Telecommunications Network
EVAS -Enhanced Vortex Advisory System	EVCS -Emergency Voice Communications System
-F-	
FAA-Federal Aviation Administration	F&E -Facility and Equipment
FAAAC -FAA Aeronautical Center	FAACIS -FAA Communications Information System
FAATC -FAA Technical Center	FAC -Facility
FAF -Final Approach Fix	FAP -Final Approach Point
FAPM -FTS2000 Associate Program Manager	FAR -Federal Aviation Regulation
FAATSAT -FAA Telecommunications Satellite	FAST -Final Approach Spacing Tool
FAX -Facsimile Equipment	FBO -Fixed Base Operator
FBS -Fall Back Switch	FCC -Federal Communications Commission
FCLT -Freeze Calculated Landing Time	FCOM -FSS Radio Voice Communications
FCPU -Facility Central Processing Unit	FDAT -Flight Data Entry and Printout (FDEP) and Flight Data Service
FDE -Flight Data Entry	FDEP -Flight Data Entry and Printout

FDIO -Flight Data Input/Output	FDIOC -Flight Data Input/Output Center
FDIOR -Flight Data Input/Output Remote	FDM -Frequency Division Multiplexing
FDP -Flight Data Processing	FED -Federal
FEIS -Final Environmental Impact Statement	FEP -Front End Processor
FFAC -From Facility	FIFO -Flight Inspection Field Office
FIG -Flight Inspection Group	FINO -Flight Inspection National Field Office
FIPS -Federal Information Publication Standard	FIR -Flight Information Region
FIRE -Fire Station	FIRMR -Federal Information Resource Management Regulation
FL -Flight Level	FLOWSIM -Traffic Flow Planning Simulation
FMA -Final Monitor Aid	FMF -Facility Master File
FMIS -FTS2000 Management Information System	FMS -Flight management System
FNMS -FTS2000 Network Management System	FOIA -Freedom Of Information Act
FP -Flight Plan	FRC -Request Full Route Clearance
FSAS -Flight Service Automation System	FSDO -Flight Standards District Office
FSDPS -Flight Service Data Processing System	FSEP -Facility/Service/Equipment Profile
FSP -Flight Strip Printer	FSPD -Freeze Speed Parameter
FSS -Flight Service Station	FSSA -Flight Service Station Automated Service
FSTS -Federal Secure Telephone Service	FSYS -Flight Service Station Equipment Systems
FTS -Federal Telecommunications System	FTS2000 -Federal Telecommunications System 2000
FUS -Functional Units or Systems	FWCS -Flight Watch Control Station
-G-	
GA-General Aviation	GAA -General Aviation Activity
GAAA -General Aviation Activity and Avionics	GADO -General Aviation District Office
GCA -Ground Control Approach	GNAS -General National Airspace System
GNSS -Global Navigation Satellite System	GOES -Geostationary Operational Environmental Satellite
GOESF -GOES Feed Point	GOEST -GOES Terminal Equipment
GPS -Global Positioning Satellite	GPWS -Ground Proximity Warning System
GRADE -Graphical Airspace Design Environment	GS -Glide Slope Indicator
GSA -General Services Administration	
-H-	
H-Non-Directional Radio Homing Beacon (NDB)	HAA -Height Above Airport
HAL -Height Above Landing	HARS -High Altitude Route System
HAT -Height Above Touchdown	HAZMAT -Hazardous Materials
HCAP -High Capacity Carriers	HLDC -High Level Data Link Control
HDME -NDB with Distance Measuring Equipment	HDQ -FAA Headquarters
HELI –Heliport	HF -High Frequency
HH -NDB, 2kw or More	HI-EFAS -High Altitude EFAS
HOV -High Occupancy Vehicle	HSI -Horizontal Situation Indicators
HUD -Housing and Urban Development	HWAS -Hazardous In-Flight Weather Advisory
Hz –HERTZ	
-I-	
IA-Indirect Access	IAF -Initial Approach Fix
I/AFSS -International AFSS	IAP -Instrument Approach Procedures
IAPA -Instrument Approach Procedures Automation	IBM -International Business Machines
IBP -International Boundary Point	IBR -Intermediate Bit Rate
ICAO -International Civil Aviation Organization	ICSS -International Communications Switching Systems
IDAT -Interfacility Data	IF -Intermediate Fix
IFCP -Interfacility Communications Processor	IFDS -Interfacility Data System
IFEA -In-Flight Emergency Assistance	IFO -International Field Office
IFR -Instrument Flight Rules	IFSS -International Flight Service Station
ILS -Instrument Landing System	IM -Inner Marker
IMC -Instrument Meteorological Conditions	INM -Integrated Noise Model
INS -Inertial Navigation System	IRMP -Information Resources Management Plan
ISDN -Integrated Services Digital Network	ISMLS -Interim Standard Microwave Landing System
ITI -Interactive Terminal Interface	IVRS -Interim Voice Response System
IW -Inside Wiring	
-J-	
-K-	
Kbps-Kilobits Per Second	KHz -Kilohertz
KVDT -Keyboard Video Display Terminal	
-L-	

LAA-Local Airport Advisory	LAAS -Low Altitude Alert System
LABS -Leased A B Service	LABSC -LABS GS-200 Computer
LABSR -LABS Remote Equipment	LABSW -LABS Switch System
LAHSO -Land and Hold Short Operation	LAN -Local Area Network
LATA -Local Access and Transport Area	LAWRS -Limited Aviation Weather Reporting System
LCF -Local Control Facility	LCN -Local Communications Network
LDA -Localizer Directional Aid	LDA -Landing Directional Aid
LDIN -Lead-in Lights	LEC -Local Exchange Carrier
LF -Low Frequency	LINCS -Leased Interfacility NAS Communications System
LIS -Logistics and Inventory System	LLWAS -Low Level Wind Shear Alert System
LM/MS -Low/Medium Frequency	LMM -Locator Middle Marker
LMS -LORAN Monitor Site	LOC -Localizer
LOCID -Location Identifier	LOI -Letter of Intent
LOM -Compass Locator at Outer Marker	LORAN -Long Range Aid to Navigation
LRCO -Limited Remote Communications Outlet	LRNAV -Long Range Navigation
LRR -Long Range Radar	
-M-	
FAA-Maximum Authorized Altitude	MALS -Medium Intensity Approach Lighting System
MALSF -MALS with Sequenced Flashers	MALSR -MALS with Runway Alignment Indicator Lights
MAP -Modified Access Pricing	MAP -Military Airport Program
MAP -Missed Approach Point	MAP -Maintenance Automation Program
Mbps -Megabits Per Second	MCA -Minimum Crossing Altitude
MCAS -Marine Corps Air Station	MCC -Maintenance Control Center
MCL -Middle Compass Locator	MCS -Maintenance and Control System
MDA -Minimum Descent Altitude	MDT -Maintenance Data Terminal
MEA -Minimum En Route Altitude	METI -Meteorological Information
MF -Middle Frequency	MFJ -Modified Final Judgement
MFT -Meter Fix Crossing Time/Slot Time	MHA -Minimum Holding Altitude
MHz –Megahertz	MIA -Minimum IFR Altitudes
MIDO -Manufacturing Inspection District Office	MIS -Meteorological Impact Statement
MISC –Miscellaneous	MISO -Manufacturing Inspection Satellite Office
MIT -Miles In Trail	MITRE -Mitre Corporation
MLS -Microwave Landing System	MM -Middle Marker
MMC -Maintenance Monitoring Console	MMS -Maintenance Monitoring System
MNPS -Minimum Navigation Performance Specification	MNPSA -Minimum Navigation Performance Specifications Airspace
MOA -Memorandum of Agreement	MOA -Military Operations Area
MOCA -Minimum Obstruction Clearance Altitude	MODE C -Altitude-Encoded Beacon Reply
MODE C -Altitude Reporting Mode of Secondary Radar	MODE S -Mode Select Beacon System
MOU -Memorandum of Understanding	MPO -Metropolitan Planning Organization
MPS -Maintenance Processor Subsystem (OR) Master Plan Supplement	MRA -Minimum Reception Altitude
MRC -Monthly Recurring Charge	MSA -Minimum Safe Altitude
MSAW -Minimum Safe Altitude Warning	MSL -Mean Sea Level
MSN -Message Switching Network	MTCS -Modular Terminal Communications System
MTI -Moving Target Indicator	MUX -Multiplexer
MVA -Minimum Vectoring Altitude	MVFR -Marginal Visual Flight Rules
-N-	
NAAQS-National Ambient Air Quality Standards	NADA -NADIN Concentrator
NADIN -National Airspace Data Interchange Network	NADSW -NADIN Switches
NAILS -National Airspace Integrated Logistics Support	NAMS -NADIN IA
NAPRS -National Airspace Performance Reporting System	NAS -National Airspace System or Naval Air Station
NASDC -National Aviation Safety Data	NASP -National Airspace System Plan
NASPAC -National Airspace System Performance Analysis Capability	NATCO -National Communications Switching Center
NAVAID -Navigation Aid	NAVMN -Navigation Monitor and Control
NAWAU -National Aviation Weather Advisory Unit	NAWPF -National Aviation Weather Processing Facility
NCAR -National Center for Atmospheric Research; Boulder, CO	NCF -National Control Facility
NCIU -NEXRAD Communications Interface Unit	NCS -National Communications System
NDB -Non-Directional Radio Homing Beacon	NDNB -NADIN II
NEPA -National Environmental Policy Act	NEXRAD -Next Generation Weather Radar

NFAX -National Facsimile Service	NFDC -National Flight Data Center
NFIS -NAS Facilities Information System	NI -Network Interface
NICS -National Interfacility Communications System	NPIAS -National Plan of Integrated Airport Systems
NM -Nautical Mile	NMAC -Near Mid Air Collision
NMC -National Meteorological Center	NMCE -Network Monitoring and Control Equipment
NMCS -Network Monitoring and Control System	NOAA -National Oceanic and Atmospheric Administration
NOC -Notice Of Completion	NOTAM -Notice to Airmen
NPDES -National Pollutant Discharge Elimination System	NPIAS -National Plan of Integrated Airport Systems
NRC -Non-Recurring Charge	NRCS -National Radio Communications Systems
NSAP -National Service Assurance Plan	NSSFC -National Severe Storms Forecast Center
NSSL -National Severe Storms Laboratory; Norman, OK	NTAP -Notices To Airmen Publication
NTP -National Transportation Policy	NTSB -National Transportation Safety Board
NTZ -No Transgression Zone	NWS -National Weather Service
NWSR -NWS Weather Excluding NXRD	NSWRH -NWS Regional Headquarters
NXRD -Advanced Weather Radar System	
-O-	
OAG-Official Airline Guide	OALT -Operational Acceptable Level of Traffic
OAW -Off-airway Weather Station	ODAL -Omni directional Approach Lighting System
ODAPS -Oceanic Display and Processing Station	OFA -Object Free Area
OFDPS -Offshore Flight Data Processing System	OFT -Outer Fix Time
OFZ -Obstacle Free Zone	OM -Outer Marker
OMB -Office of Management and Budget	ONER -Oceanic Navigational Error Report
OPLT -Operational Acceptable Level of Traffic	OPSW -Operational Switch
OPX -Off Premises Exchange	ORD -Operational Readiness Demonstration
OTR -Oceanic Transition Route	OTS -Organized Track System
-P-	
PABX-Private Automated Branch Exchange	PAD -Packet Assembler/Disassembler
PAM -Peripheral Adapter Module	PAPI -Precision Approach Path Indicator
PAR -Precision Approach Radar	PAR -Preferential Arrival Route
PATWAS -Pilots Automatic Telephone Weather Answering Service	PBCT -Proposed Boundary Crossing Time
PBRF -Pilot Briefing	PBX -Private Branch Exchange
PCA -Positive Control Airspace	PCM -Pulse Code Modulation
PDAR -Preferential Arrival And Departure Route	PDC -Pre-Departure Clearance
PDC -Program Designator Code	PDR -Preferential Departure Route
PDN -Public Data Network	PFC -Passenger Facility Charge
PHONE –Telephone	PIC -Principal Interexchange Carrier
PIDP -Programmable Indicator Data Processor	PIREP -Pilot Weather Report
PMS -Program Management System	POLIC -Police Station
POP -Point Of Presence	POT -Point Of Termination
PPIMS -Personal Property Information Management System	PR -Primary Commercial Service Airport
PRI -Primary Rate Interface	PRM -Precision Runway Monitor
PSDN -Public Switched Data Network	PSN -Packet Switched Network
PSS -Packet Switched Service	PSTN -Public Switched Telephone Network
PUB –Publication	PUP -Principal User Processor
PVC -Permanent Virtual Circuit	PVD -Plan View Display
-Q-	
-R-	
RAIL-Runway Alignment Indicator Lights	RAPCO -Radar Approach Control (USAF)
RAPCON -Radar Approach Control	RATCC -Radar Air Traffic Control Center
RATCF -Radar Air Traffic Control Facility (USN)	RBC -Rotating Beam Ceilometer
RBDPE -Radar Beacon Data Processing Equipment	RBSS -Radar Bomb Scoring Squadron
RCAG -Remote Communications Air/Ground	RCC -Rescue Coordination Center
RCF -Remote Communication Facility	RCCC -Regional Communications Control Centers
RCIU -Remote Control Interface Unit	RCL -Radio Communications Link
RCLR -RCL Repeater	RCLT -RCL Terminal
RCO -Remote Communications Outlet	RCU -Remote Control Unit
RDAT -Digitized Radar Data	RDP -Radar Data Processing
RDSIM -Runway Delay Simulation Model	REIL -Runway End Identification Lights
RF -Radio Frequency	RL -General Aviation Reliever Airport
RMCC -Remote Monitor Control Center	RMCF -Remote Monitor Control Facility
RML -Radio Microwave Link	RMLR -RML Repeater

RMLT -RML Terminal	RMM -Remote Maintenance Monitoring
RMMS -Remote Maintenance Monitoring System	RMS -Remote Monitoring Subsystem
RMSC -Remote Monitoring Subsystem Concentrator	RNAV -Area Navigation
RNP -Required Navigation Performance	ROD -Record of Decision
ROSA -Report of Service Activity	ROT -Runway Occupancy Time
RP -Restoration Priority	RPC -Restoration Priority Code
RPG -Radar Processing Group	RPZ -Runway Protection Zone
RRH -Remote Reading Hygrothermometer	RRHS -Remote Reading Hydrometer
RRWDS -Remote Radar Weather Display	RRWSS -RWDS Sensor Site
RSS -Remote Speaking System	RT -Remote Transmitter
RT & BTL -Radar Tracking And Beacon Tracking Level	RTAD -Remote Tower Alphanumeric Display
RTCA -Radio Technical Commission for Aeronautics	RTR -Remote Transmitter/Receiver
RTRD -Remote Tower Radar Display	RVR -Runway Visual Range
RW –Runway	RWDS -Same as RRWDS
RWP -Realtime Weather Processor	
-S-	
S/S - Sector Suite	SAC -Strategic Air Command
SAFI -Semi Automatic Flight Inspection	SALS -Short Approach Lighting System
SATCOM -Satellite Communications	SAWRS -Supplementary Aviation Weather Reporting System
SCC -System Command Center	SCVTS -Switched Compressed Video Telecommunications Service
SDF -Simplified Direction Finding	SDF -Software Defined Network
SDIS -Switched Digital Integrated Service	SDP -Service Delivery Point
SDS -Switched Data Service	SEL -Single Event Level
SELF -Simplified Short Approach Lighting System With Sequenced Flashing Lights	SFAR-38 -Special Federal Aviation Regulation 38
SHPO -State Historic Preservation Officer	SIC -Service Initiation Charge
SID -Station Identifier	SID -Standard Instrument Departure
SIGMET -Significant Meteorological Information	SIMMOD -Airport and Airspace Simulation Model
SIP -State Implementation Plan	SM -Statute Miles
SMGC -Surface Movement Guidance and Control	SMPS -Sector Maintenance Processor Subsystem
SMS -Simulation Modeling System	SNR -Signal-to-Noise Ratio, also: S/N
SOC -Service Oversight Center	SOIR -Simultaneous Operations On Intersecting Runways
SOIWR -Simultaneous Operations on Intersecting Wet Runways	SRAP -Sensor Receiver and Processor
SSALF -SSALS with Sequenced Flashers	SSALR -Simplified Short Approach Lighting System
SSB -Single Side Band	STAR -Standard Terminal Arrival Route
STD –Standard	STMUX -Statistical Data Multiplexer
STOL -Short Takeoff and Landing	SURPIC -Surface Picture
SVCA -Service A	SVCB -Service B
SVCC -Service C	SVCO -Service O
SVFO -Interphone Service F (A)	SVFB -Interphone Service F (B)
SVFC -Interphone Service F (C)	SVFD -Interphone Service F (D)
SVFR -Special Visual Flight Rules	
-T-	
T1MUX-T1 Multiplexer	TAAS -Terminal Advance Automation System
TACAN -Tactical Aircraft Control and Navigation	TACR -TACAN at VOR, TACAN only
TAF -Terminal Area Forecast	TARS -Terminal Automated Radar Service
TAS -True Air Speed	TATCA -Terminal Air Traffic Control Automation
TAVT -Terminal Airspace Visualization Tool	TCA -Traffic Control Airport or Tower Control Airport
TCA -Terminal Control Area	TCACCIS -Transportation Coordinator Automated Command and Control Information System
TCAS -Traffic Alert And Collision Avoidance System	TCC -DOT Transportation Computer Center
TCCC -Tower Control Computer Complex	TCE -Tone Control Equipment
TCLT -Tentative Calculated Landing Time	TCO -Telecommunications Certification Officer
TCOM -Terminal Communications	TCS -Tower Communications System
TDLS -Tower Data-Link Services	TDMUX -Time Division Data Multiplexer
TDWR -Terminal Doppler Weather Radar	TELCO -Telephone Company
TELMS -Telecommunications Management System	TERPS -Terminal Instrument Procedures
TFAC -To Facility	TH -Threshold
TIMS -Telecommunications Information Management System	TIPS -Terminal Information Processing System
TL –Taxilane	TMA -Traffic Management Advisor

TMC -Traffic Management Coordinator	TMC/MC -Traffic Management Coordinator/Military Coordinator
TMCC -Terminal Information Processing System	TMCC -Traffic Management Computer Complex
TMF -Traffic Management Facility	TML -Television Microwave Link
TMLI -Television Microwave Link Indicator	TMLR -Television Microwave Link Repeater
TMLT -Television Microwave Link Terminal	TM&O -Telecommunications Management and Operations
TMP -Traffic Management Processor	TMS -Traffic Management System
TMSPS -Traffic Management Specialists	TMU -Traffic Management Unit
TODA -Takeoff Distance Available	TOF -Time Of Flight
TOFMS -Time of Flight Mass Spectrometer	TOPS -Telecommunications Ordering and Pricing System (GSA software tool)
TORA -Take-off Run Available	TNAV -Terminal Navigational Aids
TR -Telecommunications Request	TRACAB -Terminal Radar Approach Control in Tower Cab
TRACON -Terminal Radar Approach Control Facility	TRAD -Terminal Radar Service
TRNG –Training	TSA -Taxiway Safety Area
TSEC -Terminal Secondary Radar Service	TSP -Telecommunications Service Priority
TSR -Telecommunications Service Request	TSYS -Terminal Equipment Systems
TTMA -TRACON Traffic Management Advisor	TTY -Teletype
TVOR -Terminal VHF Omnidirectional Range	TW -Taxiway
TWEB -Transcribed WeatherBroadcastTWR-Tower (non-controlled)	TY -Type (FAACIS)
-U-	
UAS -Uniform Accounting System	UHF -Ultra High Frequency
URA -Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	USAF -United States Air Force
USOC -Uniform Service Order Code	
-V-	
VASI-Visual Approach Slope Indicator	VDME -VOR with Distance Measuring Equipment
VF -Voice Frequency	VFR -Visual Flight Rules
VHF -Very High Frequency	VLF -Very Low Frequency
VMC -Visual Meteorological Conditions	VNAV -Visual Navigational Aids
VNTSC -Volpe National Transportation System Center	VON -Virtual On-net
VOR -VHF Omnidirectional Range	VOR/DME -VHF Omnidirectional Range/Distance Measuring Equipment
VORTAC -VOR collocated with TACAN	VOT -VOR Test Facility
VRS -Voice Recording System	VSCS -Voice Switching and Control System
VTA -Vertex Time of Arrival	VTAC -VOR collocated with TACAN
VTOL -Vertical Takeoff and Landing	VTS -Voice Telecommunications System
-W-	
WAAS-Wide Area Augmentation System	WAN -Wide Area Network
WC -Work Center	WCP -Weather Communications Processor
WECO -Western Electric Company	WESCOM -Western Electric Satellite Communications
WMSC -Weather Message Switching Center	WMSCR -Weather Message Switching Center Replacement
WSCMO -Weather Service Contract Meteorological Observatory	WSFO -Weather Service Forecast Office
WSMO -Weather Service Meteorological Observatory	WSO -Weather Service Office
WTHR -"Weather"	WX -Weather
-X-	
-Y-	
-Z-	

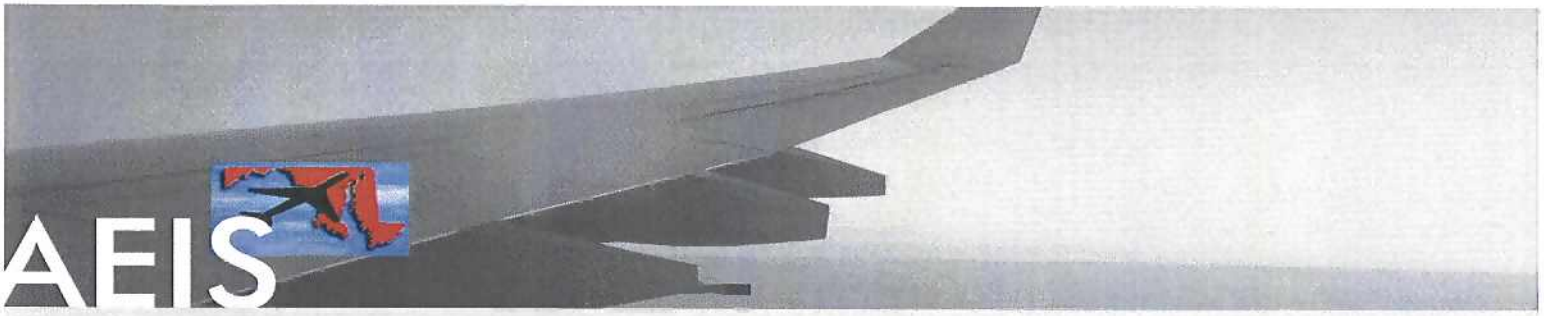
APPENDIX I

AIRPORT ENGINEERING INFORMATION SYSTEM

GIS DATA STANDARD

MARTIN STATE AIRPORT

BWI BALTIMORE/WASHINGTON INTERNATIONAL Thurgood Marshall AIRPORT



Maryland Aviation Administration

Office of Engineering and Construction Management

Airport Engineering Information System

GEOGRAPHIC INFORMATION SYSTEM DATA STANDARD

Version 1.1
July 2007

Geographic Information System
Data Standard
Utilities Supplement
For the Maryland Aviation Administration
Version 1.1, July 2007

This document defines communications and utilities feature classes that are included in MAA's Geographic Information System (GIS) Data Standard. This document is a supplement to Appendix A of the MAA Geographic Information System Data Standard and should be used by anyone developing or checking GIS data for MAA that includes communications or utility features. This document is related to the content included in the Geographic Information System Data Standard and should only be used in conjunction with that document.

The following pages list each of the 218 GIS Feature Types defined by this supplement. The Feature Types are grouped into categories (i.e., General, Electrical, Communications, etc.) for ease of use. For each Feature Type, the class name, geometry type, sensitivity level, and a definition are provided. Suggested accuracies are also provided. Accuracies are indicated at a reasonable level that will meet a broad range of end user requirements. Individual project scopes, technical limitations and other factors may require data to be of a higher or lower level of accuracy. Attributes are also provided along with their type and definition. The following figure provides a key to the information provided in this supplement.

Figure 1 - Legend

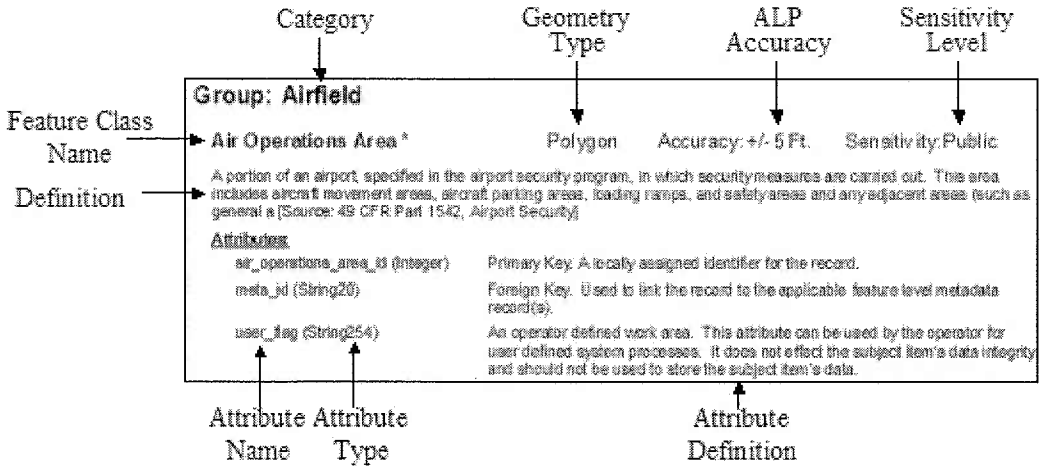


Table of Contents to Appendix A

Following is a table of contents of the feature type definitions in Appendix A. For ease in referencing, the 218 feature types defined are subdivided into 11 categories.

Group: General

ConduitCenterline

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

A pipe, structure, tube, or tile used to house or protect piping, cables, or wires for various utilities. [Source: SDSFIE

Attributes: *SDSFIE Entity* *conduit_centerline*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

SolarPanelPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

Device consisting of solar cells that convert light into energy. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *solar_panel_point*

panel_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_name (String30)	The name of the fuel feature. [Source: AIR FORCE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

TunnelCenterline

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

An opening which goes through an area which holds piping, cables, or wires for various utilities, and typically is inaccessible. [Source: SDSFIE NGB]

Attributes: *SDSFIE Entity* *tunnel_centerline*

uttunnl_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_desc (String60)	Any brief description of the feature.
feat_len (Real)	The overall length of the feature. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

UndefinedUtilityLine

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

A pipe for which it's use and utility association is not currently known or defined (e.g., location identified by aerial

photography but not yet verified by follow-up investigation). [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *undefined_utility_line*
genpipe_id (Number*)	Primary Key. A locally assigned identifier for the record.
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline . [Source: Aerial Data Service]
mat_d (Enumeration16)	The code indicating the material composition of the subject item. [Source: Aerial Data Service]
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe). [Source: Aerial Data Service]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Aerial Data Service]
piplty_d (Enumeration16)	The code indicating the location of the pipeline in relevance to the earth's surface. [Source: Aerial Data Service]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UnknownTankSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A tank to which either of the following conditions apply: (1) It is not associated with a specific utility, (2) It's use and contents are not currently known or defined (e.g., location identified by aerial photography but not yet verified by follow-up inv [Source: SDSFIE Aerial Data Service]

Attributes:	*SDSFIE Entity* *undefined_tank_site*
unktnk_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum, if it is known.
invert_elv (Real)	The elevation measured at bottom of the tank, in feet (English units) or meters (SI units) above some datum, if it is known.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item, if it is known.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
serial_no (String16)	The code that indicates the manufacturer's serial, or unique identification number of the subject item, if it is known.
tank_lgth (Real)	The dimension indicating the length dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side, if it is known.
tank_vol (Real)	The volume of the tank, if it is known.
tank_width (Real)	The dimension indicating the exterior width of the tank, measured from

	outside face of the exterior wall/side to outside face of the opposite exterior wall/side, if it is known.
top_elv (Real)	The dimension indicating the elevation of exterior top surface of the tank's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum, if it is known.
vol_u_d (Enumeration16)	The code indicating the unit of measure of the volume of the tank.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilityArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

An area of utility company responsibility or an area where special construction precautions are required to prevent damage to underground utility services. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *utility_area*
utlresp_id (Number*)	Primary Key. The unique identification number of defined areas of responsibility for utilities. [Source: REEGIS]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

UtilityPoleConduitPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pipe, structure, tube, or tile used to house or protect piping, cables, or wires for various utilities. [Source: SDSFIE

Attributes:	*SDSFIE Entity* *utility_pole_conduit_point*
utcond_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_desc (String60)	Any brief description of the feature.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
drng_pat_d (Enumeration16)	The drainage pattern of the material surrounding the conduit. [Source: CENTER]
drng_tex_d (Enumeration16)	The texture of the material surrounding the conduit. [Source: Center]
drng_zone (String50)	The local name of assigned the hydrographic drainage zone.
feat_name (String30)	Any commonly used name of the culvert.
inv_elv_1 (Real)	The dimension indicating the elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.

inv_elv_2 (Real)	The dimension indicating the elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
lined_d (Enumeration16)	A boolean indicating whether the conduit is lined or not (Y = YES and N = NO)? [Source: Center]
mat_d (Enumeration16)	A code denoting the material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String16)	A code indicating the Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d (Enumeration16)	The code indicating the unit of measure of slope.
area_size (Real)	The size of the area, zone, or polygon in square units.
con_lgth (Real)	The length of conduit, measured from node to node along the conduit centerline . [Source: Center]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilityPoleGuyLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A support configuration that spans between two structures, which generally includes connecting hardware, cables, and anchor components. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *utility_pole_guy_line*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

UtilityPoleGuyPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A support configuration, which generally includes connecting hardware, cables, and anchor components, used to stabilize structures (poles, towers, etc.). Down guys typically connect to the structures at key stress points and extend to an anchor at the gro [Source: SDSFIE Anteon]

Attributes: *SDSFIE Entity* *utility_pole_guy_point*

guy_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anchor_att (String15)	The type of anchor attachment to the pole or tower.
anchor_ty (String15)	The type of anchor used with this guy.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
design_d (Enumeration16)	Discriminator. The design code for a utility guy.
cbl_dia (Real)	The nominal diameter of the cable.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
guy_len (Real)	The length of the guy cable from pole connection to anchor.
cbl_mat_d (Enumeration16)	The material composition of the cable.
cbl_sht_d (Enumeration16)	The type sheath attached to the guy cable.
cbl_ten (Real)	The tensile force applied to the guy cable.
cbl_ty_d (Enumeration16)	The type of cable use for the guy.
cbldia_u_d (Enumeration16)	The unit of measure of the diameter.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
guy_ty_d (Enumeration16)	A code indicating the configuration of the guy construction.

ten_u_d (Enumeration16)	The unit of measure of tension
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilityPoleTowerSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A structure used to elevate wires, cables, or other lines above the ground surface. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *utility_pole_tower_site*

pole_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
design_d (Enumeration16)	Discriminator. The design code for types of poles.
capped_d (Enumeration16)	Indicates whether or not the pole is capped (yes/no).
date_treat (Date)	The date that the pole was last treated. Format for date is YYYYMMDD (i.e. September 15, 1994 = 19940915).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
grounded_d (Enumeration16)	An indicator as to whether or not the pole is grounded. (yes or no)
pole_lgth (Real)	The overall length of the pole from tip to tip.
poleheight (Real)	The height of the pole measured from the ground surface to the top.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
p_class_d (Enumeration16)	A classification of the pole diameter, and consequently the breaking strength, of wooden poles.
treattyp_d (Enumeration16)	Defines any treatment applied to the pole to improve its life.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilUtilidorLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A tunnel system which may exist above or below ground used for horizontal conveyance of utilities including communications cables in arctic climates
[Source: SDSFIE REEGIS]

Attributes: *SDSFIE Entity* *utilities_utilidor_line*

uti_id (Number*)	Primary Key. A locally assigned identifier for the record.

user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
mat_d (Enumeration16)	The material composition of the utilidor
height (Real)	The depth of the utilidor from the ground surface.
width (Real)	A measurement of the shorter of two linear axes.
width_u_d (Enumeration16)	The unit of measure of width.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_len (Real)	A measure of the longer of the two linear axes.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtUndefinedFeaturePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A utility feature which it's use and utility association is not currently known or defined (e.g., location identified by aerial photography but not yet verified by follow-up investigation) [Source: SDSFIE Aerial Data Service]

Attributes: *SDSFIE Entity* *undefined_utility_feature_point*

utfeat_id (Number*)	Primary Key. A locally assigned identifier for the record.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc. [Source: Aerial Data Service]
feat_typ_d (Enumeration16)	Discriminator. The type of undefined utility feature. [Source: Aerial Data Service]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Aerial Data Service]
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum. [Source: Aerial Data Service]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Communications

AccessCoverageArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

The nominal coverage area for a wireless local area network (WLAN) access point. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *access_coverage_area*

wiraca_id (Number*)	Primary Key. A locally assigned identifier for the record.
avgss (Real)	Average Signal Strength for coverage area. [Source: AIR FORCE]
maxsnr (Real)	Maximum Signal to Noise Ratio (dbm) for coverage area. [Source: AIR FORCE]
minsnr (Real)	Minimum Signal to Noise Ratio (dbm) for coverage area. [Source: AIR FORCE]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
maxdr (Real)	Maximum Data Rate for the coverage area. [Source: AIR FORCE]
mindr (Real)	Minimum Data Rate for the coverage area. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
snr_u_d (Enumeration16)	The unit of measure for the MaxSNR and MinSNR [Source: AIR FORCE]
dr_u_d (Enumeration16)	The unit of measure for the MaxDR and MinDR (Most likely measured in Mbps). [Source: AIR FORCE]
cap_u_d (Enumeration16)	The unit of measure of capacitance. [Source: AIR FORCE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AccessPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An access point is a station that transmits and receives data in a wireless local area network (WLAN). [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *access_point*

wiracp_id (Number*)	Primary Key. A locally assigned identifier for the record.
enc_prot_d (Enumeration16)	Protocol used to provide encryption for the access point (WEP, WPA, etc.). [Source: AIR FORCE]
ant_ty_d (Enumeration16)	The type of communications antenna used. [Source: AIR FORCE]
pomx (String16)	The Access Point designator as defined in the POMX Site Survey Report. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
ids_d (Enumeration16)	A boolean indicating whether the WLAN AP has an Intrusion Detection System (IDS). [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
ant_loc_d (Enumeration16)	A boolean indicating whether the antenna is located inside a building. [Source: AIR FORCE]
gain_u_d (Enumeration16)	The unit of measure for gain. [Source: AIR FORCE]
ssid (String50)	The service set identification of the device. [Source: AIR FORCE]
mac (String20)	The MAC address of the device. [Source: AIR FORCE]
num_sens (Integer)	The number of sensors used for the Intrusion Detection System (IDS). [Source: AIR FORCE]
name (String20)	The local name of the Access Point. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
standard (String16)	IEEE wireless standard used (i.e. 802.11a, b, g, etc.). [Source: AIR FORCE]
channel (Integer)	Channel number utilized. [Source: AIR FORCE]
gain (Real)	The measure of signal amplification. [Source: AIR FORCE]
height (Real)	Antenna height above ground level. [Source: AIR FORCE]
elevation (Real)	The height of the antenna as measured from a reference point or from sea level. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
ant_rad_d (Enumeration16)	The radiation pattern of the antenna. [Source: AIR FORCE]
size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]

dr_u_d (Enumeration16)	The unit of measure for the MaxDR and MinDR (Most likely measured in Mbps). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CameraSurveillancePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Top Secret

The location of a video camera used for surveillance purposes. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *camera_surveillance_point*

camera_id (Number*)	Primary Key. A locally assigned identifier for the record.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
color_d (Enumeration16)	A Boolean indicating whether the camera transmits images in color.
feat_desc (String60)	A brief description of the feature. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cam_typ_d (Enumeration16)	Discriminator - The type of surveillance camera. [Source: Tinker Air Force Base]
date_int (Date)	The date on which a well construction object was installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: Tinker Air Force Base]
imag_formt (String50)	The size of CCD Imager. [Source: Tinker Air Force Base]
lens_size (String50)	The size of the camera lens. [Source: Tinker Air Force Base]
location (String60)	Location of the camera (Interior or exterior). [Source: Tinker Air Force Base]
mount_d (Enumeration16)	Type of mounting for the surveillance camera. [Source: Tinker Air Force Base]
encl_typ_d (Enumeration16)	The type of enclosure used to protect the camera. [Source: Tinker Air Force Base]
camer_name (String50)	The camera name. [Source: Tinker Air Force Base]
cswitch_no (String50)	The switch in which the camera is connected. [Source: Tinker Air Force Base]
remarks (String240)	Any narrative remarks concerning the camera switch. [Source: Tinker Air Force Base]
camfil_d (Enumeration16)	Lens Filter Type. [Source: AIR FORCE]
ptz_typ_d (Enumeration16)	Point, tilt, and zoom type. [Source: AIR FORCE]
ccd_vres (Integer)	Resolution of the CCD in vertical pixels. [Source: AIR FORCE]
ccd_hres (Integer)	Resolution of the CCD in horizontal pixels. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommAirpipeLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe which conveys pressurized air to a pressurized telephone cable system [Source: SDSFIE Tinker Air Force

Attributes: *SDSFIE Entity* *communications_airpipe_line*

coapipe_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the

	subject item's data integrity and should not be used to store the subject item's data.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
pipe_lgth (Real)	A measurement of the longer of two linear axes.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
grnd_elv_1 (Real)	The elevation of the ground surface at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
grnd_elv_2 (Real)	The elevation of the ground surface at node_id_2, in feet (English units) or meters (SI units) above some datum.
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
press_norm (Real)	The manufacturer's or industry standard's normal pressure rating of the subject item.
press_u_d (Enumeration16)	The unit of measure for pressure.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommAirPressureDevicePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Any device which supports a cable pressurization system, for example valves, compressors, pressure transducers, air dryers, and pressure mete. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_air_pressure_device_point*
airprdv_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item.
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item.
airp_typ_d (Enumeration16)	The type of air pressure device. [Source: Austin and Pitts]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from list or entered from field inspections.
use_d (Enumeration16)	The site specific use of the valve.

dev_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
dev_size (Real)	The manufacturer's nominal size designation.
size_u_d (Enumeration16)	The unit of measure of size.
device_elv (Real)	The elevation measured at centerline of the valve, in feet (English Units) or meters (SI Units) above some datum.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
feat_desc (String60)	A description of the feature.
applace_d (Enumeration16)	Indicates the placement of the device. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommAmplifierPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Any electronic device intended to boost the power or amplify the signal associated with a communications system. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_amplifier_point*

amp_id (Number*)	Primary Key. A locally assigned identifier for the record.
gain (Real)	The measure of signal amplification. [Source: Tinker Air Force Base]
bandwidth (Real)	The difference between the highest and lowest frequencies that an amplifier can pass. [Source: Tinker Air Force Base]
power (Real)	The amplifier power. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
amp_typ_d (Enumeration16)	Discriminator - Amplifier type [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
gain_u_d (Enumeration16)	The unit of measure of gain.
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
band_u_d (Enumeration16)	The unit of measure of bandwidth.
in_sig_lvl (Real)	The amount of the input signal to the amplifier. [Source: Tinker Air Force Base]
power_u_d (Enumeration16)	The unit of measure of power. [Source: Tinker Air Force Base]
outsig_lvl (Real)	The output level of the signal. [Source: Tinker Air Force Base]
level_u_d (Enumeration16)	The unit of measure for input and output signal level. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_in (Real)	The input impedance of the amplifier [Source: Tinker Air Force Base]
imped_out (Real)	The output impedance of the amplifier. [Source: Tinker Air Force Base]
imped_u_d (Enumeration16)	The unit of measure of input and output impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommAntennaLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Any device or wire which is intended to transmit or receive electromagnetic impulses to or from air or space. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_antenna_line*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CommAntennaSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of a communications antenna. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_antenna_site*

antenna_id (Number*)	Primary Key. A locally assigned identifier for the record.
feat_len (Real)	A measurement of the longer of two linear axes.
azimu_u_d (Enumeration16)	The unit of measure of azimuth.
feat_desc (String60)	A description of the feature.
diameter (Real)	The width of a cylindrical or circular antenna. [Source: Tinker Air Force Base]
ant_ty_d (Enumeration16)	Discriminator. The type of communications antenna. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
azimuth (Real)	The angle of horizontal deviation.
bandwidth (Real)	The difference between the highest and lowest frequencies that an antenna can pass. [Source: Tinker Air Force Base]
diam_u_d (Enumeration16)	The unit of measure of antenna diameter.
elevation (Real)	The height of the antenna as measured from a reference point or from sea level. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
gain (Real)	The measure of signal amplification. [Source: Tinker Air Force Base]
band_u_d (Enumeration16)	The unit of measure of bandwidth.
tx_power (Real)	The transmission power rating of the antenna. [Source: Tinker Air Force Base]
power_u_d (Enumeration16)	Unit of measure for power.
tx_freq (Real)	The transmission frequency of the antenna. [Source: Tinker Air Force Base]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
ant_use_d (Enumeration16)	The usage of communications antenna. [Source: AIR FORCE]
beamwdth_e (Integer)	The measurement of vertical beamwidth at half power. [Source: Tinker Air Force Base]
beamwdth_h (Integer)	The measurement of horizontal beamwidth at half power. [Source: Tinker Air Force Base]
conn_type (String20)	The type of RF connector presented on the antenna. [Source: Tinker Air Force Base]
eq_fp_area (Real)	The surface area used for calculating wind loading for tower design. [Source: Tinker Air Force Base]
freq_rng_h (Integer)	The highest frequency antenna is designed to pass. [Source: Tinker Air Force Base]
freq_u_d (Enumeration16)	the unit of measure of frequency.
rx_freq (Real)	The receiving frequency of the antenna. [Source: Tinker Air Force Base]
freq_rng_l (Integer)	The lowest frequency antenna is designed to pass. [Source: Tinker Air Force Base]

avgpwr_u_d (Enumeration16)	The init of measure for average power. [Source: AIR FORCE]
ftb_ratio (Integer)	The isolation provided by directional antennas away from the beam. [Source: HSIP]
height (Real)	The overall height of an antenna unit - base to top. [Source: HSIP]
imped (Real)	The impedance of antenna for cable matching (Ohms). apparent opposition in an electrical circuit to the flow of an alternating current. Analogous to the actual electrical resistance to a direct current. It is the ratio of effective electromotive force to the effective current. [Source: HSIP]
max_wind (Integer)	The maximum wind speed antenna is designed to withstand. [Source: HSIP]
polarizatn (Integer)	The rf polarization provided by antenna (as installed). [Source: Tinker Air Force Base]
rdome_dia (Integer)	The radome diameter. [Source: Tinker Air Force Base]
vswr (Integer)	The maximum voltage that the Standing Wave Ratio antenna will operate at over range. [Source: Tinker Air Force Base]
weight (Integer)	The weight of the antenna unit for use in tower loading calculations. [Source: Tinker Air Force Base]
corp_name (String80)	Name of station corporation. [Source: HSIP]
agl_u_d (Enumeration16)	Antenna height above ground level UOM. [Source: AIR FORCE]
efpa_u_d (Enumeration16)	The unit of measure for Equivalent Flat Plate Area. [Source: AIR FORCE]
polr_typ_d (Enumeration16)	Polarization type. [Source: AIR FORCE]
fr_rgl_u_d (Enumeration16)	The unit of measure for low frequency range. [Source: AIR FORCE]
agl (Real)	Antenna height above ground level. [Source: AIR FORCE]
tilt (Real)	Antenna tilt angle for dish and parabolic antennas. [Source: AIR FORCE]
peakpower (Real)	The peak amount of power the antenna can withstand. [Source: AIR FORCE]
avgpwr (Real)	Average power rating for this antenna. [Source: AIR FORCE]
ant_rad_d (Enumeration16)	The radiation pattern of the antenna. [Source: AIR FORCE]
tltang_u_d (Enumeration16)	Antenna tilt angle UOM. [Source: AIR FORCE]
plarea_u_d (Enumeration16)	The unit of measure for the area of the plume above. [Source: NAVFAC]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: AIR FORCE]
rdmdia_u_d (Enumeration16)	The unit of measure for the radiomen diameter. [Source: AIR FORCE]
imped3_u_d (Enumeration16)	Tertiary. The unit of measure of for impedance. [Source: AIR FORCE]
fr_rgh_u_d (Enumeration16)	The unit of measure for high frequency range. [Source: AIR FORCE]
gain_u_d (Enumeration16)	The unit of measure for gain. [Source: AIR FORCE]
pekpwr_u_d (Enumeration16)	The peak power UOM. [Source: AIR FORCE]
mbrd_u_d (Enumeration16)	The unit of radius for the Minimum Bending Radius, Dynamic. [Source: AIR FORCE]
spd_u_d (Enumeration16)	The unit of measure for speed. [Source: USACE]
conn_typ_d (Enumeration16)	The type of RF connector presented on the antenna. [Source: AIR FORCE]
maxw_u_d (Enumeration16)	The unit of measure for max wind. [Source: AIR FORCE]
weight_u_d (Enumeration16)	The unit of measure for weight. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommAttenuatorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device for reducing the amplitude of an electrical signal without appreciable distortion [Source: SDSFIE Tinker

Air Force Base]

Attributes:	*SDSFIE Entity* *communications_attenuator_point*
atten_id (Number*)	Primary Key. A locally assigned identifier for the record.
level_u_d (Enumeration16)	The unit of measure of input and output signal amplitude.
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
attn_typ_d (Enumeration16)	The type of attenuator. [Source: Tinker Air Force Base]
loss (Real)	The amount of signal loss of the attenuator. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
loss_u_d (Enumeration16)	The unit of measure of loss.
bandwidth (Real)	The difference between the highest and lowest frequencies that an attenuator can pass. [Source: Tinker Air Force Base]
band_u_d (Enumeration16)	The unit of measure of attenuator bandwidth.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
in_sig_lvl (Real)	The amplitude of the input signal. [Source: Tinker Air Force Base]
outsig_lvl (Real)	The amplitude of the output signal. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_in (Real)	The input impedance of the attenuator. [Source: Tinker Air Force Base]
imped_out (Real)	The output impedance of the attenuator. [Source: Tinker Air Force Base]
imped_u_d (Enumeration16)	The unit of measure for input and output impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommCableBridgeLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A structure used for the horizontal conveyance of A communications cable that allows passage over or under an obstacle such as a river, chasm, mountain, road or railroad. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_cable_bridge_line*
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CommCableLadderPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A ladder type structure used to support the vertical conveyance of communications cable. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_cable_ladder_point*
cab_lad_id (Number*)	Primary Key. A locally assigned identifier for the record.
height (Real)	The height of the cable ladder measured from the ground surface to the top. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
width_u_d (Enumeration16)	The unit of measure of width
width (Real)	A measurement of the shorter of two linear axes. [Source: Tinker Air

	Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommCableRackLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A ladder type structure used to support the horizontal conveyance of communications cable. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_cable_rack_line*
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CommCableTrayLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

An elevated structure enclosed on the bottom and sides usually fabricated from sheet metal which is used to support the horizontal conveyance of communications cable.
[Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_cable_tray_line*
caw_id (Number*)	Primary Key. A locally assigned identifier for the record.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
width (Real)	A measurement of the shorter of two linear axes. [Source: Tinker Air Force Base]
caw_typ_d (Enumeration16)	The type of cable way. [Source: Tinker Air Force Base]
mat_d (Enumeration16)	The material composition of the cable way. [Source: AIR FORCE]
height (Real)	The height of the cable way measured from the ground surface to the top. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
width_u_d (Enumeration16)	The unit of measure of width.
feat_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommCableTroughLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A trench along the ground used for the horizontal conveyance of communications cables. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_cable_trough_line*
cab_tro_id (Number*)	Primary Key. A locally assigned identifier for the record.

mat_d (Enumeration16)	The material composition of the cable trough line. [Source: Tinker Air Force Base]
width (Real)	A measurement of the shorter of the two linear axes of the cable trough line. [Source: Tinker Air Force Base]
width_u_d (Enumeration16)	The unit of measure of width.
feat_len (Real)	A measurement of the longer of the two linear axes. [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommCoaxialLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

a transmission line that consists of a tube of electrically conducting material surrounding a central conductor held in place by insulators that is used to transmit telegraph, telephone, and television signals of high frequency [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_coaxial_line*
cocoax_id (Number*)	Primary Key. A locally assigned identifier for the record.
no_cond (Integer)	The number of conductors within the coaxial cable. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cab_use_d (Enumeration16)	Discriminator - The overall use of the coaxial cable.
cab_no (String16)	The alphanumeric string assigned to the cable. [Source: Tinker Air Force Base]
offset_u_d (Enumeration16)	The unit of measure of offset. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cab_elev_d (Enumeration16)	The vertical location of the cable. [Source: Tinker Air Force Base]
cbl_mat_d (Enumeration16)	The material composition of the cable. [Source: Tinker Air Force Base]
river_mile (Real)	The reference of the river mile associated with the cable. [Source: REEGIS]
feat_name (String60)	Any commonly used name for the cable. [Source: Tinker Air Force Base]
vert_clr (Real)	The clearance in feet between the lowest point under the cable line and the water's surface at Mean High Water (MHW) referenced to a reading on the appropriate gage. [Source: Tinker Air Force Base]
vert_u_d (Enumeration16)	The unit of measure of vertical clearance
frequency (Real)	The number of cycles per unit time of the current in the coaxial cable. [Source: Tinker Air Force Base]
freq_u_d (Enumeration16)	The unit of measure of frequency. [Source: Tinker Air Force Base]
cab_offset (Real)	The distance to the cable as measured from the edge of a paved surface. [Source: Tinker Air Force Base]
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Austin and Pitts]
feat_desc (String60)	Any brief description of the feature. [Source: Tinker Air Force Base]
chl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
cbl_len (Real)	The length dimension of the cable. [Source: Tinker Air Force

	Base]
diameter (Real)	The width of a cylindrical or circular cable. [Source: Tinker Air Force Base]
diam_u_d (Enumeration16)	The unit of measure of cable diameter.
impedance (Real)	The number representing the total opposition to alternating current within an electrical circuit. [Source: Tinker Air Force Base]
impedance (Real)	The number representing the total opposition to flow.
imped_u_d (Enumeration16)	The unit of measure of for impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommDevicePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A communications system component that lies within the signal transmission path and modifies the transmission characteristics of the media. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_device_point*

comdev_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
dgtl_in (Integer)	The total number of digital-in ports on the device.
dgtl_ot (Integer)	The total number of digital-out ports on the device.
imped (Real)	The apparent opposition in an electrical circuit to the flow of an alternating current. Analogous to the actual electrical resistance to a direct current. It is the ratio of effective electromotive force to the effective current. [Source: Tinker Air Force Base]
dev_name (String30)	Any commonly used name for the device. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_desc (String60)	A description of the feature [Source: Tinker Air Force Base]
no_pairlnk (Integer)	The number of cables attached to the device.
readout_d (Enumeration16)	The type of display or readout for the device.
anlg_in (Integer)	The total number of analog-in ports on the device.
anlg_ot (Integer)	The total number of analog-out ports on the device.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_u_d (Enumeration16)	The unit of measure of impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommDuctbankLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

One or more duct routed in parallel between two nodes [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_ductbank_line*

commdbk_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
no_ducts (Integer)	The total number of ducts in the ductbank.
no_du_high (Integer)	The number of ducts in the y-direction
no_du_wide (Integer)	The number of ducts in the x-direction
no_spares (Integer)	The total number of ducts not used in the ductbank.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]
dbk_size_d (Enumeration16)	A two dimensional description of the physical size of the ductbank including units of measure (e.g., 2 ft x 2 ft, 3 m x 3 m).
dbl_len (Real)	The total length of the ductbank from source to load. Manholes and pullboxes should not break the measurement.
conc_enc_d (Enumeration16)	A Boolean indicating whether the ductbank is encased in concrete. [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
diameter (Real)	Diameter (if round). [Source: AIR FORCE]
width (Real)	Width of horizontal cross section. [Source: AIR FORCE]
height (Real)	Height. [Source: AIR FORCE]
size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]
diam_u_d (Enumeration16)	The unit of measure for the diameter (inches or centimeters). [Source: AIR FORCE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommDuctLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Any linear component of a path for cable routing. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_duct_line*

cduct_id (Number*)	Primary Key. A locally assigned identifier for the record.
duct_mat_d (Enumeration16)	The material composition of the duct.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
in_diam (Real)	The inside diameter of the duct.
diam_u_d (Enumeration16)	The unit of measure of diameter.
pullrope_d (Enumeration16)	A Boolean indicating the existence of a pullrope.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
feat_len (Real)	The overall length of the feature. [Source: Center]
mexcellc_d (Enumeration16)	The color code of the MaxCell product if a 3in/3 cell is used. [Source: AIR FORCE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
maxcellt_d (Enumeration16)	For flexible MaxCell inner ducts, this indicates the type used. [Source: AIR FORCE]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommEquipPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A generic piece of communications equipment, that has not otherwise been defined with the communications equipment entity class. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_equip_point*

coequip_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the

	operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
eqp_name (String60)	The name or type of the equipment. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
port_num (String50)	The port identifier corresponding to port's location on the device(slot/card/port). [Source: Air Force]
port_vlan (String50)	The VLAN(s) port is assigned to. [Source: Air Force]
stdsy_name (String50)	The standard system name. [Source: Air Force]
ncc_d (Enumeration16)	A boolean indicating whether it is under The Network Control Center control (Y = YES or N = NO)? [Source: Air Force]
coeqpinid (String20)	The identifying number of the input equipment. [Source: Air Force]
inst_date (Integer)	The date of the Installation. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: Air Force]
sec_fac (String50)	The secondary facility name. [Source: Air Force]
pri_fac_na (String30)	The primary facility name. [Source: Air Force]
platform (String50)	The processor class. [Source: Air Force]
pri_fac_no (String20)	The primary facility number. [Source: Air Force]
contrid (Integer)	The access control system for this portal. [Source: Air Force]
equiptyp_d (Enumeration16)	The different types of equipment. [Source: Air Force]
bar_code (String50)	The IPMS Bar Code. [Source: Air Force]
bandwidth (Real)	The bandwidth of network adapter. [Source: Air Force]
media_ty_d (Enumeration16)	The different types of media. [Source: Air Force]
ant_use_d (Enumeration16)	The different usages of communications antenna. [Source: Air Force]
auto_sys (String20)	The Automation System. [Source: Air Force]
card_ports (String50)	The total ports used/available on card. [Source: Air Force]
por_duplex (String50)	The transmission duplex of the port. [Source: Air Force]
port_loc (String50)	The location of the portal. [Source: Air Force]
card_type (String50)	The model/version of card. [Source: Air Force]
crd_no_use (Integer)	The total number of expansion slots in chassis in use. [Source: Air Force]
if_mac (String50)	The MAC Address of interface. [Source: Air Force]
proc_desc (String50)	The identifier of processor. [Source: Air Force]
dev_class (String50)	The class of device. [Source: Air Force]
dev_mac (String50)	The MAC Address of device. [Source: Air Force]
dev_ip (String50)	The IP Address of device. [Source: Air Force]
os_ver (String50)	The software version/I.O.S. of device. [Source: Air Force]
date_intl (Date)	The date the camera switch was installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: Air Force]
remarks (String240)	Additional information about the camera switch. [Source: Air Force]
camera_no (Integer)	The number of cameras on the switch. [Source: Air Force]
monitor_no (Integer)	The number of monitors on the switch. [Source: Air Force]
keybord_no (Integer)	The number of keyboards on the switch. [Source: Air Force]
max_cam_no (Integer)	The maximum number of cameras switch can have. [Source: Air Force]
max_mon_no (Integer)	The maximum of monitors switch can have. [Source: Air Force]
max_key_no (Integer)	The maximum number of keyboards a switch can have. [Source: Air Force]

num_sens (Integer)	The number of sensors on an annunciator. [Source: Air Force]
max_sen_no (Integer)	The maximum number of sensors annunciator you can have. [Source: Air Force]
int_vid_d (Enumeration16)	A boolean indicating of it is integrated w/a video switch (Y = YES and N = NO)? [Source: Air Force]
cbl_ty_d (Enumeration16)	The type of cable. [Source: Air Force]
onlncmptos (String25)	The name of the operating system. [Source: Air Force]
soft_ver (String50)	The version of the software being used. [Source: Air Force]
cntr_ty_d (Enumeration16)	The list of control type codes. [Source: Air Force]
portal_no (Integer)	The number of controlled portals. [Source: Air Force]
dns_name (String50)	The Domain Name Server name of device if applicable. [Source: Air Force]
net_ver_no (String50)	The version number of network device. [Source: Air Force]
phys_dim (Real)	The physical dimensions of network device (HxWxD). [Source: Air Force]
pwr_in_typ (String50)	The required input power type. [Source: Air Force]
pwr_supply (Integer)	The number of power supplies network device was designed for. [Source: Air Force]
pwr_sup_no (Integer)	The number of power supplies network device has installed. [Source: Air Force]
total_if (Integer)	The total number of network interfaces/ports network device has. [Source: Air Force]
card_slots (Integer)	The total number of expansion slots in chassis. [Source: Air Force]
contrl_lvl (String50)	The level of control at the portal. [Source: Air Force]
radio_cap (Integer)	The radio circuit capacity system. [Source: Air Force]
if_ip (String50)	The IP Address of interface. [Source: Air Force]
if_protocl (String50)	The protocol by which interface communicates. [Source: Air Force]
if_speed (String50)	The interface bit rate. [Source: Air Force]
if_mtu (String50)	The maximum transmission unit of interface. [Source: Air Force]
if_app (String50)	The application for interface. [Source: Air Force]
if_app_des (String50)	The destination interface/port number. [Source: Air Force]
b_lan_name (String50)	The domain name. [Source: Air Force]
prt_mod_no (String50)	The physical module number. [Source: Air Force]
fan_tray (String50)	The description of the number of fans that are operational. [Source: Air Force]
max_por_no (Integer)	The maximum number of controlled portals. [Source: Air Force]
port_index (String50)	The physical port number. [Source: Air Force]
voltage_d (Enumeration16)	The voltage requirements. [Source: Air Force]
mon_type (String50)	The primary or remote annunciator. [Source: Air Force]
if_typ (String50)	The physical/electrical type of interface. [Source: Air Force]
rack_desc (String50)	The identifier of rack chassis is located in. [Source: Air Force]
card_ip (String50)	The IP Address of device. [Source: Air Force]
intrf_desc (String50)	A unique Identifier of interface that port corresponds to. [Source: Air Force]
card_mac (String50)	The MAC Address of device. [Source: Air Force]
coeqpoutid (String20)	The identifying number of the output equipment. [Source: Air Force]
rem_ind (String50)	The type of remote indicators. [Source: Air Force]
crypto_d (Enumeration16)	A boolean indicating whether the data is classified or unclassified (Y = YES and N = NO)? [Source: Air Force]
line_cap (Integer)	The landline circuit capacity system. [Source: Air Force]
num_op_pos (Integer)	The number of operator positions. [Source: Air Force]
runway (String50)	The name of the runway. [Source: Air Force]
numautscop (Integer)	The number of automation scopes or positions. [Source: Air Force]
fl_ck_date (Integer)	The date of the flight check. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: Air Force]
reflc_loc (String50)	The name of the reflector location. [Source: Air Force]

remindloc (String50)	The location position of the remote indicator. [Source: Air Force]
sec_fac_no (Integer)	The secondary facility number. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommFiberopticLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Thin transparent fibers of glass or plastic that are enclosed by material of a lower index of refraction and that transmit light throughout their length by internal reflections [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_fiberoptic_line*
fiberop_id (Number*)	Primary Key. A locally assigned identifier for the record.
vert_clr (Real)	The clearance in feet between the lowest point under the cable line and the water's surface at Mean High Water (MHW) referenced to a reading on the appropriate gage. [Source: REEGIS]
vert_u_d (Enumeration16)	the unit of measure of vertical clearance.
diam_u_d (Enumeration16)	The unit of measure of cable diameter.
cab_elev_d (Enumeration16)	The vertical location of the cable. [Source: Tinker Air Force Base]
river_mile (Real)	The river mile marker. [Source: REEGIS]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_name (String60)	The name of the feature. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cab_use_d (Enumeration16)	Discriminator - The overall use of the fiberoptic cable.
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
cbl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
feat_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
diameter (Real)	The width of a cylindrical or circular cable. [Source: Tinker Air Force Base]
cab_offset (Real)	The distance to the cable as measured from the edge of a paved surface. [Source: Tinker Air Force Base]
offset_u_d (Enumeration16)	The unit of measure of cable offset.
fc_sm (Integer)	The number of single-mode fibers [Source: Tinker Air Force Base]
fc_mm (Integer)	The number of multi-mode fibers in the cable. [Source: Tinker Air Force Base]
fc_ds (Integer)	The number of dispersion-shifted fibers in the cable. [Source: Tinker Air Force Base]
fc_total (Integer)	The total number of fibers in the cable. [Source: Tinker Air Force Base]
cbl_mat_d (Enumeration16)	Types of communication cable. [Source: HSIP]
net_affil (String32)	Network affiliation. [Source: HSIP]
stat_name (String12)	Commercial identifier. [Source: HSIP]
corp_name (String80)	Name of station corporation. [Source: HSIP]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommGroundplanePolygon

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A series of ground points electrically connected in a mesh formation necessary to minimize ground resistance and electromagnetic radiation, for example lightening strikes, in support of critical communications systems. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_groundplane_polygon_area*
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CommGroundPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where the communication configuration is grounded. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_ground_point*
ground_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
resistance (Real)	The measured resistance of the cable. [Source: Tinker Air Force Base]
resist_u_d (Enumeration16)	The unit of measure of resistance.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_desc (String60)	A description of the feature.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommGroundwavePolygon

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

An emanation pattern of Low Frequency Electromagnetic transmissions which use a ground path for transmission. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_groundwave_polygon_area*
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CommHandholePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A chamber, just below the earth's surface, too small for a man to enter, in the route of one or more cable runs where cables may be accessed. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_handhole_point*
handhol_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
no_cables (Integer)	The number of cables in the handhole.
type_d (Enumeration16)	The handhole type.
mat_d (Enumeration16)	The material composition of the handhole.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

function_d (Enumeration16)	The function of the handhole.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommImpedanceMatching

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that matches the impedance between two transmissions in order to minimize signal attenuation and distortion [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_impedance_matching_point*

impmat_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
imp_typ_d (Enumeration16)	The impedance matching device type. [Source: Tinker Air Force Base]
loss (Real)	The signal amplitude loss of matching device. [Source: Tinker Air Force Base]
loss_u_d (Enumeration16)	The unit of measure of loss.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
bandwidth (Real)	The difference between the highest and lowest frequencies. [Source: Tinker Air Force Base]
band_u_d (Enumeration16)	The unit of measure of bandwidth.
in_sig_lvl (Real)	The amplitude of the input signal. [Source: Tinker Air Force Base]
outsig_lvl (Real)	The amplitude of the output signal. [Source: Tinker Air Force Base]
level_u_d (Enumeration16)	The unit of measure for input and output signal level.
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_in (Real)	The input impedance. [Source: Tinker Air Force Base]
imped_out (Real)	The output impedance. [Source: Tinker Air Force Base]
imped_u_d (Enumeration16)	The unit of measure of input and output impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommLineOfSightLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

An electromagnetic transmission signal path requiring line of sight such as microwave or laser transmission [Source:

Attributes: *SDSFIE Entity* *communications_line_of_sight_line*

los_id (Number*)	Primary Key. A locally assigned identifier for the record.
frequency (Real)	The frequency of the signal in the LOS transmission path.
freq_u_d (Enumeration16)	The unit of measure of frequency.
power (Real)	The power of the signal in the LOS transmission path.
power_u_d (Enumeration16)	The unit of measure of signal power.
feat_desc (String60)	A description of the feature.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
tx_len (Real)	The length of the LOS transmission path.
vert_clr (Real)	The clearance in feet MHW between the lowest point under the transmission path. [Source: REEGIS]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the

	subject item's data integrity and should not be used to store the subject item's data.
vert_u_d (Enumeration16)	The unit of measure of vertical clearance.
river_mile (Real)	The river mile marker.
feat_name (String30)	Any commonly used name for the signal path.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommManholeSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A subsurface chamber, large enough for a person to enter, in the route of one or more duct runs, and affording facilities for placing and maintaining the runs, conductors, cables, and associated apparatus. [Source: SDSFIE

Attributes:	*SDSFIE Entity* *communications_manhole_site*
comhl_id (Number*)	Primary Key. A locally assigned identifier for the record.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
drain_ty_d (Enumeration16)	An indication of the method of removing stormwater from the manhole.
fc_typ_d (Enumeration16)	he type of manhole frame/cover. [Source: Austin and Pitts]
function_d (Enumeration16)	The function of the manhole. [Source: Austin and Pitts]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
no_lat_dct (Integer)	The number of lateral ducts in the manhole. [Source: Tinker Air Force Base]
spl_rck_d (Enumeration16)	A Boolean indicating the presence of splicing racks. [Source: Tinker Air Force Base]
plugs_d (Enumeration16)	A Boolean indicating the presence of ducts equipped with plugs [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
mh_size_d (Enumeration16)	The exact dimensions of a standard size manhole. [Source: Tinker Air Force Base]
rim_elv (Real)	The height of the top of the rim of the manhole measured from grade.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections. [Source: FGDC]
road_name (String30)	A common name or street name used to refer to the stretch of road that the manhole cover was located. [Source: FGDC]
area_size (Real)	The size of the area, zone, or polygon in square units.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
mhl_type_d (Enumeration16)	The type of manhole. [Source: Tinker Air Force Base]
mh_mat_d (Enumeration16)	The material composition of the manhole. [Source: AIR FORCE]
no_cables (Integer)	A number representing the total number of cables in the manhole. A cable passing through the manhole counts as one cable and a cable tying into another cable inside the manhole counts as one cable.
floor_elv (Real)	The height (or depth) of the bottom of the manhole measured from grade.
name (String20)	The standard identifier name (i.e. MH-19). [Source: AIR FORCE]
diameter (Real)	Diameter. [Source: AIR FORCE]
depth (Real)	Depth of horizontal cross-section. [Source: AIR FORCE]
width (Real)	Width of horizontal cross section. [Source: AIR FORCE]
height (Real)	Height. [Source: AIR FORCE]

size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]
date_int (Date)	Date (and Time if available) installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommMultihopPolygonArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A radio broadcast transmission which consist of a larger network such as cellular telephone; polygon represents coverage area. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_multihop_polygon_area*

gwv_id (Number*)	Primary Key. A locally assigned identifier for the record.
river_mile (Real)	The river mile marker. [Source: REEGIS]
feat_name (String30)	any commonly used name for the feature. [Source: REEGIS]
feat_desc (String60)	A description of the feature.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
frequency (Real)	The frequency of the signal. [Source: Tinker Air Force Base]
freq_u_d (Enumeration16)	The unit of measure of frequency.
power (Real)	The amount power of the transmission signal. [Source: Tinker Air Force Base]
power_u_d (Enumeration16)	The unit of measure of power.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommOtherTypeCableLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Any type of communications cable transmission not otherwise specified in the SDS. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_other_type_cable_line*

coother_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cab_use_d (Enumeration16)	Discriminator - The overall use of the cable.
offset_u_d (Enumeration16)	The unit of measure of cable offset.
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Tinker Air Force Base]
diameter (Real)	The width of a cylindrical or circular cable. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
diam_u_d (Enumeration16)	The unit of measure of diameter.
cab_elev_d (Enumeration16)	The vertical location of the cable. [Source: Tinker Air Force Base]
river_mile (Real)	The river mile marker. [Source: REEGIS]
cbl_mat_d (Enumeration16)	The material composition of the cable. [Source: Tinker Air Force Base]
feat_name (String60)	Any commonly used name for the cable. [Source: Tinker Air Force Base]

vert_clr (Real)	The clearance in feet between the lowest point under the cable line and the water's surface at Mean High Water (MHW) referenced to a reading on the appropriate gage. [Source: REEGIS]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
cbl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
cbl_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
vert_u_d (Enumeration16)	The unit of measure of vertical clearance.
coffset (Real)	The distance to the cable as measured from the edge of a paved surface. [Source: Tinker Air Force Base]
icefac_clr (Real)	The clearance in feet between the lowest point under the cable line and the ice facility surface. [Source: S-57]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommPathNodeSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Node that represents a transition of different communications path segment types (i.e. duct to aerial) or attributes (i.e. duct material type from PVC to PE). [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_path_node_site*
copathn_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
node_typ_d (Enumeration16)	Discriminator. The type of node this represents. [Source: AIR FORCE]
duct_flap (String20)	The flap on which this duct opening is located (i.e. N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, and NNW). [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
duct_tag (String8)	The location of the duct within the flap (i.e. A3). [Source: AIR FORCE]
in_diam (Real)	The inside diameter measurement of the duct, stub out, or hole. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
diam_u_d (Enumeration16)	The unit of measure for the diameter (inches or centimeters). [Source: AIR FORCE]
size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommPathSegmentLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Link that represents an enclosure path of communications items outside of a building, manhole, pedestal, or other enclosed structures. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_path_segment_line*
compath_id (Number*)	Primary Key. A locally assigned identifier for the record.

path_typ_d (Enumeration16)	A field that describes what type of thing this segment is representing. [Source: AIR FORCE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
path_cnt_d (Enumeration16)	A field that indicates what the path contains. [Source: AIR FORCE]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
percent_d (Enumeration16)	The code that represents Percent Modifier of Reef Ground Cover. [Source: NAVFAC]
cabins_d (Enumeration16)	A field to describe the type of installation. [Source: AIR FORCE]
remarks (String240)	Any narrative remarks. [Source: AIR FORCE]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground communications path. [Source: AIR FORCE]
date_int (Date)	Date Installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]
mbrs_u_d (Enumeration16)	The unit of radius for the Minimum Bending Radius, Static. [Source: AIR FORCE]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommPullboxSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box with cover used as an aid for pulling cable. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_pullbox_site*

copbx_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommRiserPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pipe-like structure used for the vertical conveyance of cable [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_riser_point*

rid_id (Number*)	Primary Key. A locally assigned identifier for the record.
duct_d (Enumeration16)	A Boolean indicating the presence of a duct. [Source: Tinker Air Force Base]

height (Real)	The height of the riser duct measured from the ground surface to the top. [Source: Tinker Air Force Base]
diameter (Real)	The width of a cylindrical or circular riser as measured from the ground surface to the top. [Source: Tinker Air Force Base]
diam_u_d (Enumeration16)	The unit of measure of diameter.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
mat_d (Enumeration16)	The code used to determine the type of material the riser is made of.
date_instl (Date)	The date the riser was installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommSensorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of equipment used to detect and measure various environmental conditions (e.g. Temperature, Fire, Intrusion, etc.) [Source: SDSFIE Austin and Pitts]

Attributes:	*SDSFIE Entity* *communications_sensor_point*
cosensr_id (Number*)	Primary Key. A locally assigned identifier for the record.
sensor_typ (String16)	The type of sensor. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
office_typ (String30)	National Hurricane Center, Nat. Severe Storm Forecast Center. [Source: HSIP]
bus_name (String80)	Name of the Weather Forecast Office.
sens_loc (String50)	The sensor location (Interior or exterior). [Source: Tinker Air Force Base]
cbl_typ_d (Enumeration16)	Sensor cable connectivity type. [Source: Tinker Air Force Base]
sens_zone (String50)	The Detection zone. [Source: Tinker Air Force Base]
annun_num (String50)	The Annunciator in which the sensor is connected. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommSplitterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device to split a signal transmission into two or more signal paths while minimizing attenuation and distortion; generally used in broadband cable systems
[Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_splitter_point*

splittr_id (Number*)	Primary Key. A locally assigned identifier for the record
in_sig_lvl (Real)	The input signal amplitude. [Source: Tinker Air Force Base]
outsig_lvl (Real)	The amplitude of the output signal. [Source: Tinker Air Force Base]
level_u_d (Enumeration16)	The unit of measure for input and output signal level. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
splt_typ_d (Enumeration16)	Discriminator - Splitter Type. [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
loss (Real)	The signal amplitude loss of splitter. [Source: Tinker Air Force Base]
loss_u_d (Enumeration16)	The unit of measure of loss.
bandwidth (Real)	The difference between the highest and lowest frequencies that a splitter can pass. [Source: Tinker Air Force Base]
band_u_d (Enumeration16)	The unit of measure of bandwidth. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_in (Real)	The input impedance of the amplifier [Source: Tinker Air Force Base]
imped_out (Real)	The output impedance of the amplifier [Source: Tinker Air Force Base]
imped_u_d (Enumeration16)	The unit of measure of input and output impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommTelephoneBoothSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of one or more outdoor telephones either in an open air bank or enclosed within a booth or other enclosure. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_telephone_booth_site*
tpbooth_id (Number*)	Primary Key. A locally assigned identifier for the record.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
area_size (Real)	The size of the area, zone, or polygon in square units.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommTelephonePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of an end user telephone set used for voice communications. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_telephone_point*

phone_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
color_d (Enumeration16)	The color of the emergency telephone. [Source: FGDC]
appearance (String50)	A description of the appearance of phone. [Source: FGDC]
status_d (Enumeration16)	A description of the status of the emergency telephone. [Source: FGDC]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections. [Source: FGDC]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
phn_typ_d (Enumeration16)	The type of phone. [Source: Tinker Air Force Base]
phone_no (String16)	The phone number of the location. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
feat_name (String80)	Indicates the name of the feature. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommTerminatorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that terminates an electrical or optical transmission media. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *communications_terminator_point*

termint_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
term_typ_d (Enumeration16)	The type of terminator. [Source: AIR FORCE]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
connt_d (Enumeration16)	The type of connector used for the terminator. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cbldim3_d (Enumeration16)	Tertiary. Wire Gauge (AWG) or Core Size (in um). [Source: AIR FORCE]
impedance (Real)	A measure of the apparent opposition in an electrical circuit to the flow of an alternating current that is analogous to the actual electrical resistance to a direct current and that is the ratio of effective electromotive force to the effective current. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
imped_u_d (Enumeration16)	The unit of measure of impedance.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommTwistedPairLine

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

Multi-conductor Communications cable generally consisting of copper wire, with each pair being twisted in order to minimize signal loss due to electromagnetic radiation. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *communications_twisted_pair_line*
twpcbl_id (Number*)	Primary Key. A locally assigned identifier for the record.
vert_clr (Real)	The clearance in feet between the lowest point under the cable line and the water's surface at Mean High Water (MHW) referenced to a reading on the appropriate gage. [Source: REEGIS]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cab_use_d (Enumeration16)	Discriminator - The overall use of the cable.
offset_u_d (Enumeration16)	The unit of measure of offset
no_pairs (Integer)	The number of wire pairs in the cable
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
cbl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
vert_u_d (Enumeration16)	The unit of measure of vertical clearance
river_mile (Real)	The reference of the river mile associated with the cable. [Source: REEGIS]
feat_name (String60)	The name of the feature. [Source: Tinker Air Force Base]
cbl_size_d (Enumeration16)	The wire gauge of the cable. [Source: Austin and Pitts]
resistance (Real)	The degree of tendency of the cable to oppose the flow of current.
resist_u_d (Enumeration16)	The unit of measure of resistance.
numpr_low (Integer)	The lowest numbered pair within the cable [Source: Tinker Air Force Base]
numpr_high (Integer)	The highest numbered pair within the cable [Source: Tinker Air Force Base]
core_typ_d (Enumeration16)	The type of core in the cable. [Source: Tinker Air Force Base]
cab_offset (Real)	The distance to the cable as measured from the edge of a paved surface. [Source: Tinker Air Force Base]
feat_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
diameter (Real)	The width of a cylindrical or circular cable. [Source: Tinker Air Force Base]
diam_u_d (Enumeration16)	The unit of measure of diameter
cab_elev_d (Enumeration16)	The vertical location of the cable.
cbl_mat_d (Enumeration16)	The material composition of the cable. [Source: Tinker Air Force Base]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommVaultSite

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A special structure for transitioning the outside cable plant from horizontal orientation to vertical orientation in preparation for termination on the distribution frame. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *communications_vault_site*
comvlt_id (Number*)	Primary Key. A locally assigned identifier for the record.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
no_circuit (Integer)	The number of circuits housed in the vault.

model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlt_mat_d (Enumeration16)	Used to describe the material composition of the vault. [Source: AIR FORCE]
date_int (Date)	The date the vault was installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]
name (String20)	The standard identifier name (i.e. MH-19). [Source: AIR FORCE]
diameter (Real)	Diameter. [Source: AIR FORCE]
depth (Real)	Depth of horizontal cross-section. [Source: AIR FORCE]
width (Real)	Width of horizontal cross section. [Source: AIR FORCE]
height (Real)	Height. [Source: AIR FORCE]
size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CommWaveguideLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A cable designed to confine and direct the propagation of electromagnetic waves. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *communications_waveguide_line*

wvg_id (Number*)	Primary Key. A locally assigned identifier for the record.
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
cbl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
feat_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
diameter (Real)	The width of a cylindrical or circular cable. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
diam_u_d (Enumeration16)	The unit of measure code.
cab_elev_d (Enumeration16)	The vertical location of the cable. [Source: Tinker Air Force Base]
cbl_mat_d (Enumeration16)	The material composition of the cable. [Source: Tinker Air Force Base]
river_mile (Real)	The river mile marker. [Source: REEGIS]
feat_name (String60)	The name of the feature. [Source: Tinker Air Force Base]
vert_clr (Real)	The clearance in feet between the lowest point under the cable line and the water's surface at Mean High Water (MHW) referenced to a reading on the appropriate gage. [Source: REEGIS]
vert_u_d (Enumeration16)	The unit of measure of vertical clearance.
cab_typ_d (Enumeration16)	The type of cable. [Source: Tinker Air Force Base]
frequency (Real)	The number of cycles per unit time of the energy in the waveguide..

	[Source: Tinker Air Force Base]
freq_u_d (Enumeration16)	The unit of measure of frequency.
cab_offset (Real)	The distance to the cable as measured from the edge of a paved surface. [Source: Tinker Air Force Base]
offset_u_d (Enumeration16)	The unit of measure of cable offset.
cab_use_d (Enumeration16)	Discriminator - The overall use of the cable.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

DbspliceSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A enclosed structure that represents a splice case (aerial or buried). [Source: SDSFIE Air Force]

Attributes: *SDSFIE Entity* *dbsplice_site*

dbsplic_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
name (String20)	The standard identifier name (i.e. MH-19). [Source: AIR FORCE]
date_int (Date)	Date Installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
spec_con_d (Enumeration16)	The condition of the species at the time it was sighted. [Source: NAVFAC]
ecs_typ_d (Enumeration16)	The type of encapsulate used. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
cas_typ_d (Enumeration16)	Used to describe the type of splice case. [Source: AIR FORCE]
cas_mat_d (Enumeration16)	Used to describe the material composition of the splice case. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectronicMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Device that aids location of buried communications equipment or pathways. [Source: SDSFIE NGA/NIMA]

Attributes: *SDSFIE Entity* *electronic_marker_point*

elemrk_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject

	item's data.
passve_d (Enumeration16)	Is it a passive device? (Y/N). [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
metertyp_d (Enumeration16)	A label describing the features of the electrical system that the meter is measuring. [Source: AIR FORCE]
elmpur_d (Enumeration16)	Purpose of this marker. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
type_d (Enumeration16)	Discriminator - The type of marker. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

InternetCenterSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A site that contains information about the internet center. [Source: SDSFIE Air Force]

Attributes: *SDSFIE Entity* *internet_center_site*

internt_id (Number*)	Primary Key. A locally assigned identifier for the record.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
area_size (Real)	The size of the area, zone, or polygon in square units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

JunctionNodePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The communications junction node represents a transition node of cable path. For example, it can represent terminal, splice, or cross connection points. It can also indicate the transition of the cable into a duct opening.

Attributes: *SDSFIE Entity* *junction_node_point*

cojunct_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
conectedto (String30)	Table name of Child Equipment that links to this node. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

LoadCapacitorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Device used to eliminate problems with high-frequencies on long telephone lines using capacitance. Spliced into the line. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *load_capacitor_point*

cap_id (Number*)	Primary Key. A locally assigned identifier for the record.
dist_u_d (Enumeration16)	The unit of measure of distance to the CO. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cap_u_d (Enumeration16)	The unit of measure of capacitance. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
capacit (Real)	Capacitance of each capacitor. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
co_dist (Real)	Distance from the build-out unit to the Central Office. [Source: AIR FORCE]
narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
fr_rgl_u_d (Enumeration16)	The unit of measure for low frequency range. [Source: AIR FORCE]
ldcnum_d (Enumeration16)	Number of capacitors making up the build-out unit. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

LoadCoilPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Device used to eliminate problems with high-frequencies on long telephone lines using inductance. Spliced into the line. [Source: SDSFIE Air Force]

Attributes:	*SDSFIE Entity* *load_coil_point*
coil_id (Number*)	Primary Key. A locally assigned identifier for the record.
ldccas_d (Enumeration16)	Type of case in which the load coil(s) are assembled. [Source: AIR FORCE]
ldctyp_d (Enumeration16)	Type of loading coils. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
dist_u_d (Enumeration16)	The unit of measure of distance to the CO. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
load_pt_no (Integer)	Load point number. [Source: AIR FORCE]
co_dist (Real)	Distance from the load coil assembly to the Central Office. [Source: AIR FORCE]
narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
agl_u_d (Enumeration16)	Antenna height above ground level UOM. [Source: AIR FORCE]
kingdom_d (Enumeration16)	Identifies one of the five kingdoms into which all living organisms are classified. [Source: NAVFAC]
ldcnum_d (Enumeration16)	Number of coils making up the load coil assembly. [Source: AIR FORCE]
ldcsym_d (Enumeration16)	Type of load coil system used. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

MediaConverterPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

Device used to convert from one type of signal transmission media to another. [Source: SDSFIE Tinker Air Force

Attributes: *SDSFIE Entity* *media_converter_point*

medcvrt_id (Number*)	Primary Key. A locally assigned identifier for the record.
connt2_d (Enumeration16)	The connector type at port two. [Source: AIR FORCE]
maxcellt_d (Enumeration16)	For flexible MaxCell inner ducts, this indicates the type used. [Source: AIR FORCE]
mtimzone_d (Enumeration16)	Typical Maritime Zones. [Source: NAVFAC]
netbw_d (Enumeration16)	The data transmission rate through the repeater. [Source: AIR FORCE]
cbltyp1_d (Enumeration16)	The type of cable accommodated by port one. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cbltyp2_d (Enumeration16)	The type of cable accommodated by port two. [Source: AIR FORCE]
netprc_d (Enumeration16)	The network protocol accommodated by the media converter. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
vehtype_d (Enumeration16)	The type of vehicles located in the parking area. [Source: AIR FORCE]
connt1_d (Enumeration16)	The connector type at port one. [Source: AIR FORCE]
volt_req_d (Enumeration16)	Voltage Requirements. [Source: AIR FORCE]
mcnvty_d (Enumeration16)	Converter Type. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NetworkSystemsSite

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

The Network Standard System name, architecture (i.e. protocol), number of facilities where installed and number of users of system. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *network_systems_site*

net_sys_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: Tinker Air Force Base]
net_aff_d (Enumeration16)	The broadcasting network to which the facility is associated. [Source: HSIP]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
conv_type (String50)	A type of media converter. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
feat_name (String80)	The name for the standard system. [Source: Tinker Air Force Base]

arch_protl (String60)	The Protocol Description. [Source: Tinker Air Force Base]
num_users (String50)	The number of users of standard system. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RadarSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of equipment used for determining the presence and position of an object by measure the direction and timing of electromagnetic waves. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *radar_site*
rdr_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
rad_typ_d (Enumeration16)	The operating spectrum of the radar. [Source: Tinker Air Force Base]
power (Real)	The amount of power the radar emits. [Source: Tinker Air Force Base]
power_u_d (Enumeration16)	The unit of measure of power.
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RadioPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of equipment used to transmit and receive communications signals via electromagnetic waves. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *radio_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

RadioReceiverSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location to store individual radio receiver sections that may be in one piece of radio equipment. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *radio_receiver_site*
radiorx_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: Tinker Air Force Base]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in

	linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rf_asn_frq (String50)	The frequencies assigned to this unit. [Source: Tinker Air Force Base]
rf_high (Integer)	The highest capable operating frequency unit. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
rf_low (Integer)	The lowest capable operating frequency unit. [Source: Tinker Air Force Base]
rf_bndwdth (Integer)	The bandwidth of signal (LMR is 25k wide, 12.5k narrow). [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Tinker Air Force Base]
mod_pos (Integer)	From the left of unit, module number for multiple transmitters in one radio. [Source: Tinker Air Force Base]
rf_p25t_d (Enumeration16)	Is the unit capable of operating P25 Trunking (Y/N)? [Source: Tinker Air Force Base]
rf_p25c_d (Enumeration16)	Is the unit capable of operation P25 Conventional (Y/N)? [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RadioTransmitterSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location to store individual radio transmitter sections that may be in one piece of radio equipment. [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *radio_transmitter_site*
radiotx_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: Tinker Air Force Base]
area_size (Real)	The size of the area, zone, or polygon in square units.
rf_low (Integer)	The lowest capable operating frequency unit. [Source: Tinker Air Force Base]
rf_p25t_d (Enumeration16)	Is the unit capable of operating P25 Trunking (Y/N)? [Source: Tinker Air Force Base]
rf_p25c_d (Enumeration16)	Is the unit capable of operation P25 Conventional (Y/N)? [Source: Tinker Air Force Base]
mod_pos (Integer)	From the left of unit, module number for multiple transmitters in one radio. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Tinker Air Force Base]
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rf_asn_frq (String50)	The frequencies assigned to this unit. [Source: Tinker Air Force Base]
rf_fccid (String50)	FCC emission designators. [Source: Tinker Air Force Base]
rf_bndwdth (Integer)	The bandwidth of signal (LMR is 25k wide, 12.5k narrow). [Source: Tinker Air Force Base]
rf_maxwats (Integer)	The maximum output power of this unit in watts. [Source: Tinker Air Force Base]

rf_high (Integer)	The highest capable operating frequency unit. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RelayStationPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A piece of equipment used to relay communications signals. [Source: SDSFIE Air Force]

Attributes: *SDSFIE Entity relay_station_point*

radio_id (Number*)	Primary Key. A locally assigned identifier for the record.
serial_no (String16)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
fac_typ_d (Enumeration16)	The type of broadcast facility located at this location. [Source: Tinker Air Force Base]
net_aff_d (Enumeration16)	The broadcasting network to which the facility is associated. [Source: Tinker Air Force Base]
radio_ty_d (Enumeration16)	Types of radio points [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rad_typ_d (Enumeration16)	Discriminator - Radio type [Source: Tinker Air Force Base]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
acct_code (String20)	The owners account code. [Source: Tinker Air Force Base]
base_ilc (String20)	ILC code of the installation where this equipment is located. [Source: Tinker Air Force Base]
deployab_d (Enumeration16)	Is unit flagged as deployable (Y/N)? [Source: Tinker Air Force Base]
enc_lvl (String20)	The level of encryption unit supports (TRS is not standard on this). [Source: Tinker Air Force Base]
enc_max_d (Enumeration16)	The highest level of encryption unit can operate [Source: Tinker Air Force Base]
enc_prot_d (Enumeration16)	Type of protocol used to provide encryption. [Source: Tinker Air Force Base]
feat_name (String80)	Any commonly used name of the feature. [Source: HSIP]
lmr_net (String20)	The network is this unit assigned to (LMR or Conventional). [Source: Tinker Air Force Base]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Tinker Air Force Base]
narrowbn_d (Enumeration16)	Narrowband operation 12.5kHz capable (Y/N)? [Source: Tinker Air Force Base]
power_d (Enumeration16)	Alternating Current or Direct Current (AC/DC). [Source: Tinker Air Force Base]
pwr_phase (Integer)	The phase requirement if AC. [Source: Tinker Air Force Base]
pwr_volt (Integer)	The voltage required in Volts. [Source: Tinker Air Force Base]
pwr_watts (Integer)	The maximum power draw. [Source: Tinker Air Force Base]
rack_no (String20)	The rack identifier the unit is in. [Source: Tinker Air Force Base]
rack_pos (String20)	The position in the rack if applicable. [Source: Tinker Air Force Base]
rf_lmrwd_d (Enumeration16)	Is the unit wideband operation capable (Y/N)? [Source: Tinker Air Force Base]
statn_name (String20)	Indicates the Commercial Identifier. [Source: HSIP]
supp_sys (String20)	The system that does this asset support (LMR, Giant Voice, Milstar).

	[Source: Tinker Air Force Base]
t_load_u_d (Enumeration16)	Units used for thermal loading. [Source: Tinker Air Force Base]
therm_load (Integer)	Thermal loading of unit for HVAC calculations. [Source: Tinker Air Force Base]
trnk_p25_d (Enumeration16)	Is the unit capable of operating trunking P25 (Y/N)? [Source: Tinker Air Force Base]
trunk_num (Integer)	Trunking site ID (LMR). [Source: Tinker Air Force Base]
tx_analg_d (Enumeration16)	Analog transmission capable (Y/N)? [Source: Tinker Air Force Base]
tx_digl_d (Enumeration16)	Digital transmission capable (Y/N)? [Source: Tinker Air Force Base]
vehicle_no (String20)	For mobile units assigned to vehicles (LMR). [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RepeaterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Device used to receive, clean up a signal, and then retransmit it. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *repeater_point*

repeatr_id (Number*)	Primary Key. A locally assigned identifier for the record.
netbw_d (Enumeration16)	The data transmission rate through the repeater. [Source: AIR FORCE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

SatellitePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Communications Satellite. Used to retransmit signals from space. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *satellite_point*

satelte_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
comn_name (String30)	Common Name. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
norad_no (String5)	NORAD Designation Number. [Source: AIR FORCE]
origin (String50)	Country of Origin. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
lvehicle (String25)	Launch vehicle used. [Source: AIR FORCE]
ldate (Integer)	Launch date. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]

narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SegmentedCableLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Used to represent a portion of the entire cable sheath as it is shown in an enclosed structure (building, manhole, vault, etc) so that the cable sheath does not have to be drawn between enclosed structures. [Source: SDSFIE Tinker

Attributes: *SDSFIE Entity* *segmented_cable_line*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

SegmentedCableSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location all communication cable types. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *segmented_cable_site*

seg_cbl_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: Tinker Air Force Base]
core_typ_d (Enumeration16)	Attributes for Core Types. [Source: Air Force]
buf_typ_d (Enumeration16)	The types of buffers. [Source: Tinker Air Force Base]
cab_use_d (Enumeration16)	The overall use of the cable. [Source: Tinker Air Force Base]
ins_typ_d (Enumeration16)	The installation type code for cables. [Source: Tinker Air Force Base]
feat_desc (String60)	A description of the feature. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cbl_sht_d (Enumeration16)	The type of cable sheathing or insulation. [Source: Tinker Air Force Base]
cbl_len (Real)	A measurement of the longer of two linear axes. [Source: Tinker Air Force Base]
diam_u_d (Enumeration16)	The unit of measure of diameter. [Source: Tinker Air Force Base]
feat_name (String60)	Any commonly used name for the cable. [Source: Tinker Air Force Base]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
seg_num (Integer)	The segment in which the cable section is located. [Source: Tinker Air Force Base]
cab_typ_d (Enumeration16)	The type of cable. [Source: Tinker Air Force Base]
cab_no (String16)	Cable name or number. [Source: Tinker Air Force Base]
begincount (Integer)	Starting count of pairs or strands. [Source: Tinker Air Force Base]
endcount (Integer)	Ending count of pairs or strands. [Source: Tinker Air Force Base]
totalcount (Integer)	Total number of pairs or strands associated with a particular cable. [Source: Tinker Air Force Base]

sheath_dia (Real)	Overall Diameter of sheath. [Source: Tinker Air Force Base]
media_diam (Real)	Diameter of gauge of individual media. [Source: Tinker Air Force Base]
media_ty_d (Enumeration16)	The types of media. [Source: Tinker Air Force Base]
date_ins (Date)	Date Installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ServiceLoopPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Service loops contain extra cable that may be required in the future. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *service_loop_point*

cosrvlp_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
length (Real)	The length of cable contained in the service loop. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

SpeakerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that converts an electrical signal into sound. Generally used as part of a public address, giant voice, or mass notification system. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *speaker_point*

cospekr_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections. [Source: AIR FORCE]
size_u_d (Enumeration16)	Size (Diameter, Depth, Width, Height) Unit of Measure. [Source: AIR FORCE]
weather_d (Enumeration16)	Indicates a weather proof speaker case. [Source: AIR FORCE]
multp25_d (Enumeration16)	Indicates a 25 Volt multi-tap transformer. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
multp70_d (Enumeration16)	Indicates a 70 Volt multi-tap transformer. [Source: AIR FORCE]
name (String20)	The local name of the Speaker. [Source: AIR FORCE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: AIR FORCE]
rms_watage (Integer)	Average power handling capability over time, in watts AKA average power or mean power. [Source: AIR FORCE]
diameter (Real)	Diameter, if round or cylindrical. [Source: AIR FORCE]
width (Real)	Width. [Source: AIR FORCE]

height (Real)	Height. [Source: AIR FORCE]
depth (Real)	Depth. [Source: AIR FORCE]
freq_rng_h (Integer)	Highest effective frequency speaker emits in Hz. [Source: AIR FORCE]
freq_rng_l (Integer)	Lowest effective frequency speaker emits in Hz. [Source: AIR FORCE]
weight (Real)	Weight of speaker. [Source: AIR FORCE]
dispertn_h (Integer)	Angle of horizontal sound dispersion in degrees. [Source: AIR FORCE]
dispertn_v (Integer)	Angle of vertical sound dispersion in degrees. [Source: AIR FORCE]
sensitivty (String50)	Speaker sensitivity or efficiency measured as dB/W/m - decibels output for an input of one nominal watt measured at on meter from the speaker. [Source: AIR FORCE]
narrative (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
dist_u_d (Enumeration16)	The unit of measure of distance to the CO. [Source: AIR FORCE]
weight_u_d (Enumeration16)	The unit of measure for weight. [Source: AIR FORCE]
spkimp_d (Enumeration16)	Input impedance. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

VerticalSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A vertical is part of a mainframe where the outside cable plant terminates. [Source: SDSFIE Tinker Air Force Base]

Attributes: *SDSFIE Entity* *vertical_site*

covrtcl_id (Number*)	Primary Key. A locally assigned identifier for the record.
covtbk_d (Enumeration16)	The type of the connector block. [Source: AIR FORCE]
covtht_d (Enumeration16)	The height of this vertical in the frame. [Source: AIR FORCE]
covtma_d (Enumeration16)	The spacing between mounting brackets for mounting MDF connector blocks. [Source: AIR FORCE]
covtmb_d (Enumeration16)	The type of mounting bar. [Source: AIR FORCE]
covtsw_d (Enumeration16)	The width of the mounting shelf for connector blocks. [Source: AIR FORCE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
covtty_d (Enumeration16)	The type of vertical. [Source: AIR FORCE]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
grndbar_d (Enumeration16)	Indicates the presences of a grounding bar. [Source: AIR FORCE]
grdrails_d (Enumeration16)	Indicates the presences of a guardrail. [Source: AIR FORCE]
endguard_d (Enumeration16)	Indicates the presences of an end guard. [Source: AIR FORCE]
remarks (String240)	A description or other unique information concerning the subject item, unlimited length (SDSFIE export limited to first 240 characters). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

VideoSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of equipment used to receive or transmit the visual portion of a communications signal.
used to receive or transmit
the visual portion of a
communications signal [Source: SDSFIE Tinker Air Force Base]

Attributes:	*SDSFIE Entity* *video_site*
video_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity. [Source: Tinker Air Force Base]
conv_type (String60)	A type of media converter. [Source: Tinker Air Force Base]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_name (String30)	Name of the recreation feature. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String16)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
feat_desc (String30)	The name or type of the equipment. [Source: Tinker Air Force Base]
sys_desc (String60)	The system description. [Source: Tinker Air Force Base]
trans_type (String50)	The transmission type protocol. [Source: Tinker Air Force Base]
bandwidth (Real)	The data rate. [Source: Tinker Air Force Base]
crypto_d (Enumeration16)	Classified or Unclassified (Y/N)? [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

VoiceSwitchSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location of equipment used to receive or transmit the visual portion of a communications signal. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *voice_switch_site*
vswitch_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity. [Source: Tinker Air Force Base]
voip_trk (String50)	Number of Trunks Voice IP switch -to- DCO PBX. [Source: Tinker Air Force Base]
num_users (String50)	The number of users capability in Voice Mail system. [Source: Tinker Air Force Base]
trk_used (String50)	The total number of trunk lines being used. [Source: Tinker Air Force Base]
remarks (String240)	Any narrative remarks concerning the voice switch. [Source: Tinker Air Force Base]
lin_cap_no (String50)	The number of lines capability. [Source: Tinker Air Force Base]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
num_lused (String50)	The number of lines used. [Source: Tinker Air Force Base]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.

sw_type (String20)	The code for the different switch types. [Source: Tinker Air Force Base]
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item. [Source: Tinker Air Force Base]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item. [Source: Tinker Air Force Base]
soft_ver (String50)	The software version release number. [Source: Tinker Air Force Base]
sw_cap (String50)	The number of lines that the software is capable of running. [Source: Tinker Air Force Base]
hw_cap (String50)	The total hardware line capacity. [Source: Tinker Air Force Base]
anlg_lused (Integer)	The number of analog lines being used. [Source: Tinker Air Force Base]
digt_lused (Integer)	The number of digital lines being used. [Source: Tinker Air Force Base]
isdn_lused (Integer)	The number of ISDN lines being used. [Source: Tinker Air Force Base]
trk_cap (String50)	The total number of trunk lines capacity. [Source: Tinker Air Force Base]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Utilities Air

CompressedAirDrainSepPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

condensation drain in a compressed air line. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *compressed_air_drain_sep_point*

PKAirsepID (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
UserFlag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FeatDesc (String60)	Any brief description of the feature.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
metadata (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
CodeOwner (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CompressedAirFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise alter a pipe carrying compressed air. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *compressed_air_fitting_point*

PKAirflngID (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
UserFlag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FeatDesc (String60)	Any brief description of the feature.
FittypDOM (Enumeration16)	Discriminator. The type of fitting used for the compressed air unit.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither

	in the network.
metadata (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
CodeOwner (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CompressedAirPipeLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry compressed air from location to location [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *compressed_air_pipe_line*

PKAirpipeID (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
UserFlag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FeatDesc (String60)	Any brief description of the feature.
DepthUOM (Enumeration16)	The unit of measure for depth. [Source: CENTER]
FeatLen (Real)	The overall length of the feature. [Source: Center]
Coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground air line pipe. [Source: Air Force]
CodeOwner (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
Impedance (Real)	The number representing the total opposition to flow.
metadata (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CompressedAirTankPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A chamber for holding compressed air prior to its use. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *compressed_air_tank_point*

PKAirtnkID (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
UserFlag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FeatDesc (String60)	Any brief description of the feature.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
metadata (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
CodeOwner (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

CompressedAirValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device to control flow through a compressed air line. [Source: SDSFIE REEGIS]

Attributes: *SDSFIE Entity* *compressed_air_valve_point*

PKAirvlvID (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
UserFlag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FeatDesc (String60)	Any brief description of the feature.

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
metadata (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
CodeOwner (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

Group: Electrical

ElectHeadBoltOutletPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device which supplies electric current in cold weather climates for vehicle heating. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_head_bolt_outlet_point*

headbol_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: Air Force]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
type_d (Enumeration16)	The type of head bold outlet. [Source: Air Force]
voltage_d (Enumeration16)	The type of voltage used. [Source: Air Force]
no_plugs (Integer)	The number of plug-ins available. [Source: Air Force]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: Air Force]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalBusLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A rigid metallic conductor (copper or aluminum), typically in the form of a flat bar, angle stock, or square tubing. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_bus_line*

busgrp_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
bil_rat_d (Enumeration16)	The insulators basic insulation level rating.
bus_mat_d (Enumeration16)	The material composition of the electrical bus group.
cbl_use_d (Enumeration16)	The use or purpose of the cable group.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
frame_ty_d (Enumeration16)	The substation structural frame configuration.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
voltage_d (Enumeration16)	The voltage of the bus group.
no_conduct (Integer)	The total number of ungrounded conductors in the cable.
no_neutral (Integer)	The number of neutral conductors.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
reactance (Real)	The reactance of the bus provided by the manufacturer.
sizeneut_d (Enumeration16)	The size of the neutral conductors.

resistance (Real)	The resistance of the bus provided by the manufacturer.
feat_len (Real)	The overall length of the feature. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalCableLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A group of conductors used to carry electrical energy from point to point. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *electrical_cable_line*

cblgrp_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
condsize_d (Enumeration16)	The size of a single ungrounded conductor in the cable group in American Wire Gauge (AWG) units.
cbl_len (Real)	The length of the cable between nodes.
cbl_mat_d (Enumeration16)	The material composition of the cable.
cfg_ty_d (Enumeration16)	The cable mounting configuration on the pole or tower.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
voltage_d (Enumeration16)	The system voltage applied to the cable group.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
instl_ty_d (Enumeration16)	Discriminator. The installation type code.
insulmat_d (Enumeration16)	The type of material with which the conductors are insulated from each other and from their surroundings.
neutsize_d (Enumeration16)	The size of a single neutral conductor in American Wire Gauge (AWG) units.
no_conduct (Integer)	The total number of ungrounded conductors in the cable.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_neutral (Integer)	The total number of grounded conductors in a ductbank.
no_phases (Integer)	The number of phases routed by this cable group.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
river_mile (Real)	River mile marker. [Source: REEGIS]
feat_name (String30)	Any commonly used name for the feature. [Source: REEGIS]
cbl_typ_d (Enumeration16)	This value differentiates similar entities by use or type. [Source: REEGIS]
catnav_d (Enumeration16)	Category of navigation line [Source: S-57]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalDuctbankLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A tubular structure that provides protection for underground cables contained in conduit. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_ductbank_line*

ductbnk_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
duct_mat_d (Enumeration16)	An indication of the type of material of which the duct is composed.
dbk_len (Real)	The total length of the ductbank from source to load. Manholes and pullboxes should not break the measurement.
dbk_size_d (Enumeration16)	A two dimensional description of the physical size of the ductbank including units of measure (e.g., 2 ft x 2 ft, 3 m x 3 m).

dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
voltage_d (Enumeration16)	The maximum voltage in the ductbank.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
no_ducts (Integer)	An indicator of the number of conduits or wireways found in the ductbank.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_spares (Integer)	The number of spare ducts enclosed in the ductbank for future use.
river_mile (Real)	River mile marker. [Source: REEGIS]
feat_name (String30)	Name of the electrical underground conduit. [Source: REEGIS]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalGeneratorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A machine which converts mechanical energy into electrical energy. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_generator_point*

genratr_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
cool_ty_d (Enumeration16)	The type of cooling for the generator engine.
autotran_d (Enumeration16)	An indicator as to whether or not an automatic transfer switch exist. (yes or no) An automatic transfer switch is an electromechanical device used to automatically change states in the event of a power failure on the primary electrical service to use an
gen_ty_d (Enumeration16)	This value differentiates similar entities by use or type.
eng_model (String20)	The engine Model, Product, Catalog, or Item Number.
eng_ser_no (String20)	The engine serial number.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
engine_hp (Integer)	The power rating of the prime mover of the generator in horsepower.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure of oil capacity.
power_fact (Real)	The cosine of the phase angle between the voltage and the current that the generator creates.
fuel_ty_d (Enumeration16)	The type of fuel required to operate the prime mover of the generator.
hertz_d (Enumeration16)	The frequency of the electrical signal that the generator creates.
oil_cpcty (Real)	The manufacturer recommended amount of oil that the generator engine requires to operate properly.
voltage_d (Enumeration16)	The potential of the electrical energy that the generator creates.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
kva_rate (Integer)	The rating of the complex power that the generator creates.
kw_rate (Integer)	The rating of the real power that the generator creates.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_phases (Integer)	The number of phases to which this device provides reactive power.
sound_d (Enumeration16)	An indicator as to whether or not Insulation was added to dampen the transmission of noise. (yes or no)

phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
num_pipes (Integer)	The number of powerlines entering the power plant. [Source: HSIP]
cap_u_d (Enumeration16)	The unit of measure for the capacity. [Source: HSIP]
pwrsource (String65)	The source of the power used by the plant to generate electricity. [Source: HSIP]
fac_name (String65)	A commonly used name for the facility. [Source: HSIP]
fuel_del_d (Enumeration16)	The delivery method of the fuel used at the power plant. [Source: HSIP]
num_lines (Integer)	The total number of powerlines exiting the power plant. [Source: HSIP]
num_stat (Integer)	The total number of substations associated with the power plant. [Source: HSIP]
gen_cpcty (Real)	The total generating capacity of the power plant. [Source: HSIP]
com_aff (String80)	The name of the company that operates the power plant. [Source: HSIP]
num_gen (Integer)	The total number of generators at the power plant. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalGroundPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where the electrical configuration is grounded. [Source: SDSFIE Air Force]

Attributes: *SDSFIE Entity* *electrical_ground_point*

elgrnd_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

ElectricalJunctionSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or metal) typically located below grade with above grade access in which cables intersect, connect, or pass through. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_junction_site*

elemnhl_id (Number*)	Primary Key. An operator generated identifier unique for a electrical manhole.
drain_ty_d (Enumeration16)	An indication of the method of removing storm water from the manhole.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
dia_u_d (Enumeration16)	The unit of measure for diameter.
floor_elv (Real)	The height (or depth) of the bottom of the manhole measured from grade.
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]
mh_dia (Real)	The maximum linear distance measured horizontally across a manhole.
no_cables (Integer)	A number representing the total number of cables in the manhole. A cable passing through the manhole counts as one cable and a cable tying into another cable inside the manhole counts as one cable.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
rim_elv (Real)	The height of the top of the rim of the manhole measured from grade.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc., identifying the location of the electrical equipment. [Source: SDSFIE FGDC Utilities

Attributes:	*SDSFIE Entity* *electrical_marker_point*
elmark_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

ElectricalMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the electrical power supplied to a facility or through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *electrical_meter_point*
meter_id (Number*)	Primary Key. An operator generated identifier unique for a electric meter.
amp_rate (Integer)	The maximum continuous current rating of the meter.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_kva (String12)	The limit of the complex power which the demand meter can record.
meter_ty_d (Enumeration16)	A label describing the features of the electrical system that the meter is measuring.
hertz_d (Enumeration16)	The frequency of the electrical system on which the meter should be used.

owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
voltage_d (Enumeration16)	The potential of the electrical system on which the meter may be used.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
kw_rate (Integer)	The power rating on the meter based on the current and potential transformer ratios.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
mtr_const (Integer)	The multiplication factor by which one must multiply the difference in present and previous meter readings to determine actual power consumed.
mtr_use_d (Enumeration16)	An indication of the type of service the meter is monitoring.
no_phases (Integer)	The number of phases that the meter monitors.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
drgvesty_d (Enumeration16)	The types of dredging vessels. [Source: USACE]
metertyp_d (Enumeration16)	A label describing the features of the electrical system that the meter is measuring. [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalMotorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A machine that converts electrical energy into mechanical energy. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_motor_point*

motor_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
enclty_d (Enumeration16)	The type enclosure the motor has to protect it from outside elements like the weather.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
power_fact (Real)	The nameplate power factor at which the motor operates at full load. The power factor is the cosine of the phase angle between the voltage and the current.
hertz_d (Enumeration16)	The nameplate frequency rating of the motor.
voltage_d (Enumeration16)	The nameplate voltage rating of the motor.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
insul_cl_d (Enumeration16)	The classification of the motor's insulation.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
start_ty_d (Enumeration16)	The startup configuration for the motor.
motor_hp (Real)	The output power rating of the motor in units of horsepower.
motor_ty_d (Enumeration16)	A label representing the name of a certain category of motors in which the motor fits based on common features of construction with other motors in the same category.

no_phases (Integer)	The number of phases at which the motor was designed to operate.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
wind_ty_d (Enumeration16)	A label representing the configuration of the stator winding connections.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalRegulatorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An electrical device that maintains its output voltage at a certain level even though its input voltage varies in a certain range over time. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *electrical_regulator_point*
elereg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_manuf (Date)	The date of manufacturer for the subject item. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
cool_ty_d (Enumeration16)	The method of controlling the temperature of the regulator.
instl_ty_d (Enumeration16)	The type installation of the subject item.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
fuse_rate (Integer)	The current rating of the fuse protecting the regulator. This will be on the primary side.
fuse_ty_d (Enumeration16)	A label chosen from a standard list of labels describing the characteristics of the fuse.
oil_cpcty (Real)	The manufacturer suggested volume of oil that should be maintained inside the regulator to assure safe and efficient operation.
prcnt_tap (Real)	The percentage of the voltage that will be changed by moving the connection up or down one tap.
kva_rate (Integer)	The maximum continuous complex power rating of the regulator.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sec_volt_d (Enumeration16)	The voltage on the load side of the regulator with the associated units given.
weight_u_d (Enumeration16)	The unit of measure for weight.
no_phases (Integer)	The number of phases regulated by this device.
no_taps (Integer)	The number of available points of connection on the regulator which may be used to change the voltage.
pri_volt_d (Enumeration16)	The voltage on the source side of the regulator with the associated units given.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
reg_type_d (Enumeration16)	The type of voltage regulator.
reg_use_d (Enumeration16)	An indication of whether the regulator is on a line or in a substation.
reg_weight (Integer)	The force of the regulator toward the center of the earth due to the regulator's mass.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalRiserPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where underground cable transitions to overhead. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_riser_point*

riser_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
mat_d (Enumeration16)	The material composition of the pole riser.
instl_date (Integer)	The date the riser was installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_desc (String60)	Any brief description of the feature.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalSplicePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The connection of two separate cables at their ends or the tapping of a conductor along the path of another conductor. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_splice_point*

elsplce_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

ElectricalSubstationSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A facility in an electrical system where the voltage is reduced from transmission levels to distribution levels. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_substation_site*

substa_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
volt_out_d (Enumeration16)	The line-to-line output voltage of the substation.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_oper (Integer)	The normal continuous amount of complex power that the substation provides.
cpcty_rate (Real)	The maximum continuous amount of complex power that the substation can provide.

cpcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
no_trans (Integer)	The total number of transformers presently in use at the substation.
no_circuit (Integer)	The total number of circuits that are being fed by the substation.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sst_ty_d (Enumeration16)	A label indicating the type of service that the substation performs (e.g. distribution substation, facility substation).
no_spares (Integer)	The number of spare bays for possible substation expansion.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
volt_in_d (Enumeration16)	The line-to-line voltage of the transmission line that is the source for the substation.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
feat_name (String30)	Any commonly used name for the substation. [Source: USGS]
fac_name (String65)	A commonly used name for the facility. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectricalSwitchPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device which closes and opens (connects and disconnects) an electrical circuit. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *electrical_switch_point*
switch_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
instl_ty_d (Enumeration16)	Discriminator. The installation type code.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
voltage_d (Enumeration16)	The system voltage of the electrical line at the point in which the switch is inserted.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
weight_u_d (Enumeration16)	The unit of measure for weight.
no_phases (Integer)	The number of phases opened by the switch
no_switch (Integer)	The number of switches at this installation. Each switch has its own record.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
sw_cub_no (String20)	A locally assigned switching cubicle number or designator.
switch_dim (String20)	A three dimensional description of the amount of space which a switch occupies (e.g., 2 x 1 x 4).
switch_rat (Integer)	The maximum continuous amount of current to which the switch should be subjected.

swt_sta_d (Enumeration16)	The positional condition of a switch during normal circuit conditions (e.g., normally-open, normally closed).
swt_ty_d (Enumeration16)	A label chosen from a standard list of labels indicating the characteristics of a switch.
swt_weight (Integer)	The force of the switch toward the center of the earth due to the switch's mass.
fuse_size (Integer)	The size of the fuse associated with the switch. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectTransformrBankPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A location containing one or more transformers. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_transformer_bank_point*

tranbnk_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
no_trans (Integer)	The number of transformers in the transformer bank.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sec_volt_d (Enumeration16)	The line-to-line voltage of the electrical system that the transformer bank serves.
tran_cap1 (Integer)	The capacity of the first transformer contained in the transformer bank. Used exclusively for displaying the capacities in the bank.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
tran_cap2 (Integer)	The capacity of the second transformer contained in the transformer bank. Used exclusively for displaying the capacities in the bank.
tran_cap3 (Integer)	The capacity of the third transformer contained in the transformer bank. Used exclusively for displaying the capacities in the bank.
mount_d (Enumeration16)	Discriminator. The type of mounting for the transformer bank.
total_kva (Real)	The total kva rate for all transformers attached to the transformer bank.
feeder_no (String20)	An operator generated identifier locally used to identify the feeder to the transformer bank.
pri_volt_d (Enumeration16)	The line-to-line voltage of the electrical system that serves as the source for the transformer bank.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
date_instl (Date)	The date on which the subject item was originally installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
date_last (Date)	The last inspection date of the subject item. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
cond_d (Enumeration16)	The condition of the subject item when last inspected.
phase_1_d (Enumeration16)	The phase number for the first transformer group.
kva_1_d (Enumeration16)	The capacity of each transformer in a group. (i.e. 2-50kva / 1-25kva, 50 is the capacity of each transformer in the first group - 25 is the capacity of each transformer in the second group.) There can be no more than two groups in a bank.
no_tfrs_1 (Integer)	The number of transformers in the first group.
phase_2_d (Enumeration16)	The phase number for the second transformer group.
no_tfrs_2 (Integer)	The number of transformers in the second group.
kva_2_d (Enumeration16)	The capacity of each transformer in a group. (i.e. 2-50kva / 1-25kva, 50 is the capacity of each transformer in the first group - 25 is the capacity of each transformer in the second group.) There can be no more than two groups in a bank.

pcb_d (Enumeration16)	A boolean indicating whether the transformer contains PCB's and can be classified as wet or not (YES = Y and NO = N)? [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElectXformerVaultPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An enclosure housing one or more transformers. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *electrical_transformer_vault_point*

tranvlt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
no_trans (Integer)	The number of transformers housed inside the transformer vault.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ExteriorLightingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Locations of point sources of general external lighting. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *exterior_lighting_point*

ext_lit_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
lit_typ_d (Enumeration16)	Discriminator - Various kinds of mounts for external lights.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
sensor_d (Enumeration16)	A Boolean code indicating whether or not the light has a night sensor. [Source: USACE OPERATIONS]
watts_d (Enumeration16)	The light fixture wattage specification.
voltage_d (Enumeration16)	The system voltage applied to the light fixture.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
no_lamps (Integer)	The total number of lamps in fixture.
fixture_ht (Real)	The height above the ground/base surface of the light fixture.
mount_ht (Real)	The fixture mounting height.
narrative (String240)	Any additional comments or text.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilityElectricUtilitySite

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

An electrical power utility company or organization's certificated area of jurisdiction or responsibility as approved by a federal, state, or local utility regulatory authority. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *utility_electric_utility_site*
e_util_id (Number*)	Primary Key. A locally assigned identifier for the record.
num_pipes (Integer)	Number of pipelines entering facility. [Source: HSIP]
num_lines (Integer)	Number of powerlines existing on a facility. [Source: HSIP]
num_gen (Integer)	Total number of power generators at the plant. [Source: HSIP]
num_stat (Integer)	Number of substations at the facility. [Source: HSIP]
area_size (Real)	The size of the area, zone, or polygon in square units.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
re_connect (Integer)	Total number of residential type service connections.
co_connect (Integer)	Total number of commercial (i.e., businesses, industrial) type service connections.
elutname (String50)	Name of electrical power utility or system.
pop_served (Integer)	Population served by electrical power utility or system.
elecutid (String30)	Identifier assigned to the electrical power utility or system by the appropriate federal, state, or local regulatory authority.
elecutcap (Real)	Total design capacity of the electrical power utility or system (e.g. megawatts per day).
capr_u_d (Enumeration16)	Capacity rate unit of measure (e.g., megawatt per day).
utilown_d (Enumeration16)	General category or type of electric utility or system owner.
elecsource (String50)	Source of electrical power distributed by electric utility (e.g., electrical power plants owned by utility, electrical power purchased from other utilities).
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Fuel

FuelAirEliminatorPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A device or structure placed in the fuel distribution system to separate air from petroleum products. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_air_eliminator_point*
fulair_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

FuelAnodePoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A material used for fuel distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_anode_point*
fulanod_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anode_wght (Real)	The initial weight of the anode or anode packet.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
material_d (Enumeration16)	The type of material composition of the anode or anode packet.
wght_u_d (Enumeration16)	The unit of measure for weight.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelFarmSite

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

An area designated for the storage of POL products which normally includes multiple tanks (above or below ground), berms, and monitoring wells. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_farm_site*
fuelfar_id (Number*)	Primary Key. A locally assigned identifier for the record. [Source: HSIP]
jet_u_d (Enumeration16)	The unit of measure for the jet fuel storage quantity. [Source: HSIP]
feat_name (String30)	A commonly used name for the feature. [Source: HSIP]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
num_pipes (Integer)	The quantity of pipes that access the fuel farm. [Source: HSIP]
gas_u_d (Enumeration16)	The unit of measure for the gas storage quantity. [Source: HSIP]
jet_cpcty (Real)	The quantity of jet fuel that can be stored in the facility. [Source: HSIP]
lub_cpcty (Real)	The total storage capacity of lubricants at the fuel farm. [Source: HSIP]
lub_u_d (Enumeration16)	The unit of measure for the lubricant storage quantity. [Source: HSIP]
gas_cpcty (Real)	The total gas storage capacity for the fuel farm. [Source: HSIP]
num_tanks (Integer)	The total number of tanks in the fuel farm. [Source: HSIP]
oil_cpcty (Real)	The quantity of oil that can be stored in the facility. [Source: HSIP]
oil_u_d (Enumeration16)	The unit of measure for the oil storage quantity. [Source: HSIP]
strgpet_d (Enumeration16)	A boolean indicating whether the farm is a part of the Strategic Petroleum Reserve (Y - is a part of the reserve, N - is not a part of the reserve)? [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither

	in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelFilterStrainerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device through which fuel is passed to remove impurities to the fuel. Usually placed in fuel lines near fill points. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_filter_strainer_point*
fulflt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

FuelFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise alter a pipe carrying fuel. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_fitting_point*
fulfitt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fit_lgth (Real)	The overall length of the fitting.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1 gas hydrant, 2 meter, 6 pipe).
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
coverdepth (Real)	Depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line fitting. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level

	metadata record(s).

FuelHydrantPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

Location where fuel is control discharged to users. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_hydrant_point*
fulhydr_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
hyd_ty_d (Enumeration16)	The particular kind, class, or group of hydrant.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
dia_u_d (Enumeration16)	The unit of measure for diameter.
outcon1dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of the largest hydrant outlet.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
outcon2dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of the second largest hydrant outlet.
outcon3dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of the smallest hydrant outlet.
hyd_elv (Real)	The elevation of the hydrant, measured at the hydrant outlet, in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
press_resd (Real)	The measured pressure at a hydrant or connection during a flow test conducted at the subject hydrant or connection.
press_stat (Real)	The numeric pressure head on the subject item under static (i.e., no flow or demand) conditions in the utility system.
press_u_d (Enumeration16)	The unit of measure of pressure.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlv_st_d (Enumeration16)	The style of the valve.
country_d (Enumeration16)	The 2-letter Country Designator. [Source: Air Force]
no_hydrnts (Integer)	The number of Refill for the hydrants. [Source: Air Force]
nozzl_ty_d (Enumeration16)	Fuel System Hydrant Cart Nozzle Type Code. [Source: Air Force]
truck_nr (Integer)	The number of the cart truck. [Source: Air Force]
truck_ty_d (Enumeration16)	The different code types of the cart truck. [Source: Air Force]
remarks (String240)	Any narrative remarks about the fuel hydrant . [Source: Air Force]
nozzle_nr (Integer)	The number of fuel system hydrant cart nozzles. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelJunctionSite

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in fuel systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_junction_site*
fulmnhl_id (Number*)	Primary Key. An operator generated identifier unique for a fuel manhole.

airrfvlv_d (Enumeration16)	Indicates whether or not there is an air relief valve installed on subject item? (yes/no)
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
no_valves (Integer)	The number of valves inside the subject item.
mh_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
status_d (Enumeration16)	The status of the manhole indicating its' usability.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry fuel from location to location (main line, service line, vent line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_line*
fulpipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
catprot_d (Enumeration16)	Indicates whether or not the pipe has been provided with cathodic protection? (yes or no).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]
fuel_ty_d (Enumeration16)	The type of fuel transported in this pipe.
press_norm (Real)	The normal operating pressure of the fuel pipe.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	Discriminator. The use code for a fuel line.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1 gas hydrant, 2 meter, 6 pipe).
press_u_d (Enumeration16)	The unit of measure for pressure.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
piplty_d (Enumeration16)	The location of the pipeline in relevance to the earth's surface. [Source: USGS]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
coverdepth (Real)	Depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line pipe. [Source: Air Force]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc to indicate the presence of fuel lines. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_marker_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

FuelMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the quantity and or rate of fuel to a facility or through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_meter_point*
fulmetr_id (Number*)	Primary Key. An operator generated identifier unique for a fuel meter.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
instl_ty_d (Enumeration16)	The type installation of the subject item.
meter_elv (Real)	The elevation at the centerline of the meter, in feet (English units) or meters (SI units) above some datum.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed,

	abandoned, etc.), from lists or entered from field inspections.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
mtr_custmr (String20)	The name of the individual, company, or government agency served by the subject item.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1 gas hydrant, 2 meter, 6 pipe).
srvc_mtr_d (Enumeration16)	An indicator as to whether or not the meter is installed on a service line? (yes or no)
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelOilWaterSeparatorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A filtering device placed in the fuel stream specifically to remove oil and water from the fuel. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_oil_water_separator_point*
sep_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_per_x (Date)	The date the current permit expires for the subject item. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
disposal (String30)	Brief description of how the waste is disposed.
cpcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_u_d (Enumeration16)	The unit of measure for flow rate.
grtchbr_d (Enumeration16)	An indicator as to whether or not the subject item has a grit chamber. (yes or no)
flowcpcty (Real)	The flow capacity of the subject item.
oil_cpcty (Real)	The retention capacity of the oil-water separator.
sep_code (String2)	The oil-water separator code. Usually defined as OW.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sep_contnt (String20)	Separator contents
temp_optim (Real)	The optimum operating temperature for the subject item.
temp_u_d (Enumeration16)	The unit of measure for temperature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
sep_name (String12)	The site specific identification name or number assigned to the subject item.

sep_procss (String30)	The specific type of separation process.
sep_volume (Real)	The volume of the oil-water separator.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
vol_u_d (Enumeration16)	The unit of measure of volume.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelPumpBoosterStatnPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a fuel distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_pump_booster_station_point*
fulstat_id (Number*)	Primary Key. A unique operator generated designator used to identify a station (pump station, pressure reducing station).
disposttn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
design_d (Enumeration16)	Discriminator. The design of the pump/booster station.
cpcty_alrm (Real)	Capacity alarm level.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
cpcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
fuel_src_d (Enumeration16)	The source of fuel for the pumps.
nodal_elv (Real)	The elevation of subject node, which is used in performing computer analyses of the water distribution system. The node elevation is usually the ground elevation at the subject node, or the elevation of the subject item located at the subject node (e.g.,
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
sta_cpcty (Real)	The pump station's output capacity (e.g., gpm) rating (with all pumps operating) at a specific total dynamic head (TDH), which correlates to normal system pressure head or design pressure head.
sta_len (Real)	The length dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
sta_ty_d (Enumeration16)	The type of station.
sta_width (Real)	The width dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
no_pumps (Integer)	The total number of pumps located at the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_name (String30)	Any commonly used name for the fuel pump booster station point. [Source: USGS]
prodct_d (Enumeration16)	The product being pumped or carried by the pipeline. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelPumpPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A mechanical device for a fuel system that draws material into itself through an entrance port and forces the material out through an exhaust port. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_pump_point*
pump_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
outflw_act (Real)	The actual measured pump flow output.
cool_mth_d (Enumeration16)	The method by which the pump is cooled.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
cpcty_rate (Real)	The manufacturer's pump capacity (e.g., gpm) rating at a specific design total dynamic head (TDH), usually depicted by a pump curve.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_u_d (Enumeration16)	The unit of measure for flow rate.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	The particular application, or use the subject item.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
prime_meth (String15)	The method by which the pump is primed.
prim_rqd_d (Enumeration16)	An indicator as to whether or not the pump has to be primed? (yes or no).
pump_hp (Real)	The power generated by the pump, equal in the U.S. to 746 watts and nearly equivalent to the English gravitational unit of the same name that equals 550 foot-pounds of work per second.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
bank_d (Enumeration16)	The bankside of the river that the feature is located on. [Source: USACE]
river_mile (Real)	River mile marker. [Source: USACE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelRectifierPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the fuel distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_rectifier_point*
rect_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
cool_mth_d (Enumeration16)	The method by which the rectifier is cooled, typically air or oil.
encl_typ_d (Enumeration16)	The type of enclosure used to protect the rectifier.
volt_in_d (Enumeration16)	The input AC voltage to the rectifier.
currnt_out (Real)	The output direct current from the rectifier to the anode system.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]
currnt_u_d (Enumeration16)	The unit of measure for electrical current.
volt_out_d (Enumeration16)	The output DC voltage from the rectifier to the anode system.
int_mtr_d (Enumeration16)	An indicator as to whether or not the rectifier has an internal meter, yes/no.
no_phases (Integer)	The number of phases to which this device provides reactive power.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelRegulatorReducerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pressure regulator located in the fuel line automatically reduces the pressure on the downstream side of the valve to a preset magnitude. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_regulator_reducer_point*
reg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
press_in (Real)	The design fuel system pressure in the line on inlet side of the pressure regulator.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
press_out (Real)	The design or maximum system pressure in the line on outlet side of the pressure reducing station.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1 gas hydrant, 2 meter, 6 pipe).
press_reqd (Real)	The required maximum outlet pressure setting for the regulator.
press_u_d (Enumeration16)	The unit of measure for pressure.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelSourcePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The point from which the fuel is supplied a product for processing and distribution. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_source_point*
source_id (Number*)	Primary Key. A unique, user defined identifier for each record or

	instance of an entity.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelTankSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An above or below grade receptacle or chamber for holding fuels on a temporary basis prior to transfer or use. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *fuel_tank_site*
tank_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
alt_vlv_d (Enumeration16)	Indicates whether or not the tank has an altitude valve which controls the flow into the tank? (yes or no).
area_size (Real)	The size of the area, zone, or polygon in square units.
ovrflw_elv (Real)	The elevation measured at the point of overflow, or entrance, into the tank overflow pipe,, in feet (English units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
head_norm (Real)	The normal operating head for the subject item.
head_u_d (Enumeration16)	The unit of measure for head.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
fuel_ty_d (Enumeration16)	The type fuel stored in the tank.
press_norm (Real)	The normal operating pressure of the fuel tank.
invert_elv (Real)	The elevation measured at bottom of the tank, in feet (English units) or meters (SI units) above some datum. mean sea level.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tank_st_d (Enumeration16)	The particular kind, class, or group of tank (e.g., elevated, hydropneumatic, etc.).
tank_use_d (Enumeration16)	The particular kind or use of the tank.
tank_width (Real)	The exterior width dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.

press_u_d (Enumeration16)	The unit of measure for pressure.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
tank_cpcty (Real)	The tank's storage capacity (e.g., gallons, ft3, etc).
tank_dia (Real)	The inside diameter of the tank, measured from the interior wall surface to the opposite interior wall surface.
tank_lgth (Real)	The length dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
strgpet_d (Enumeration16)	A boolean indicating whether there is a Strategic Petroleum Reserve (Y = YES or N = NO). [Source: HSIP]
num_tanks (Integer)	Maximum number of storage tanks, all POL. [Source: HSIP]
num_pipes (Integer)	Number of pipelines entering/exiting facility. [Source: HSIP]
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
fllstandrt (Integer)	The Rate of the Fillstand. [Source: Air Force]
remarks (String240)	The narrative remarks about the fuel tank. [Source: Air Force]
resply_cap (Integer)	The Resupply Capacity. [Source: Air Force]
country_d (Enumeration16)	2-letter Country Designator. [Source: Air Force]
sec_contam (String20)	The secondary containment that is present. [Source: Army]
sec_cont_d (Enumeration16)	A boolean indicating whether or not the secondary containment that is present (Y = YES or N = NO). [Source: AIR FORCE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FuelValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a fuel line. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *fuel_valve_point*

valve_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	The site specific use of the valve.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlv_dia_d (Enumeration16)	The manufacturer's nominal diameter
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
feat_name (String30)	Any commonly used name for the fuel valve point. [Source: USGS]

coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line valve. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Gas

NatGasRegReducerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pressure regulator automatically reduces the pressure on the downstream side of the valve to a preset magnitude. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *natural_gas_regulator_reducer_point*

gasreg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
press_in (Real)	The design gas system pressure in the line on inlet side of the pressure regulator
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
press_out (Real)	The design or maximum system pressure in the line on outlet side of the pressure reducing station.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
press_reqd (Real)	The required maximum outlet pressure setting for the regulator.
press_u_d (Enumeration16)	The unit of measure for pressure.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasAnodePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A material used for natural gas distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *natural_gas_anode_point*

anode_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anode_wght (Real)	The initial weight of the anode or anode packet.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
material_d (Enumeration16)	The type of material composition of the anode or anode packet.

wght_u_d (Enumeration16)	The unit of measure for weight.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasFillPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Location where gas is control discharged to users. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *natural_gas_fill_point*

hydrant_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
hyd_ty_d (Enumeration16)	The particular kind, class, or group of hydrant.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dia_u_d (Enumeration16)	The unit of measure for diameter.
outcon1dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
outcon2dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
outcon3dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
gas_ty_d (Enumeration16)	The type of fuel or gas dispensed, carried, used or otherwise handled by the subject item.
hyd_elv (Real)	The elevation of the hydrant, measured at the hydrant outlet, in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
source_d (Enumeration16)	The source of fuel for the subject item.
press_resd (Real)	The measured pressure at a hydrant or connection during a flow test conducted at the subject hydrant or connection.
press_stat (Real)	The numeric pressure head on the subject item under static (i.e., no flow or demand) conditions in the utility system.
press_u_d (Enumeration16)	The unit of measure for pressure.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlv_st_d (Enumeration16)	The style of the valve.
capacity (Real)	The storage capacity of the hydrant.
cap_u_d (Enumeration16)	The hydrant storage capacity unit of measure.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Hardware used to cap, plug, or join pieces of pipe. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *natural_gas_fitting_point*

gasfitt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
fittin_len (Real)	The overall length of the fitting.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1 gas hydrant, 2 meter, 6 pipe).
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line valve. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasJunctionPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in natural gas systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *natural_gas_junction_point*

gasmnhl_id (Number*)	Primary Key. An operator generated identifier unique for a natural gas manhole.
airrfvlv_d (Enumeration16)	Indicates whether or not there is an air relief valve installed on subject item? (yes/no)
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
no_valves (Integer)	The number of valves inside the subject item.
mh_len (Real)	The length dimension of the subject item, from outside face of exterior

	wall/side to outside face of opposite exterior wall/side.
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry natural gas from location to location (main line, service line, vent line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *natural_gas_line*
gaspipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
catprot_d (Enumeration16)	Indicates whether or not the pipe has been provided with cathodic protection? (yes or no).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
gas_ty_d (Enumeration16)	The type of fuel or gas dispensed, carried, used or otherwise handled by the subject item.
press_norm (Real)	The normal operating pressure of the gas pipe.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	Discriminator. The use code for natural gas pipes.
source_d (Enumeration16)	The source of fuel for the subject item.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in

	meter, 6in pipe).
press_u_d (Enumeration16)	The unit of measure for pressure.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
piplty_d (Enumeration16)	The location of the pipeline in relevance to the earth's surface. [Source: USGS]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line valve. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc to indicate natural gas. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *natural_gas_marker_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

NaturalGasMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the quantity and or rate of gas to a facility or through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *natural_gas_meter_point*
gasmetr_id (Number*)	Primary Key. An operator generated identifier unique for a gas meter.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
instl_ty_d (Enumeration16)	The type installation of the subject item.
meter_elv (Real)	The elevation of the meter above a specific datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dia_u_d (Enumeration16)	The unit of measure for diameter.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
mtr_custmr (String20)	The name of the individual, company, or government agency served by the subject item.
source_d (Enumeration16)	The source of fuel for the subject item.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
srvc_mtr_d (Enumeration16)	An indicator as to whether or not the meter is installed on a service line? (yes or no)
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.

user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_max (Real)	Maximum working pressure.
press_u_d (Enumeration16)	Pressure Unit of measure code.
capacity (Real)	Capacity of the gas meter.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasSourcePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The point from which natural gas is supplied for processing and distribution. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *natural_gas_source_point*

gassrce_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NaturalGasValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a natural gas line. [Source: SDSFIE NGA/NIMA]

Attributes: *SDSFIE Entity* *natural_gas_valve_point*

gasvlv_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
use_d (Enumeration16)	Discriminator. The site specific use of the valve.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the

	operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlv_dia_d (Enumeration16)	The manufacturer's nominal diameter.
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground fuel line valve. [Source: CENTER]
end_date (Integer)	The date the evacuation route ended. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: NGA/NIMA]
branch_sys (String12)	An operator generated identifier that is a unique site specific name or number designation of a branch or isolated area of a natural gas distribution system.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

UtilityGasUtilitySite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A gas utility company or organization's certificated area of jurisdiction or responsibility as approved by a federal, state, or local utility regulatory authority. [Source: SDSFIE Army]

Attributes:	*SDSFIE Entity* *utility_gas_utility_site*
g_util_id (Number*)	Primary Key. A locally assigned identifier for the record.
re_connect (Integer)	Total number of residential type service connections.
co_connect (Integer)	Total number of commercial (i.e., businesses, industrial) type service connections.
gassource (String50)	Source of natural gas distributed by gas utility (e.g., wells owned by gas utility, purchased from another gas utility (provide name), etc.).
state (String30)	Name of state where gas utility or system provides service.
city (String30)	Name of city served by gas utility or system (if applicable).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
utilown_d (Enumeration16)	General category or type of gas utility or system owner.
gasutname (String50)	Name of the gas utility or system.
gasutilid (String30)	Identifier assigned to the gas utility or system by the appropriate federal, state, or local regulatory authority.
pop_served (Integer)	Population served by gas system or utility.
gasutcap (Real)	Total design capacity of the gas utility or system. (e.g., cubic feet per day).
capr_u_d (Enumeration16)	Capacity rate unit of measure (e.g., cubic feet per day).
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Heating & Cooling Systems

HeatCoolAnchorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A structure, typically concrete, used to either guide the expansion of pipes or used to fix the movement of some part of the expansion section. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_anchor_point*
anchor_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anch_typ_d (Enumeration16)	Discriminator. This value differentiates similar entities by use or type.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

HeatCoolAnodePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device used in utility distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_anode_point*
hcsanod_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anode_wght (Real)	The initial weight of the anode or anode packet.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
material_d (Enumeration16)	The type of material composition of the anode or anode packet.
wght_u_d (Enumeration16)	The unit of measure for weight.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise attach to a heating and cooling system pipe. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_fitting_point*
hcsfitt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
fit_elv (Real)	The elevation measured at centerline of the fitting, in feet (English units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dia_in (Real)	The inside, or interior, diameter of the fitting.
dia_u_d (Enumeration16)	The unit of measure for the subject item diameter.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI

	units) above some datum.
fit_lgth (Real)	The overall length of the fitting.
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
size_u_d (Enumeration16)	This attribute provides information concerning the unit of measure for size of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground heating and cooling system line fitting. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolJunctionSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in heating/cooling systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_junction_site*
hcsmnhl_id (Number*)	Primary Key. An operator generated identifier unique for a heating/cooling system manhole.
airrfvlv_d (Enumeration16)	Indicates whether or not there is an air relief valve installed on subject item? (yes/no)
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
no_valves (Integer)	The number of valves inside the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
mh_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item,

	limited to 240 characters.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
date_acqrd (Date)	Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). Date on which item was acquired or installed. [Source: Cherry Point]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
area_size (Real)	The size of the area, zone, or polygon in square units. [Source: Cherry Point]
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units. [Source: Cherry Point]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry a heating/cooling substances from location to location (main line, service line, vent line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_line*
hcspipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
catprot_d (Enumeration16)	Indicates whether or not the pipe has been provided with cathodic protection? (yes or no).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
exp_loop_d (Enumeration16)	The expansion loop of the heating and cooling system.
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
grnd_elv_1 (Real)	The elevation of the ground surface at node_id_1, in feet (English units) or meters (SI units) above some datum.
grnd_elv_2 (Real)	The elevation of the ground surface at node_id_2, in feet (English units) or meters (SI units) above some datum.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
slope_u_d (Enumeration16)	The unit of measure for slope.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tape_d (Enumeration16)	Location marker tape or wire is installed above underground pipe to

	facilitate locating with a magnetometer? (yes or no).
use_d (Enumeration16)	Discriminator. The use code for heating and cooling pipes.
press_norm (Real)	The normal operating pressure of the heating and cooling system pipe.
temp_u_d (Enumeration16)	The unit of measure for temperature.
temp_norm (Real)	The normal operating temperature of the subject item.
temp_max (Real)	The manufacturer's or industry standard's maximum temperature rating of the subject item.
feat_desc (String60)	Narrative text providing a brief description of the feature. [Source: Cherry Point]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_u_d (Enumeration16)	The unit of measure for pressure.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground heating and cooling system line pipe. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc., installed either directly above or immediately adjacent heating/cooling equipment marking its location. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_marker_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

HeatCoolMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the quantity and or rate of water to a facility or through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_meter_point*
hcsmetr_id (Number*)	Primary Key. An operator generated identifier unique for a heating/cooling meter.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
instl_ty_d (Enumeration16)	The type installation of the subject item.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
meter_elv (Real)	The elevation at the centerline of the meter, in feet (English units) or meters (SI units) above some datum.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
serial_no (String15)	The manufacturer's serial, or unique identification number of the

	subject item.
srvc_mtr_d (Enumeration16)	An indicator as to whether or not the meter is installed on a service line? (yes or no)
size_u_d (Enumeration16)	The unit of measure for size.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
mtr_custmr (String20)	The name of the individual, company, or government agency served by the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolPlantArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A building or structure containing boilers, furnaces, chillers, pumps and appurtenant equipment to produce the water temperature/pressure combinations which are distributed to other buildings and facilities. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_plant_area*
hcsplnt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
capac_cool (Real)	The plant's rated capacity (e.g., tons), which signifies the peak constant cooling ability of the plant.
capac_heat (Real)	The plant's rated capacity (e.g. boiler_hp), which signifies the peak constant heating ability of the plant.
area_size (Real)	The size of the area, zone, or polygon in square units.
cap_c_u_d (Enumeration16)	The unit of measure for cooling capacity.
cap_h_u_d (Enumeration16)	The unit of measure for heating capacity.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
press_cool (Real)	The nominal chilled water pressure leaving the plant.
press_heat (Real)	The nominal hot water or steam pressure leaving the plant.
prod_typ_d (Enumeration16)	The type of product (chilled water, high temp, etc) produced at this plant.
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
temp_cool (Real)	The nominal chilled water temperature leaving the plant.
temp_heat (Real)	The nominal hot water temperature leaving the plant.
temp_u_d (Enumeration16)	The unit of measure for temperature.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the

	operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
plant_elv (Real)	The finished floor elevation of the energy plant, in feet (English units) or meters (SI units) above some datum.
plant_lgth (Real)	The overall length dimension of the energy plant.
plantwidth (Real)	The overall width dimension of the energy plant.
press_u_d (Enumeration16)	The unit of measure for pressure.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolPumpPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A mechanical device for heating and cooling system that draws material into itself through an entrance port and forces the material out through an exhaust port. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *heat_cool_pump_point*

hcspump_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cool_mth_d (Enumeration16)	The method by which the pump is cooled.
cpcty_act (Real)	The measured capacity of the pump operating under actual normal head and flow conditions.
cpcty_rate (Real)	The manufacturer's pump capacity (e.g., gpm) rating at a specific design total dynamic head (TDH), usually depicted by a pump curve.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gpm).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
pwr_req_d (Enumeration16)	The voltage of the electrical power required by the subject item.
prime_meth (String15)	The method by which the pump is primed.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
prim_rqd_d (Enumeration16)	An indicator as to whether or not the pump has to be primed? (yes or no).
tdh_rated (Real)	The total dynamic head upon which the capacity_rated is based.
tdh_u_d (Enumeration16)	The unit of measure for Total Dynamic Head (TDH), usually expressed in feet (English units).
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	The particular application, or use the subject item.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolRectifierPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that changes alternating current to direct current for an impressed current cathodic protection system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_rectifier_point*
hcsrect_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
cool_mth_d (Enumeration16)	The method by which the rectifier is cooled, typically air or oil.
encl_typ_d (Enumeration16)	The type of enclosure used to protect the rectifier.
volt_in_d (Enumeration16)	The input AC voltage to the rectifier.
volt_out_d (Enumeration16)	The output DC voltage from the rectifier to the anode system.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
currnt_out (Real)	The output direct current from the rectifier to the anode system.
currnt_u_d (Enumeration16)	The unit of measure for electrical current.
int_mtr_d (Enumeration16)	An indicator as to whether or not the rectifier has an internal meter, yes/no.
no_phases (Integer)	The number of phases to which this device provides reactive power.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolRegulatorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A regulator located in the heating/cooling line that automatically reduces the pressure on the downstream side of the valve to a preset magnitude. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *heat_cool_regulator_point*
hcsreg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
press_in (Real)	The design water system pressure in the waterline on inlet side of the pressure regulator.
press_out (Real)	The design water system pressure in the waterline on outlet side of the pressure regulator.
press_reqd (Real)	The required maximum outlet pressure setting for the regulator.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

press_u_d (Enumeration16)	The unit of measure for pressure.
reg_elv (Real)	The elevation of the pressure regulator, measured at the regulator centerline.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
type_d (Enumeration16)	The kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HeatCoolValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a heating and cooling line. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *heat_cool_valve_point*

hcsvlv_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
size_u_d (Enumeration16)	The unit of measure for size.
use_d (Enumeration16)	The site specific use of the valve.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
vlv_size (Real)	The manufacturer's nominal size designation.
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground heating and cooling system line valve. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Storm

CulvertCenterline

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

The centerline of a pipe or structure, the purpose of which is for the interception and conveyance of surface water transported in open drainage lines and ditches. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *culvert_centerline*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management

	responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StmswrDrainageBasinArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

An area in which surface runoff collects and from which it is carried by a drainage system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_drainage_basin_area*
basin_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
grade_mean (Real)	The average grade in the drainage basin.
grade_min (Real)	The minimum or shallowest grade in the drainage basin.
grade_u_d (Enumeration16)	The unit of measure for grade.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
grade_max (Real)	The maximum or steepest grade in the drainage basin.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StmswrDrainageDivideLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

The border of a drainage basin where one side directs runoff to one basin and the other side directs runoff to a different basin. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_drainage_divide_line*
sewrdrn_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StmswrOilWatSeparatorSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device or structure placed in the storm sewer stream to separate water from oil products. [Source: SDSFIE USMC]

Attributes:	*SDSFIE Entity* *storm_sewer_oil_water_separator_site*
stosep_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
date_per_x (Date)	The date the current permit expires for the subject item. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)

dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
disposal (String30)	Brief description of how the waste is disposed.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_u_d (Enumeration16)	The unit of measure for flow rate.
grtchbr_d (Enumeration16)	An indicator as to whether or not the subject item has a grit chamber. (yes or no)
flowcpcty (Real)	The flow capacity of the subject item.
oil_cpcty (Real)	The retention capacity of the oil-water separator.
sep_code (String2)	The oil-water separator code. Usually defined as OW.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
temp_optim (Real)	The optimum operating temperature for the subject item.
temp_u_d (Enumeration16)	The unit of measure for temperature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
sep_contnt (String20)	Separator contents
sep_name (String12)	The site specific identification name or number assigned to the subject item.
sep_procss (String30)	The specific type of separation process.
sep_volume (Real)	The volume of the oil-water separator.
area_size (Real)	The size of the area, zone, or polygon in square units.
vol_u_d (Enumeration16)	The unit of measure of volume.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StmswrStillingBasinSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where the energy from turbulent water flow is reduced. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_sewer_stilling_basin_site*

sbn_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
date_const (Date)	The date on which the subject item construction was complete and user occupancy provided. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
depth_avg (Real)	The average depth of containment measured from normal operating pool.
out_cntr (String12)	The outlet control.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
inv_elv_av (Real)	The average elevation of the bottom of the stilling basin.
sbn_len (Real)	The overall length of the stilling basin.

sbn_width (Real)	The average width dimension of the stilling basin, measured from top of opposite side slopes.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
x_dikes_d (Enumeration16)	An indicator whether cross dikes exists in the subject item or not (yes or no).
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormCulvertSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pipe or structure, the purpose of which is for the interception and conveyance of surface water transported in open drainage lines and ditches [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_culvert_site*

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StormSewerArmorPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Any location where armor stone is used for erosion protection in an open channel. [Source: SDSFIE REEGIS]

Attributes: *SDSFIE Entity* *storm_sewer_armor_point*

armor_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
bed_mat_d (Enumeration16)	The type of bedding material beneath the channel armor.
bot_width (Real)	The bottom width of the armor measured along the base of the armor.
armor_len (Real)	The overall length of the armor protection.
armor_ty_d (Enumeration16)	The type of channel armor used.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
inv_elv_1 (Real)	The elevation of the bottom of the armor at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of the armor at node_id_2 in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
reach_name (String20)	An operator generated identifier for the reach of an open channel.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.

slope_left (Real)	The slope of the left channel side expressed as a percentage.
slope_rght (Real)	The slope of the right channel side expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
top_width (Real)	The top width of the armor.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerCulvertLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

The components of a storm drainage collection system including pipes, fittings, fixtures, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_culvert_line*
culvert_id (Number*)	Primary Key. A locally assigned identifier for the record.
angle (Real)	The angle that the structure symbol should appear on a map. [Source: USACE]
control (String30)	The means in which the water being controlled; i.e., by gate, weir, flashboard, pump, lock or uncontrolled? [Source: USACE]
peak_flow (Real)	Q10 runoff (cubic feet per second of the 10 year peak flow associated with a ten year storm). [Source: ARMY]
purpose (String30)	A summary of the intentions with which the data set was developed. [Source: USACE]
estuary (String25)	The name of the Estuary, if applicable. [Source: USACE]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
canal_name (String30)	The canal name that the structure is located on. [Source: USACE]
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
gat_type_d (Enumeration16)	Discriminator. The type of gate. [Source: Center]
drng_pat_d (Enumeration16)	The drainage pattern of the material surrounding the culvert. [Source: Center]
slope_u_d (Enumeration16)	The code indicating the unit of measure of slope. [Source: Center]
drng_zone (String50)	The local name of assigned the hydrographic drainage zone. [Source: Center]
feat_name (String30)	Any commonly used name of the culvert. [Source: Center]
mat_tex_d (Enumeration16)	The texture of the material surrounding the culvert. [Source: Center]
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage. [Source: Center]
inv_elv_2 (Real)	The dimension indicating the elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum. [Source: Center]
inv_elv_1 (Real)	The dimension indicating the elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum. [Source: Center]
culv_lgth (Real)	The length of culvert, measured from node to node along the culvert centerline . [Source: Center]
lined_d (Enumeration16)	A boolean indicating whether the culvert is lined or not (Y = YES and N = NO)? [Source: Center]

flow_type (String15)	The type of flow such as culvert, lock, pump, spillway or weir. [Source: USACE]
mat_d (Enumeration16)	The material composition of the subject item, such as concrete or corrugated metal, etc. [Source: USACE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: ARMY]
source (String20)	The event's source of information. [Source: USACE]
verified_d (Enumeration16)	A boolean indicating whether that a structure has been repositioned and with good source (Y = YES or N = NO). [Source: USACE]
critical_d (Enumeration16)	A boolean indicating whether this is a 'critical' structure (Y = YES or N = NO). [Source: USACE]
volt_req_d (Enumeration16)	Voltage Requirements. [Source: AIR FORCE]
size_d (Enumeration16)	The size of the diameter of the pipe opening in inches. [Source: ARMY]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerDischargePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Any location where storm sewer pipes directly discharge effluent. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_sewer_discharge_point*

stodcrg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
systyp_d (Enumeration16)	The type of stormwater discharge system. [Source: USACE OPERATIONS]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerDownspoutPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pipe normally attached to the side of a building or structure which conveys rainfall runoff from the roof area to the ground surface or the storm sewer system. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_sewer_downspout_point*

dnspt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dnspt_lgth (Real)	The length of the downspout, measured from highest point to its discharge point.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
base_elv (Real)	The elevation of the discharge point of the downspout in feet (English

	units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
grnd_elv (Real)	The elevation of the ground surface at the discharge point, in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise alter a pipe carrying storm sewage. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_fitting_point*
stofitt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fit_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
fit_lgth (Real)	The overall length of the fitting.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground storm water line fitting. [Source: Air Force]

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerFloodArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

Areas where the storm sewer drainage capacity has been exceeded resulting in localized flooding. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_flood_area*
flood_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
flow_u_d (Enumeration16)	The unit of measure for flow rate.
flowwidth (Real)	The top flow width.
fld_flow (Real)	The flow rate of the flood based on the flow elevation.
fld_freq (Real)	The statistical reoccurring frequency of the flood measured in years up to the probable maximum flood (PMF). Typical values are 5-yr, 10-yr, 25-yr, 50-yr, 100-yr, 500-yr, etc.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_elv (Real)	The average flood elevation.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerFlowControlPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Devices for a storm water system to control the pressure in and out of the open channel. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_flow_control_point*
flctdev_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
cntrl_elv (Real)	The elevation at the centerline of the flow control device, in feet (English units) or meters (SI units) above some datum.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
instl_ty_d (Enumeration16)	The type installation of the subject item.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
fct_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
fct_len (Real)	The overall length of the flow control.
fct_width (Real)	The width dimension of the subject item, measured from opposite inside faces.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item,

	limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerGatePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A movable barrier used in an open channel. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_gate_point*
stogate_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
gate_st_d (Enumeration16)	The particular kind, class, or group of gate.
gate_width (Real)	The width dimension of the subject item, measured from opposite inside faces.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
gate_lgth (Real)	The overall length of the storm gate.
gate_cpcty (Real)	The flow capacity of the storm gate.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerHeadwallLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A wall (of any material) depicted as a line at the end of a culvert or drain to serve one or more of the following purposes: protect fill from scour or undermining; increase hydraulic efficiency, divert direction of flow, and serve as a retaining wall. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_headwall_line*
impedance (Real)	The number representing the total opposition to flow.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StormSewerHeadwallPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A wall (of any material) depicted as a point at the end of a culvert or drain to serve one or more of the following purposes: protect fill from scour or undermining; increase hydraulic efficiency, divert direction of flow, and serve as a retaining wall. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_headwall_point*
sewrwal_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
feat_name (String30)	Any commonly used name for the storm sewer headwall. [Source: REEGIS]
river_mile (Real)	River mile marker. [Source: REEGIS]
poll_typ_d (Enumeration16)	Pollution type. [Source: REEGIS]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
top_elv (Real)	The elevation of the top of wall above the pipe.
feat_len (Real)	The overall length of the feature. [Source: Center]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerInletPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where water is collected and received into the utility system. [Source: SDSFIE FGDC Utilities

Attributes:	*SDSFIE Entity* *storm_sewer_inlet_point*
stoinlt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_dgn (Real)	The design flow capacity of the subject item.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
inlet_st_d (Enumeration16)	Discriminator. The step domain code for an inlet.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
weir_elv (Real)	Elevation of the weir invert.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerJunctionPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in storm sewer systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_junction_point*
manhole_id (Number*)	Primary Key. An operator generated identifier unique for a storm sewer manhole.
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
mh_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry storm sewer water from location to location (main line, service line, vent line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_line*
stopipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
drng_zon_d (Enumeration16)	Local name of assigned hydrographic drainage zones.
drng_pat_d (Enumeration16)	The drainage pattern of the material surrounding the pipe.
drng_tex_d (Enumeration16)	The texture of the material surrounding the pipe.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994

	= 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset. [Source: Adopted from SDSFIE]
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline
pipe_width (Real)	The width dimension of the subject item, measured from opposite inside faces.
lined_d (Enumeration16)	An indicator as to whether the pipe is lined or not (yes/no).
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
scrn_ty_d (Enumeration16)	The type of screen used to cover the end of the culvert.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	Discriminator. The use code for storm sewer line.
press_norm (Real)	The normal operating pressure of the storm system pipe.
press_u_d (Enumeration16)	The unit of measure for pressure.
feat_name (String30)	Any commonly used name of the culvert. [Source: REEGIS]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground storm water line pipe. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc to indicate the presence of nearby storm sewer. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_marker_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StormSewerOpenDrainage

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

Interception and removal area of ground water or surface water. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_sewer_open_drainage_area*

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

StormSewerOpenDrainage

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

Interception and removal of ground water or surface water by natural means. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *storm_sewer_open_drainage_line*

stochan_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
chan_lgth (Real)	The overall length of the open channel.
chan_st_d (Enumeration16)	The style or geometric configuration of the channel
bed_mat_d (Enumeration16)	The type of bedding material beneath the channel armor.
bank_arm_d (Enumeration16)	The type of channel armor used.
design_d (Enumeration16)	Discriminator. The design code for open channel.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
drng_zon_d (Enumeration16)	Local name of assigned hydrographic drainage zones.
bot_width (Real)	The bottom width of the open channel measured from the base of opposite side slopes.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
fld_zon_d (Enumeration16)	Local name of assigned hydrographic drainage zones.
flmean_elv (Real)	The elevation of the mean flow above a specific datum.
flmean_top (Real)	The average top width of the mean flow.
flmean_xar (Real)	The cross section area of the mean flow for the open channel.
flooddepth (Real)	The average depth of the specific flood.
flow_mean (Real)	The mean or average flow rate for the open channel.
inv_elv_1 (Real)	The elevation of the bottom of channel at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of channel at node_id_2 in feet (English units) or meters (SI units) above some datum.
no_floods (Integer)	The total number of floods recorded for this channel.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
reach_name (String20)	An operator generated identifier for the reach of an open channel.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_left (Real)	The slope of the left channel side expressed as a percentage.
slope_rght (Real)	The slope of the right channel side expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
top_width (Real)	The top width of the open channel measured from the top of opposite side slopes.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units. [Source: USMC]
area_size (Real)	The size of the area, zone, or polygon in square units. [Source: USMC]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level

metadata record(s).

StormSewerPumpPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A mechanical device for storm sewer system that draws material into itself through an entrance port and forces the material out through an exhaust port. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_pump_point*
stopump_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
outflw_act (Real)	The actual measured pump flow output.
cool_mth_d (Enumeration16)	The method by which the pump is cooled.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_rate (Real)	The manufacturer's pump capacity (e.g., gpm) rating at a specific design total dynamic head (TDH), usually depicted by a pump curve.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
prim_rqd_d (Enumeration16)	An indicator as to whether or not the pump has to be primed? (yes or no).
prime_meth (String15)	The method by which the pump is primed.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	The particular application, or use the subject item.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
pump_hp (Real)	The power generated by the pump, equal in the U.S. to 746 watts and nearly equivalent to the English gravitational unit of the same name that equals 550 foot-pounds of work per second.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerPumpStation

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a storm sewer distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_pump_station_site*
stostat_id (Number*)	Primary Key. A unique operator generated designator used to identify a station (pump station, pressure reducing station).
alrmlvlelv (Real)	The elevation in the wet well that triggers an alarm indicating no additional storage capacity.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or

	purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
hi_wat_elv (Real)	The high water or overflow elevation of the storage tank at the pumping station, in feet (English units) or meters (SI units) above some datum.
nodal_elv (Real)	The elevation of subject node, which is used in performing computer analyses of the water distribution system. The node elevation is usually the ground elevation at the subject node, or the elevation of the subject item located at the subject node (e.g.,
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sta_width (Real)	The width dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
sta_len (Real)	The overall length of the pump station plant area.
wetwlcpcty (Real)	The wet well capacity.
area_size (Real)	The size of the area, zone, or polygon in square units.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
no_pumps (Integer)	The total number of pumps located at the subject item.
river_mile (Real)	River mile marker. [Source: REEGIS]
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
mx_dsgn_hd (Real)	The water elevation of the maximum design head of the pump in feet NGVD. [Source: REEGIS]
date_end (Date)	The date the project was actually completed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915) [Source: REEGIS]
feat_name (String30)	Any commonly used name for the storm sewer pump station. [Source: REEGIS]
capacity (Real)	The pumping capacity at the maximum design head in cfs. [Source: REEGIS]
capcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute). [Source: REEGIS]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerReservoirPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where storm sewer water is collected. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *storm_sewer_reservoir_point*

res_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
date_const (Date)	The date on which the subject item construction was complete and user occupancy provided. Format for date is YYYYMMDD (i.e.,

	September 15, 1994 = 19940915)
depth_avg (Real)	The average depth of containment measured from normal operating pool.
inv_elv_av (Real)	The average elevation of the bottom of the reservoir.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
x_dikes_d (Enumeration16)	An indicator whether cross dikes exists in the subject item or not (yes or no).
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
out_cntr (String12)	The outlet control.
use_d (Enumeration16)	The particular application, or use the subject item.
res_len (Real)	The overall length of the reservoir.
res_typ_d (Enumeration16)	The type or classification of the reservoir.
res_width (Real)	The average width dimension of the reservoir, measured from top of opposite side slopes.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

StormSewerValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a storm sewer line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *storm_sewer_valve_point*
stovlv_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	The particular application, or use the subject item.
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground storm water line valve. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level

metadata record(s).

Group: Transmission

PipeLine

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

An interstate or intrastate transmission line through which gas, oil, or hazardous liquid is transported for the purpose of supplying a local utility. [Source: SDSFIE DOT - NPMS]

Attributes:	*SDSFIE Entity* *pipeline_line*
txpipe_id (Number*)	Primary Key. A locally assigned identifier for the record.
oper_nm (String40)	The name of the company or organization that physically operates the pipeline system. [Source: DOT - NPMS]
sys_nm (String40)	The name of a single pipeline system. [Source: DOT - NPMS]
catpip_d (Enumeration16)	Category of pipe [Source: S-57]
vert_clr (Real)	Vertical Clearance of pipeline [Source: S-57]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
piprod_d (Enumeration16)	Discriminator. The type of product carried by pipeline. [Source: HSIP]
diameter (Real)	The diameter of the pipeline in either mm or cm. [Source: HSIP]
tank_st_d (Enumeration16)	The particular kind, class, or group of tank (e.g. elevated, on ground, below ground, floating, on water body bottom.). [Source: HSIP]
cpcty_u_d (Enumeration16)	The unit of measure of capacity. [Source: HSIP]
capacity (Real)	The capacity of the pipeline. [Source: HSIP]
intersta_d (Enumeration16)	Indication whether or not (yes or no) pipeline is an interstate pipeline. Yes = interstate, No = Intrastate. [Source: DOT - NPMS]
cmdty_desc (String40)	Comma separated list of the names of commodities carried by the pipeline system. [Source: DOT - NPMS]
commody1_d (Enumeration16)	Code designation for the primary commodity carried by the pipeline system. [Source: DOT - NPMS]
commody2_d (Enumeration16)	Code designation for a secondary commodity carried by the pipeline system (if applicable). Empty (EMT) is not valid. [Source: DOT - NPMS]
commody3_d (Enumeration16)	Code designation for an additional secondary commodity carried by the pipeline system (if applicable). Empty (EMT) is not valid. [Source: DOT - NPMS]
prodct_d (Enumeration16)	Actual product that is being carried in pipeline [Source: S-57]
feat_len (Real)	The overall length of the feature. [Source: Center]
feat_name (String30)	Any commonly used name for the pipeline. [Source: USGS]
vert_loc_d (Enumeration16)	The vertical location for the pipeline relative to the surface. [Source: USGS]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

PipelineSegmentLine

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Secret

A linear feature representing part or all of a pipeline system. A pipeline segment must have only two ends. No branches are allowed. A pipeline segment may be a straight line or may have any number of vertices. Each pipeline segment must be uniquely i [Source: SDSFIE CGDII]

Attributes:	*SDSFIE Entity* *pipeline_segment_line*
pipeseg_id (Number*)	Primary Key. A locally assigned identifier for the record.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe). [Source: DOT - NPMS]

status_d (Enumeration16)	Current status (disposition) of the pipeline segment. [Source: DOT - NPMS]
pos_acc_d (Enumeration16)	Estimated positional accuracy of the feature. [Source: DOT - NPMS]
feat_len (Real)	The length of pipe, measured from node to node along the pipeline segment centerline. [Source: DOT - NPMS]
subsys_nm (String40)	Name for the pipeline segment, or smaller sub-section of the pipeline system. [Source: DOT - NPMS]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Wastewater

WastewaterAnodePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A material used in waste water distribution systems that is electrically connected to a less electrolytically-active material so that it will oxidize in the place of the less active material. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *wastewater_anode_point*

wwtand_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
anode_wght (Real)	The initial weight of the anode or anode packet. [Source: FGDC Utilities Classification]
date_instl (Date)	The date on which the subject item was originally installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: FGDC Utilities Classification]
date_last (Date)	The date the anode was last inspected or checked. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: FGDC Utilities Classification]
material_d (Enumeration16)	The type of material composition of the anode or anode packet. [Source: FGDC Utilities Classification]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: FGDC Utilities Classification]
wght_u_d (Enumeration16)	The unit of measure of weight. [Source: FGDC Utilities Classification]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterDischargePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Any location where wastewater pipes directly discharge effluent. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *wastewater_discharge_point*

wwtdcrg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or

	purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
systyp_d (Enumeration16)	The type of wastewater system. [Source: USACE OPERATIONS]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterDisposalTank

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An above or below grade receptacle or chamber for holding waste water on a temporary basis prior to transfer or use. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_disposal_tank_site*
wwtank_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
alt_vlv_d (Enumeration16)	Indicates whether or not the tank has an altitude valve which controls the flow into the tank? (yes or no).
area_size (Real)	The size of the area, zone, or polygon in square units.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
ovrflw_elv (Real)	The elevation measured at the point of overflow, or entrance, into the tank overflow pipe,, in feet (English units) or meters (SI units) above some datum.
head_norm (Real)	The normal operating head for the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
head_u_d (Enumeration16)	The unit of measure for pressure head.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
top_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
invert_elv (Real)	The elevation measured at bottom of the tank, in feet (English units) or meters (SI units) above some datum. mean sea level.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tank_lgth (Real)	The length dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
tank_sty_d (Enumeration16)	The style of tank, such as underground, above ground, etc.
tank_use_d (Enumeration16)	The particular kind or use of the waste water tank.
tank_width (Real)	The exterior width dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior

	wall/side.
press_norm (Real)	The manufacturer's (as rated by American Society of Mechanical Engineers (ASME) testing procedures) maximum pressure rating of the waste water tank.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_u_d (Enumeration16)	The unit of measure for pressure.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
tank_cpcty (Real)	The tank's storage capacity (e.g., gallons, ft3, etc).
tank_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
tank_des_d (Enumeration16)	This value differentiates similar entities by use or type.
tank_dia (Real)	The inside diameter of the tank, measured from the interior wall surface to the opposite interior wall surface.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterDownspoutPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pipe normally attached to the side of a building or structure which conveys rainfall runoff from the roof area to the ground surface or an underground collection system for wastewater. [Source: SDSFIE FGDC Utilities

Attributes:	*SDSFIE Entity* *wastewater_downspout_point*
wwtdspt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
dnspt_lgth (Real)	The length of the downspout, measured from highest point to its discharge point.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
base_elv (Real)	The elevation of the discharge point of the downspout in feet (English units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
grnd_elv (Real)	The elevation of the ground surface at the discharge point, in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterDrainFieldArea

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Confidential

The area of influence where perforated pipe placed in gravel trenches carries effluent from a waste storage containment for percolation into the earth. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_drain_field_area*
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WastewaterFiltrationBedArea

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Confidential

A below grade system consisting of perforated piping installed in sand or gravel beds or trenches designed to permit the uniform distribution and absorption of effluent from a septic tank or aerobic unit into the soil. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_filtration_bed_area*
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WastewaterFittingPoint

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise alter a pipe carrying wastewater. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_fitting_point*
wwtfitt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fit_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
fit_lgth (Real)	The overall length of the fitting.
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground wastewater line fitting. [Source: Air Force]

depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterGreaseTrapPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A tank which separates grease from water, collects the grease for removal, and allows the water to exit. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *wastewater_grease_trap_point*

trap_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dstbx_d (Enumeration16)	Indicates whether or not a distribution box exists for the subject item. (yes or no)
dstbx_i_el (Real)	The invert elevation of the inside bottom of the distribution box.
drnfl_st_d (Enumeration16)	The style of field drain system indicating the configuration and layout of the drain lines.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
drng_pat_d (Enumeration16)	The texture of the material surrounding the grease trap.
drng_tex_d (Enumeration16)	The texture of the material surrounding the grease trap.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
manhole_d (Enumeration16)	An indication as to whether or not is part of a manhole or has access via a manhole (yes/no).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
gtp_width (Real)	The width dimension of the subject item, measured from opposite inside faces.
lat_di_tot (Real)	The total diameter of all drainage laterals
lat_di_u_d (Enumeration16)	The unit of measure for the laterals diameter length.
latdimean (Real)	The average diameter of all drainage laterals
laterl_slp (Real)	The average slope of all drainage laterals.
laterl_tot (Real)	The total (sum) length of all drainage laterals.
laterlmean (Real)	The mean or average length of the drainage laterals.
latlgt_u_d (Enumeration16)	The unit of measure for length.
flow_rate (Real)	The flow rate of the feature.
perc_u_d (Enumeration16)	The unit of measure for soil percolation.
gtp_cpcty (Real)	The grease trap's storage capacity (e.g., gallons, ft3, etc).
gtp_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
gtp_len (Integer)	The overall length of the grease trap.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
no_lateral (Integer)	The total number of laterals.

slope_u_d (Enumeration16)	The unit of measure for slope.
trap_st_d (Enumeration16)	The particular kind, class, or group of tank (e.g., elevated, hydropneumatic, etc.).
trench_wid (Real)	The trench width excavated for the field drains.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
soil_perc (Real)	The percolation rate of the soil in which the drain field lines are placed.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterGritChamberPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A chamber designed to remove sand, gravel, or other heavy solids that have subsiding velocities or specific gravities substantially greater than those of the organic solids in the waste water system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_grit_chamber_point*
grtchbr_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
o_w_sep_d (Enumeration16)	An indicator as to whether or not grit chamber has an integrated oil-water separator. (yes or no)
flow_u_d (Enumeration16)	The unit of measure for flow rate.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flowcpcty (Real)	The flow capacity of the subject item.
grit_type (String12)	The predominate type of grit collected in the grit chamber.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
stor_cpcty (Real)	The grit chamber overall storage capacity.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterInletPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where waste water is collected and received into the utility system. [Source: SDSFIE FGDC Utilities

Attributes:	*SDSFIE Entity* *wastewater_inlet_point*
inlet_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_dgn (Real)	The design flow capacity of the subject item.

date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
inlet_st_d (Enumeration16)	Discriminator: This value differentiates similar entities by use or type.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
weir_elv (Real)	Elevation of the weir invert.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterJunctionPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in wastewater systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_junction_point*
wwtmnhl_id (Number*)	Primary Key. An operator generated identifier unique for a sanitary sewer manhole.
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
liner_ty_d (Enumeration16)	The type of liner used if the pit/manhole is used for neutralizing chemicals.
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
mh_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
reactant (String30)	The chemical in the incoming waste stream being neutralized.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
neut_agent (String30)	The chemical agent in the pit which chemically neutralizes the in stream reactant.

no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
feat_desc (String60)	The text describing a wastewater manhole. [Source: Cherry Point]
date_acqrd (Date)	Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). Date on which the manhole or wastewater junction box was acquired, or installed. [Source: Cherry Point]
no_steps (Integer)	Number of manhole steps. [Source: Cherry Point]
illict_d (Enumeration16)	Indication whether or not (yes/no) illicit flow was detected in manhole or box. [Source: Cherry Point]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterLagoonArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A shallow man made pool or pond for the purpose of providing treatment of domestic wastewater. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_lagoon_area*
lagoon_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
aerator_d (Enumeration16)	Indicates whether or not the lagoon has aerators. (yes/no)
aeratr_pow (Real)	The power rating for the aerator, usually in terms of horse power (hp).
area_size (Real)	The size of the area, zone, or polygon in square units.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
date_anl (Date)	Date on which water quality analyses were performed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_const (Date)	The date on which the subject item construction was complete and user occupancy provided. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
depth_avg (Real)	The average depth of containment measured from normal operating pool.
lgn_len (Real)	The average length of the lagoon.
lgn_width (Real)	The average width dimension of the lagoon, measured from top of opposite side slopes.
out_cntr (String12)	The outlet control.
freq_u_d (Enumeration16)	The unit of measure for frequency.
manage_off (String12)	The office/organization responsible for managing the lagoon.
hp_u_d (Enumeration16)	The unit of measure for horse power.
test_ty_d (Enumeration16)	The type of test used to evaluate the contained material.
inv_elv_av (Real)	The average elevation of the bottom of the lagoon.
lab_name_d (Enumeration16)	The name of the laboratory primarily responsible for completing the required tests for the subject item.
lab_ty_d (Enumeration16)	The type of the laboratory primarily responsible for completing the required tests for the subject item.
user_ind_d (Enumeration16)	An indicator as to whether or not the lagoon is used for industrial wastewater. (yes or no)
user_san_d (Enumeration16)	An indicator as to whether or not the lagoon is used for wastewater. (yes or no)
smpl_freq (Integer)	The frequency at which material sampling is conducted.

soil_cdn_d (Enumeration16)	The consistency of the soil indicating soil condition and strength.
wer_outl_d (Enumeration16)	An indicator as to whether or not the subject item has weir outlets. (yes or no)
x_dikes_d (Enumeration16)	An indicator whether cross dikes exists in the subject item or not (yes or no).
mon_agency (String15)	The regulator agency that monitors inflow, containment, and discharge for the subject item.
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_pumps (Integer)	The total number of pumps located at the subject item.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
soil_ero_d (Enumeration16)	The erosion potential of the soil.
soil_fam_d (Enumeration16)	The soil family.
soil_tex_d (Enumeration16)	The soil texture.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
pip_outl_d (Enumeration16)	An indicator as to whether or not the lagoon has pipe outlets. (yes or no)
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry waste water from location to location (main line, service line, force main line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_line*
pipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
drng_tex_d (Enumeration16)	The texture of the material surrounding the pipe.
drng_pat_d (Enumeration16)	The drainage pattern of the material surrounding the pipe.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline .
lined_d (Enumeration16)	An indicator as to whether the pipe is lined or not (yes/no).
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
slope_u_d (Enumeration16)	The unit of measure for slope.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.

model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	Discriminator. The use code for wastewater lines.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
press_norm (Real)	The normal operating pressure of the waste water system pipe.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_u_d (Enumeration16)	The unit of measure for pressure.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
piplty_d (Enumeration16)	The location of the pipeline in relevance to the earth's surface. [Source: USGS]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground wastewater line pipe. [Source: Air Force]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc to indicate the presence of waste water. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_marker_point*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WastewaterMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the quantity and or rate of water through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_meter_point*
wwtmetr_id (Number*)	Primary Key. An operator generated identifier unique for a wastewater meter.
design_d (Enumeration16)	Discriminator: The design of the water meter.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
instl_ty_d (Enumeration16)	The type installation of the subject item.
meter_elv (Real)	The elevation at the centerline of the meter, in feet (English units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.

mtr_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
meter_len (Real)	The overall length of the meter.
mtr_width (Real)	The overall width dimension of the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterNeutralizerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A receptacle or chamber where chemicals react with reactant materials, resulting in making liquid waste passing through chemically neutral for wastewater systems. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_neutralizer_point*
wwtneut_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
liner_ty_d (Enumeration16)	The type of liner used if the pit/manhole is used for neutralizing chemicals.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
neut_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
neut_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
neut_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
reactant (String30)	The chemical in the incoming waste stream being neutralized.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
neut_agent (String30)	The chemical agent in the pit which chemically neutralizes the in stream reactant.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.

type_d (Enumeration16)	A field indicating the kind, class, or group of manhole/pit for the subject utility.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterPumpPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A mechanical device for wastewater system that draws material into itself through an entrance port and forces the material out through an exhaust port. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *wastewater_pump_point*

wwtpump_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
outflw_act (Real)	The actual measured pump flow output.
outflw_rat (Real)	The manufacturer's pump capacity (e.g., gpm) rating at a specific design total dynamic head (TDH), usually depicted by a pump curve.
cool_mth_d (Enumeration16)	The method by which the pump is cooled.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_u_d (Enumeration16)	The unit of measure for flow rate.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
prim_rqd_d (Enumeration16)	An indicator as to whether or not the pump has to be primed? (yes or no).
prime_meth (String15)	The method by which the pump is primed.
use_d (Enumeration16)	The particular application, or use the subject item.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
pump_hp (Real)	The power generated by the pump, equal in the U.S. to 746 watts and nearly equivalent to the English gravitational unit of the same name that equals 550 foot-pounds of work per second.
feat_name (String30)	Any commonly used name for the pump/lift station. [Source: REEGIS]
river_mile (Real)	River mile marker. [Source: REEGIS]
no_pumps (Integer)	The number of pumps located at the station. [Source: REEGIS]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterRectifierPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the wastewater distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_rectifier_point*
wwtrec_id (Number*)	Primary Key. A locally assigned identifier for the record.
volt_out_d (Enumeration16)	The output DC voltage from the rectifier to the anode system. [Source: FGDC Utilities Classification]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
cool_mth_d (Enumeration16)	The method by which the rectifier is cooled, typically air or oil. [Source: FGDC Utilities Classification]
currnt_out (Real)	The output direct current from the rectifier to the anode system. [Source: FGDC Utilities Classification]
currnt_u_d (Enumeration16)	The unit measure of current. [Source: FGDC Utilities Classification]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
encl_typ_d (Enumeration16)	The type of enclosure used to protect the rectifier. [Source: FGDC Utilities Classification]
int_mtr_d (Enumeration16)	An indicator as to whether or not the rectifier has an internal meter, yes/no. [Source: FGDC Utilities Classification]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: FGDC Utilities Classification]
no_phases (Integer)	The number of phases to which this device provides reactive power. [Source: FGDC Utilities Classification]
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item. [Source: FGDC Utilities Classification]
volt_in_d (Enumeration16)	The input AC voltage to the rectifier. [Source: FGDC Utilities Classification]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterSepticTankPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Typically, a below grade receptacle or chamber in which solid organic waste is decomposed and purified by anaerobic bacteria. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_septic_tank_point*
wwstank_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
dstbx_d (Enumeration16)	Indicates whether or not a distribution box exists for the subject item. (yes or no)
dstbx_i_el (Real)	The invert elevation of the inside bottom of the distribution box.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
drng_tex_d (Enumeration16)	The texture of the material surrounding the tank.
drnfl_st_d (Enumeration16)	The style of field drain system indicating the configuration and layout of the drain lines.
drng_pat_d (Enumeration16)	The drainage pattern of the material surrounding the tank.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
manhole_d (Enumeration16)	An indication as to whether or not is part of a manhole or has access via a manhole (yes/no).

flow_u_d (Enumeration16)	The unit of measure for flow rate.
laterl_slp (Real)	The average slope of all drainage laterals.
laterl_tot (Real)	The total (sum) length of all drainage laterals.
laterlmean (Real)	The mean or average length of the drainage laterals.
flow_rate (Real)	The rate of flow through the device or pipe.
perc_u_d (Enumeration16)	The unit of measure for soil percolation.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
no_lateral (Integer)	The total number of laterals.
slope_u_d (Enumeration16)	The unit of measure for slope.
trench_wid (Real)	The trench width excavated for the field drains.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
tank_lgth (Real)	The length dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
tank_st_d (Enumeration16)	The particular kind, class, or group of tank (e.g., elevated, hydropneumatic, etc.).
tank_width (Real)	The exterior width dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
use_d (Enumeration16)	This value differentiates similar entities by use or type.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
soil_perc (Real)	The percolation rate of the soil in which the drain field lines are placed.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
tank_cpcty (Real)	The tank's storage capacity (e.g., gallons, ft3, etc).
tank_depth (Real)	The depth below the ground surface or cover measured from the top of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterSludgeBedArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

An area used for spreading and drying waste sludge. [Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *wastewater_sludge_bed_area*

sldgbed_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
bed_width (Real)	The exterior width dimension of the sludge bed, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
bed_lgth (Real)	The length dimension of the sludge bed, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
bed_dia (Real)	The inside diameter of the sludge bed, measured from the interior wall surface to the opposite interior wall surface.
bed_depth (Real)	The depth measured from the top of the subject item.
invert_elv (Real)	The elevation measured at bottom of the sludge bed, in feet (English

	units) or meters (SI units) above some datum. mean sea level.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
bed_cpcty (Real)	The sludge bed's storage capacity (e.g., gallons, ft3, etc).
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
area_size (Real)	The size of the area, zone, or polygon in square units.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
feat_name (String30)	Any commonly used name for the wastewater sludge bed area. [Source: USGS]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterTreatPlantSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A structure containing equipment used to treat and remove unwanted constituents from wastewater. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_treatment_plant_site*
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WastewaterUtilitySite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A wastewater utility company or organization's certificated area of jurisdiction or responsibility as approved by a federal, state, or local utility regulatory authority. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *utility_wastewater_utility_site*
ww_util_id (Number*)	Primary Key. A locally assigned identifier for the record.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
wwutilname (String50)	Name of the wastewater utility or system. [Source: EPA]
wwutilid (String30)	Identifier assigned to the water utility by the appropriate federal, state, or local regulatory authority. [Source: EPA]
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
city (String30)	Name of city served by wastewater utility or system (if applicable).

	[Source: EPA]
state (String30)	Name of state where wastewater utility or system provides service. [Source: EPA]
pop_served (Integer)	Population served by wastewater system or utility. [Source: EPA]
ww_plant (Integer)	Total number of wastewater treatment plants serving wastewater utility or system.
dtreatcap (Real)	Total design capacity of wastewater treatment plants serving wastewater utility or system. Usually expressed in mgd.
re_connect (Integer)	Total number of residential type service connections.
co_connect (Integer)	Total number of commercial (i.e., businesses, industrial) type service connections.
capr_u_d (Enumeration16)	Capacity rate unit of measure (e.g., million gallons per day (mgd)).
wwsystem_d (Enumeration16)	General type or category of a wastewater system or utility. [Source: EPA]
utilown_d (Enumeration16)	General category of type of utility owner.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WastewaterValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a wastewater line. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *wastewater_valve_point*

wwtvlv_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	The particular application, or use the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground wastewater line valve. [Source: Air Force]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WstewatOilWatSeparatrSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device or structure placed in the waste water stream to separate water from oil products. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_oil_water_separator_site*
wwtsep_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_per_x (Date)	The date the current permit expires for the subject item. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
oil_cpcty (Real)	The retention capacity of the oil-water separator.
disposal (String30)	Brief description of how the waste is disposed.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
grtchbr_d (Enumeration16)	An indicator as to whether or not the subject item has a grit chamber. (yes or no)
flow_u_d (Enumeration16)	The unit of measure for flow rate.
flowcpcty (Real)	The flow capacity of the subject item.
sep_code (String2)	The oil-water separator code. Usually defined as OW.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
temp_optim (Real)	The optimum operating temperature for the subject item.
temp_u_d (Enumeration16)	The unit of measure for temperature.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
sep_contnt (String20)	Separator contents
sep_name (String12)	The site specific identification name or number assigned to the subject item.
sep_procss (String30)	The specific type of separation process.
sep_volume (Real)	The volume of the oil-water separator.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
vol_u_d (Enumeration16)	The unit of measure of volume.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
siz (Integer)	The manufacturer's designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 6 inches). [Source: Cherry Point]
size_u_d (Enumeration16)	Unit of measure code for size (e.g., inches or centimeters). [Source: Cherry Point]
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum. [Source: Cherry Point]
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum. [Source: Cherry Point]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WstewatPumpEjectrStnSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A building in which one or more pumps operate to pump wastewater flowing at adequate pressure to or from a distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_pump_ejector_station_site*
station_id (Number*)	Primary Key. A unique operator generated designator used to identify a station (pump station, pressure reducing station).
alrmlvlelv (Real)	The elevation in the wet well that triggers an alarm indicating no additional storage capacity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
design_d (Enumeration16)	Discriminator. The design of the pump station.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
hi_wat_elv (Real)	The high water or overflow elevation of the storage tank at the pumping station, in feet (English units) or meters (SI units) above some datum.
nodal_elv (Real)	The elevation of subject node, which is used in performing computer analyses of the water distribution system. The node elevation is usually the ground elevation at the subject node, or the elevation of the subject item located at the subject node (e.g.,
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
wetwlcpcty (Real)	The wet well capacity.
sta_width (Real)	The width dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_pumps (Integer)	The total number of pumps located at the subject item.
sta_len (Real)	The overall length of the pump station plant area.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WstewatTreatmentUnitSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A waste water treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *wastewater_treatment_unit_site*
wwtplnt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
bypass_d (Enumeration16)	Indicates whether or not the treatment plant has a bypass line? (yes or

	no).
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_rated (Real)	The plant manufacturer's rated treatment plant capacity (e.g., gpm), which signifies the peak constant or daily flow of raw water that the plant can treat and transform to the specified water quality requirements.
flow_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).
flow_act (Real)	The measured peak treatment capacity of the water treatment plant when installation has been completed and it is operating under normal inflow and demand conditions.
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
no_pumps (Integer)	The total number of pumps located at the subject item.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
plant_elv (Real)	The finished floor elevation of the treatment plant, in feet (English units) or meters (SI units) above some datum.
plant_lgth (Real)	The overall length dimension of the treatment plant.
plantwidth (Real)	The overall width dimension of the water treatment plant.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
rem_mth (String32)	The method used to remove solids from the wastewater during processing. [Source: HSIP]
trt_lev_d (Enumeration16)	The overall level of treatment for the wastewater process. [Source: HSIP]
com_aff (String80)	The name of the company that operates the wastewater treatment facility. [Source: HSIP]
chlorint_d (Enumeration16)	Chlorination (Y/N)? [Source: HSIP]
max_capac (Real)	Capacity rate of the plant. [Source: HSIP]
cpcty_rate (Real)	Maximum waste water treatment capacity. [Source: HSIP]
feat_name (String80)	Indicates the name for the sewage treatment plant. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Water

DrinkingWaterSamplePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A point location where one or more water samples are collected from a water utility or system. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *utility_drinking_water_sample_collection_point*

dw_saml_id (Number*)	Primary Key. A locally assigned identifier for the record.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the

	subject item's data integrity and should not be used to store the subject item's data.
dwslocname (String50)	Commonly used name for the location where a drinking water sample was collected. [Source: EPA]
dwslocty_d (Enumeration16)	Code designating the type of location where a drinking water sample was collected.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

PigLaunchPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

Fittings where a pigging device is inserted in order to clean or maintain a pipe. [Source: SDSFIE DOT - NPMS]

Attributes: *SDSFIE Entity* *pig_launch_point*

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

UtilityWaterUtilitySite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A water utility company or organization's certificated area of jurisdiction or responsibility as approved by a federal, state, or local utility regulatory authority.
[Source: SDSFIE FGDC Utilities Classification]

Attributes: *SDSFIE Entity* *utility_water_utility_site*

w_util_id (Number*)	Primary Key. A locally assigned identifier for the record.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
utilown_d (Enumeration16)	General category or type of utility owner. [Source: AWWA]
waterutlid (String30)	Identifier assigned to the water utility by the appropriate federal, state, or local regulatory authority. [Source: AWWA]
wautilname (String50)	Name of the water utility or system.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
gstorcap (Real)	Total finished (treated) capacity in ground storage tanks. Usually expressed in million gallons. [Source: AWWA]
capr_u_d (Enumeration16)	Capacity rate unit of measure (e.g., million gallons per day (mgd)).
city (String30)	Name of city served by water utility (if applicable). [Source: AWWA]
pwsource_d (Enumeration16)	A water utility's primary type of water source. [Source: AWWA]
wsystem_d (Enumeration16)	General type of water utility or system. [Source: AWWA]
area_size (Real)	The size of the area, zone, or polygon in square units.
pop_served (Integer)	Population served by water system or utility. [Source: AWWA]
re_connect (Integer)	Total number of residential type service connections. [Source: AWWA]
co_connect (Integer)	Total number of commercial type service connections. [Source: AWWA]
watr_plant (Integer)	Total number of water treatment plants serving water utility or system. [Source: AWWA]
dtreatcap (Real)	Total design capacity of water treatment plants serving water utility or

	system. Usually expressed in mgd. [Source: AWWA]
watwellno (Integer)	Total number of water wells serving water utility or system. [Source: AWWA]
wellclno (Integer)	Total number of water well fields/clusters serving water utility or system. [Source: AWWA]
dsourcecap (Real)	Total design water supply or source capacity (e.g., water wells, surface water pumping capacity, purchased water capacity, etc.). Usually expressed in mgd. [Source: AWWA]
cap_u_d (Enumeration16)	Total volume capacity (e.g., million gallons).
etankcap (Real)	Total finished (treated) storage capacity in elevated and pressure tanks. Normally expressed in million gallons. [Source: AWWA]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterAnodePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A material used for water distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_anode_point*
watanod_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
anode_wght (Real)	The initial weight of the anode or anode packet.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
material_d (Enumeration16)	The type of material composition of the anode or anode packet.
wght_u_d (Enumeration16)	The unit of measure for weight.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterFireConnectionPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An apparatus which dispenses fluids for use in fire management. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_fire_connection_point*
firhydr_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fire_flow (Real)	The code or regulation required fire flow rate from a fire hydrant or fire flow connection.
meas_ty_d (Enumeration16)	This attribute provides information concerning the basis for the subject item's inlet and outlet dimensions (e.g., inside diameter, outside diameter, nominal).
con_type_d (Enumeration16)	Discriminator. This value differentiates fire connections by use or type.
hyd_ty_d (Enumeration16)	The particular kind, class, or group of hydrant.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
inlet_dia (Real)	The diameter of the hydrant inlet connection.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994

	= 19940915).
dia_u_d (Enumeration16)	The unit of measure for diameter.
outcon1dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
outcon2dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
outcon3dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
flow_test (Integer)	The date of the last fire flow test conducted at the subject fire hydrant or fire department connection. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
flow_u_d (Enumeration16)	The unit of measure for flow rate.
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
hyd_elv (Real)	The elevation of the hydrant, measured at the hydrant outlet, in feet (English units) or meters (SI units) above some datum.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
size_u_d (Enumeration16)	The unit of measure for size.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_u_d (Enumeration16)	The unit of measure for pressure data (e.g., psi).
source_d (Enumeration16)	The point of origin of a water system's water supply.
press_resd (Real)	The measured pressure at a hydrant or connection during a flow test conducted at the subject hydrant or connection.
press_stat (Real)	The numeric pressure head on the subject item under static (i.e., no flow or demand) conditions in the utility system.
hydclass_d (Enumeration16)	The hydrant classification according to their rated capacity according to the National Fire Protection Association.
vlv_st_d (Enumeration16)	The style of the valve.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections. [Source: FGDC]
road_name (String30)	A common name or street name used to refer to the stretch of road that the hydrant is facing. [Source: FGDC]
verify_d (Enumeration16)	A boolean indicating whether the blue reflectors was placed correctly in the street (Y = YES and N = NO). [Source: FGDC]
location (String80)	The location of the fire hydrant. [Source: FGDC]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterFittingPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting is an item used to connect, cap, plug or otherwise alter a pipe carrying water. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_fitting_point*
fitting_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fit_elv (Real)	The elevation measured at centerline of the fitting, in feet (English units) or meters (SI units) above some datum.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed,

	abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dia_in (Real)	The inside, or interior, diameter of the fitting.
dia_u_d (Enumeration16)	The unit of measure for the subject item diameter.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
fit_lgth (Real)	The overall length of the fitting.
fit_width (Real)	The width dimension of the subject item measured at its' widest point.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
size_u_d (Enumeration16)	This attribute provides information concerning the unit of measure for size of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
drawing_no (Integer)	The drawing number of the Pig Drawing. This is a separate field from media_id.
coverdepth (Real)	The depth of cover The depth measured from top of ground's surface (or grade) to top of underground waterline fitting. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: CENTER]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterHydrantPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An apparatus which dispenses fluids. [Source: SDSFIE IENC]

Attributes: *SDSFIE Entity* *water_hydrant_point*

wathydr_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
fire_flow (Real)	The code or regulation required fire flow rate from a fire hydrant or fire flow connection.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
meas_ty_d (Enumeration16)	This attribute provides information concerning the basis for the subject item's inlet and outlet dimensions (e.g., inside diameter, outside diameter, nominal).
design_d (Enumeration16)	Discriminator. The design code for a water hydrant.
hyd_ty_d (Enumeration16)	The particular kind, class, or group of hydrant.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
hyd_elv (Real)	The elevation of the hydrant, measured at the hydrant outlet, in feet (English units) or meters (SI units) above some datum.

inlet_dia (Real)	The diameter of the hydrant inlet connection.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
dia_u_d (Enumeration16)	The unit of measure for diameter.
outcon1dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
outcon2dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
outcon3dia (Real)	The diameter of the hydrant outlet, or for hydrants with more than one outlet, the diameter of one of the hydrant outlets.
flow_test (Integer)	The date of the last fire flow test conducted at the subject fire hydrant or fire department connection. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
flow_u_d (Enumeration16)	The unit of measure for flow rate.
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
size_u_d (Enumeration16)	The unit of measure for size.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
source_d (Enumeration16)	The point of origin of a water system's water supply.
press_resd (Real)	The measured pressure at a hydrant or connection during a flow test conducted at the subject hydrant or connection.
press_stat (Real)	The numeric pressure head on the subject item under static (i.e., no flow or demand) conditions in the utility system.
press_u_d (Enumeration16)	The unit of measure for pressure data (e.g., psi).
vlv_st_d (Enumeration16)	The style of the valve.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterIntakeLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

The location where water is allowed into the water distribution system. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *water_intake_line*

impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WaterIntakePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The location where water is allowed into the water distribution system. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *water_intake_point*

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WaterJunctionPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A box or small vault (usually concrete, brick, or cast iron) in water systems located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_junction_point*
watmnhl_id (Number*)	Primary Key. An operator generated identifier unique for a water manhole.
airrfvlv_d (Enumeration16)	Indicates whether or not there is an air relief valve installed on subject item? (yes/no)
drain_ty_d (Enumeration16)	The type of subject item drain.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
no_valves (Integer)	The number of valves inside the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
mh_dia (Real)	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
mh_len (Real)	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mh_width (Real)	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
invert_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of manhole for the subject utility.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	Discriminator. An attribute that differentiates the use of the subject item.
no_pipes (Integer)	The number of the pipes entering and exiting the subject item.
rim_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterLine

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Secret

A pipe used to carry water from location to location (main line, service line, vent line, etc). [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_line*
watpipe_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed,

	abandoned, etc.), from lists or entered from field inspections.
catprot_d (Enumeration16)	Indicates whether or not the pipe has been provided with cathodic protection? (yes or no).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
pipe_lgth (Real)	The length of pipe, measured from node to node along the pipe centerline
press_max (Real)	The manufacturer's or industry standard's maximum pressure rating of the subject item.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
grnd_elv_1 (Real)	The elevation of the ground surface at node_id_1, in feet (English units) or meters (SI units) above some datum.
grnd_elv_2 (Real)	The elevation of the ground surface at node_id_2, in feet (English units) or meters (SI units) above some datum.
inv_elv_1 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2 (Real)	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	The kind, class, or group of the subject item.
slope_bot (Real)	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d (Enumeration16)	The unit of measure for slope.
tape_d (Enumeration16)	This attribute indicates whether or not location marker tape or wire been installed above the waterline pipe to facilitate it's location with a magnetometer? (yes or no).
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
use_d (Enumeration16)	Discriminator. The use code for water pipes.
press_norm (Real)	The normal operating pressure of the water system pipe.
press_u_d (Enumeration16)	The unit of measure for pressure.
source_d (Enumeration16)	The source type for the origin of a water system's water supply.
piplty_d (Enumeration16)	The location of the pipeline in relevance to the earth's surface. [Source: USGS]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground waterline pipe. [Source: Air Force]
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
impedance (Real)	The number representing the total opposition to flow.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterMarkerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc to indicate the presence of water. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_marker_point*
marker_id (Number*)	Primary Key. An operator generated identifier unique for a general utility marker.

dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
pole_mat_d (Enumeration16)	The material composition of the pole.
pole_depth (Real)	The depth the pole is buried in the foundation (usually the ground surface).
pole_hght (Real)	The distance the pole extends above the foundation (usually the ground surface).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
sign_hgth (Real)	The height dimension of the sign.
sign_mat_d (Enumeration16)	The material composition of the sign.
sign_text (String30)	The text on the sign, up to 30 characters.
sign_width (Real)	The width dimension of the sign.
soil_cnd_d (Enumeration16)	The soil condition indicating the soil's strength and integrity.
rock_cnd_d (Enumeration16)	The condition of the rock relative to the rocks strength and integrity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterMeterPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device installed in a line for measuring the quantity and or rate of water flowing to a facility or through a section of line. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_meter_point*
watmetr_id (Number*)	Primary Key. An operator generated identifier unique for a water meter.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
instl_ty_d (Enumeration16)	The type installation of the subject item.
meter_elv (Real)	The elevation at the centerline of the meter, in feet (English units) or meters (SI units) above some datum.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
size_u_d (Enumeration16)	The unit of measure for size.
mtr_custmr (String20)	The name of the individual, company, or government agency served by the subject item.

user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
source_d (Enumeration16)	The point of origin of a water system's water supply
srvc_mtr_d (Enumeration16)	An indicator as to whether or not the meter is installed on a service line? (yes or no)
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterPumpPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A mechanical device for water system that draws material into itself through an entrance port and forces the material out through an exhaust port. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_pump_point*
watpump_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
cool_mth_d (Enumeration16)	The method by which the pump is cooled.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_act (Real)	The measured capacity of the pump operating under actual normal head and flow conditions.
cpcty_rate (Real)	The manufacturer's pump capacity (e.g., gpm) rating at a specific design total dynamic head (TDH), usually depicted by a pump curve.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gpm).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
pwr_gen (Real)	The power generated by the pump, equal in the U.S. to 746 watts and nearly equivalent to the English gravitational unit of the same name that equals 550 foot-pounds of work per second.
pwr_req_d (Enumeration16)	The voltage of the electrical power required by the subject item.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
prim_rqd_d (Enumeration16)	An indicator as to whether or not the pump has to be primed? (yes or no).
prime_meth (String15)	The method by which the pump is primed.
tdh_rated (Real)	The total dynamic head upon which the capacity_rated is based.
tdh_u_d (Enumeration16)	The unit of measure for Total Dynamic Head (TDH), usually expressed in feet (English units).
use_d (Enumeration16)	The particular application, or use the subject item.
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither

	in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterPumpStationSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A building in which one or more pumps operate to maintain flow at adequate pressure within a water distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_pump_station_site*
watstat_id (Number*)	Primary Key. A unique operator generated designator used to identify a station (pump station, pressure reducing station).
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
cpcty_u_d (Enumeration16)	The unit of measure for capacity data (e.g., gallons).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
hi_wat_elv (Real)	The high water or overflow elevation of the elevated water storage tank downstream of the pumping station, in feet (English units) or meters (SI units) above some datum.
nodal_elv (Real)	The elevation of subject node, which is used in performing computer analyses of the water distribution system. The node elevation is usually the ground elevation at the subject node, or the elevation of the subject item located at the subject node (e.g.,
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
wetwlcpcty (Real)	The wet well capacity.
sta_width (Real)	The width dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
sta_cpcty (Real)	The pump station's output capacity (e.g., gpm) rating (with all pumps operating) at a specific total dynamic head (TDH), which correlates to normal system pressure head or design pressure head.
sta_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
sta_ty_d (Enumeration16)	Discriminator. The type of station.
no_pumps (Integer)	The total number of pumps located at the subject item.
source_d (Enumeration16)	The point of origin of a water system's water supply.
sta_len (Real)	The length dimension of the station, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
tribut_cod (String20)	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
src_name_d (Enumeration16)	The name of the water source (e.g., Mississippi River, Bayou LaFouche, etc.).
pump_elv (Real)	The elevation measured at centerline of the pump, in feet (English units) or meters (SI units) above some datum.
tnkalrmelv (Real)	Elevation of water in upstream ground water storage tank(s) which represents a low level which activates a low water/pressure alarm.
vol_u_d (Enumeration16)	The unit of measure of volume.
area_size (Real)	The size of the area, zone, or polygon in square units.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.

feat_name (String80)	The name of the pumping station. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterRectifierPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the water distribution system. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_rectifier_point*
watrect_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
cool_mth_d (Enumeration16)	The method by which the rectifier is cooled, typically air or oil.
encl_typ_d (Enumeration16)	The type of enclosure used to protect the rectifier.
volt_out_d (Enumeration16)	The output DC voltage from the rectifier to the anode system.
currnt_out (Real)	The output direct current from the rectifier to the anode system.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
currnt_u_d (Enumeration16)	The unit of measure for electrical current.
int_mtr_d (Enumeration16)	An indicator as to whether or not the rectifier has an internal meter, yes/no.
no_phases (Integer)	The number of phases to which this device provides reactive power.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
phas_ltr_d (Enumeration16)	The letter(s) of the phase(s) for the subject item.
volt_in_d (Enumeration16)	The input AC voltage to the rectifier.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterRegulatorReducerPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A pressure regulator located in the water line that automatically reduces the pressure on the downstream side of the valve to a preset magnitude. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_regulator_reducer_point*
watreg_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
size_d (Enumeration16)	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
narrative (String240)	A description or other unique information concerning the subject item,

	limited to 240 characters.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
press_in (Real)	The design water system pressure in the waterline on inlet side of the pressure regulator.
press_u_d (Enumeration16)	The unit of measure for pressure.
type_d (Enumeration16)	Discriminator. The kind, class, or group of the subject item.
press_out (Real)	The design water system pressure in the waterline on outlet side of the pressure regulator.
press_reqd (Real)	The required maximum outlet pressure setting for the regulator.
reg_elv (Real)	The elevation of the pressure regulator, measured at the regulator centerline.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterSourceSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The point from which water is supplied for processing and distribution. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *water_source_site*

watsrce_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
name_d (Enumeration16)	The name of a water system's water source.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
systyp_d (Enumeration16)	The type of water system. [Source: USACE OPERATIONS]
catpip_d (Enumeration16)	Category of pipe [Source: S-57]
feat_len (Real)	The overall length of the feature. [Source: Center]
flow_u_d (Enumeration16)	The unit of measure for flow rate. [Source: HSIP]
max_flow (Real)	The intake capacity of the pipe. [Source: HSIP]
feat_name (String80)	The name of the water intake. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterTankSite

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

An above or below grade receptacle or chamber used for holding water on a temporary basis prior to transfer or use. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *water_tank_site*

wattank_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
alarm_lvl (Real)	The elevation of the preset level in a tank which activates a low water level alarm, in feet (English units) or meters (SI units) above mean sea level. Mean sea level is universally considered as the elevation reference surface although local surveys may
alt_vlv_d (Enumeration16)	Indicates whether or not the tank has an altitude valve which controls the flow into the tank? (yes or no).
area_size (Real)	The size of the area, zone, or polygon in square units.
level_1_on (Real)	The elevation of the preset level in a tank which activates one pump or one control valve which supplies water to the tank, in feet (English units) or meters (SI units) above some datum.
level_2_on (Real)	The elevation of the preset level in a tank which activates a second pump, or control valve, which operates in conjunction with the first activated pump, or control valve, to supply water to the tank, in feet or meters above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
level_off (Real)	The elevation of the preset level in a tank which turns off the pump(s) or control valve(s) which supply water to the tank, in feet (English units) or meters (SI units) above some datum.
level_shut (Real)	The elevation of the preset level in a tank (ground storage or supply tank) which indicates a dangerously low water level in the tank and turns off all pumps which draw water from the tank, in feet (English units) or meters (SI units) above some datum.
ovrflw_elv (Real)	The elevation measured at the point of overflow, or entrance, into the tank overflow pipe,, in feet (English units) or meters (SI units) above some datum.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
head_norm (Real)	The normal operating head for the subject item.
head_u_d (Enumeration16)	The unit of measure for pressure head.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
press_alrm (Real)	The preset pressure setting of a tank which activates a low tank pressure alarm.
press_high (Real)	The preset high, or maximum, operating pressure setting of a tank. For a hydropneumatic (i.e., pressure) type tank this is the setting at which all pumps supplying water to the tank, and all air compressors supplying compressed air to the tank, are off.
invert_elv (Real)	The elevation measured at bottom of the tank, in feet (English units) or meters (SI units) above some datum. mean sea level.
mat_d (Enumeration16)	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
top_elv (Real)	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
tank_lgth (Real)	The length dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
tank_st_d (Enumeration16)	The particular kind, class, or group of tank (e.g., elevated, hydropneumatic, etc.).
tank_use_d (Enumeration16)	The particular kind or use of the tank (e.g., raw water, potable, etc.).
tank_vol (Real)	The tank's storage capacity (e.g., gallons, ft3, etc).

tank_width (Real)	The exterior width dimension of the tank, measured from outside face of the exterior wall/side to outside face of the opposite exterior wall/side.
press_low (Real)	The preset low, or minimum, operating pressure setting of a tank. For a hydropneumatic (i.e., pressure) type tank this is the setting which activates the pump(s) supplying water to the tank. For an elevated type tank, this is the setting which activates
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
press_norm (Real)	The manufacturer's (as rated by American Society of Mechanical Engineers (ASME) testing procedures) maximum pressure rating of the water tank.
press_u_d (Enumeration16)	The unit of measure for pressure.
serial_no (String15)	The manufacturer's serial, or unique identification number of the subject item.
tank_dia (Real)	The inside diameter of the tank, measured from the interior wall surface to the opposite interior wall surface.
vol_u_d (Enumeration16)	The unit of measure of volume.
feat_name (String80)	Indicates the name as given for the water system control facility. [Source: HSIP]
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterTreatmentPlantArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A water treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_treatment_plant_area*
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

WaterTreatmentUnitArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A water separation pond or other pool designed to allow solid material decomposition. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_treatment_unit_area*
watpInt_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
area_size (Real)	The size of the area, zone, or polygon in square units.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
bypass_d (Enumeration16)	Indicates whether or not the treatment plant has a bypass line? (yes or no).
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
flow_rated (Real)	The plant manufacturer's rated treatment plant capacity (e.g., gpm), which signifies the peak constant or daily flow of raw water that the plant can treat and transform to the specified water quality requirements.
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
flow_u_d (Enumeration16)	The unit of measure for rate capacity data (e.g., gallons per minute).

flow_act (Real)	The measured peak treatment capacity of the water treatment plant when installation has been completed and it is operating under normal inflow and demand conditions.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
name_d (Enumeration16)	The site specific identification name or number assigned to the subject item.
no_pumps (Integer)	The total number of pumps located at the subject item.
perim (Real)	The distance around the boundary of the area, zone, or subject item in linear units.
source_d (Enumeration16)	The point of origin of a water system's water supply.
type_d (Enumeration16)	A field indicating the kind, class, or group of the subject item.
plant_elv (Real)	The finished floor elevation of the treatment plant, in feet (English units) or meters (SI units) above some datum.
plant_lgth (Real)	The overall length dimension of the treatment plant.
plantwidth (Real)	The overall width dimension of the water treatment plant.
num_cust (Integer)	The number of customers being served by the treatment facility. [Source: HSIP]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterValvePoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A fitting or device used for shutting or throttling flow through a water line. [Source: SDSFIE FGDC Utilities

Attributes: *SDSFIE Entity* *water_valve_point*

watvlv_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
branch_sys (String12)	An operator generated identifier that is a unique site specific name or number designation of a branch or isolated area of a water distribution system.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
valve_elv (Real)	The elevation measured at centerline of the valve, in feet (English units) or meters (SI units) above some datum.
size_u_d (Enumeration16)	The unit of measure for size.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
use_d (Enumeration16)	Discriminator. The site specific use of the valve.
vlv_size_d (Enumeration16)	A code indicating the manufacturer's nominal size designation.
vlv_st_d (Enumeration16)	The particular kind, class, or group of valve (e.g., gate, check, etc.).
depth_u_d (Enumeration16)	The unit of measure for depth. [Source: Center]
coverdepth (Real)	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground waterline valve. [Source: Air Force]

juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WaterVentPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A valve installed in a line to either release air trapped in the line, and/or allow air into a line to relieve a vacuum condition. [Source: FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_vent_point*
watvent_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
feat_desc (String60)	Any brief description of the feature.
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]

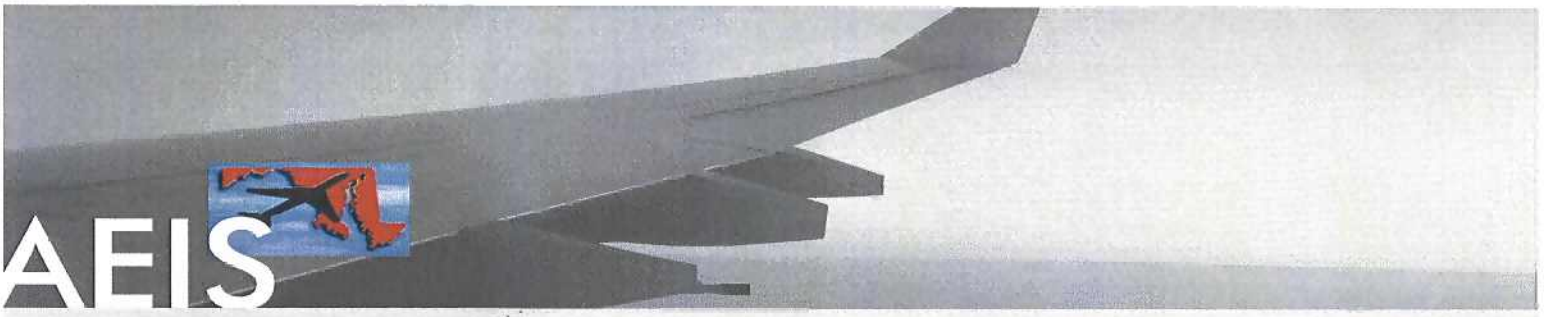
WatPressReducingStatnPoint

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

A station consists of a box/pit containing one or more pressure regulators and appurtenant shutoff valves and fittings. [Source: SDSFIE FGDC Utilities Classification]

Attributes:	*SDSFIE Entity* *water_pressure_reducing_station_point*
red_sta_id (Number*)	Primary Key. A unique, user defined identifier for each record or instance of an entity.
cond_d (Enumeration16)	Indicates a state of being, or readiness for use of the subject item (e.g., good, fair, poor), from lists or field inspections.
dispostn_d (Enumeration16)	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
date_acqrd (Date)	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
date_const (Date)	The date on which the subject item construction was complete and user occupancy provided. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915)
ground_elv (Real)	The elevation of the ground surface in feet (English units) or meters (SI units) above some datum.
owner_d (Enumeration16)	A person, organization, or agency with legal control or management responsibility of the utility asset.. [Source: Adopted from SDSFIE]
user_flag (String20)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters.
sta_elv (Real)	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
model_no (String12)	The Model, Product, Catalog, or Item Number of subject item.
press_in (Real)	The design or maximum water system pressure in the waterline on inlet side of the pressure reducing station.
press_oper (Real)	The normal operating water system pressure in the waterline on inlet side of the pressure reducing station.
press_u_d (Enumeration16)	The unit of measure for pressure.
source_d (Enumeration16)	The point of origin of a water system's water supply.

press_out (Real)	The design or maximum water system pressure in the waterline on outlet side of the pressure reducing station.
juntionType (Enumeration16)	An indicator as to whether the feature serves as a source, sink or neither in the network.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).



Maryland Aviation Administration

Office of Engineering and Construction Management

Airport Engineering Information System

GEOGRAPHIC INFORMATION SYSTEM DATA STANDARD

UTILITIES SUPPLEMENT

Version 1.1
July 2007

Geographic Information System
Data Standard
For the Maryland Aviation Administration
Version 1.1, July 2007

Table of Contents

1. INTRODUCTION

1.1. Purpose

By defining the content and format of geospatial data, related attributes, and metadata (i.e., information about the data), this GIS Data Standard provides guidance for developing geospatially-referenced data to be submitted to, maintained by, or provided by the Maryland Aviation Administration (MAA). This standard is required so providers and receivers of MAA data have an understanding of the information they submit and use.

1.2. Scope

This standard encompasses 353 types of geospatial features, such as runways, taxiways, buildings, and others, that are relevant to MAA. While not all possible data sets are included, the features defined herein collectively provide a common map of the most relevant and therefore the most widely used information about an airport. This common map, or basemap, supports a variety of planning, design, operations, safety, and security applications. Users can also layer information on top of the basemap to support other more specialized applications.

This document defines 135 of the 353 features covered by MAA's GIS Data Standard. The remaining 218 feature classes are covered in the MAA GIS Data Standard – Utilities Supplement.

1.3. Audience

This standard is intended for Computer Automated Drafting & Design (CADD) and Geographic Information Systems (GIS) technicians, data developers, database designers, and other providers and recipients of geospatial data that depict Baltimore-Washington International (BWI) and Martin State (MTN) airports and their surrounds, as well as other facilities owned and operated by MAA. This standard assumes basic familiarity with CADD and GIS concepts and terminology. A glossary is provided in Section 12.

1.4. Application

The U.S. Geological Survey (USGS) defines Geospatial data as information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth. This type of information is increasingly used to convey important infrastructure, terrain, and operations data within divisions of an airport and between an airport and its consultants, safety and security personnel, and other stakeholders. Increasingly, this information is created, used, and maintained in GIS software.

GIS brings together a collection of geospatial data that depict manmade and natural features linked to attribute information for those features. This geospatial and attribute information is typically organized as layers that can be superimposed on one another to form a map. Different collections of layers can be used to provide maps that meet a variety of needs. For example, some GIS layers are grouped together to produce an Airport Layout Plan (ALP) while others are used to produce an interior Space Utilization Drawing.

A key benefit of GIS is improved management of data across organizational lines by linking data sets based on location. This helps departments across an agency such as the MAA share their

data. By creating a shared database, one organization can benefit from the work of another, and data can be collected once and used many times.

1.5. Background

This standard was developed based on input from within MAA and from its consultants. This standard is based largely on and includes portions of the GIS standard developed for the Federal Aviation Administration (FAA) and as such has benefited from input from FAA stakeholders. It has also benefited from a public review process and feedback based on the implementation of earlier drafts at several airports of varying sizes.

The standard was also developed in conjunction with the Federal Geographic Data Committee (FGDC) Framework Data Content Standards. Under this initiative, additional input was provided by airport authority, National Geospatial-Intelligence Agency (NGA), DOD (Department of Defense), Department of Transportation (DOT), data vendor, software supplier, and consultant representatives. As part of the FGDC standards, it is integrated with similar standards being developed for other modes of transportation and other non-transportation themes into a comprehensive geospatial data exchange standard for adoption by American National Standards Institute (ANSI). Also as a result of the FGDC initiative, the standard is compatible with the data exchange resources being developed under the federal Geospatial One-Stop initiative.

The standard is also harmonized with other relevant standards, including RTCA's User Requirements for Aerodrome Mapping Information (DO-272), which defines geospatial data required to support aircraft movement on the ground, and the U.S. CADD/GIS Technology Center's Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE), which is an extensive GIS standard originally developed for military facilities. Harmonization with these similar and widely used standards helps broaden the availability of data, systems, and personnel resources available to users of this standard.

1.6. Related Material

The following documents are related to this GIS Data Standard and are referenced herein. These resources are informative (versus normative) in nature: compliance with the requirements of the following documents is not required in order to be in compliance with this standard. Readers of this standard may wish to review the related reading material listed below for further details on a specific topic. The URL for each is provided. In some cases, the document can be downloaded for free from the Web sites. In other cases, as indicated with an asterisk, instructions on how to obtain a copy are provided.

- MAA CADD Standards Manual, Issue #1.0, 2005
- MAA GIS Data Standard – Utilities Supplement, Version 1.1, July 2007
- FAA, Advisory Circular - Airport Master Plans, AC 150/5070-6B, Draft, http://www.faa.gov/arp/publications/acs/draftacs.cfm
- FAA Document 405, Standards for Aeronautical Surveys and Related Products,
- 4th ed., September 1996, http://www.ngs.noaa.gov/AERO/aerospecs.htm#FAA405
- FGDC Geospatial Data Content Framework Standards, Federal Geographic Data Committee, 2005, http://www.fgdc.gov/standards/framework/index.html

- Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE), Version 2.4, U.S. CADD/GIS Technology Center, 2004, https://tsc.wes.army.mil/products/tssds-tsfms/tssds/projects/sds/default.asp
- User Requirements for Aerodrome Mapping Information (DO-272), RTCA, Inc., 2001, http://www.rtca.org/doclist.asp *
- Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (FGDC-STD-007.3-1998), FGDC, 1998, http://www.fgdc.gov/standards/status/sub1_3.html
- Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management (FGDC-STD-007.4-2002), FGDC, 2002, http://www.fgdc.gov/standards/status/sub1_5.html
- Geographic Information – Metadata (ISO 19115), International Organization for Standards, 2003, http://www.iso.org *
- Geographic Information – Spatial Schema (ISO 19107), International Organization for Standards, 2001, http://www.iso.org *
- Level 0 Profile of GML3 for WFS, Version 0.0.10 (03-003r10), Open GIS Consortium, May 10, 2004, http://portal.opengeospatial.org/files/?artifact_id=4347
- U.S. National CADD Standard (NCS), version 3.0, 2003, http://www.nationalcadstandard.org/ *
- CAD Layer Guidelines, Second Addition, The American Institute of Architects, http://www.aia.org/ *
- ICAO Annex 15 – Aeronautical Information Services (AIS), International Civil Aviation Organization, 11th edition 2003, http://www.aviatechpubs.com/custom4.html *
- Aeronautical Information Exchange Model (AIXM), Edition 3.3, Eurocontrol, 2003, http://www.eurocontrol.int/ais/aixm/conceptual.htm
- 49 CFR 1520, Protection of Sensitive Security Information, Code of Federal Regulations, October 1, 2003, http://www.access.gpo.gov/nara/cfr/waisidx_03/49cfr1520_03.html
- Standard Classification of Building Elements and Related Sitework - UNIFORMAT II, American Society for Testing and Materials (ASTM) E1557-97, http://www.astm.org *

** Documents available for purchase from the organization designated*

1.7. Change Control

Following is a chronological list of changes made to this document since it was first released. A version number and the date of release are indicated for each revision.

Version Number	Date of Release	Changes Addressed
1.0	12/22/2005	Original release
1.1	7/9/2007	Section 1.5 added for change control. Section formatting adjusted to be consistent with other AEIS standards. Utility and communications features moved to a supplement to this document.

Readers are encouraged to suggest additional changes to this document. Comments and suggestions should be recorded using the form on the following page and submitted to the AEIS Program Manager for MAA's consideration. Accepted changes will be reflected in a subsequent version of this document.

MAA GIS Data Standard
Document Revision Form

Date: _____

To:

Marcus Zadi Rouhani MSc. (Eng.)
Chief, Document Mgmt. /Tech. Support
Division of Facilities Design
Maryland Aviation Administration
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MAA USE ONLY

Change Tracking # _____

Date Received: _____

Assigned To: _____

Date Addressed: _____

Change in Version: _____

From:

Name: _____
Title: _____
Organization: _____
Address: _____
_____
City, State, Zip: _____, ____ _____
E-Mail: _____
Phone:

Comments:

#	Reference*	Comment or Suggested Change	MAA Resolution

** Reference must provide a clear indication of where the change is recommended (e.g. section, page, paragraph and sentence or figure number).*

Additional pages can be used if required.

2. FEATURE TYPES

The focus of this standard is on the definition of 353 geographic features required to depict an airport and its surrounding environment. These include features unique to airports, such as runways and taxiways, as well as more generic features, such as roads and buildings. Each of these 353 types of geographic features is referred to as a Feature Type. A specific instance of a Feature Type is referred to as a Feature Instance. For example, Runways is a Feature Type, but Runway 10/28 at BWI is a Feature Instance.

For simplicity in data development and transfer, this standard associates a single geometry with each Feature Type.

2.1. Allowable Geometry Types

There are three basic types of geometry (i.e., points, lines, and polygons). To ease implementation, this standard assigns only one type of geometry to each Feature Type. The following geometry type definitions are used in accordance with ISO 19107 and in compliance with the Open GIS Consortium Level 0 Profile of GML Version 3.

1). Point: a single location represented by X and Y (and in some cases Z) coordinates on a reference coordinate system, as shown below in Figure 1.

Figure 1
Example of Point Features

2). Line: straight line connections between two or more discrete locations represented by X and Y coordinates on a reference coordinate system, as shown below in Figure 2. Note that line segments (i.e., a straight line connecting two points) and polylines (i.e., one or more connected line segments) are both included in this definition but that arcs (i.e., a curve joining two points) are not.

Figure 2
Example of Point Features

3). Polygon: A closed connection between three or more discrete locations represented by X and Y coordinates on a reference coordinate system, as shown below in Figure 3.

Figure 3
Example of Polygon Features

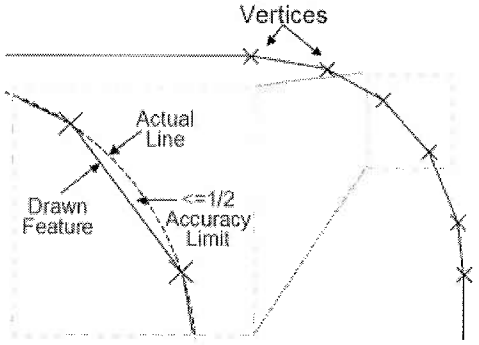
4). Complex Geometry Types: Arcs, circles, and ellipses are not included in this standard. This is intended to facilitate data exchange between software that process these complex data types differently. For example, if arcs are used in a CADD drawing, they must first be broken into a line with vertices placed at intervals that are sufficient to maintain the accuracy requirements described in Section 11b.

2.2. Topology Rules

The placement of geometric elements (i.e., Feature Instances) in juxtaposition to one another (i.e., next to, connected to, or on top of) is referred to as a topology. Topology rules establish requirements for the placement of instances of a Feature Type in relation to one another and in relation to instances of other Feature Types. Unless stated otherwise, this standard requires the following topological rules:

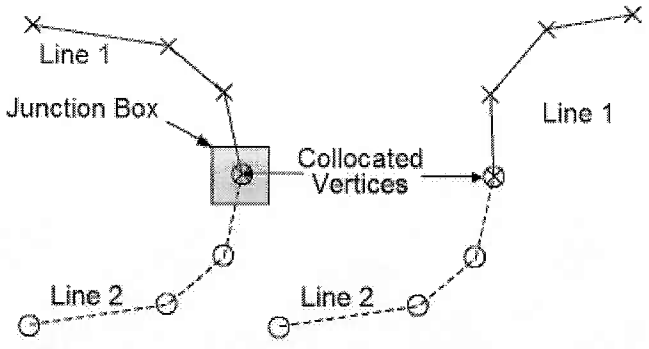
1. Line Feature Types: Lines should contain one or more line segments with vertices placed at required intervals so the line feature does not stray from the actual feature by more than the half accuracy limit defined in Appendix A for the Feature Type, as shown below in Figure 4.

Figure 4
Illustrates the placement of vertices along a curve



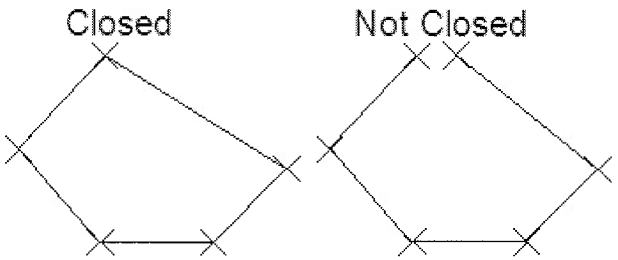
Lines should begin and end at vertices collocated (i.e., exactly at the same coordinate) with features (often point Feature Types) designed to join two or more linear features, as shown in Figure 5. An example is electrical conduit lines that are joined only at junction boxes and other similar point features. For lines not naturally joined by physical features (e.g., marking lines), beginning and ending nodes should be placed where an attribute or other property change occurs.

Figure 5
Collocation of Line End Points



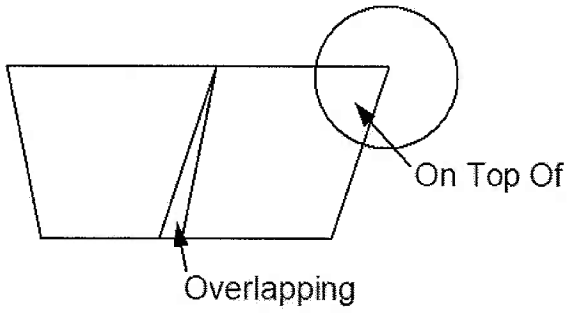
2. Polygon Feature Types: Polygons must always be closed, meaning all vertices must be shared by two adjacent line segments forming the edges of the polygon, as shown in Figure 6.

Figure 6
Examples of Closed and Unclosed Polygons



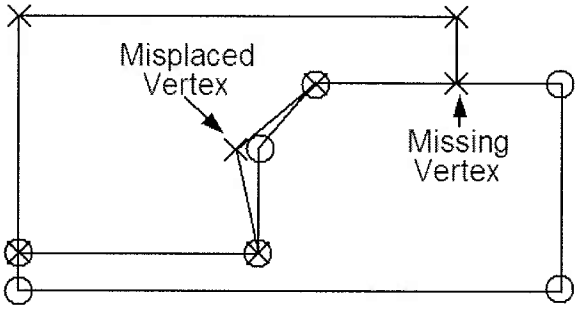
Unless otherwise stated, polygons must not overlap other polygons of the same Feature Type, as shown in Figure 7. This includes polygons placed on top of other polygons, as well as small overlapping splices because one or more vertices of adjacent sides are not matched. Polygons placed within (e.g., a 'doughnut hole') a larger polygon (e.g., the 'doughnut') which do not overlap are acceptable, because they describe a physically different space from the surrounding polygon.

Figure 7
Depicts an examples of overlapping polygons



Polygons must share vertices with adjacent polygons where the real-world features they represent are adjacent, as shown below in Figure 8. This rule applies to polygons in the same Feature Type as well as polygons of different but related Feature Types.

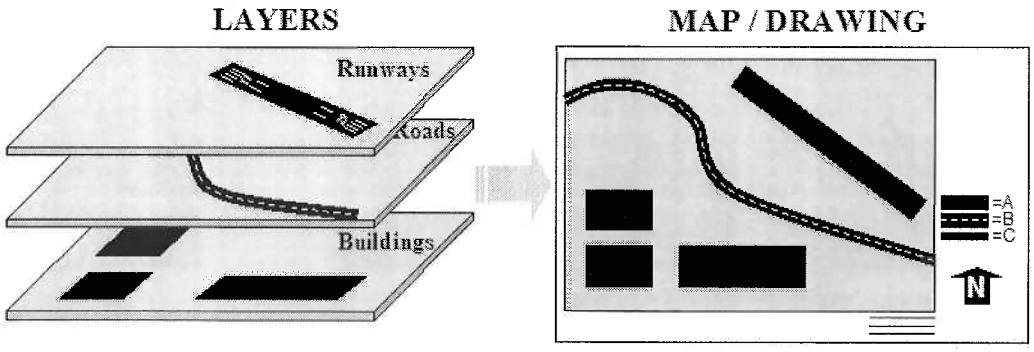
Figure 8
Depicts the placement of vertices of adjacent polygons



2.3. Layering of Feature Types

Each Feature Type corresponds to a single GIS layer and one or more CADD layers in this standard. GIS and CADD software superimpose layers on top of one another to form a map or drawing, as shown in Figure 9 below.

Figure 9
Illustrates the layering of Feature Types to form a map or drawing



Because layers are a fundamental element of GIS and CADD software, layers are often associated with tables that contain attributes (e.g., width, material type, condition, etc.), metadata (e.g., accuracy, source, date of relevance, etc.) and properties (e..g., color, line type, etc.). These are covered, respectively, in more detail in the following sections.

2.4. Feature Type Layering in GIS Software

GIS software provides a great deal of flexibility when distinguishing, rendering, and annotating different types of features (i.e., Feature Instances) within a single layer (i.e., a Feature Type) of a map. Because of this flexibility, features that have the same properties and attributes but have minor differences such as type and status can be grouped onto a single layer but still be displayed differently. The result is that fewer layers can be used to represent real-world situations. In this standard, 353 GIS layers are used to represent all of the features deemed relevant to airport GIS applications.

2.5. Feature Type Layering in CADD Software

In CADD software, layers are typically used not only distinguish between different types of features (as with GIS), but also to color or shade specific features, indicate the status of features and display annotations or dimensions. As a result, more CADD layers are typically used to represent all of the features potentially relevant in airport CADD drawings. MAA's CADD Standards Manual reflects the range of layers relevant to MAA.

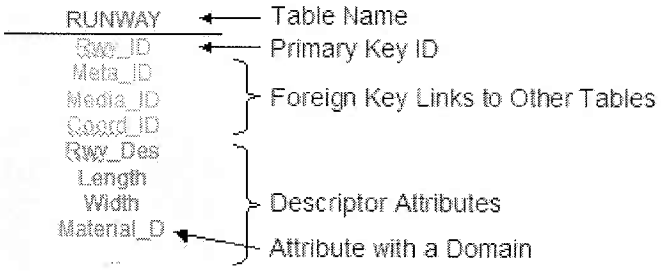
2.6. Relationship of GIS & CADD Layers

Because many more CADD layers can be used to represent the same features represented on far fewer GIS layers, there is a natural many-to-one matching of CADD to GIS layers. The specific relationship of CADD layers that correspond to GIS layers is shown in the CADD-to-GIS crosswalk.

3. ATTRIBUTES

Attributes add alphanumeric descriptors to the geometry of a feature. Attributes can contain information such as the name, type, or condition of a feature. For example, the attributes of a runway include its designator (e.g., 15R/33L), material type (e.g., concrete), and length (e.g., 6,500 feet). Figure 10 below shows a typical list of attributes associated with a Feature Type.

Figure 10
Sample Attribute Table for a Feature Type



3.1. Domain Values

The values assigned to an attribute are sometimes limited. The range of acceptable values is referred to as the domain for that attribute. Domains that limit attribute values to a range of numeric or date values are referred to as range domains. List Domains limit values to a selection of choices. If users can add values to a list of acceptable values and still be compliant with the standard, the list is referred to as a code list. A list that users cannot add to is referred to as an enumeration. In this standard, most of the list domains are enumerations. To distinguish attributes that are limited to a domain, the name of each attribute ends with "_D". For each such attribute, there is an associated table in Appendix B listing the acceptable values and their definitions.

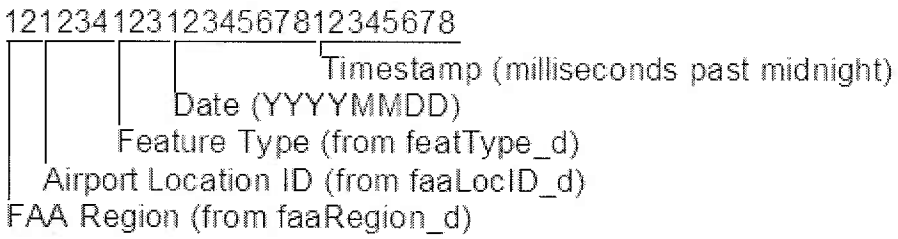
3.2. Primary Key Identifiers

Primary Keys are attributes used by a system to uniquely identify each record (i.e., feature instances). Primary key values must be unique within each attribute table.

When GIS data are submitted to MAA and uploaded into the AEIS Data Repository, each record will also be assigned a globally unique ID (GUID), which means that no other records have the same identifier. AEIS modules will use this GUID to track feature instances as they are modified. If users who download data from AEIS encounter such GUIDs, they are required to retain the GUIDs and submit them, unaltered, with subsequent revisions, to the feature instances they downloaded.

The format of the GUIDs used in AEIS is described in Figure 11 below. A numeric ID is used that contains the FAA region, airport location ID, feature type, date, and a timestamp. Since FAA region, airport location, and feature type are text values, corresponding numeric values have been assigned in the domain tables found in Appendix B.

Figure 11
Format for Globally Unique Primary Keys



3.3. Foreign Key Identifiers

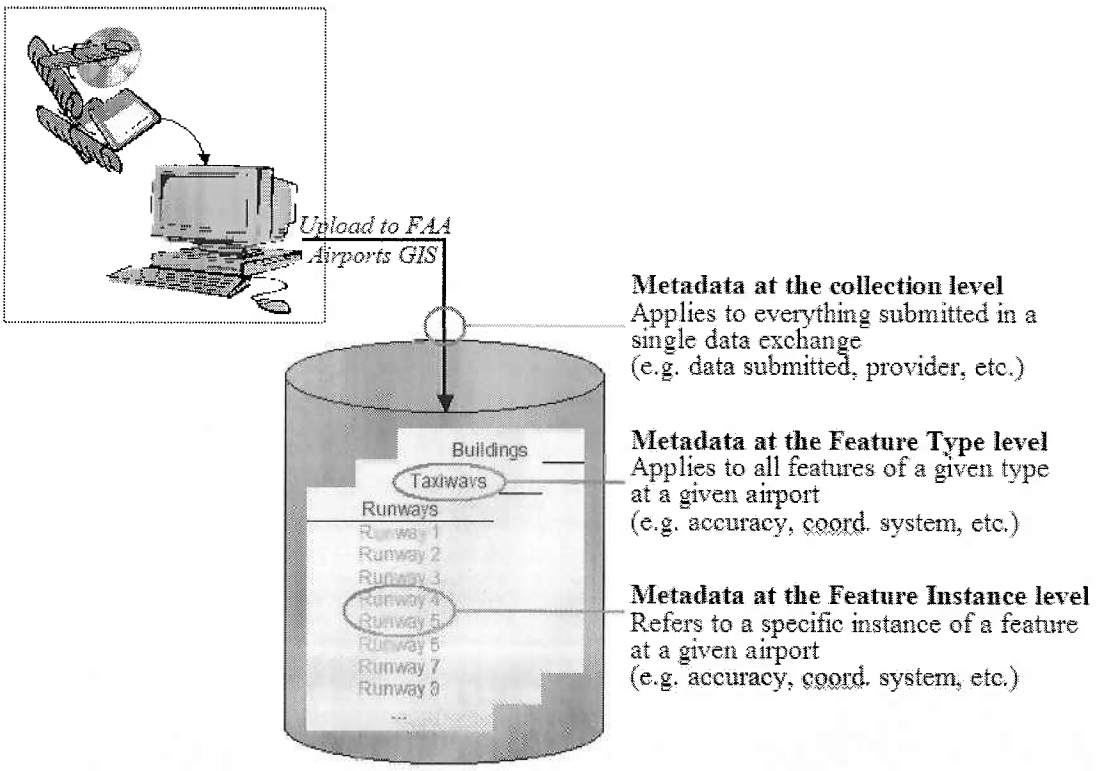
Attributes containing primary key values of related records in other Feature Type tables are called foreign key identifiers. Foreign key identifiers provide a link between different types of features with logical relationships. For example, a the data for a taxiway leading to a runway might contain a foreign key to the runway table that is populated with the primary key value for that runway.

4. METADATA

Metadata is information about the data, such as the data source, accuracy, and the dates during which the data are valid. Metadata values take the form of alphanumeric descriptors of the data and in this way are very similar to attributes. For clarity, and because they are stored separately, metadata descriptors are referred to in this standard as metadata elements (versus attributes).

Metadata elements can be applied at various levels of data aggregation. They can describe a collection of data submitted at one time. A collection may comprise one or more drawings that contain several layers such as those that make up an ALP, several individual Shape files that each represent a layer, a single layer stored in a shape file, or any other combination of allowable data sets. Metadata elements can also describe all geometry and attributes on a given layer or Feature Type. This is the case with traditional FGDC compliant metadata. This level of metadata applies if different layers within a collection have different metadata. Next, metadata elements can describe a given feature instance. This level applies when individual features or groups of features within a layer have different metadata. Finally, they can describe the geometry and each attribute of a given feature instance separately. Figure 12 shows this hierarchical definition of the metadata levels that apply to GIS data.

Figure 12
Metadata Elements are Different Levels of Aggregation



For this standard, metadata is required at the collection level when data are submitted. The standard also accommodates metadata elements at the feature type, feature instance, and attribute levels. More detailed metadata increases the usefulness of the data provided. Accordingly, data providers are encouraged to submit metadata at the most detailed level possible.

This standard uses metadata elements defined by the ISO Geographic Information – Metadata Standard (ISO 19115). Of the 409 elements defined in ISO 19115, only 25 are used by this standard, because many of the elements defined in ISO are classified as optional or conditional and do not apply to this standard. Furthermore, some of the mandatory elements in the ISO standard are redundant with the specifications of this standard and are therefore not necessary for data exchange. For example, the security classification code is a mandatory ISO element, but since this standard sets the classification code based on the Feature Type, it is not necessary to convey the security classification code in metadata. Figure 13 lists each metadata element used in this standard along with the level of applicability. Further details about these metadata elements are provided in Appendix C.

FIGURE 13

List of Metadata Elements

	Collection	Set	Feature
Overview			
abstract	✓	✓	✓
status	✓	✓	✓
geometricObjectCount	✓	✓	
Scope			
dataset	✓		
features	✓	✓	
attributes			✓
Useage			
specificUsage	✓	✓	✓
BegusageDateTime	✓	✓	✓
endUsageDateTime	✓	✓	✓
Source			
statement	✓		
individualName	✓		
organizationName	✓		
positionName	✓		
deliveryPoint	✓		
city	✓		
administrativeArea	✓		
postalCode	✓		
electronicMailAddress	✓		
voicePhoneLine	✓		
Coordinate System			
projection	✓	✓	
horizontalDatum	✓	✓	
verticalDatum	✓	✓	
code	✓	✓	
Data Quality			
horizontalAccuracy	✓	✓	✓
verticalAcuracy	✓	✓	✓
evaluationMethodName	✓	✓	✓
evalutionMethodDescription	✓	✓	✓
pass	✓	✓	✓
groundSampleDistance	✓	✓	✓

4.1. Temporal Relevance

One of the most critical metadata elements to the aviation industry is time. The frequency with which airport infrastructure changes requires spatial data to possess an indication of the time period for which the data are valid. For example, the existence of a runway may be valid from the time it was authorized for use until further notice. This standard defines the beginning and ending date and time for which each feature instance is valid. All features must have a beginning date (i.e., data are valid until further notice), an ending date (i.e., the data expire at a specified time), or both (i.e., the data are valid only during the period specified). These values are held in the begUsageDateTime and endUsageDateTime metadata elements defined in Appendix C.

4.2. Accuracy

Accuracy is one metadata element that is particularly important to airport GIS applications. Accuracy is broadly defined as *the quality of nearness to the true value*. For the exchange of data as specified in this standard, it is important to be more specific. This standard, therefore, provides limits for the absolute horizontal positional accuracy of each Feature Type. These limits are described as a maximum number of feet between a feature's actual position and the position indicated in the data provided. The actual position is defined as the feature's true location on the specified geoid. Since the earth's surface has many variations, it is approximated by a geoid. Furthermore, the difference between a feature's true and recorded positions is required at a 95% confidence level. This means that statistically, 95% or more of the features provided fall within the required accuracy limit.

For some feature classes, vertical accuracy limits are also provided. These accuracies are expressed as the maximum number of feet a feature's recorded elevation can differ from its actual elevation. Again, the actual elevation is measured from the geoid elevation at that location. Elevations are also to be provided at a 95% confidence level.

Accuracy requirements are driven by the way the data are to be used. The location of an airport on a map used for aircraft navigation must be much more accurate than its location on a national map of airports provided for general information purposes. This standard provides accuracy guidelines for maps that are intended for airport layout plans.

The accuracy guidelines provided in this standard have been derived from several sources, including FAA Document 405, RTCA User Requirements for Aerodrome Mapping Information, FGDC Geospatial Positioning Accuracy Standards-Part 4 (sources are indicated in order of precedence). Further information on accuracy definitions and methods to assess the accuracy of existing data can be found in the FGDC Geospatial Positioning Accuracy Standards-Part 3: National Standard for Spatial Data Accuracy (FGDC-STD-007.3-1998).

4.3. Security Sensitivity Levels

Sensitivity level is another important metadata element. Because spatial data can be used for nefarious purposes, the data must be protected from unauthorized users. The Code of Federal Regulations (49 CFR 1520) defines Sensitive Security Information (SSI) and methods for protecting the information. Based on this definition, many forms of spatial data can be considered SSI. Protecting sensitive spatial data is therefore not just good practice, it is the law. However, overly protecting data limits the information's usefulness, in many cases needlessly. The challenge is to restrict data to users having an *operational need to know* and whose credentials the data provider has qualified. Relative to spatial data, this challenge is particularly complex because or the wide variety of data users and ways in which they need to use the data. An efficient way to restrict access to spatial data is to apply specific restrictions at the Feature Type level. This standard applies one of the following sensitivity levels to each Feature Type. The sensitivity levels are based on the MAA Spatial Data Security Standard and conform to the classifications listed in the MD_ClassificationCode list in ISO 19115.

- **Unclassified** data are available for general disclosure.
- **Restricted** data are not available for general disclosure.
- **Confidential** data are available for users that can be trusted with the information.
- **Secret** data are to be kept or intended to be kept private, unknown, or hidden from all but a select group of people.
- **Top Secret** data are of the highest secrecy.

Since sensitivity levels are established for each Feature Type by this standard (See Appendix A), it is not necessary to include this information (i.e., a classification code in ISO terminology) in the metadata.

5. COORDINATE SYSTEM

Horizontal spatial data shall be submitted to, maintained by, and provided by MAA in the Maryland Coordinate System of 1987, also referred to as Maryland State Plane. Following are the parameters of the Maryland Coordinate System of 1987:

Map Projection:	Lambert conic conformal projection of the geodetic reference system of 1980
Horizontal Datum:	NAD83 (2001)
Latitude of Origin*:	37°40 North latitude
Central Meridian:	77°00' West longitude
Standard Parallel 1:	38°18' North latitude
Standard Parallel 2:	39°27' North latitude
False Easting*:	400,000 meters
False Northing*:	0 meters
Latitude**:	37°34' 38.14264" N
Longitude**:	81°31' 45.07877" W

** at the 77th meridian*
*** at artificial origin (0,0)*

Vertical spatial data shall be submitted to, maintained by, and provided by MAA based on the National Geodetic Vertical Datum of 1988 (NGVD88).

All units for both horizontal and vertical data will be the U.S. Survey Foot (1200/3937 meters).

6. ACCEPTABLE DATA FORMATS

GIS data should be submitted to MAA as ESRI Shape files or in an ESR Geodatabase. Shape files and Geodatabase layers must be named for the Feature Type they represent (e.g., RunwaySegment). They must also contain relevant attributes for the Feature Type they represent. Attributes that are covered in this standard must be named as they are in Appendix A. Attributes defined in this standard that are not used need not be included. Attributes that a data submitter uses but which are not defined in this standard may be included.

Metadata at the collection level should be submitted in the form of a comma delimited ASCII text file which lists each metadata element and its associated value. Element names, as defined in Appendix C, should be listed on the first line and be separated by commas. Their corresponding values should be listed on the second line. The name of this file should be the same as the name assigned to the collection of data submitted, and should include an indication of the data contained in the collection, the company providing the data, and the date (e.g., "ALP Layers from Landrum & Brown 111205.ZIP" for the collection and "ALP Layers from Landrum & Brown 111205.txt" for the associated metadata).

Metadata at the Feature Type level should also be submitted with this type of ASCII file, although there should be a separate file for each Feature Type submitted. The names of these metadata files should be the same as the names of the corresponding Feature Type (i.e., "TaxiwaySegment.txt"). Alternatively, Feature Type level metadata can be submitted in an FGDC compliant XML format (such as the metadata format available in ESRI software).

Metadata at the feature instance level should be submitted with this type of ASCII file. A separate file containing the name of the Feature Type should be provided for each Feature Type submitted. Each line of the file (aside from the first line, which lists the element names) should contain the metadata values for specific feature instances or records in the attribute table. Alternatively, metadata elements can be added as additional attributes to the attribute tables themselves.

Shape files or collections of shape files should be submitted on CD-R or CD-R/W with the session closed to ensure maximum cross platform readability. All electronic deliverables (including CDs) must be virus free. The submitted CD will include a CD cover and label with the following information:

- Contract No MAA-CO-XX-XXX
- Contract/Task Title: _____
- Consultant: XXXXXXXXXXXX
- Airport: BWI and/or MTN AIRPORT
- Submittal Date: MONTH, DAY, YEAR
- No. of Documents/Sheets: XX
- CD # / Total in Set: X or XX

The root directory of the delivered CD should contain a text file named ReadMe.txt that repeats the information contained on the label as well as the following:

- Contact information for the individual responsible for submitting the document(s);
- Brief explanation of CD directory structure if subdirectories are used;
- Any other comments necessary to convey the contents of the CD.

GLOSSARY OF ACRONYMS AND TERMS

The following acronyms have been used in this standard:

AC	Advisory Circular
ADCAT	Airport Data Collection and Analysis Tool
A/E/C	Architecture Engineering and Construction
AIA	American Institute of Architects
AIS	Aeronautical Information Services
AIXM	Aeronautical Information Exchange Model
ALP	Airport Layout Plan
ANSI	American National Standards Institute
AOC	Airport Obstruction Chart
ASTM	American Society for Testing and Materials
CADD	Computer Automated Drafting & Design
DGN	Microstation Design File
DOD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DWG	Autodesk Drawing File
FAA	Federal Aviation Administration
FGDC	Federal Geographic Data Committee
GIS	Geographic Information System
GML	Geographic Markup Language
ICAO	International Civil Aviation Organization
ISO	International Organization for Standards
NAD	North American Datum
NGA	National Geospatial Intelligence Agency
NGS	National Geodetic Survey
NGVD	National Geodetic Vertical Datum
RTCA	Radio Technical Commission for Aeronautics
SDSFIE	Spatial Data Standards for Facilities, Infrastructure and Environment
SSI	Sensitive Security Information
USGS	U.S. Geological Survey

The key terms and phrases used in this standard are defined below:

Attributes or **Attribute Data** are alphabetical and/or numeric information that describes particular characteristics of a geospatial feature, such as its type, dimensions, usage, occupant, etc.

A **Collection** is any combination of data that are submitted by a provider at a given time.

Geospatial Data or **Geospatially-Referenced Data** are data that depict natural or manmade elements that occupy a specific location on the face of the earth. Examples include a runway, building, river, or underground pipe. Geospatial features or a particular type (i.e., all runways) are often referred to as a feature type, data set, or layer of spatial data.

A **Feature** is a manmade or natural object such as a building, runway, navigational aid, or river that appears in the real world. A **Feature Type** refers to a collection of all features of a given type, such as all runways or all buildings. Feature Types are analogous to layers in many GIS applications and are also referred to as Entity Types and Feature Classes in other standards.

A **Feature Instance** refers to a specific feature such as runway 10/28 at Baltimore Washington International Airport.

Metadata is information about the data, such as source, accuracy, dates for which the data are valid, and security classification. Metadata is essential in helping users determine the extent to which they can rely on a given data item to make decisions.

An **Orthophoto** is an aerial image that has been taken from above (either from an aircraft or a satellite) and has been spatially corrected so that features shown on the photo are displayed in their actual geographic position within a specified range of tolerance.

Photogrammetric refers to the process of creating vector data, such as building outlines and elevation contours, from stereo imagery, or pairs of images taken of the same location but at different angles.

Positional Accuracy refers to the difference between a geospatial feature's displayed position and its actual position. Absolute positional accuracy is the difference between a geospatial feature's displayed position and its actual position on the face of the earth. Relative positional accuracy is the difference between a geospatial feature's displayed position and that of other geospatial features in the same data set.

A **Schema** is a logical diagram that shows the structure and interrelationships among different feature classes of the data standard or model.

Spatial Data are data that depict a real world feature such as a road, building, or runway on a map. The most basic types of spatial data are points, lines, and polygons, but spatial data can also include orthophotos and other more complex forms of locational information.

APPENDIX A - LIST OF FEATURE TYPES AND ATTRIBUTES

This appendix lists each of the 135 GIS Feature Types defined by this document. MAA's GIS Data Standard also includes 218 communication and utility Feature Types, which are defined in the MAA GIS Data Standard – Utilities Supplement.

The Feature Types defined in this document are grouped into categories (i.e., Airfield, Airspace, Environmental, etc.) for ease of use. For each Feature Type, the class name, geometry type, sensitivity level, and a definition are provided. Suggested accuracies are also provided. Accuracies are indicated at a reasonable level that will meet a broad range of end user requirements. Individual project scopes, technical limitations and other factors may require data to be of a higher or lower level of accuracy. Attributes are also provided along with their type and definition. The following figure provides a key to the information provided in Appendix A.

Figure 15
Legend to Appendix A

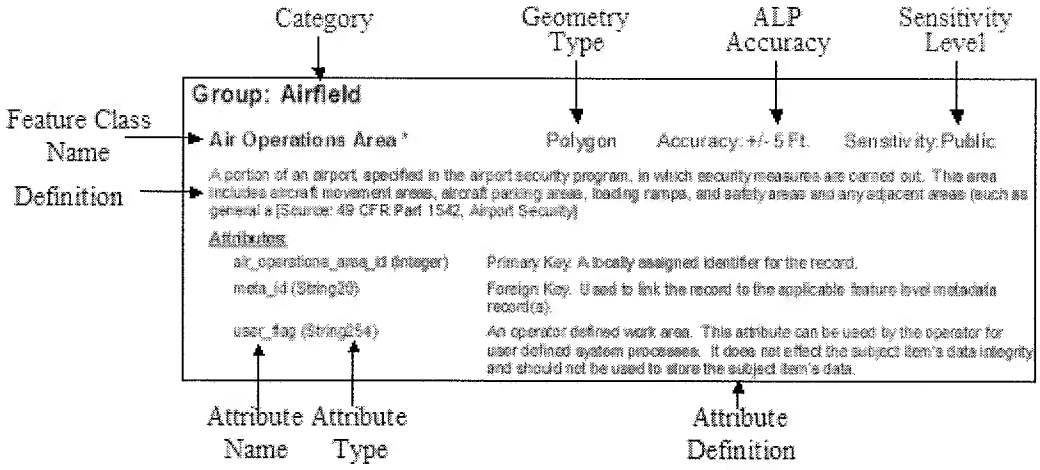


Table of Contents to Appendix A

Following is a table of contents of the feature type definitions in Appendix A. For ease in referencing, the 135 feature types defined are subdivided into 13 categories.

Group: Airfield

AircraftDeicingArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Unclassified

An area where frost, ice, or snow is removed from aircraft in order to provide clean surfaces and/or clean surfaces of the aircraft receive protection against the formation of frost or ice and accumulation of snow or slush for a limited period of time [Source: AC 150/5300-13*]

Attributes:	*SDSFIE Entity* *none*
aircraftdeicingarea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
area_desc (String254)	A brief description of the area and any special characteristics. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AircraftGateStand

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Operational area of gate (parking) stand. If no gate stand area painting is available, a virtual parking stand area should be provided [Source: RTCA DO-272]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
acpark_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	The name of the feature. [Source: SDSFIE Feature Table]
feat_desc (String255)	Description of the feature.
gate_stand_type_d (Enumeration16)	The type of aircraft gate/stand.
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
wingspan (Real)	The quantity representing the maximum wingspan which can be accommodated by the airfield surface. [Source: SDSFIE Feature Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
feat_width (Real)	The overall width of the airfield surface. [Source: SDSFIE Feature Table]
feat_len (Real)	The overall length of the airfield surface. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AircraftNonMovementArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

An area where aircraft cannot be seen by a control tower and therefore are restricted to move.

Attributes:	*SDSFIE Entity* *none*
aircraftnonmovementarea_id	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.

user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AirfieldLight

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Restricted

Any lighting located within or near an airport boundary the provides guidance for airborne and ground maneuvering of aircraft [Source: AIM, AC 150/5340-24]

Attributes:	*SDSFIE Entity* *airfield_light_point*
light_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
lightingType_d (Enumeration16)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
color_d (Enumeration16)	The color of the airfield light. [Source: SDSFIE Feature Table]
luminesc (String12)	The luminescence of the airfield light. [Source: SDSFIE Feature Table]
pilotControlFrequency * (Real)	The radio frequency used by pilots to control various airport lighting systems
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AirOperationsArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Unclassified

Area, specified in the airport security program, where security measures are carried out (aircraft movement, aircraft parking, loading, and safety areas as well as any adjacent areas that are not separated by adequate security systems or procedures) [Source: 49 CFR Part 1542, Airport Security*]

Attributes:	*SDSFIE Entity* *none*
airoperationsarea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AirportBoundary

Geometry Type: Polygon Accuracy: +/-1Ft. Sensitivity: Restricted

A polygon, or a set of polygons, that encompasses all property owned or controlled by the airport for aviation purposes [Source: AC 150/5300-13, Appendix 7, Order 5190.6A, Section 5]

Attributes:	*SDSFIE Entity* *airfield_area*
airfld_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
faaSiteNr (String8)	Number to the airport in ascending order depending on the state and city. Contains a suffix (A = Airport, B = Balloonport, C = Seaplane Base, G = Gliderport, H = Heliport, S = Stolport, and U = Ultralight Flightpark). [Source: FAA AC 150/5200-35]
LndFacTypeCode (String2)	Landing facility type
feat_desc (String254)	Description of the feature.
faaLocID (String4)	The location identifier assigned to the feature by the FAA.
iataCode (String4)	The location identifier assigned to the feature by IATA.

icaoCode (String4)	The location identifier assigned to the feature by the International Civil Aviation Organization.
feat_name (String50)	The name of the airfield. [Source: SDSFIE Feature Table]
airportFacilityType_d	The type of airfield
operationsType_d (Enumeration16)	The type of operations permitted on the airfield
owner_d (Enumeration16)	The type of owner of the airfield.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

AirportSign

Geometry Type: Point Accuracy: +/-10Ft. Sensitivity: Restricted

Signs at an airport other than surface painted signs [Source: AC 150/5340-18]

Attributes: *SDSFIE Entity* *general_improvement_feature_point*

feature_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
signTypeCode_d (Enumeration16)	The type of sign
message (String254)	The text message which appears on the sign.
feat_desc (String254)	A description of the improvement feature. [Source: SDSFIE Feature Table]
feat_ht (Real)	The overall height of the feature. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Apron

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A defined area on an airport or heliport, paved or unpaved, intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance [Source: FAA]

Attributes: *SDSFIE Entity* *airfield_surface_site*

air_sur_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
apronType_d (Enumeration16)	A classification of the typical use for the apron
feat_desc (String254)	Description of the feature.
feat_name (String30)	The name of the feature. [Source: SDSFIE Feature Table]
tiedowns (Integer)	The approximate number of tiedowns in the surface. [Source: SDSFIE Feature Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level

metadata record(s).

ArrestingGear

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Restricted

Location of the arresting gear cable across the runway [Source: RTCA DO-272]

Attributes: *SDSFIE Entity* *airfield_linear_safety_feature_line*

safety_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
fac_typ_d (String16)	The type of facility or feature related to airfield operations. [Source: SDSFIE Attribute Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Clearway

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

An area beyond the takeoff runway under control of airport authorities within which terrain or fixed obstacles may not extend above specified limits. [Source: AC 150/53XX-XX (Vol. C)*]

Attributes: *SDSFIE Entity* *none*

feat_desc (String255)	Description of the feature.
designSurfaceType_d	A description of the design surface
safety_reg (String20)	An identifier for the safety regulations in effect within the zone. [Source: SDSFIE Feature Table]
zone_use (String50)	A description of the use of the zone. [Source: SDSFIE Feature Table]
determination (String255)	A formal declaration of the runway safety area condition with respect to standards and any requirement improvements [Source: FAA Order 5200.8]

DesignSurface

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

A three-dimensional surface that is used in runway design [Source: AC 150/5300-13]

Attributes: *SDSFIE Entity* *airfield_imaginary_surface_area*

spc_zon_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
zone_name (String30)	A commonly used name for the zone. [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
designSurfaceType_d	A description of the design surface
safety_reg (String50)	A description of the use of the zone. [Source: SDSFIE Feature Table]
zone_use (String50)	A description of the use of the zone. [Source: SDSFIE Feature Table]
determination (String255)	A formal declaration of the runway safety area condition with respect to standards and any requirement improvements [Source: FAA Order 5200.8]
determinationDate (Date)	The date the RSA determination was approved [Source: FAA Order 5200.8]
zone_inner_width * (Real)	The width of the narrow end of a trapezoidal shaped DesignSurface feature. This is normally the end that is closest to the landing surface [Source: AC 150/5300-13]
zone_outer_width (String20)	An identifier for the safety regulations in effect within the zone. [Source: SDSFIE Feature Table]

zone_length (Real)	The length of a trapezoidal shaped DesignSurface feature.
grad_lo_hi (Real)	The low to high gradient within the airspace. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

DisplacedThreshold

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Restricted

The beginning of that portion of the runway available for landing when it is located at a point other than the physical end of the runway [Source: AC 150/5300-13]

Attributes:	*SDSFIE Entity* *none*
displacedthreshold_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
pointType_d (Enumeration16)	Contains the allowable values of a point type used by the ControlPoint feature. The point types may be supplementally provided as subtypes of ControlPoints for ease of use and clarification.
elevation (Real)	Elevation of the point relative to the selected vertical datum. [Source: NGS]
ellipsoidElevation (Real)	The height above the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question. Also called the geodetic height. [Source: NGS]
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FrequencyArea

Geometry Type: Polygon Accuracy: +/-20Ft. Sensitivity: Unclassified

Area specifying the designated part of the surface movement area where a specific frequency is required by ATC or ground control [Source: RTCA DO-272]

Attributes:	*SDSFIE Entity* *communications_groundwave_polygon_area*
gwv_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	any commonly used name for the feature. [Source: SDSFIE Feature Table]
feat_desc (String254)	A description of the feature. [Source: SDSFIE Feature Table]
frequency (Real)	Primary frequency used on frequency area (in MHZ). [Source: RTCA DO-272]
station (String30)	Service or Station assigned to primary frequency (e.g., ATC Tower, Ground Control) [Source: RTCA DO-272]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Helipad

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Unclassified

A small designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp,

or movement area used for takeoff, landing, or parking of helicopters. Also known as the Touchdown and Lift-Off Area (TLOF) [Source: AC 150/5390-2B]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
air_sur_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
elevation (Real)	Elevation of the point relative to the selected vertical datum. [Source: NGS]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
feat_len (Real)	The overall length of the airfield surface. [Source: SDSFIE Attribute Table]
feat_width (Real)	The overall width of the airfield surface. [Source: SDSFIE Feature Table]
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HelipadFATO

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Unclassified

A defined area over which the final phase of the approach to a hover, or a landing, is completed and from which the takeoff is initiated. This area was called the "takeoff and landing area" in previous publications [Source: AC

Attributes:	*SDSFIE Entity* *none*
helipadfato_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
elevation (Real)	The elevation of helipad measured from mean sea level (MSL). [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HelipadThreshold

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Unclassified

Based on the predominant wind direction, the helipad threshold position is congruent with the approach/takeoff paths [Source: RTCA DO-272]

Attributes:	*SDSFIE Entity* *none*
helipadthreshold_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
thresholdDesc (String254)	A descriptive of the helipad and direction. See SF21 3.3.3.4.54
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HelipadTLOF

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Unclassified

A load bearing, generally paved area, normally centered in the FATO, on which the helicopter lands or takes off. The TLOF is frequently called a helipad or helideck. TLOFs shall be photogrammetrically determined [Source: AC

Attributes:	*SDSFIE Entity* *none*
helipadtlof_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Infield

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Area of an airfield where aircraft cannot move.

Attributes:	*SDSFIE Entity* *none*
Infield_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

MarkingArea

Geometry Type: Polygon Accuracy: +/-2Ft. Sensitivity: Unclassified

An element of Marking whose geometry is a polygon [Source: AC 150/5340-1]

Attributes:	*SDSFIE Entity* *airfield_surface_marking_area*
mark_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
markingFeatureType_d	The type of the marking
color_d (Enumeration16)	The color of the marking
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

MarkingLine

Geometry Type: Line Accuracy: +/-2Ft. Sensitivity: Restricted

An element of Marking whose geometry is a line [Source: AC 150/5340-1, RTCA/DO-272]

Attributes:	*SDSFIE Entity* *airfield_surface_marking_line*
mark_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
markingFeatureType_d	The type of the marking
color_d (Enumeration16)	The color of the marking

user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

PassengerLoadingBridge

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

A bridge for loading/unloading access to airplanes for passengers and crew

Attributes: *SDSFIE Entity* *none*

passengerloadingbridge_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name, code or identifier used to identify the loading bridge.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

PavementSection

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A section of paved surface used for pavement condition assessment

Attributes: *SDSFIE Entity* *none*

pavementsection_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
pavement_condition_index (Integer)	Pavement Classification Number Code [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RestrictedAccessBoundar

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Confidential

A restricted area boundary defines aircraft movement area that is strictly reserved for use by authorized personnel only. These boundaries, typically found on joint civil/military use airports, are often painted red lines on taxiway or apron surfaces. [Source: NGS*]

Attributes: *SDSFIE Entity* *military_restricted_access_area*

access_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
area_name (String30)	A common name for the restricted area. [Source: SDSFIE Feature Table]
area_desc (String254)	A description of the restricted area. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RsaBoundary

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

The boundary of the Runway Safety Area (RSA) for which the Airport Authority has maintenance responsibility. [Source: AC 150/53XX-XX (Vol C)]

Attributes:	*SDSFIE Entity* *none*
rsaID (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
determination (String255)	A formal declaration of the runway safety area condition with respect to standards and any requirement improvements [Source: FAA Order 5200.8]
feat_desc (String254)	Description of the feature.
zone_use (String50)	A description of the use of the zone. [Source: SDSFIE Feature Table]
designSurfaceType_d	A description of the design surface
safety_reg (String20)	An identifier for the safety regulations in effect within the zone. [Source: SDSFIE Feature Table]

Runway

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees: e.g., Runway 10/28, Runway 07/25. [Source: AC 150/5300-13*]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
air_sur_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
runway_num (String7)	Designator of the runway based on the magnetic bearing and position in relation to parallel runways (e.g. 33R/15L) [Source: AC 150/5340-1]
feat_desc (String254)	Description of the feature.
feat_len (Real)	The straight line distance between runway end points. This line does not account for surface undulations between points. Official runway lengths are normally computed from runway end coordinates and elevations. [Source: FAA Specification 405]
feat_width (Real)	Perpendicular line to the surface centerline, extending to the edge of the runway pavement on both sides of the runway, through a runway end-point. If less than 100 feet round up to the nearest 5 feet. If more than 100 feet round to the nearest 10 feet. [Source: NGS]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
Approach Visibility Minimums	Approach Visibility Minimums [Source: HJAIA GIS ALP Working Paper -]
Effective Runway Gradient (Real)	Effective Runway Gradient [Source: HJAIA GIS ALP Working Paper -]
Instrument Runway (String2)	Is the runway instrument rated [Source: HJAIA GIS ALP Working Paper -]
Approach Slope (String25)	Approach slope [Source: HJAIA GIS ALP Working Paper -]
Landing Distance Available	Landing Distance Available [Source: HJAIA GIS ALP Working Paper -]
Takeoff Distance Available (String25)	Takeoff Distance Available [Source: HJAIA GIS ALP Working Paper -]
Lighting (String50)	Type of lighting [Source: HJAIA GIS ALP Working Paper -]
Marking (String50)	Type of runway markings [Source: HJAIA GIS ALP Working Paper -]

Navigational Aids (String50)	Type of navigation aids [Source: HJAIA GIS ALP Working Paper -]
Wheel Load (String50)	Number of wheels [Source: HJAIA GIS ALP Working Paper -]
Weight Load (String50)	Wheel weight limit of runway [Source: HJAIA GIS ALP Working Paper -]
Bearing of Centerline Alignment	Bearing of Centerline Alignment [Source: HJAIA GIS ALP Working Paper -]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayArrestingArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

FAA-approved high energy absorbing material of a specific strength that will reliably and predictably bring aircraft to a stop without imposing loads that exceed design limits, cause major structural damage, or impose excessive forces on its occupants. [Source: AC 150/5220-22*]

Attributes:	*SDSFIE Entity* *airfield_linear_saftey_feature_line*
safety_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_len (Real)	The overall length of the feature. [Source: SDSFIE Feature Table]
feat_width (Real)	The overall width of the feature.
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayBlastPad

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A specially prepared surface placed adjacent to the ends of runways to eliminate the erosive effect of the high wind forces produced by airplanes at the beginning of their takeoff rolls [Source: AC 150/5300-13]

Attributes:	*SDSFIE Entity* *airfield_linear_safety_feature_line*
safety_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
feat_len (Real)	The overall length of the feature. [Source: SDSFIE Feature Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayCenterline

Geometry Type: Line | Accuracy: +/-2Ft. | Sensitivity: Restricted

Continuous line along the painted centerline of a runway connecting the middle-points of the two outermost thresholds. Centerline is composed of many centerline points (see RunwayControlPoint). It is used to calculate grade and line-of-sight criteria. [Source: AC 150/5300-13]

Attributes:	*SDSFIE Entity* *airfield_surface_centerline*
runwaycenterline_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
rwy_desg (String7)	Designator of the runway based on the magnetic bearing and position in relation to parallel runways (e.g. 33R/15L) [Source: AC 150/5340-1]
isDerived (Boolean)	Indicates whether the centerline is derived or photodetermined.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayEnd

Geometry Type: Point | Accuracy: +/-1Ft. | Sensitivity: Restricted

End of the runway surface suitable for landing or takeoff of aircraft. They are related to and describe approach and departure procedure characteristics of a runway threshold. It is the same as the runway threshold when the threshold is not displaced. [Source: NGS*]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
runwayend_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
status_d (Enumeration16)	The predominant status of the airfield facility surface site. [Source: SDSFIE Feature Table]
approachCat_d (Enumeration16)	A grouping of aircraft based on 1.3 times their stall speed in the landing configuration at the certificated maximum flap setting and maximum landing weight at standard atmospheric conditions [Source: AC 150/5300-13]
precisionApproachGuidance_d	Code indicating the type of precision guidance applicable.
elevation (Real)	Elevation of the point relative to the selected vertical datum. [Source: NGS]
ellipsoidElevation (Real)	The height above the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question. Also called the geodetic height. [Source: NGS]
asDistAvail (Real)	ASDA: The runway plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff [Source: AC 150/5300-13]
brngMagnetic (Real)	Magnetic runway bearing corresponding to threshold location valid at the day of data generation [Source: RTCA DO-272]
brngTrue (Real)	True bearing corresponding to the landing direction [Source: ICAO Annex 14]
designGroup_d (Enumeration16)	A grouping of airplanes based on wingspan [Source: AC 150/5300-13]
displacedDist (Integer)	The distance from the runway end to the landing threshold. When the thresholdType is normal, displacedDist = 0
landingDistAvail (Real)	LDA: The runway length declared available and suitable for a landing airplane [Source: AC 150/5300-13]
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
RunwayEndDesg (String3)	The designator for the runway end (i.e. 32L)
rwySlope (Real)	Runway slope corresponding to landing direction [Source: RTCA DO-272]
takeOffDistAvail (Real)	TODA: The TORA plus the length of any remaining runway clearway beyond the far end of the TORA [Source: AC 150/5300-13]
takeOffRunAvail (Real)	TORA: The runway length declared available and suitable for the ground run of an airplane taking off [Source: AC 150/5300-13]

tdzElevation (Real)	The highest elevation in the Touchdown Zone. The Touchdown Zone is the first 3,000 feet of the runway beginning at the threshold. [Source: FAA Specification 405]
tdzSlope (Real)	The longitudinal slope of the first 3000 feet of the runway beginning at the threshold [Source: FAA Specification 405]
thresholdType_d (Enumeration16)	An description of the landing threshold: either normal or displaced
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayIntersection

Geometry Type: Polygon Accuracy: +/-2Ft. Sensitivity: Restricted

The area of intersection between two or more runways [Source: RTCA DO-272]

Attributes: *SDSFIE Entity* *none*

runwayintersection_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
rnw1_desgn (String7)	Designator of the 1st intersecting runway based on the magnetic bearing and position in relation to parallel runways (e.g. 33R/15L) [Source: SDSFIE Attribute Table]
rnw2_desgn (String7)	Designator of the 2nd intersecting runway based on the magnetic bearing and position in relation to parallel runways (e.g. 33R/15L) [Source: SDSFIE Attribute Table]
rnw3_desgn (String7)	Designator of the 3rd intersecting runway based on the magnetic bearing and position in relation to parallel runways (e.g. 33R/15L) [Source: SDSFIE Attribute Table]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayLabel

Geometry Type: Point Accuracy: +/-1Ft. Sensitivity: Secret

The bottom center position of the runway designation marking [Source: NGS]

Attributes: *SDSFIE Entity* *none*

runwaylabel_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
rwy_desg (String3)	The designator of the associated runway
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwayLAHSO

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Restricted

Runway markings where an aircraft is to stop when the runway is normally used as a taxiway or used for Land and Hold Short Operations per letter of agreement with the ATCT. [Source: Order 7110.118*]

Attributes: *SDSFIE Entity* *none*

runwaylahso_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
color_d (Enumeration16)	The color of the marking
protected_rnw_desgn (String7)	Unique runway identifier for the airport of the runway, if any, being protected by the LAHSO (when the LAHSO precedes a runway intersection).
markingFeatureType_d	The type of the marking
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RunwaySegment

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A section of the runway surface. The runway surface can be defined by a set of non-overlapping RunwaySegment polygons. Use RunwaySegment to model the physical runway pavement in terms of surface, material, strength and condition. [Source: AC 150/5335-5, AC 150/5320-12, AC 150/5320-17, AC 150/5320-6*]

Attributes:	*SDSFIE Entity* *none*
runwaysegment_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Shoulder

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhance drainage; and blast protection [Source: AC 150/5300-13]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
air_sur_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
shl_type_d (String20)	Code for whether this is a runway shoulder or taxiway shoulder [Source: SDSFIE Attribute Table]
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
feat_width (Real)	The overall width of the airfield surface. [Source: SDSFIE Feature Table]
feat_len (Real)	The overall length of the airfield surface. [Source: SDSFIE Attribute Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
restricted (Boolean)	An indicator as to whether access to the feature is restricted.
user_flag (String254)	An operator defined work area. This attribute can be used by the

	operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Stopway

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A defined rectangular surface beyond the end of a runway prepared or suitable for use in lieu of runway to support an airplane, without causing structural damage to the airplane, during an aborted takeoff [Source: AC

Attributes: *SDSFIE Entity* *none*

stopway_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_len (Real)	The length of the designated stopway from the end of the runway
feat_width (Real)	The overall width of the feature.
surfaceType_d (Enumeration16)	A classification of airfield pavement surfaces for Airport Obstruction Charts [Source: NGS]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

TaxiwayHoldingPosition

Geometry Type: Line Accuracy: +/-2Ft. Sensitivity: Restricted

A designated position at which taxiing aircraft and vehicles shall stop and hold position, unless otherwise authorized by the aerodrome control tower [Source: RTCA DO-272]

Attributes: *SDSFIE Entity* *none*

taxiwayholdingposition_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
low_visibility_cat_d (Enumeration16)	The low visibility category
rnw_desgn (String7)	The designator for the approaching runway [Source: SDSFIE Attribute Table]
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
taxi_desgn (String4)	The designator for the taxiway [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

TaxiwayIntersection

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Restricted

A junction of two or more taxiways [Source: ICAO Annex 14 (Aerodromes), Chapter 1, page 5]

Attributes: *SDSFIE Entity* *none*

taxiwayintersection_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject

	item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

TaxiwaySegment

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

The taxiway segment features are used to represents taxiway, apron taxiway, rapid exit taxiway, taxiway intersection, and aircraft stand taxilane surface [Source: AC 150-5300-13]

Attributes:	*SDSFIE Entity* *airfield_surface_site*
air_sur_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
taxi_desgn (String75)	Taxiway segment name, which is identical to the corresponding taxiway name. Multiple taxiway segments can have the same name. Intersections of taxiways will be named after the predominant taxiway (if of the same level either name is acceptable).
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
taxiwayType_d (Enumeration16)	The type of taxiway.
surfaceMaterial_d (Enumeration16)	A code indicating the composition of the related surface [Source: NFDC]
feat_len (Real)	The overall length of the airfield surface. [Source: SDSFIE Feature Table]
feat_width (Real)	The overall width of the airfield surface. [Source: SDSFIE Feature Table]
designGroup_d (Enumeration16)	A grouping of airplanes based on wingspan [Source: AC 150/5300-13]
wingspan (Real)	The quantity representing the maximum wingspan which can be accommodated by the airfield surface. [Source: SDSFIE Feature Table]
directionality_d (Enumeration16)	An indicator as to whether operations can be conducted in one or two directions.
maxSpeed (Real)	The maximum speed permitted.
pavementClassificationNumber	A number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load. [Source: AC 150/5335-5]
surfaceCondition_d (Enumeration16)	A description of the serviceability of the pavement [Source: NFDC]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Airspace

AirwayLine

Geometry Type: Line Accuracy: +/-100Ft. Sensitivity: Restricted

The location of airways between origins and destinations. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *airway_line*
airway_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
ops_typ_d (Enumeration16)	The air operations permitted within the airway. [Source: SDSFIE Feature Table]
route_len (Real)	The length of the air route. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject

	item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FlightTrackLine

Geometry Type: Line | Accuracy: +/-20Ft. | Sensitivity: Unclassified

A line indicating the general flight track used in the vicinity of airfields. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *flight_track_line*
track_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
flight_no (String8)	The flight number assigned to the Flight Plan
feat_desc (String254)	A brief description of the flight track. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FlightTrackPoint

Geometry Type: Point | Accuracy: +/-20Ft. | Sensitivity: Unclassified

A point in space that designates aircraft arrival and departure routes [Source: FAA]

Attributes:	*SDSFIE Entity* *none*
flighttrackpoint_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
flight_no (String8)	The flight number assigned to the Flight Plan
feat_desc (String254)	Description of the feature.
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
altitude (Real)	The altitude in feet above mean sea level.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

LandmarkSegment

Geometry Type: Line | Accuracy: +/-10Ft. | Sensitivity: Unclassified

Geographic features located in the vicinity of an airport that aid geographic orientation. The features may or may not have obstruction value. These may include objects such as roads, fences, utility lines, shorelines, levees, quarries and airports, etc [Source: NGS*]

Attributes:	*SDSFIE Entity* *none*
landmarksegment_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
landmarkType_d (Enumeration16)	Type of landmark feature
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Obstacle

Geometry Type: Point | Accuracy: +/-Ft. | Sensitivity: Restricted

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that represent a defined Obstruction Identification Surface

Attributes:	*SDSFIE Entity* *none*
obstacle_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
obstacle_type_d (Enumeration16)	The type of obstacle
feat_desc (String254)	Description of the feature.
aboveGroundLevel (Real)	The vertical distance from the ground to the top of the obstacle [Source: NGS]
elevation (Real)	Elevation of the point relative to the selected vertical datum.
ellipsoidElevation (Real)	The height above the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question. Also called the geodetic height.
FromDTHLDDist (Integer)	Distance along extended runway centerline from a Displaced Threshold to point abeam the obstacle. A negative distance indicates that the obstacle is on the touchdown side of the runway approach end. This data is not provided for HCT surveys.
FromRwyCenterlineDist (Integer)	Shortest distance from the runway centerline or centerline extended to the obstacle. "L" (LEFT) or "R" (RIGHT) is relative to an observer facing forward in a landing aircraft. This data is not provided for HCT surveys.
FromRwyEndDist (Integer)	Distance along extended runway centerline from the physical end to point abeam the obstacle. A negative distance indicates that the obstacle is on the touchdown side of the runway approach end. This data is not provided for HCT surveys.
groupCode (String75)	A text code indicating that the obstacle consists of a group of obstacles of the same type. For example, a group of trees, a group of buildings, a group of antennas, etc [Source: AIXM]
heightAboveAirport (Integer)	Height above airport the official airport elevation point [Source: NGS]
heightAboveRunway (Integer)	Height above runway physical end for obstructions located underneath the approach surface [Source: NGS]
heightAboveTdz (Integer)	Height above touchdown zone elevation for obstructions located underneath the approach surface [Source: NGS]
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
lightCode (Boolean)	A code indicating that the obstacle is lighted [Source: AIXM]
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
markingFeatureType_d	The type of the marking
penVal_Specified (Integer)	The elevation difference between the height of the obstacle and the specified approach surface. [Source: NGS]
penVal_Supplemental (Integer)	The elevation difference between the height of the obstacle and the supplemental approach surface. [Source: NGS]
Disposition (String254)	What was done to obstruction [Source: HJAIA GIS ALP Standard - 5/29/]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ObstructionArea

Geometry Type: Polygon | Accuracy: +/-20Ft. | Sensitivity: Restricted

Areas penetrating the plane of a specified or supplemental obstruction identification surface (OIS). Penetrating groups of trees, ground, buildings, and mobile cranes are the most common types of area limits found within the surfaces of a FAR-77 survey. [Source: NGS*]

Attributes:	*SDSFIE Entity* *airspace_obstruction_navaid_point*

air_obs_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
obs_number (String20)	An obstruction number as shown on a map, which is assigned to the wavier, deviation, etc. [Source: SDSFIE Feature Table]
name (String40)	Name of the feature.
obs_typ_d (Enumeration16)	Description of Obstruction Area type
feat_desc (String254)	Description of the feature.
oisSurfaceCondition_d	The Obstruction Identification Surface that Obstructing Area represents
dispostn_d (Enumeration16)	The disposition of the airspace obstruction. [Source: SDSFIE Feature Table]
faa_d (Boolean)	A Boolean indicating whether the obstruction has received FAA coordination or review. [Source: SDSFIE Feature Table]
feat_ht (Real)	The overall height of the obstruction from the surface of the earth. [Source: SDSFIE Feature Table]
feat_len (Real)	The overall length of the obstruction. [Source: SDSFIE Feature Table]
feat_width (Real)	The overall width of the obstruction. [Source: SDSFIE Feature Table]
frangibl_d (Boolean)	A Boolean indicating whether the obstruction is easily broken. [Source: SDSFIE Feature Table]
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ObstructionSurface

Geometry Type: Polygon Accuracy: +/-20Ft. Sensitivity: Restricted

A derived imaginary Obstruction Identification Surface defined by the FAA. [Source: NGS]

Attributes: *SDSFIE Entity* *airfield_imaginary_surface_area*

spc_zon_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
zone_name (String30)	A commonly used name for the zone. [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
oisSurfaceType_d (Enumeration16)	General type of surface used to analyze features. Those of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community
oisZoneType_d (Enumeration16)	Specifies zones within Obstruction Identification Surfaces (OIS)
oisSurfaceCondition_d	The Obstruction Identification Surface that Obstructing Area represents
safety_reg (String20)	An identifier for the safety regulations in effect within the zone. [Source: SDSFIE Feature Table]
zone_use (String50)	A description of the use of the zone. [Source: SDSFIE Feature Table]
approachType_d (Enumeration16)	Specific approach type used to analyze features. The approach types must be ab approach of the general surface type specified in the AirportSurfaceType attribute
grad_lo_hi (Real)	The low to high gradient within the airspace. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RegulatedAirspaceArea

Geometry Type: Polygon Accuracy: +/-40Ft. Sensitivity: Confidential

3D airspace which must be confined due to the types of operations in that area. Includes any associated underlying surface and subsurface training areas. [Source: SDSFIE*]

Attributes:	*SDSFIE Entity* *regulated_airspace_area*
airspce_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	The title of the restricted area ie. R-4009. [Source: SDSFIE Feature Table]
feat_desc (String254)	The name of the restricted area ie. Example: Camp David (P-40-Hagerstown/Thurmont, MD) [Source: SDSFIE Feature Table]
notice_num (String30)	The Notice to Airman number (ie 3/4223). [Source: SDSFIE Feature Table]
elevation (Real)	The height of the restriction airspace measured from the a reference point or from sea level. [Source: SDSFIE Feature Table]
fea_typ_d (Enumeration16)	Type of restriction. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Cadastral

AirportParcel

Geometry Type: Polygon Accuracy: +/-1Ft. Sensitivity: Restricted

A tract of land within the airport boundary that was acquired from surplus property, Federal funds, local funds, etc. Easement interests in areas outside the fee property line should also be included as an AirportParcel [Source: AC 150/5300-13, Appendix 7, Order 5190.6A, Section 5]

Attributes:	*SDSFIE Entity* *none*
airportparcel_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
authority (String75)	The owner of the airport parcel.
name (String40)	Name of the feature.
streetAddress (String254)	Physical address of property [Source: HJAIA GIS ALP Standard - 5/29/]
ownerName (String60)	Owner of property [Source: HJAIA GIS ALP Standard - 5/29/]
ownerAddress (String254)	Owner's address [Source: HJAIA GIS ALP Standard - 5/29/]
feat_desc (String254)	Description of the feature.
acquisitionType (String20)	The type of acquisition used to acquire the parcel
costToAcquire (Real)	The amount paid to the owner in US dollars for the parcel
dateAcquired (Date)	The date the parcel was acquired. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
grantProjectNumber (String30)	The grant number if federal funds were used to acquire the parcel.
howAcquired (String50)	The manner in which the parcel was acquired.
landUse (Enumeration16)	The land use of the parcel when it was acquired.
marketValue (Real)	The assessed market value of the parcel in US dollars when it was acquired.
yearAssessed (Date)	The year in which the market value assessment was made
yearBuilt (Date)	The year in which the most recent structure(s) were built on the parcel.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ArcheologicalSite

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Confidential

The location of a registered archeological site. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *none*

site_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
site_name (String30)	Name of the cultural resource site. [Source: SDSFIE Attribute Table]
site_desig (String20)	Primary site designation. [Source: SDSFIE Attribute Table]
site_desc (String254)	Description of the cultural resource site. [Source: SDSFIE Attribute Table]
date_estab (Date)	The date the site was established. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: SDSFIE Attribute Table]
distrub_d (Enumeration16)	The level of disturbance of the site. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

County

Geometry Type: Polygon | Accuracy: +/-50Ft. | Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the county government. [Source:

Attributes: *SDSFIE Entity* *political_jurisdiction_county_line*

juris_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
polit_name (String30)	The common name associated with the property area. [Source: SDSFIE Feature Table]
feat_desc (String254)	The description of the area. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

EasementAndRightofWay

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

A parcel of land for which formal or informal deed easement rights exist [Source: SDSFIE (modified)]

Attributes: *SDSFIE Entity* *easement_right_of_way_area*

easementsandrightofways_id	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	A brief description of the feature. [Source: SDSFIE Feature Table]
status_d (Enumeration16)	The status of the parcel. (Active, inactive, terminated) [Source: SDSFIE Feature Table]
purpose (String30)	Project purpose for which the easement was acquired. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FAARegionArea

Geometry Type: Polygon Accuracy: +/-40Ft. Sensitivity: Unclassified

This feature depicts the FAA regions. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *faa_region_area*

region_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
reg_name (String60)	Name of the FAA region. [Source: SDSFIE Feature Table]
reg_desc (String254)	Description of the FAA region [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

LandUse

Geometry Type: Polygon Accuracy: +/-50Ft. Sensitivity: Confidential

A description of the human use of land and water [Source: SDSFIE]

Attributes: *SDSFIE Entity* *land_use_area*

landuse_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
use_name (String30)	Name of the land use area. [Source: SDSFIE Feature Table]
use_desc (String254)	Description of the land use area. [Source: SDSFIE Feature Table]
use_typ_d (Enumeration16)	The way in which the land is being used. High level (i.e. n000) or detailed (i.e. nnnn) can be used. [Source: SDSFIE]
publicFacilities (Boolean)	Is a public facility present [Source: HJAIA GIS ALP Standard - 5/29/]
publicFacilityName (String50)	Name of public facility, if present and if known [Source: HJAIA GIS ALP Standard - 5/29/]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

LeaseZone

Geometry Type: Polygon Accuracy: +/-0.5Ft. Sensitivity: Unclassified

A parcel of land leased by an individual, agency, or organization for their use. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *lease_zone_area*

leasezone_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	A brief description of the feature. [Source: SDSFIE Feature Table]
ten_name (String75)	The current name of the tenant occupying the leased parcel [Source: SDSFIE Attribute Table]
status_d (Enumeration16)	The status of the parcel. (Active, inactive, terminated) [Source: SDSFIE Feature Table]
permit_use (String20)	Permitted use of the leased parcel [Source: SDSFIE Attribute Table]
lsd_area (Real)	Area accounted for in the lease for a parcel [Source: SDSFIE Attribute Table]
act_area (Real)	Actual measured area of the leased parcel [Source: SDSFIE Attribute

	Table]
date_lsexp (Date)	The date the lease is expected to expire. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: SDSFIE Feature Table]
legl_desc (String240)	The complete legal description of the property as it appears in the deed. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Municipality

Geometry Type: Polygon Accuracy: +/-50Ft. Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the municipal government. [Source:

Attributes:	*SDSFIE Entity* *political_jurisdiction_municipal_line*
juris_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
polit_name (String30)	The common name associated with the property area. [Source: SDSFIE Feature Table]
feat_desc (String254)	The description of the area. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Parcel

Geometry Type: Polygon Accuracy: +/-1Ft. Sensitivity: Restricted

Individual cadastral unit. These elements have been extracted from the Maryland Department of Planning's MD PropertyView database. Please note that some of the attributes are dependent upon the combination of values of other attributes and are based on the Computer Aided Mass Appraisal (CAMA) data from the Maryland Department of Planning.

Attributes:	*SDSFIE Entity* *parcel_area*
acctID (String16)	positions 1-2 are the jurisdiction (county) code which is 02 for Anne Arundel, positions 3-4 are the tax district, positions 5-7 are the subdivision and the remaining 9 positions are the parcel account number.
digXCord (Number)	The parcel x coordinate in the NAD83 meters version of the Maryland State Plane Coordinate System.
digYCord (Number)	The parcel y coordinate in the NAD83 meters version of the Maryland State Plane Coordinate System.
ct2000 (String12)	2000 census tract. Position 1-2 are the State code (024), positions 3-5 are the jurisdiction FIPS code, positions 6-11 are the census tract and position 12 of BG2000 is the census block group.
bg2000 (String12)	2000 census block group. Position 1-2 are the State code (024), positions 3-5 are the jurisdiction FIPS code, positions 6-11 are the census tract and position 12 the census block group.
geogCode (String2)	Geographic code of the assessment cycle area: 80 or 81 or 82
ooi (String1)	Owner occupied indicator: H for occupied by owner, N for not occupied by owner, D for dual use (partly occupied by owner, part of the property is devoted to agricultural, commercial or rental use)
address (string60)	Combined street address. Populated with data from premise address number (PREMSNUM), premise address direction (PREMSDIR), premise address name (PREMSNAM) and premise address street type (PREMSTYP) found in the jurisdiction project files (views). ADDRESS is only populated with premise address data if there are data in both premise address number (PREMSNUM) and premise address name REMSNAM). If combined street address cannot be populated by premise address, ADDRESS is populated with owner address line 1 data (OWNADD1) for parcel accounts with an owner occupied indicator (OOI) of either "H" (occupied by owner) or "D" (dual use, partly occupied by owner, part of the property is devoted to agriculture, commercial or rental use), provided that

	owner address line 1 contains a valid street address, and not a post office box
STRTNUM (String5)	The street address number component of combined street address (ADDRESS).
STRTDIR (String2)	The street address prefix directional component of combined street address (ADDRESS).
STRTNAM (String40)	The street address name component of combined street address (ADDRESS).
STRTTYP(String5)	The street address street type component of combined street address (ADDRESS). Street address types are standardized to United States Postal Service (USPS) standard street type abbreviations.
STRTSFX (String2)	The street address suffix directional component of combined street address (ADDRESS).
STRTUNT (String30)	The street address units component of combined street address (ADDRESS).
ADDRTYP (String1)	Street address source indicator: O the ADDRESS field was populated from owner address line 1 (OWNADD1), P the ADDRESS field was populated from premise address (PREMSNUM, PREMSDIR, PREMSNAM and PREMSTYP)
CITY (String30)	Combined street address city. CITY is populated with data from premise city (PREMCITY) if there are data in both premise address number (PREMSNUM) and premise address name (PREMSNAM). CITY is populated with owner city data (OWNCITY) if owner address data have been used to populate ADDRESS as described above.
ZIPCODE (String5)	Combined street address primary (5 digit) ZIP code. Must be numeric. ZIPCODE is populated with data from premise primary (5 digit) ZIP code (PREMZIP) if there are data in both premise address number (PREMSNUM) and premise address name (PREMSNAM). ZIPCODE is populated with owner primary (5 digit) ZIP code data (OWNERZIP) if owner address data have been used to populate ADDRESS as described above.
OWNNAME1 (String34)	Owner's name line 1.
OWNNAME2 (String34)	Owner's name line 2.
OWNADD1 (String30)	Owner's mailing address line 1.
OWNADD2 (String30)	Owner's mailing address line 1.
OWNCITY (String22)	Owner's mailing address city.
OWNSTATE (String2)	Owner's mailing address state post office abbreviations for any of the 50 states or the District of Columbia. The following abbreviations are also used: AA military service CZ canal zone PR Puerto Rico; AE military service FC foreign country VI Virgin Islands; and AP military service GU Guam.
OWNERZIP (String5)	
OWNZIP2 (String4)	Owner's mailing address primary (5 digit) and secondary (4 digit) zip code. Must be numeric. OWNZIP2 cannot be filled in unless OWNERZIP contains a ZIP code.
PREMSNUM (String5)	Premise address number. Must be numeric.
PREMSDIR (String2)	Premise address direction (may be left blank). N = north; E = east ; NE = northeast; SE = southeast; S = south; W = west; NW = northwest; and SW = southwest.
PREMSNAM (String22)	Premise address name. Must be filled in if there are data in REMSTYP.
PREMSTYP (String 5)	Premise address street type.
PREMCITY (String22)	Premise address city.
PREMZIP (String5)	
PREMZIP2 (String4)	Premise address primary (5 digit) and secondary (4 digit) zip code. Must be numeric. PREMZIP2 cannot be filled in unless PREMZIP contains a ZIP code.
LEGAL1 (String24)	Legal description line 1. Positions 1-4 must contain blanks, or IMPS if there is a structure on the property.
LEGAL2 (String24)	Legal description line 2.
LEGAL3 (String24)	Legal description line 3.
DR1LIBER (String 5)	Deed reference 1 - liber. Must be numeric.
DR1FOLIO (string4)	Deed reference 1 - folio. Must be numeric.
TOWNCODE (String3)	
DESCTOWN(String25)	Town code and town code description (town name). Town code must be numeric. 001 ANNE Annapolis, 002 ANNE Highland Beach.
SUBDIVSN (String4)	
PLAT (String6)	
SECTION (String3)	
BLOCK (String5)	
LOT (String5)	Subdivision, plat, section, block and lot.
MAP (String5)	

GRID (String5)
PARCEL (String5)

Parcel map number, grid, and parcel. The first four positions of MAP, GRID and PARCEL must be numeric.

ZONING (String5)
MZI (String1)

Zoning code and multiple zoning indicator, M for multiple zoning. MZI Cannot be filled in unless there are data in ZONING.

MFI (String1)
multiple family indicator, F for multiple family dwelling.

EXSTATUS (String1)
Exempt status: 0 for taxable, 1 for exempt county, 2 for exempt state or 3 for exempt county and state.

EXCLASS (String3)
DESCEXCL (String60)

Exemption class code and code description. Code data must be numeric. Code data must be 000 if EXSTATUS data are 0 (indicating a taxable property) or 999 if EXSTATUS data are unknown. EXCLASS must be filled with a numeric entry ranging from 010 to 994 if EXSTATUS data are 1, 2 or 3. Exemption class codes are grouped as follows:
100-190 PUB Public Owned Real Property or U.S.A. Federal Property
200-390 STA State Owned Real Property
400-590 JUR County or Baltimore City Owned Real Property
600-690 MUN Town or Municipality Owned Real Property
700-795 PVT Privately Owned Real Property
800-994 NPF Non-Profit or Charitable Organizations
010-090 OTH All other classes

LU (String2)
Land use code (see codes below)

DESCLU (String23)
Land use code description.

A agricultural	E exempt	NP non-perc land
C commercial	EC exempt commercial	R residential
CA country club	I industrial	RC residential commercial
CC com. Condo.	M apartments	TH town house
CR com. Resid.	MA marsh land	U residential condominium

PFUW (String1)
Property factor utilities, water: 1 for public water; 2 for private water; or 0

PFUS (String1)
Property factor utilities, sewer: 1 for public sewer; 2 for private sewer; or 0

PFLW (String1)
Property factor location, waterfront: 1 for waterfront property, or 0

PFIH (String1)
Property factor influence, historical: 1 for historical influence; or 0

ACRES (Number)
LANDAREA converted to acres.

LANDAREA (Number)
Land area acres or square feet, as indicated by LUOM.

LUOM (String1)
Land area unit of measure: A for acres or S for square feet. LUOM must be filled in if there are data in LANDAREA.

STRUCODE (String10)
Structure code, a coded identifier for type of structure. STRUCODE must be filled in if there are data in YEARBLT or SQFTSTRC. Where there is a corresponding CAMA (Computer Assisted Mass Appraisal) record for the structure, position 1 is always an "M".

For "M" records:
Position 2 is the CAMA quality of construction/grade code. Data are extracted to STRUGRAD and DESCGRAD. Equivalent to DWLL_GRADE and DWLL_GDESC in the CAMA Database.

1 low cost	5 good	8 luxury
2 economy	6 very good	9 luxury plus
3 fair	7 excellent	0 no data
4 average		

Positions 3-4 are the CAMA type of construction code. Data are extracted to STRUCNST and DESCCNST. Data are tracked in more detail in CAMA Database dwelling sections 1-5 CONST and CDESC (SEC1_CONST, SEC1_CDSEC, and so on).

01 siding - aluminum, vinyl	06 block	11 1/2 stone and siding
02 frame	07 brick	12 1/2 stone and frame
03 wood shingle	08 stone	13 log
04 asbestos shingle	09 1/2 brick+siding	14 no data
05 stucco	10 1/2 brick+frame	

Positions 5-6 are the CAMA number of stories code. Data are extracted to STRUSTRY and DESCSTRY. Data are tracked in more detail in CAMA Database dwelling sections 1-5 STORY and SDESC (SEC1_STORY, SEC1_SDSEC, and so on).

01 1 story no basement	08 2 1/2 story with basement
02 1 story with basement	09 3 story no basement

03 1 1/2 story no basement
04 1 1/2 story with basement
05 2 story no basement
06 2 story with basement
07 2 1/2 story no basement
10 3 story with basement
11 4 story no basement
12 4 story with basement
13 split foyer
14 no data

Positions 7-8 are blank.

Positions 9-10 are the CAMA type of dwelling code. Data are extracted to STRUDWEL and DESCDWEL. Equivalent to DWLL_TYPE and DWLL_TDESC in the CAMA Database.

01 standard single family unit 1, 2 or 3 story
02 townhouse end unit
03 townhouse center unit
04 split foyer 2 levels of living area
05 split level 3 or more levels of living area
06 mobile home
07 condominium townhouse
08 condominium garden unit
09 condominium high-rise
10 condominium penthouse
11 condo studio/efficiency
12 boat slip
13 rental dwelling
14 no data

For parcels with no corresponding CAMA record, position 1 of structure code is always an "X". For "X" records:

Position 2 is the old quality of construction/grade code. Data are extracted to STRUGRAD and DESCGRAD.

1 lowest cost dwelling unit
2 next lowest cost dwelling unit
3 minimum stock-type dwelling
4 average code dwelling
5 individually-designed dwelling
6 architecturally-designed dwelling
7 luxury-type dwelling

Positions 3-4 are the old type of construction code. Data are extracted to STRUCNST and DESCCNST.

1 wood, including stucco
2 brick
3 stone, high quality
4 1/2 wood and 1/2 brick
5 1/2 wood and 1/2 stone
6 1/2 brick and 1/2 stone

Position 5 is the old number of stories above ground code. Data are extracted to STRUSTRY and DESCSTRY.

1 1 story
2 2 stories
3 3 stories
4 4 stories

Position 6 is the old half-story code. Data are not extracted.

5 with 1/2 story
0 without 1/2 story

Positions 7-8 are the old basement code. Data are not extracted.

0-with basement
5-without basement

Positions 9-10 are the old type of dwelling (unit) code. Data are extracted to STRUDWEL and DESCDWEL.

A standard unit
E end unit
F center unit
P split foyer
G split level
M mobile home

STRUGRAD (String1)

Quality of construction/grade code. Where there is a corresponding CAMA (Computer Assisted Mass Appraisal) record for the structure. See codes below.

DESCGRAD (String33)

Quality of construction/grade description. Where there is a corresponding CAMA

(Computer Assisted Mass Appraisal) record for the structure:

1 low cost	5 good	8 luxury
2 economy	6 very good	9 luxury plus
3 fair	7 excellent	0 no data
4 average		

For parcels with no corresponding CAMA record:

1 lowest cost dwelling unit	5 individually-designed dwelling
2 next lowest cost dwelling unit	6 architecturally-designed dwelling
3 minimum stock-type dwelling	7 luxury-type dwelling
4 average code dwelling	

STRUCNST (String2)
Type of construction code (see below)

DESCCNST (String24)
Type of construction description. Where there is a corresponding CAMA (Computer Assisted Mass Appraisal) record for the structure:

01 siding - aluminum, vinyl	06 block	11 1/2 stone and siding
02 frame	07 brick	12 1/2 stone and frame
03 wood shingle	08 stone	13 log
04 asbestos shingle	09 1/2 brick+siding	14 no data
05 stucco	10 1/2 brick+frame	

For parcels with no corresponding CAMA record:

1 wood, including stucco	4 1/2 wood and 1/2 brick
2 brick	5 1/2 wood and 1/2 stone
3 stone, high quality	6 1/2 brick and 1/2 stone

STRUSTRY (String2)
Number of stories code (see below)

DESCSTRY (String25)
Number of stories description. Where there is a corresponding CAMA (Computer Assisted Mass Appraisal) record for the structure:

01 1 story no basement	08 2 1/2 story with basement
02 1 story with basement	09 3 story no basement
03 1 1/2 story no basement	10 3 story with basement
04 1 1/2 story with basement	11 4 story no basement
05 2 story no basement	12 4 story with basement
06 2 story with basement	13 split foyer
07 2 1/2 story no basement	14 no data

For parcels with no corresponding CAMA record:
1 1 story
2 2 stories
3 3 stories
4 4 stories

STRUDWEL(String2)
Type of dwelling code (see below)

DESCDWEL (String43)
Type of dwelling description. Type of dwelling codes 09-14 have changed for View 2003 Edition. Where there is a corresponding CAMA (Computer Assisted Mass Appraisal) record for the structure:

01 standard single family unit 1, 2 or 3 story	08 condominium garden unit
02 townhouse end unit	09 condominium high-rise
03 townhouse center unit	10 condominium penthouse
04 split foyer 2 levels of living area	11 condo studio/efficiency
05 split level 3 or more levels of living area	12 boat slip
06 mobile home	13 rental dwelling
07 condominium townhouse	14 no data

For parcels with no corresponding CAMA record:
-A standard unit -P split foyer
-E end unit -G split level
-F center unit -M mobile home

YEARBLT (String4)
Year structure was built. Must be numeric. Format CCYY. Must be filled in if there are data in STRUCODE or SQFTSTRC.

SQFTSTRC (Number)
Foundation square footage of the principal structure. May be zero. Must be filled in if there are data in STRUCODE or YEARBLT.

TRANSNO1 (String6)
Sales transfer number. Must be numeric. Must be a number which has not been used previously.

GRNTNAM1 (String34)
Sales grantor name (the name of the person who last sold the house). If not

	filled in through data entry, the previous owner's name is used to generate a grantor name.
GR1LIBR1 (String5) GR1FOLO1 (String4)	Grantor deed reference 1 (most recent grantor) liber and folio. Must be numeric. If not filled in through data entry, data from the previous owner's deed reference 1 are used.
CONVEY1 (String1)	How conveyed (what kind of sale was it when the house was last sold). If the transfer date (TRADATE) is on or after October 1, 1994, there are four possible values for "how conveyed": 1 arms-length transfer, improved 2 arms-length transfer, vacant at time of sale 3 arms-length transfer, multiple parcel 9 non-arms-length transfer such as a foreclosure, gift or auction If the transfer date (TRADATE) is prior to October 1, 1994, there are ten possible values for "how conveyed": 1 private sale, 5 foreclosure, 8 confirmatory deed 2 lease, 6 straw deed, 9 other 3 gift, 7 tax sale, 0 unknown 4 auction
TOTPART1 (String1)	Total/partial transfer indicator: P for partial transfer or T for total transfer
TRADATE (String8)	Transfer date. Must be numeric, format YYYYMMDD.
CONSIDR1 (Number) MORTGAG1 (Number)	Consideration (the amount of money paid for the property) and mortgage. CONSIDR1 may be zero.
NFMLNDVL (Number) NFMIMPVL (Number) NFMTTLVL (Number)	New full market land value (appraised land value), new full market improvement value (appraised improvement value) and new full market total value (land value plus improvement value). May be zero.
CRTARCOD (String2)	Critical area code: C for conservation area, L for limited development area or I for intensely developed area
PLTLIBER (String4) PLTFOLIO (String4)	Plat liber and folio, used for subdivisions. Must be numeric.
CIUSE (String5) DESCCIUSE (String40)	Commercial and industrial property use code, used to identify the specific uses of improved commercial/industrial properties. The code is also used to identify properties owned by public utilities and railroads (both vacant and improved) and indicate their status as to operating or non-operating. Must be numeric.
PTYPE (Number)	Type of digitized parcel: 0 no x,y assigned for the parcel 2 located by MAP, GRID, PARCEL, SECTION, BLOCK and LOT on the property map 3 State Highway Administration located parcel, located on the wrong side of the road 20 "stacked" non-condominium parcel Non-condominium located parcels which were assigned the same x,y coordinate by the Computerized Property Mapping Section based on the MAP, GRID, PARCEL, SECTION, BLOCK and LOT data available for the parcels. "Stacked" non-condominium parcels may be found in any or all 2003 Edition databases. 21 "stacked" condominium parcel Condominium located parcels which were assigned the same x,y coordinate by the Computerized Property Mapping Section based on the MAP, GRID, PARCEL, SECTION, BLOCK and LOT data available for the parcels. "Stacked" condominium parcels may be found in any or all 2003 Edition databases.
DWLL_TOTAL (Number)	Number of dwellings on the property. Obtained from the Computer Assisted Mass Appraisal (CAMA) database for residential properties only.
APT_UNITS (Number)	Number of dwelling units on the property. Obtained as a special Computer Assisted Mass Appraisal (CAMA) extract for commercial properties with residential uses only. Available for properties where the commercial and industrial property use code (CIUSE) is one of the following: **01000** HOUSING Apartment

01500 HOUSING Apartment Garden
01550 HOUSING Apartment High Rise
01600 HOUSING Apartment Townhouse
01650 HOUSING Apartment mixed
03500 HOUSING Trailer Park
01800 HOUSING Apartment subsidized
44000 CARE Nursing Home
44050 CARE Nursing Home Converted Building
44100 CARE Life Care Facility
44200 CARE Assisted Living Ambulatory
44300 CARE Retirement Center
53000 WAREHOUSE Mini Storage 65500 BOAT Marina
54000 INDUSTRY Truck Terminal

TTL_ROOMS (Number)

Total number of rooms on the property. Obtained as a special Computer Assisted Mass Appraisal (CAMA) extract for commercial properties with residential uses only. Available for properties where the commercial and industrial property use code (CIUSE) is one of the following:

44000 CARE Nursing Home
44050 CARE Nursing Home Converted Building
44200 CARE Assisted Living Ambulatory
44300 CARE Retirement Center
44100 CARE Life Care Facility
04000 TRAVEL Hotel 05200 TRAVEL Bed And Breakfast
04200 TRAVEL Hotel Extended Stay 05600 TRAVEL Motel Old Style
05000 TRAVEL Motel

YRBLT_CAMA (String4)

The year in which the dwelling was constructed. Obtained from the Computer Assisted Mass Appraisal (CAMA) database for residential properties only.

COMBINED (Boolean)

Indicates whether ADDRESS, CITY and ZIPCODE contain combined street address data.

RESIDENT (Boolean)

Indicates whether a property is residential, based on the following criteria:
Land use code (LU) is one of the following:

A agricultural	RC residential commercial
CR commercial residential	TH town house
R residential	U residential condominium

AND

New full market improvement value (NFMIMPVL) is equal to or greater than $1000. If both of these conditions are true, the value of RESIDENT is:

T True, the property is residential

RESIUTHS - Logical Field - Width 1

Indicates whether a property is residential improved with a value less than $1000, based on the following criteria:

Land use code (LU) is one of the following:

A agricultural
CR commercial residential
R residential
RC residential commercial
TH town house
U residential condominium

AND

New full market improvement value (NFMIMPVL) is less than $1000. If both of these conditions are true, the value of RESIUTHS is:
T True, the property is residential improved with a value less than $1000

RESI1990 (Boolean)

Indicates whether a property is residential improved with a value equal to or greater than $1000 and built in or after 1990, based on the following criteria:

	Land use code (LU) is one of the following: A agricultural CR commercial residential R residential RC residential commercial TH town house U residential condominium AND New full market improvement value (NFMIMPVL) is equal to or greater than $1000. AND CAMA year built (YRBLT_CAMA) is equal to or greater than 1990 and equal to or less than 1999. OR Year built (YEARBLT) is equal to or greater than 1990 and equal to or less than 1999 and CAMA year built (YRBLT_CAMA) is blank. OR Year built (YEARBLT) is equal to or greater than 1990 and equal to or less than 1999 and CAMA year built (YRBLT_CAMA) is equal to "0000". If all of these conditions are true, the value of RESI1990 is: T = True, the property is residential improved with a value equal to or greater than $1000 and built in or after 1990
RESI2000 (Boolean)	Indicates whether a property is residential improved with a value equal to or greater than $1000 and built in or after 2000, based on the following criteria: Land use code (LU) is one of the following: A agricultural CR commercial residential R residential RC residential commercial TH town house U residential condominium AND New full market improvement value (NFMIMPVL) is equal to or greater than $1000. AND CAMA year built (YRBLT_CAMA) is equal to or greater than 2000 and equal to or less than 2009. OR Year built (YEARBLT) is equal to or greater than 2000 and equal to or less than 2009 and CAMA year built (YRBLT_CAMA) is blank. OR Year built (YEARBLT) is equal to or greater than 2000 and equal to or less than 2009 and CAMA year built (YRBLT_CAMA) is equal to "0000". If all of these conditions are true, the value of RESI2000 is: T = True, the property is residential improved with a value equal to or greater than $1000 and built in or after 2000
APRTMENT (Boolean)	Indicates whether a parcel is an apartment with a value equal to or greater than $1000, based on the following criteria:

	Commercial and industrial property use code (CIUSE) is one of the following: 01000 HOUSING Apartment 01500 HOUSING Apartment Garden 01550 HOUSING Apartment High Rise 01600 HOUSING Apartment Townhouse 01650 HOUSING Apartment Mixed 01800 HOUSING Apartments Subsidized 30600 STORE Retail with Apartment Upstairs OR Land use code (LU) is equal to "M" (apartment) AND New full market improvement value (NFMIMPVL) is equal to or greater than $1000. If either of these sets of conditions are true, the value of APRTMENT is: T True, the property is an apartment with a value equal to or greater than $1000
TRAILER (Boolean)	Indicates whether a property is a trailer park, based on the following criteria: Commercial and industrial property use code (CIUSE) is: 03000 HOUSING Trailer Park If this condition is true, the value of TRAILER is: T true, the property is a trailer park
SPECIAL (Boolean)	Indicates whether a property may house special populations, based on the following criteria: Commercial and industrial property use code (CIUSE) is one of the following: 43000 CARE Hospital 44000 CARE Nursing Home 44050 CARE Nursing Home Converted Building 44100 CARE Life Care Facility 44200 CARE Ambulatory Assisted Living Facility 44300 CARE Retirement Center 60020 REC Camp Ground 65500 BOAT Marina 65710 BOAT Marina Condo 80020 SAFETY Jail 80040 COMMUNITY Fraternity OR Exempt class code (EXCLASS) is one of the following: 110 PUB Hospital (public/USA Federal) 130 PUB Military Installation (public/USA Federal) 140 PUB School (public/USA Federal) 210 STA Hospital/Health Related Facility (State) 250 STA College (State) 280 STA Detention Center (State) 410 JUR Hospital/Health Related Facility (county/Baltimore City) 470 JUR Detention Center (county/Baltimore City) 720 PVT Church College (private) 740 PVT Church Hospital/Health Related Facility (private) 760 PVT Other such as Salvation Army or Mission (private) 780 PVT Church Aged/Rehabilitation Home (private) 810 NPF Private College (non-profit or charitable organization) 820 NPF Hospital/Health Related Facility (non-profit or charitable organization) 840 NPF Non-Profit Housing for the Elderly (non-profit or charitable org.) 880 NPF YMCA Camp/YWCA Camp (non-profit or charitable organization) 970 NPF Goodwill/Disabled Veterans Rehabilitation Center/Red Cross (non-profit or charitable organization) If either of these conditions are true, the value of SPECIAL is: T = True, the property may house special populations

OTHER (Boolean)	Indicates whether a property falls outside of any of the categories described above. If a property fails to meet any of the above conditions, the value of OTHER is: T = True, the property is not RESIDENT, RESIUTHS, RESI1990, RESI2000, APRTMENT, TRAILER or SPECIAL
SEQNUMB (Number)	Contains the 2003 Database record number for each property. The 2003 Database is sorted in street address order. Properties lacking a valid street address, which are properties with no data in ADDRESS, fall to the end of the 2003 Database in account number (ACCTID) order. Record numbers are loaded into SEQNUMB so that they appear sequentially in street address order followed by account number order.

State

Geometry Type: Polygon Accuracy: +/-50Ft. Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the state government. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *political_jurisdiction_state_line*

juris_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
polit_name (String30)	The common name associated with the property area. [Source: SDSFIE Feature Table]
feat_desc (String254)	The description of the area. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Zoning

Geometry Type: Polygon Accuracy: +/-50Ft. Sensitivity: Restricted

A parcel of land zoned specifically for real estate and land management purposes; more specifically for commercial, residential, or industrial use. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *zoning_area*

zoning_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	A brief description of the feature. [Source: SDSFIE Feature Table]
zng_cls_d (Enumeration16)	The zoning classification of the parcel. [Source: SDSFIE Feature Table]
restrict_d (Enumeration16)	Codes determining the land owner restriction for the parcel. [Source: SDSFIE Feature Table]
status_d (Enumeration16)	The status of the parcel. (Active, inactive, terminated) [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Environmental

ContaminationArea

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

A facility or other locational entity, (as designated by the Environmental Protection Agency) that is regulated or monitored because of environmental concerns. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *environmental_regulated_facility_site*

sitaoc_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a

	feature type. [Source: FAA Airports GIS]
site_name (String50)	The name of a specific facility. [Source: SDSFIE Feature Table]
ehazcat_d (Enumeration16)	Indicates the broad category or type of the most prevalent or serious environmental hazard present at the site. [Source: SDSFIE Feature Table]
src_desc (String254)	A description of the source of the pollution. [Source: SDSFIE Feature Table]
rel_typ_d (Enumeration16)	A descriptor for the type of pollutant release experienced. [Source: SDSFIE Feature Table]
severity_d (Enumeration16)	A descriptor for the severity of the pollution. [Source: SDSFIE Feature Table]
rem_urg_d (Enumeration16)	A code indicating the urgency for accomplishing a site remediation project. [Source: SDSFIE Feature Table]
tox_stt_d (Enumeration16)	A descriptor for the toxic status of the pollution. [Source: SDSFIE Feature Table]
pstatus_d (Enumeration16)	The code indicating whether the facility status is Active or Inactive. [Source: SDSFIE Feature Table]
date_found (Date)	The date the pollution was discovered. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915) [Source: SDSFIE Feature Table]
cause_d (Enumeration16)	A code indicating the cause of the pollution. [Source: SDSFIE Feature Table]
pol_src_d (Enumeration16)	The actual or suspected source of the pollutant. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FaunaHazardArea

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

An area where there are hazards due to wildlife activities. This includes bird aircraft strike hazard (BASH) areas, and deer strike areas. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *fauna_hazard_area*
hazard_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
haz_typ_d (Enumeration16)	A descriptor of the type of the hazard. [Source: SDSFIE Feature Table]
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FloodZone

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Unclassified

Areas subject to 100-year, 500-year and minimal flooding [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *flood_zone_area*
fld_zon_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
zone_type_d (Enumeration16)	The zoning classification of the area
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the

	subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

FloraSpeciesSite

Geometry Type: Point Accuracy: +/-20Ft. Sensitivity: Unclassified

The specific location where an individual flora species or an aggregate of flora species has been identified

Attributes: *SDSFIE Entity* *flora_species_site*

species_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
plnt_typ_d (Enumeration16)	A descriptor of the type of flora. [Source: SDSFIE Feature Table]
feat_desc (String254)	Any brief description of the feature. [Source: SDSFIE Feature Table]
plant_ht (Real)	The average height of the flora species. [Source: SDSFIE Feature Table]
hab_stt (String1)	Defines if the habitat has been designated as a critical habitat under (C) the Endangered species Act or has not been so designated (N). [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ForestStandArea

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Confidential

A forest flora community with similar characteristics. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *flora_species_management_area*

flmspc_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
habcat_d (Enumeration16)	Discriminator - The designation or type of the special wildlife habitat. [Source: SDSFIE Feature Table]
feat_desc (String254)	A description of the flora species. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

HazMatStorageSite

Geometry Type: Point Accuracy: +/-10Ft. Sensitivity: Unclassified

A defined or bounded geographical area designated and used for the storage of contained hazardous materials. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *contained_hazwaste_storage_site*

hwarea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
hsb_cat_d (Enumeration16)	The general type or category of contained hazardous material stored. [Source: SDSFIE Feature Table]
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NoiseContour

Geometry Type: Polygon | Accuracy: +/-1Ft. | Sensitivity: Confidential

An area that describes the noise attributed to operations. For aircraft operations, the Day/Night average sound level (Ldn) descriptor is typically used to categorize noise levels [Source: 14 CFR Part 150]

Attributes: *SDSFIE Entity* *noise_countour_line*

noi_zon_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
contourValue (Real)	The decibel level of the contour line.
zone_desc (String254)	A description for the noise zone. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NoiseIncident

Geometry Type: Point | Accuracy: +/-10Ft. | Sensitivity: Restricted

A formal complaint by an individual or group regarding excessive noise resulting from airport operations

Attributes: *SDSFIE Entity* *noise_incidnent_point*

inc_sit_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
reporter (String50)	The name of the individual or organization reporting the incident. [Source: SDSFIE Feature Table]
incid_desc (String254)	A general description of the complete incident, including any reference material. [Source: SDSFIE Feature Table]
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NoiseMonitoringPoint

Geometry Type: Point | Accuracy: +/-10Ft. | Sensitivity: Restricted

The location of noise sensing equipment or where a noise sample is taken. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *noise_monitoring_point*

noisemonitoringpoint_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SampleCollectionPoint

Geometry Type: Point Accuracy: +/-10Ft. Sensitivity: Confidential

The physical location at which one or more environmental hazards field samples are collected. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *field_sample_collection_location_point*

sam_pt_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
ltccode_d (Enumeration16)	Code describing the type of location which is undergoing sampling (e.g., bh= borehole, wl=well). IRPIMS. [Source: SDSFIE Feature Table]
locdesc (String254)	Descriptor providing any additional information to describe the sampling location in text format (e.g., monitoring well located 10 feet northeast of building 624 within spill area). IRPIMS. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Shoreline

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

The boundary of a body of water including oceans, seas, lakes, rivers, streams, ponds, etc.

Attributes: *SDSFIE Entity* *shoreline*

indfshl_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
shore_name (String30)	A commonly used name for the shoreline. [Source: SDSFIE Feature Table]
shr_typ_d (Enumeration16)	Discriminator - A value indicating the type or kind of shoreline [Source: SDSFIE Feature Table]
shore_desc (String254)	A local description for the shoreline. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ShorelineCriticalArea

Geometry Type: Polygon Accuracy: +/-40Ft. Sensitivity: Restricted

An area of land extending from the shoreline where development is regulated. Activities within this critical area have the greatest potential for affecting water quality as well as fish, plant, and wildlife habitat. [Source: SDSFIE*]

Attributes: *SDSFIE Entity* *none*

buffer_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
buffr_name (String20)	A commonly used name for the shoreline buffer. [Source: SDSFIE Attribute Table]
buf_typ_d (Enumeration16)	The type of the shoreline buffer. [Source: SDSFIE Attribute Table]
buffr_desc (String254)	A description of the shoreline buffer. [Source: SDSFIE Attribute Table]
buffr_dist (Integer)	The linear distance that the buffer extends from the shoreline [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the

	subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SoilArea

Geometry Type: Polygon Accuracy: +/-40Ft. Sensitivity: Restricted

An overall soil survey area which consists of one to many soil map unit areas. The projected uses of the survey and the complexity of the soil patterns largely determine the scale of the soil map. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *none*
stssa_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
feat_name (String30)	The name given to the survey [Source: SDSFIE Attribute Table]
remarks (String254)	Remarks used to clarify or document information for a soil survey area. A list of sources, and other information for the survey area. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

WatershedArea

Geometry Type: Polygon Accuracy: +/-40Ft. Sensitivity: Restricted

The region or area drained by, or to, a particular body of water. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *none*
watshed_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
wat_name (String16)	The name associated with the watershed. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Wetland

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

Transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. [Source: SDSFIE*]

Attributes:	*SDSFIE Entity* *wetland_area*
wetland_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
wetln_name (String30)	Any commonly used name for the wetland. [Source: SDSFIE Feature Table]
wetln_desc (String254)	A description of the wetland. [Source: SDSFIE Feature Table]
feat_typ_d (Enumeration16)	A descriptor of how the wetland is depicted graphically. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Geodetic

AirportControlPoint

Geometry Type: Point | Accuracy: +/-0.07Ft. | Sensitivity: Restricted

A control station established in the vicinity of, and usually on, an airport and tied to the National Spatial Reference System (NSRS) [Source: NGS]

Attributes:	*SDSFIE Entity* *control_point*
monumnt_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
permanentId (String6)	Permanent point identifier assigned by NGS to PACS and SACS [Source: NGS]
mon_desc (String254)	The monument description. [Source: SDSFIE Feature Table]
pointType_d (Enumeration16)	Contains the allowable values of a point type used by the ControlPoint feature. The point types may be supplementally provided as subtypes of ControlPoints for ease of use and clarification.
feat_name (String50)	Any commonly used name for the control point. [Source: SDSFIE Feature Table]
mon_typ_d (Enumeration16)	The type of monument as defined by the Corps of Engineers EM 1110-1-1002. [Source: SDSFIE Feature Table]
elevation (Real)	Elevation of the point relative to the selected vertical datum. [Source: NGS]
ellipsoidElevation (Real)	The height above the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question. Also called the geodetic height. [Source: NGS]
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
yearOfSurvey (Integer)	The year of the most recent runway end survey used to compute the ARP
date_recov (Date)	The date the monument was last field recovered. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). [Source: SDSFIE Feature Table]
recov_cond (String30)	The condition and type of the marker (witness post) used to identify the location of the monument. [Source: SDSFIE Feature Table]
fld_book (String254)	The field book. [Source: SDSFIE Feature Table]
gps_suit_d (Boolean)	A Boolean indicating GPS suitability. [Source: SDSFIE Feature Table]
spcszone_d (Enumeration16)	The State Plane Coordinate System Code. [Source: SDSFIE Feature Table]
stmpd_desg (String50)	The designation stamped into the bottom of the monument. [Source: SDSFIE Feature Table]
epoch (String10)	Survey epoch used to establish the control point. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ColumnGrid

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Restricted

Reference grid lines defined by the location of structural columns within a building.

Attributes:	*SDSFIE Entity* *none*
ColumnGrid_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject

	item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

CoordinateGridArea

Geometry Type: Line | Accuracy: +/-1Ft. | Sensitivity: Restricted

A regular pattern of horizontal and vertical lines used to represent regular coordinate intervals along the x and y axis. This grid line can be used to generate an arbitrary grid system which is common on locator maps. [Source:

Attributes:	*SDSFIE Entity* *coordinate_grid_area*
cmgrd_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	The name, code or identifier used to refer to an individual grid cell.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ElevationContour

Geometry Type: Line | Accuracy: +/-1Ft. | Sensitivity: Restricted

Connecting points on the surface of the earth of equal vertical elevation representing some fixed elevation interval. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *elevation_contour_line*
contour_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
elevation (Real)	The elevation of the contour line. [Source: SDSFIE Feature Table]
feat_len (Real)	The overall length of the feature. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ImageArea

Geometry Type: Polygon | Accuracy: +/-20Ft. | Sensitivity: Confidential

The image foot print or coverage area. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *image_area*
gdimage_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
frame_no (String20)	Frame number of the image. [Source: SDSFIE Feature Table]
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
photo_date (Date)	Date the aerial photography was flown. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915) [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Interior

BaggageCarousel

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Baggage system carousels

Attributes: *SDSFIE Entity* *none*

BaggageCarousel_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
userOrganization (String60)	The organization(s) which is currently using the baggage carousel.

BaggageConveyor

Geometry Type: Line | Accuracy: +/-5Ft. | Sensitivity: Restricted

Baggage system conveyors

Attributes: *SDSFIE Entity* *none*

BaggageConveyor_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
userOrganization (String60)	The organization(s) which is currently using the baggage carousel.
direction (Enumeration16)	The direction of flow of baggage on the conveyor.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Chase

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Area of a building used for passing utilities from one floor to another.

Attributes: *SDSFIE Entity* *none*

Chase_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Column

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Structural columns of a building

Attributes: *SDSFIE Entity* *none*

Column_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the

	operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Door

Geometry Type: Line | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Line where door is located within a wall

Attributes: *SDSFIE Entity* *none*

door_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String255)	Description of the feature.
door_desgn (String10)	Alphanumeric text indicating the designator of the door [Source: SDSFIE Attribute Table]
eqp_typ_d (String60)	Type of equipment installed to restrict access [Source: SDSFIE Attribute Table]
fire_b (Boolean)	Boolean to indicate whether door is a fire door or not [Source: SDSFIE Attribute Table]
fire_time (Integer)	Time in hours for which a fire door is rated [Source: SDSFIE Attribute Table]
secure_b (Boolean)	Boolean for whether door provides access to a secure area [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Elevator

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Area of a floor where an elevator shaft is located

Attributes: *SDSFIE Entity* *none*

elevator_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String255)	Description of the feature.
elev_typ_d (String20)	Code for the type of elevator [Source: SDSFIE Attribute Table]
eqp_typ_d (String60)	Type of equipment installed to restrict access [Source: SDSFIE Attribute Table]
no_floors (Integer)	Number of floors served by the elevator [Source: SDSFIE Attribute Table]
secure_b (Boolean)	Boolean for whether elevator provides access to a secure area [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Escalators

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Area of a floor occupied by escalators

Attributes: *SDSFIE Entity* *none*

Escalators_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
Name (String60)	Common name associated with the feature. [Source: HJAIA]
name (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Floor

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Floor outline of a building

Attributes: *SDSFIE Entity* *building_space_floor*

floor_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
floorname (String50)	Name of the building floor. [Source: SDSFIE Feature Table]
floor_ua (Real)	Usable or net area of the building floor. The sum of usable areas on the building floor (i.e., business and common) which can vary over the life of a building as corridors expand and contract as floors are remodeled. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Flooring Material

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Are of floor with a common material type.

Attributes: *SDSFIE Entity* *none*

Flooring Material_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Furnishing

Geometry Type: Point | Accuracy: +/-5Ft. | Sensitivity: Restricted

The location of various interior furnishings

Attributes: *SDSFIE Entity* *none*

Furnishing_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

InteriorSign

Geometry Type: Point | Accuracy: +/-5Ft. | Sensitivity: Restricted

Signs located inside of a building.

Attributes: *SDSFIE Entity* *none*

InteriorSign_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Ladder

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

The location of a ladder for accessing another floor or roof of a building.

Attributes: *SDSFIE Entity* *none*

Ladder_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Locks

Geometry Type: Point | Accuracy: +/-5Ft. | Sensitivity: Restricted

The location of door or gate locking devices.

Attributes: *SDSFIE Entity* *none*

Locks_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

MovingSidewalk

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Area of a floor occupied by a moving sidewalk

Attributes: *SDSFIE Entity* *none*

MovingSidewalk_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Room

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Room outline within a building

Attributes: *SDSFIE Entity* *building_space_room*

room_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
roomname (String50)	Name of the building room. [Source: SDSFIE Feature Table]
room_ht (Real)	Height dimension of the building room, measured from floor to ceiling. [Source: SDSFIE Feature Table]
room_len (Real)	Length dimension of a building room, measured from inside of wall to inside of wall. [Source: SDSFIE Feature Table]
room_width (Real)	Width dimension of a building room, measured from inside of wall to inside of wall. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Space

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

A space not elsewhere classified within a building

Attributes: *SDSFIE Entity* *building_space_space*

bspace_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
spacename (String50)	Name of the building space. [Source: SDSFIE Feature Table]
feat_desc (String255)	Description of the feature.
area_size (Real)	The size of the area, zone, or polygon in square units. [Source: SDSFIE Feature Table]
space_cuse (String240)	Narrative text describing or provided information concerning the current use of the building space. [Source: SDSFIE Feature Table]
space_ht (Real)	Height of building space, or distance from floor to ceiling. [Source: SDSFIE Feature Table]
space_len (Real)	Length dimension of building space, from inside of wall or partition to inside of wall or partition. [Source: SDSFIE Feature Table]
space_wid (Real)	Width dimension of building space, from inside wall or partition to inside of wall or partition. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Stairs

Geometry Type: Polygon | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Area of a floor where stairs are located

Attributes: *SDSFIE Entity* *none*

stairs_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String255)	Description of the feature.
Escape_b (Boolean)	Boolean indicator for whether stairs are a part of an approved escape route [Source: SDSFIE Attribute Table]
floor_low (Integer)	Designator for the lowest floor served by the stairs [Source: SDSFIE

	Attribute Table]
floor_high (Integer)	Designator for the highest floor served by the stairs [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Walls

Geometry Type: Line | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Wall within a floor

Attributes: *SDSFIE Entity* *none*

walls_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_desc (String255)	Description of the feature.
fire_b (String20)	An indicator as to whether the feature is design to restrain fire [Source: SDSFIE Attribute Table]
struct_b (Boolean)	Indicator for whether the wall is a structural wall or not [Source: SDSFIE Attribute Table]
thinkness (Real)	Thickness in inches of the wall [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Windows

Geometry Type: Line | Accuracy: +/-0.5Ft. | Sensitivity: Confidential

Line where window is located on an exterior wall

Attributes: *SDSFIE Entity* *none*

windows_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
gls_typ_d (String20)	Code for the type of glass installed in the window [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Life Safety

AutomatedExternalDefibrillator

Geometry Type: Point | Accuracy: +/-5Ft. | Sensitivity: Restricted

Location of Automated External Defibrillators (AEDs).

Attributes: *SDSFIE Entity* *none*

AutomatedExternalDefibrillator _id	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

EvacuationArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Area in which people are to gather in the event of an emergency.

Attributes: *SDSFIE Entity* *none*

EvacuationArea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Manmade Structures

Building

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A three dimensional permanent structure modeled with a bounding polygon. This feature includes all on-airport buildings within an Airport Parcel and any building in the vicinity of the airport that affects air navigation or airport design requirements [Source: FAA]

Attributes: *SDSFIE Entity* *structure_existing_site*

buildng_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
buildng_no (String16)	The code indicating the number of the building. [Source: SDSFIE Feature Table]
name (String40)	Name of the feature.
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
str_type_d (Enumeration16)	The type of structure. [Source: SDSFIE Feature Table]
str_stat_d (Enumeration16)	Discriminator. This value differentiates structure entities by operational status. [Source: SDSFIE Feature Table]
no_occup (Real)	Number of persons currently occupying the structure [Source: SDSFIE Feature Table]
areaInside (Real)	Total inside area of structure [Source: SDSFIE Feature Table]
structHght (Real)	Maximum height of structure [Source: SDSFIE Feature Table]
areaFloor (Real)	Total inside floor area [Source: SDSFIE Feature Table]
area Total (Real)	Total inside square footage [Source: HJAIA GIS ALP Standard - 5/29/]
lightingType_d (Enumeration16)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
markingFeatureType_d	The type of the marking
color_d (Enumeration16)	The color of the marking
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ConfinedSpaces

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Area or structure designated as a confined space.

Attributes: *SDSFIE Entity* *none*

ConfinedSpaces_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ConstructionArea

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

A defined area that is under construction, not intended for active use until authorized by the concerned authority. The area defines a boundary for personnel, material, and equipment engaged in the construction activity [Source:

Attributes: *SDSFIE Entity* *construction_site*

conproj_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
const_name (String30)	Name of the construction area. [Source: SDSFIE Feature Table]
const_desc (String254)	Description of the construction area. [Source: SDSFIE Feature Table]
projectName (String60)	The name of the construction project
projectStatus_d (Enumeration16)	The status of the construction project
CoordinationContact (String75)	Airport, emergency, airline, tenant, and contractor personnel who are responsible for coordinating on-airport construction work
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Fence

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

Any fencing (chain-link, razor wire, PVC, etc. [Source: FAA]

Attributes: *SDSFIE Entity* *fence_line*

fence_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
fenc_typ_d (Enumeration16)	A code indicating the fencing material used. [Source: SDSFIE Feature Table]
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
fence_ht (Real)	The overall distance from the surface of the ground to the top of the fence. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Gate

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

The location of an entry or exit point. These entry or exit points could be security checkpoints or open access points. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *gate_line*

gate_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name, code or identifier used to identify the gate.

gate_typ_d (Enumeration16)	The gate material and method of construction. [Source: SDSFIE Feature Table]
gate_len (Real)	The overall distance from one end of the gate to the other. [Source: SDSFIE Feature Table]
gate_ht (Real)	The overall distance from the surface of the ground to the top of the gate. [Source: SDSFIE Feature Table]
attended_d (Boolean)	A Boolean indicating whether the gate is tended by a guard or other individual. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Tower

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Restricted

An existing structure that was created, by man, to facilitate an activity at an elevated level above the ground.

Attributes: *SDSFIE Entity* *tower_site*

tower_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
lightCode (Boolean)	A code indicating that the obstacle is lighted [Source: AIXM]
lightingType_d (Enumeration16)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
color_d (Enumeration16)	The color of the marking
markingFeatureType_d	The type of the marking
verticalStructureMaterial_d	Classifies the predominant material of the vertical object
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Navigational Aids

NAVAIDCriticalArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A zone encompassing a specific ground area in the vicinity of a radiating antenna array which must be protected from parking and unlimited movement of surface and air traffic [Source: FAA Order 6750.16C]

Attributes: *SDSFIE Entity* *airfield_buffer_zone_area*

afl_buf_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
buffr_dist (Real)	The linear distance of the limit of the buffer for the airfield. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NAVAIDEquipment

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Unclassified

Any ground-based visual or electronic device that provides point to point guidance information or position to

aircraft in flight. The location is specified by FAA Specification 405 [Source: FAA Specification 405]

Attributes:	*SDSFIE Entity* *navigational_aid_point*
navaid_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
faaLocID (String4)	ID of the associated Facility. Note that the Facility ID for NAVAIDS associated with an ILS/MLS references the associated ILS/MLS system identifier [Source: NGS]
name (String40)	Name of the feature.
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Feature Table]
navaidEquipTypeCode_d	Specifies the type of NAVAID [Source: NGS]
use_code_d (Enumeration16)	The code that represents the airspace structure in which the aeronautical-navigational-aid is utilized. [Source: SDSFIE Feature Table]
antToThreshDist (Integer)	The distance in feet that the antenna is from the runway threshold.
centerlineDist (Integer)	Navaid along centerline distances (distance between the navaid perpendicular point (PP) and the runway approach or stop-end, depending on the navaid type).
offsetDist (Integer)	The distance in feet that the feature is offset from the runway centerline.
lightingConfigType (Enumeration16)	The configuration type of visual navigational aid systems (use only when NavaidEquipTypeCode_d is set to 'Visual').
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
status_d (Enumeration16)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status
owner_d (Enumeration16)	The owner of the facility [Source: AirMAT]
refElevation (Real)	The Base Elevation for most NAVAIDS. For ILS DME the elevation is the center of the antenna cover. For MLSAZ, MLSEL and End Fire Type Glide Slope Antennas the elevation is the phase center of the reference point. [Source: NGS]
refEllipsoidHeight (Real)	The Base Ellipsoid Height for most NAVAIDS. For ILS DME the elevation is the center of the antenna cover. For MLSAZ, MLSEL and End Fire Type Glide Slope Antennas the elevation is the phase center of the reference point. [Source: NGS]
rwyEndID (Enumeration16)	The runway end associated with the NAVAID equipment (if any). This is the same as the runway identification number painted on the runway at the time of the survey
downWindBarElev (Real)	
downWindBarThreshold (Real)	
refPointThreshold (Real)	Distance from the VGSI runway reference point to the threshold [Source: FAA AAS-100]
thresholdCrossHeight (Real)	
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NAVAIDSite

Geometry Type: Polygon Accuracy: +/-20Ft. Sensitivity: Unclassified

The parcel, lease, or right-of-way boundary for a navaid facility that is located off airport property.

Attributes:	*SDSFIE Entity* *airfield_facility_surface_site*
navaidsite_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
faaLocID (String4)	The location identifier assigned to the feature by the FAA.

fac_typ_d (Enumeration16)	The type of facility or feature related to airfield operations. [Source: SDSFIE Feature Table]
facil_desc (String254)	A brief description of the facility and any special characteristics. [Source: SDSFIE Feature Table]
PropertyCustodian (String50)	The regional property management office responsible for ownership of the site
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NAVAIDSystem

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Unclassified

A reference point to a grouping of NAVAIDS that together perform a common function.

Attributes: *SDSFIE Entity* *none*

navaidsystem_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
faaLocID (String4)	The location identifier assigned to the feature by the FAA.
navaidSysTypeCode_d	The type of NAVAID system
feat_desc (String254)	Description of the feature.
latitude (Real)	Latitude in decimal degrees with negative numbers used for Western Hemisphere
longitude (Real)	Longitude in decimal degrees with negative numbers used for Western Hemisphere
feat_len (Real)	The overall length of the airfield surface. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: SeaPlane

FloatingDockSite

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Unclassified

A floating facility which can serve as a mooring place for vessels or as a floating dry dock. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *floating_dock_site*

floatingdocksite_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

NavigationBuoy

Geometry Type: Point Accuracy: +/-5Ft. Sensitivity: Unclassified

A floating marker which is moored to the bottom at a specific known location, which is used as an aid to navigation or for other special purpose. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *marine_navigation_buoy_point*

buoy_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a

	feature type. [Source: FAA Airports GIS]
buoy_num (String20)	The official number of the buoy. [Source: SDSFIE Feature Table]
feat_name (String120)	Any commonly used name associated with the buoy. [Source: SDSFIE Feature Table]
narrative (String254)	A description or other unique information concerning the buoy limited to 240 characters. [Source: SDSFIE Feature Table]
buoy_typ_d (Enumeration16)	Discriminator. The type of the buoy. [Source: SDSFIE Feature Table]
color_d (Enumeration16)	The color of the buoy. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SeaplaneLandingArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

An area specifically designated for take-offs and landings of sea planes. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *sea_plane_landing_area*

sealand_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	Any commonly used name associated with the sea plane landing area. [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
restrictn (String240)	Any restrictions or cautions associated with the sea plane landing area. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SeaplaneRampCenterline

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Restricted

The centerline of ramps specifically designed to transit seaplanes from land to water and vice versa. [Source:

Attributes: *SDSFIE Entity* *sea_plane_ramp_centerline*

seaplnr_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SeaplaneRampSite

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Ramps specifically designed to transit seaplanes from land to water and vice versa. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *sea_plane_ramp_site*

seaplnr_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.

user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Security

SecurityArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Secret

An area of the airport in which security measures required by 49CFR1542.201 must be carried out [Source:

Attributes: *SDSFIE Entity* *none*

securityarea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SecurityCheckPoint

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Top Secret

Location where security screening procedures are in effect.

Attributes: *SDSFIE Entity* *none*

SecurityCheckPoint_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SecurityPerimeterLine

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Confidential

Any type of perimeter, such as barbed wire, high fences, motion detectors and armed guards at gates, that ensure no unauthorized visitors can gain entry. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *security_perimiter_line*

secper_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
narrative (String254)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SIDA

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Secret

Portions of an airport, specified in the airport security program, in which security measures required by regulation must be carried out. This area includes the security area and may include other areas of the airport. [Source: DHS]

Attributes:	*SDSFIE Entity* *none*
sida_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

SterileArea

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Secret

Portions of an airport defined in the airport security program that provide passengers access to boarding aircraft and to which the access is generally controlled by TSA, an aircraft operator, or a foreign air carrier. [Source: DHS]

Attributes:	*SDSFIE Entity* *none*
sterilearea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
name (String40)	Name of the feature.
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Surface Transportation

Bridge

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

A structure used by vehicles that allows passage over or under an obstacle such as a river, chasm, mountain, road or railroad. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *road_bridge_area*
bridge_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	Any commonly used name for the bridge. [Source: SDSFIE Feature Table]
road_name (String50)	Name of road bridge connects [Source: HJAIA GIS ALP Standard - 5/29/]
road_name (String50)	Name of cross road under bridge, if any [Source: HJAIA GIS ALP Standard - 5/29/]
narrative (String254)	This attribute field is used to identify the datum from which the vertical clearance information is referenced and to calculate actual vertical clearance. [Source: SDSFIE Feature Table]
brdg_typ_d (Enumeration16)	The fundamental structure type of the bridge. [Source: SDSFIE Feature Table]
elevation (Real)	Finished elevation of highest point of bridge [Source: HJAIA GIS ALP Standard - 5/29/]
class (String50)	Classification of bridge [Source: HJAIA GIS ALP Standard - 5/29/]
vert_clr (Real)	The clearance in feet between the lowest point under the bridge opening and the water's surface at Mean High Water (MHW). [Source: SDSFIE Feature Table]
brdg_ht (Real)	The clearance of the bridge structure; i.e. the height beneath the structure of the bridge. [Source: SDSFIE Feature Table]
brdg_len (Real)	The total length of the span of the bridge. [Source: SDSFIE Feature

	Table]
lightingType_d (Enumeration16)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
markingFeatureType_d	The type of the marking
color_d (Enumeration16)	The color of the marking
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

DrivewayArea

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

An access to a residence or other vehicle parking lot or storage area. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *driveway_area*
drvway_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
surf_mat_d (Enumeration16)	The material used as a surface for the driveway. [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

DrivewayCenterline

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

The center of the driveway as measured from the edge of the paved surface. The segments of a driveway centerline will coincide with the road segments in order to provide network connectivity. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *none*
drivewaycenterline_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_desc (String254)	Description of the feature.
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

GuardRails

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Restricted

Location of a road guard rail.

Attributes:	*SDSFIE Entity* *none*
GuardRails_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

JerseyBarriers

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

Location of jersey barriers along a road.

Attributes: *SDSFIE Entity* *none*

JerseyBarriers_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

LandsideSign

Geometry Type: Point | Accuracy: +/-5Ft. | Sensitivity: Restricted

Signs outside of a building and not on the airfield.

Attributes: *SDSFIE Entity* *none*

haulRoute_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
island_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
LandsideSign_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
stagingArea_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type.
name (String60)	Common name associated with the feature. [Source: HJAIA]
name (String60)	Common name associated with the feature. [Source: HJAIA]
name (String60)	Common name associated with the feature. [Source: HJAIA]
name (String60)	Common name associated with the feature. [Source: HJAIA]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data. [Source: SDSFIE]
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

ParkingLot

Geometry Type: Polygon | Accuracy: +/-5Ft. | Sensitivity: Restricted

An area of an airport used for parking of automobiles, buses, etc. [Source: SDSFIE]

Attributes: *SDSFIE Entity* *vehicle_parking_area*

parking_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	Any commonly used name for the parking area. [Source: SDSFIE Feature Table]
feat_desc (String254)	A description of the parking lot. [Source: SDSFIE Feature Table]
park_use_d (Enumeration16)	The primary use of the parking area. [Source: SDSFIE Feature Table]
srf_typ_d (Enumeration16)	Type of different materials used to construct the surface. [Source: SDSFIE Feature Table]
tot_spaces (Integer)	The total parking spaces available in the area including handicapped or reserved spaces. [Source: SDSFIE Feature Table]
num_hndcp (Real)	The total number of spaces marked as being handicapped parking. [Source: SDSFIE Feature Table]
owner_d (Enumeration16)	The owner of the parking lot [Source: AirMAT]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RailroadCenterline

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Confidential

Represents the centerline of each pair of rails [Source: ANSI: Data Content Standards For Transportation Networks:

Attributes: *SDSFIE Entity* *railroad_centerline*

railrd_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String30)	Any commonly used name for the railroad [Source: SDSFIE Feature Table]
type (String50)	Type of rail (heavy, light, commuter, etc) [Source: HJAIA GIS ALP Standard - 5/29/]
remarks (String254)	Any narrative remarks concerning the railroad. [Source: SDSFIE Feature Table]
use_d (Enumeration16)	The current status as to whether the railroad segment is being used. [Source: SDSFIE Feature Table]
numTracks (Integer)	The number of tracks present
owner_d (Enumeration16)	The owner of the rail track [Source: AirMAT]
bridge_d (Boolean)	Indicates given road segment is bridge (Y- a is bridge, N-is not a bridge). [Source: SDSFIE Feature Table]
tunnel_d (Boolean)	Indicates given road segment is tunnel (Y- is a tunnel, N-is not a tunnel). [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RailroadYard

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

Represents a railroad yard [Source: ANSI: Data Content Standards For Transportation Networks: Roads]

Attributes: *SDSFIE Entity* *railroad_yard_area*

rryard_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
yard_name (String60)	A name that represent the railroad yard. [Source: SDSFIE Feature Table]
feat_desc (String254)	Any brief description of the feature. [Source: SDSFIE Feature Table]

owner_d (Enumeration16)	The owner of the rail yard [Source: AirMAT]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RoadCenterline

Geometry Type: Line Accuracy: +/-5Ft. Sensitivity: Confidential

The center of the roadway as measured from the edge of the paved surface. The segments of a road centerline will coincide with the road segments in order to have similar characteristics. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *road_centerline*
cline_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
feat_name (String40)	Any commonly used name for the road centerline. [Source: SDSFIE Feature Table]
alt_name (String35)	The alternate name or second name for the road. [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
rou1_name (String30)	The route number or other identifier that is affiliated with the first route type [Source: SDSFIE Feature Table]
rou1_typ_d (Enumeration16)	The first route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
rou2_name (String30)	The route number or other identifier that is affiliated with the second route type [Source: SDSFIE Feature Table]
rou2_typ_d (Enumeration16)	The second route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
rou3_name (String30)	The number or other identifier that is affiliated with the third route type [Source: SDSFIE Feature Table]
rou3_typ_d (Enumeration16)	The third route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
use_typ_d (Enumeration16)	The current usage status of the road [Source: SDSFIE Feature Table]
feat_len (Real)	The overall length of the road centerline. [Source: SDSFIE Feature Table]
num_lanes (Real)	The number of normal traffic lanes throughout the length of the centerline. [Source: SDSFIE Feature Table]
bridge_d (Boolean)	Indicates given road segment is bridge ("Y"- a is bridge, "N"-is not a bridge). [Source: SDSFIE Feature Table]
tunnel_d (Boolean)	Indicates given road segment is tunnel ("Y"- is a tunnel, "N"-is not a tunnel). [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RoadPoint

Geometry Type: Point Accuracy: +/-10Ft. Sensitivity: Confidential

A point along the roadway which has some special significance either for starting or ending a road segment or for representing a significant position along the roadway system such as the start or center of a bridge or the center of an intersection [Source: ANSI: Data Content Standards For Transportation Networks: Roads*]

Attributes:	*SDSFIE Entity* *none*
roadpoint_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.

meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

RoadSegment

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Confidential

A section of the road system designed for, or the result of, human or vehicular movement; must be continuous (no gaps) and cannot branch; no mandates are provided on how to segment the road system except that data providers adopt a consistent method [Source: ANSI: Data Content Standards For Transportation Networks: Roads*]

Attributes:	*SDSFIE Entity* *road_site*
rd_seg_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
road_name (String30)	A common name or street name used to refer to the stretch of road. [Source: SDSFIE Feature Table]
alt_name (String30)	The alternate name or second name for the road. [Source: SDSFIE Feature Table]
feat_desc (String254)	A general description of the road. [Source: SDSFIE Feature Table]
srf_typ_d (Enumeration16)	Type of material used to construct the surface. [Source: SDSFIE Feature Table]
rou1_name (String30)	The route number or other identifier that is affiliated with the first route type [Source: SDSFIE Feature Table]
rou1_typ_d (Enumeration16)	The first route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
rou2_name (String30)	The route number or other identifier that is affiliated with the second route type [Source: SDSFIE Feature Table]
rou2_typ_d (Enumeration16)	The second route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
rou3_name (String30)	The number or other identifier that is affiliated with the third route type [Source: SDSFIE Feature Table]
rou3_typ_d (Enumeration16)	The third route type for the road (Interstate, US, State, etc.) [Source: SDSFIE Feature Table]
seg_len (Real)	The length of the road segment measured at the centerline. [Source: SDSFIE Feature Table]
seq_width (Real)	The average width of the road segment. [Source: SDSFIE Feature Table]
num_lanes (Real)	The total number of lanes of traffic, counting both directions, not including turning lanes. [Source: SDSFIE Feature Table]
bridge_d (Boolean)	Indicates given road segment is bridge (Y- a is bridge, N-is not a bridge). [Source: SDSFIE Feature Table]
tunnel_d (Boolean)	Indicates given road segment is tunnel (Y- is a tunnel, N-is not a tunnel). [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Sidewalk

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

A paved or concrete pad used as a pedestrian walkway. Usually is composed of one or more SideWalkSegments. [Source: SDSFIE]

Attributes:	*SDSFIE Entity* *pedestrian_sidewalk_area*
walk_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
walk_use (String26)	A short description of the primary use of the sidewalk. [Source: SDSFIE Feature Table]
walk_desc (String254)	A brief description of any special characteristics of the sidewalk. [Source: SDSFIE Feature Table]
pri_matl_d (Enumeration16)	Primary material used in the sidewalk and/or trail. [Source: SDSFIE Feature Table]

sec_len (Real)	The overall length of the sidewalk section. [Source: SDSFIE Feature Table]
sec_width (Real)	The mean width of the sidewalk section. [Source: SDSFIE Feature Table]
ada_acc_d (Boolean)	Boolean indicating whether or not the walkway is in compliance with the American Disabilities Act. [Source: SDSFIE Feature Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Tunnel

Geometry Type: Polygon Accuracy: +/-5Ft. Sensitivity: Restricted

The area of a transportation passage, open at both ends, used to provide access through or under a natural obstacle [Source: SDSFIE]

Attributes: *SDSFIE Entity* *tunnel_area*

tunnel_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
tun_typ_d (Enumeration16)	The code that represents the type of tunnel [Source: SDSFIE Feature Table]
vert_clr (Real)	Indicates the actual vertical clearance to the top of the tunnel imposed by any restrictions (measured in meters). [Source: SDSFIE Feature Table]
feat_desc (String254)	Description of the feature.
avg_ht (Real)	The average height of the tunnel. [Source: SDSFIE Feature Table]
avg_wd (Real)	The average width of the tunnel. [Source: SDSFIE Feature Table]
tunnel_len (Real)	The length of the tunnel. [Source: SDSFIE Feature Table]
lightingType_d (Enumeration16)	A description of the lighting system. Lighting system classifications are Approach; Airport; Runway; Taxiway; and Obstruction
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

Group: Other

OtherLine

Geometry Type: Line Accuracy: +/-10Ft. Sensitivity: Restricted

Other polygon features not elsewhere classified

Attributes: *SDSFIE Entity* *none*

otherline_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
featureType (String40)	The type of feature
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

OtherPoint

Geometry Type: Point Accuracy: +/-10Ft. Sensitivity: Restricted

Other line features not elsewhere classified

Attributes: *SDSFIE Entity* *none*

otherpoint_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
featureType (String40)	The type of feature
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

OtherPolygon

Geometry Type: Polygon Accuracy: +/-10Ft. Sensitivity: Restricted

Other point features not elsewhere classified

Attributes: *SDSFIE Entity* *none*

otherpolygon_id (Number*)	Primary Key. A globally unique identifier assigned to the instance of a feature type. [Source: FAA Airports GIS]
featureType (String40)	The type of feature
narrative (String240)	A description or other unique information concerning the subject item, limited to 240 characters. [Source: SDSFIE Attribute Table]
user_flag (String254)	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
meta_id (Integer)	Foreign Key. Used to link the record to the applicable feature level metadata record(s).

APPENDIX B - DOMAIN VALUES

This appendix lists the acceptable domain values for each of the attributes bound by list domains in Appendix A. Each list of acceptable values is an enumeration, which means that one of the values must be selected in order to be compliant with the standard. For each value, a definition along with any applicable source information is provided.

agl_u_d, cbldia_u_d, depth_u_d,

Value	Definition (Notes) [Source]
ANGSTROM	A unit of length equal to 0.1 nanometer. [SDSFIE V2.5 SI]
CABLN	Cable lengths - 720 feet. [SDSFIE V2.5]
CH	Chains - 66 feet or 100 links (Gunter). [SDSFIE V2.5]
CM	Centimeters. [SDSFIE V2.5 ISO10001-3.1]
DM	A unit of distance in the metric system equal to 1/10 of a meter. [SDSFIE
EM	EMS - 0.166667 inches. [SDSFIE V2.5]
EN	ENS - 0.083333 inches. [SDSFIE V2.5]
FATHOM	Fathoms - 6 feet. [SDSFIE V2.5]
FT	Feet - 0.3048006 meters. [SDSFIE V2.5 ANSIX3.50-1986]
FURLONG	Furlongs - 0.125 miles or 40 rods (Gunter). [SDSFIE V2.5]
HAND	Hands - 4 inches, 10.160 centimeters. [SDSFIE V2.5]
HM	Hectometer. [SDSFIE V2.5]
IN	Inches - 0.126263 links (Gunter)or 2.54 centimeters. [SDSFIE V2.5 ANSIX3.50-1986]
INTERNATIONAL_FT	1 meter = 3.280839895 International Feet. [SDSFIE V2.5 NGS]
KM	Kilometers - 0.53961 miles or 3280.8 feet. [SDSFIE V2.5 ISO10001-3.1]
KNOT	A single nautical mile or 1.1516 statute miles. [SDSFIE V2.5]
LEAGUE	League - 3 statute miles or 4.8280 kilometers. [SDSFIE V2.5]
LINK	Links - 7.92 inches or 0.04 rods (Gunter). [SDSFIE V2.5]
M	Meters - 1.093614 yards or 39.3701 inches. [SDSFIE V2.5
MI	Miles - 80 chains (Gunter) or 320 rods. [SDSFIE V2.5 ANSIX3.50-1986]
MIL	MILS - 0.001 inches. [SDSFIE V2.5]
MM	Millimeters - 0.03937 inches. [SDSFIE V2.5 ISO10001-3.1]
MYM	Myriameters - 6.21372 miles. [SDSFIE V2.5]
NLEAGUE	Nautical leagues - 3 nautical miles or 5.5597 kilometers. [SDSFIE V2.5]
NM	A distance of one billionth of a meter. [SDSFIE V2.5 SI]
NMI	Nautical miles - 1.1516 statute miles. [SDSFIE V2.5 ANSIX3.50-1986]
PICA	Picas - 0.166666 inches or 12 points. [SDSFIE V2.5]
POINT	point - 0.1384 inches [SDSFIE V2.5]
ROD	Rods - 0.25 chains (Gunter) or 5.5 yards. [SDSFIE V2.5 ANSIX3.50-1986]
UM	Micrometers - 0.00003937 inches. [SDSFIE V2.5]
US_SURVEY_FT	1 meter = 3.28083333 US survey feet. [SDSFIE V2.5 NGS]
YD	A unit of distance equal to 3 feet or 0.9144 meter. [SDSFIE V2.5 SI ANSI]

airp_typ_d

Value	Definition (Notes) [Source]
A	Transducer [SDSFIE V2 Austin and Pitts]
AIRFLOW_B	Meter Panel Component [SDSFIE V2 Austin and Pitts]
ALARM_PIPE	Meter Panel Component [SDSFIE V2 Austin and Pitts]
AV	Automatic Shut-Off Valve [SDSFIE V2 Austin and Pitts]
B	By-Pass [SDSFIE V2 Austin and Pitts]
BV	By-Pass Valve [SDSFIE V2 Austin and Pitts]
C	Pressure Contactor [SDSFIE V2 Austin and Pitts]
CA_3131	Gas Feeder Pipe [SDSFIE V2 Austin and Pitts]
CD	Compressed Dry Air Source [SDSFIE V2 Austin and Pitts]
CO	Central Office [SDSFIE V2 Austin and Pitts]
CT	Pressure Contactor Terminal [SDSFIE V2 Austin and Pitts]
DBV	Dual (Shutoff) Valve. [SDSFIE V2.5 AIR FORCE]
E	Pressure Contactor [SDSFIE V2 Austin and Pitts]
GT	Gas-Tight Cable Terminal [SDSFIE V2 Austin and Pitts]
GT_500CFD	Air Dryer (>500 Cfd) [SDSFIE V2 Austin and Pitts]
LT_500CFD	Air Dryer (<500 Cfd) [SDSFIE V2 Austin and Pitts]
M	Flow Meter [SDSFIE V2 Austin and Pitts]
M_262	Manifold [SDSFIE V2 Austin and Pitts]

MF	Pipe Manifold [SDSFIE V2 Austin and Pitts]
MODEL_3000	Compressor Dehydrator [SDSFIE V2 Austin and Pitts]
MP	Meter Panel [SDSFIE V2 Austin and Pitts]
P	Pressure Plug [SDSFIE V2 Austin and Pitts]
PRESS_C	Transducer [SDSFIE V2 Austin and Pitts]
R	Pressure Regulator [SDSFIE V2 Austin and Pitts]
RV	Excessive Pressure Relief Valve [SDSFIE V2 Austin and Pitts]
T	Gas-Tight Cable Terminal [SDSFIE V2 Austin and Pitts]
TD	Pressure Transducer [SDSFIE V2 Austin and Pitts]
V	Pressure Testing Valve [SDSFIE V2 Austin and Pitts]
VALVE_750	Transducer [SDSFIE V2 Austin and Pitts]
VALVE_BLK	Pressure [SDSFIE V2 Austin and Pitts]
VALVE_C	Pressure [SDSFIE V2 Austin and Pitts]
VT	Cable Vent [SDSFIE V2 Austin and Pitts]

amp_typ_d, attn_typ_d, imp_typ_d

Value	Definition (Notes) [Source]
CATV	Cable Television Amplifier [SDSFIE V2 Tinker Air Force Base]
OTHER	Other [SDSFIE V2]
PHONE_LINE_AMP	Telephone Line Amplifier [SDSFIE V2 Tinker Air Force Base]
RADIO	Radio [SDSFIE V2 Tinker Air Force Base]
TBD	To Be Determined [SDSFIE V2 Tinker Air Force Base]
UNKNOWN	Unknown [SDSFIE V2]
VIDEO	Video Amplifier [SDSFIE V2 Tinker Air Force Base]

anch_typ_d

Value	Definition (Notes) [Source]
GUIDE_ANCHOR	guide anchor [SDSFIE V2.1 FGDC Utilities Classification]
RIGID_ANCHOR	rigid anchor [SDSFIE V2.1 FGDC Utilities Classification]

ant_rad_d

Value	Definition (Notes) [Source]
DIRECTIONAL	Directional Antenna. [SDSFIE V2.5 AIR FORCE]
LOS	Line of Sight. [SDSFIE V2.5 AIR FORCE]
OMNI	Omnidirectional Antenna. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

ant_ty_d

Value	Definition (Notes) [Source]
DIPOLE	dipole antenna [SDSFIE V2 Tinker Air Force Base]
FIELD	field antenna [SDSFIE V2 Tinker Air Force Base]
PARABOLIC	parabolic antenna [SDSFIE V2 Tinker Air Force Base]
PATCH	Directional Patch Antenna. [SDSFIE V2.5 AIR FORCE]
YAGI	Directional Yagi Antenna. [SDSFIE V2.5 AIR FORCE]

ant_use_d

Value	Definition (Notes) [Source]
14_DF	14 element dual frequency. [SDSFIE V2.31 Air Force]
14_SF	14 element single frequency. [SDSFIE V2.31 Air Force]
8_DF	8 element dual frequency. [SDSFIE V2.31 Air Force]
8_SF	8 element single frequency. [SDSFIE V2.31 Air Force]
CAPTURE	Capture. [SDSFIE V2.31 Air Force]
NULL	Null. [SDSFIE V2.31 Air Force]
RANTEC	Rantec. [SDSFIE V2.31 Air Force]
ROTATING	Rotating. [SDSFIE V2.31 Air Force]
SIDEBAND	Sideband. [SDSFIE V2.31 Air Force]

applace_d

Value	Definition (Notes) [Source]
EXTENDED	Extended and not in or on cable sheath. [SDSFIE V2.5 AIR FORCE]
ON_BYPASS	On the bypass. [SDSFIE V2.5 AIR FORCE]
ON_CASE	On the case. [SDSFIE V2.5 AIR FORCE]
ON_SHEATH	On or in sheath. [SDSFIE V2.5 AIR FORCE]
ON_SLEEVE	On the lead sleeve. [SDSFIE V2.5 AIR FORCE]
ON_STUB	Located on a stub and not in or on the cable sheath. [SDSFIE V2.5 AIR
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

armor_ty_d, bank_arm_d

Value	Definition (Notes) [Source]
ASPHALT	asphalt [SDSFIE V1.4]
CEMENTD_STONE	cemented stones [SDSFIE V1.4]
CONCRETE_LINED	concrete lined [SDSFIE V1.4]
DUMP_BRICK_CONC	dumped brick and concrete [SDSFIE V1.4]
DUMPED_ROCK	dumped rocks [SDSFIE V1.4]
FORMEDLINING	formed channel lining [SDSFIE V1.4]
GABIONS	gabions [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PILEDIKE	pile dike [SDSFIE V1.4]
PLACED_STONE	placed stone [SDSFIE V1.4]
SAND_CEMNBGRR	sand cement/bag riprap [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WILLOW_MAT	willow mat [SDSFIE V1.4]

asph_u_d, cap_c_u_d, cap_h_u_d,

Value	Definition (Notes) [Source]
BBL_D	A rate equal to one barrel per day. [SDSFIE V2.5 SI ANSI]
BBL_HR	A rate equal to one barrel per hour. [SDSFIE V2.5 SI ANSI]
BBL_MO	A rate equal to one barrel per month. [SDSFIE V2.5 SI ANSI]
BTU_D	The quantity of heat generated in a day that raises the temperature of one pound of water by one degree Fahrenheit. [SDSFIE V2.5 SI ANSI]
BTU_HR	The quantity of heat generated in an hour that raises the temperature of one pound of water by one degree Fahrenheit. [SDSFIE V2.5]
BTU_MIN	The quantity of heat generated in a minute that raises the temperature of one pound of water by one degree Fahrenheit. [SDSFIE V2.5]
BTU_SEC	The quantity of heat generated in a second that raises the temperature of one pound of water by one degree Fahrenheit. [SDSFIE V2.5]
C_HR	Degrees Celsius per hour. [SDSFIE V2.5]
C_MIN	Degrees Celsius per minute. [SDSFIE V2.5]
C_SEC	Degrees Celsius per second. [SDSFIE V2.5]
CC_HR	Cubic centimeters per hour. [SDSFIE V2.5]
CC_MIN	Cubic centimeters per minute. [SDSFIE V2.5]
CC_SEC	Cubic centimeters per second. [SDSFIE V2.5]
CF_HR	Cubic feet per hour. [SDSFIE V2.5]
CF_MIN	Cubic feet per minute. [SDSFIE V2.5]
CF_SEC	Cubic feet per second. [SDSFIE V2.5]
CI_HR	Cubic inches per hour. [SDSFIE V2.5]
CI_MIN	Cubic inches per minute. [SDSFIE V2.5]
CI_SEC	Cubic inches per second. [SDSFIE V2.5]
CM_DA	Centimeters per day. [SDSFIE V2.5]
CM_HR	Centimeters per hour. [SDSFIE V2.5]
CM_SEC	A unit of speed equal to one centimeter covered in one second. [SDSFIE V2.5 SI ANSI]
CM_YR	Centimeters per year. [SDSFIE V2.5]
CM3_HR	One cubic centimeter per hour. [SDSFIE V2.5 SI ANSI]
CM3_MIN	One cubic centimeter per minute. [SDSFIE V2.5 SI ANSI]
CM3_SEC	One cubic centimeter per second. [SDSFIE V2.5 SI ANSI]
D_MO	A rate equal to one day per month. [SDSFIE V2.5 SI ANSI]
D_WK	A rate equal to one day per week. [SDSFIE V2.5 SI ANSI]
DALB_YR	A rate equal to ten pounds per year. [SDSFIE V2.5 SI ANSI]
DEG_C_HR	The rate at which temperature is changing in degrees Celsius in an hour. [SDSFIE V2.5 SI ANSI]
DEG_F_HR	The rate at which temperature is changing in degrees Fahrenheit in an hour. [SDSFIE V2.5 SI ANSI]
F_HR	Degrees Fahrenheit per hour. [SDSFIE V2.5]
F_MIN	Degrees Fahrenheit per minute. [SDSFIE V2.5]
F_SEC	Degrees Fahrenheit per second. [SDSFIE V2.5]
FT_D	A unit of speed equal to one foot covered in one day. [SDSFIE V2.5 SI
FT_DAY	Feet per day. [SDSFIE V2.5]
FT_HR	Feet per hour. [SDSFIE V2.5]
FT_MIN	Feet per minute. [SDSFIE V2.5]
FT_MO	Feet per month. [SDSFIE V2.5]
FT_SEC	A unit of speed equal to one foot covered in one second. [SDSFIE V2.5 SI
FT_WK	Feet per week. [SDSFIE V2.5]
FT_YR	Feet per year. [SDSFIE V2.5]
FT3_D	A flow rate equal to one cubic foot in one day. [SDSFIE V2.5 SI ANSI]
FT3_MIN	A flow rate equal to one cubic foot in one minute. [SDSFIE V2.5 SI ANSI]
FT3_SEC	A flow rate equal to one cubic foot in one second. [SDSFIE V2.5 SI ANSI]

G_D	A rate equal to a gram per day. [SDSFIE V2.5 SI ANSI]
G_HR	Grams per hour. [SDSFIE V2.5]
G_M2_D	A production rate equal to one gram in a square meter in a day. [SDSFIE
G_M2_HR	A production rate equal to one gram in a square meter in an hour. [SDSFIE V2.5 SI]
G_M3_D	A production rate equal to one gram in a cubic meter in a day. [SDSFIE
G_M3_HR	A production rate equal to one gram in a cubic meter in an hour. [SDSFIE
G_MIN	Grams per minute. [SDSFIE V2.5]
G_SEC	Grams per second. [SDSFIE V2.5]
G_YR	A rate equal to one gram per year. [SDSFIE V2.5 SI ANSI]
GAL_D	A rate equal to one gallon per day. [SDSFIE V2.5 SI ANSI]
GAL_HR	A rate equal to one gallon per hour. [SDSFIE V2.5 SI ANSI]
GAL_MIN	A rate equal to one gallon per minute. [SDSFIE V2.5 SI ANSI]
GAL_MO	A rate equal to one gallon per month. [SDSFIE V2.5 SI ANSI]
GAL_SEC	A rate equal to one gallon per second. [SDSFIE V2.5 SI ANSI]
GAL_WK	A rate equal to one gallon per week. [SDSFIE V2.5 SI ANSI]
GAL_YR	A rate equal to one gallon per year. [SDSFIE V2.5 SI ANSI]
GBTU	The quantity of heat generated equal to a billion British thermal Units. [SDSFIE V2.5 SI]
GBTU_D	The quantity of heat generated in a day equal to a billion British Thermal Units. [SDSFIE V2.5 SI ANSI]
GBTU_HR	The quantity of heat generated in an hour equal to a billion British Thermal Units. [SDSFIE V2.5 SI ANSI]
GPD	Gallons per day. [SDSFIE V2.5]
GPH	Gallons per hour. [SDSFIE V2.5]
GPM	Gallons per minute. [SDSFIE V2.5]
GPS	Gallons per second. [SDSFIE V2.5]
HR_D	Hours per day. [SDSFIE V2.5 SI ANSI]
HR_MO	Hours per month. [SDSFIE V2.5 SI ANSI]
HR_WK	Hours per week. [SDSFIE V2.5 SI ANSI]
HR_YR	Hours per year. [SDSFIE V2.5 SI ANSI]
IN_D	A unit of speed equal to one inch covered in one day. [SDSFIE V2.5 SI
IN_DAY	Inches per day. [SDSFIE V2.5]
IN_HG	Inches of mercury. [SDSFIE V2.5]
IN_HR	A unit of speed equal to one inch covered in one hour. [SDSFIE V2.5]
IN_MIN	Inches per minute. [SDSFIE V2.5]
IN_MO	Inches per month. [SDSFIE V2.5]
IN_SEC	Inches per second. [SDSFIE V2.5]
IN_WK	Inches per week. [SDSFIE V2.5]
IN_YR	Inches per year. [SDSFIE V2.5]
K_HR	Degrees Kelvin per hour. [SDSFIE V2.5]
K_MIN	Degrees Kelvin per minute. [SDSFIE V2.5]
K_SEC	Degrees Kelvin per second. [SDSFIE V2.5]
KG_D	A rate equal to one thousand grams per day. [SDSFIE V2.5 SI ANSI]
KG_FT3_SEC	A production rate equal to one kilogram per cubic foot in a second. [SDSFIE V2.5 SI ANSI]
KG_HR	A rate equal to one thousand grams per hour. [SDSFIE V2.5]
KG_MIN	Kilograms per minute. [SDSFIE V2.5]
KG_MO	A rate equal to one thousand grams per month. [SDSFIE V2.5 SI ANSI]
KG_SEC	Kilograms per second. [SDSFIE V2.5]
KG_YR	A rate equal to one thousand grams per year. [SDSFIE V2.5 SI ANSI]
KGAL_D	A rate equal to one thousand gallons per day. [SDSFIE V2.5 SI ANSI]
KLB_HR	A rate equal to one thousand pounds per hour. [SDSFIE V2.5 SI ANSI]
KM_HR	A unit of speed equal to one thousand meters covered in one hour. [SDSFIE V2.5 SI ANSI]
KM_SEC	A unit of speed equal to one thousand meters covered in one second. [SDSFIE V2.5 SI ANSI]
L_D	A rate equal to one liter per day. [SDSFIE V2.5 SI ANSI]
L_HR	A rate equal to one liter per hour. [SDSFIE V2.5]
L_MIN	A rate equal to one liter per minute. [SDSFIE V2.5]
L_SEC	A rate equal to one liter per second. [SDSFIE V2.5]
LB_ARC_YR	A rate equal to one pound in an acre in a year. [SDSFIE V2.5 SI ANSI]
LB_D	A rate equal to one pound per day. [SDSFIE V2.5 SI ANSI]
LB_DAY	Pounds per day. [SDSFIE V2.5]
LB_FT3_SEC	A rate equal to one pound per cubic foot in a second. [SDSFIE V2.5 SI
LB_HR	A rate equal to one pound per hour. [SDSFIE V2.5]
LB_MGAL_D	A rate equal to one pound per million gallons per day. [SDSFIE V2.5 SI
LB_MIN	A rate equal to one pound per minute. [SDSFIE V2.5]
LB_MO	A rate equal to one pound per month. [SDSFIE V2.5 ANSI]
LB_MONTH	Pounds per month. [SDSFIE V2.5]

LB_SEC	Pounds per second. [SDSFIE V2.5]
LB_WK	A rate equal to one pound per week. [SDSFIE V2.5]
LB_YR	A rate equal to one pound per year. [SDSFIE V2.5]
M_HR	Meters per hour. [SDSFIE V2.5]
M_MIN	Meters per minute. [SDSFIE V2.5]
M_SEC	A unit of speed equal to one meter covered in one second. [SDSFIE V2.5
M3_D	A flow rate equal to one cubic meter in one day. [SDSFIE V2.5 SI ANSI]
M3_HR	A flow rate equal to one cubic meter in one hour. [SDSFIE V2.5 SI ANSI]
M3_MIN	A flow rate equal to one cubic meter in one minute. [SDSFIE V2.5 SI
M3_MO	A flow rate equal to one cubic meter in one month. [SDSFIE V2.5 SI
M3_SEC	A flow rate equal to one cubic meter in one second. [SDSFIE V2.5 SI
M3_WK	A flow rate equal to one cubic meter in one week. [SDSFIE V2.5 SI ANSI]
M3_YR	A flow rate equal to one cubic meter in one year. [SDSFIE V2.5 SI ANSI]
MACH	Mach (speed of sound). [SDSFIE V2.5]
MBTU_D	The quantity of heat generated in one day equal to a million British Thermal Units. [SDSFIE V2.5 SI ANSI]
MBTU_HR	The quantity of heat generated in an hour equal to a million British Thermal Units. [SDSFIE V2.5 SI ANSI]
MG_D	A rate equal to one thousandth of a gram per day. [SDSFIE V2.5 SI ANSI]
MG_M2_D	A production rate equal to one thousand grams in a square meter in a day. [SDSFIE V2.5 SI]
MG_M2_HR	A production rate equal to one thousand grams in a square meter in an hour. [SDSFIE V2.5 SI]
MG_M3_D	A production rate equal to one thousand grams in a cubic meter in a day. [SDSFIE V2.5 SI]
MG_M3_HR	A production rate equal to one thousand grams in a cubic meter in an hour. [SDSFIE V2.5 SI]
MGAL_D	A rate equal to one million gallons per day. [SDSFIE V2.5 SI ANSI]
MGAL_D_FT3_SEC	A rate equal to one million gallons per day per cubic foot per second. [SDSFIE V2.5 SI ANSI]
MGAL_D_M3_SEC	A rate equal to one million gallons per day per cubic meter per second. [SDSFIE V2.5 SI ANSI]
MGAL_DAY	Million gallons per day. [SDSFIE V2.5]
MGAL_MO	A rate equal to one million gallons per month. [SDSFIE V2.5 SI ANSI]
MGAL_YR	A rate equal to one million gallons per year. [SDSFIE V2.5 SI ANSI]
MI_H	A unit of speed equal to one mile covered in one hour. [SDSFIE V2.5 SI
MIN_D	Minutes per day. [SDSFIE V2.5 SI ANSI]
ML_L_HR	A rate equal to one thousandth of a liter in one liter in one hour. [SDSFIE
MLB_D	A rate equal to one thousandth of a pound per day. [SDSFIE V2.5 SI
MLB_YR	A rate equal to one million pounds per year. [SDSFIE V2.5 SI ANSI]
MPH	Miles per hour. [SDSFIE V2.5]
OZPM3	Ounces per cubic meter. [SDSFIE V2.5]
OZPYD3	Ounces per cubic yard. [SDSFIE V2.5]
RN_IN_DAY	Rainfall in inches per day. [SDSFIE V2.5]
RN_IN_HR	Rainfall in inches per hour. [SDSFIE V2.5]
RN_IN_YEAR	Rainfall in inches per year. [SDSFIE V2.5]
SN_IN_DAY	Snowfall in inches per day. [SDSFIE V2.5]
SN_IN_HR	Snowfall in inches per hour. [SDSFIE V2.5]
SN_IN_YEAR	Snowfall in inches per year. [SDSFIE V2.5]
T_D	A rate equal to one metric ton per day. [SDSFIE V2.5 SI ANSI]
T_KM2_YR	A production rate equal to one metric ton in a square kilometer in a year. [SDSFIE V2.5 SI]
T_YR	A rate equal to one metric ton per year. [SDSFIE V2.5 SI ANSI]
TIMES_DAY	Times per day. [SDSFIE V2.5]
TIMES_HR	Times per hour. [SDSFIE V2.5]
TIMES_MIN	Times per minute. [SDSFIE V2.5]
TIMES_MO	Times per month. [SDSFIE V2.5]
TIMES_SEC	Times per second. [SDSFIE V2.5]
TIMES_WK	Times per week. [SDSFIE V2.5]
TIMES_YR	Times per year. [SDSFIE V2.5]
TNSH_DAY	Tons (short) per day. [SDSFIE V2.5]
TNSH_HR	Tons (short) per hour. [SDSFIE V2.5]
TNSH_MIN	Tons (short) per minute. [SDSFIE V2.5]
TNSH_MO	Tons (short) per month. [SDSFIE V2.5]
TNSH_SEC	Tons (short) per second. [SDSFIE V2.5]
TNSH_WK	Tons (short) per week. [SDSFIE V2.5]
TNSH_YEAR	Tons (short) per year. [SDSFIE V2.5]
TON_D	A rate equal to one short ton per day. [SDSFIE V2.5 SI ANSI]
TON_HR	A rate equal to one short ton per hour. [SDSFIE V2.5 SI ANSI]
TON_MO	A rate equal to one short ton per month. [SDSFIE V2.5 SI ANSI]

TON_WK	A rate equal to one short ton per week. [SDSFIE V2.5 SI ANSI]
TON_YR	A rate equal to one short ton per year. [SDSFIE V2.5 SI ANSI]
UG_D	A rate equal to one millionth of a gram per day. [SDSFIE V2.5 SI ANSI]
UNITPFT3	Units per cubic foot. [SDSFIE V2.5]
UNITPM3	Units per cubic meter. [SDSFIE V2.5]
UNITPYD3	Units per cubic yard. [SDSFIE V2.5]

avgpwr_u_d, hp_u_d, pekpwr_u_d,

Value	Definition (Notes) [Source]
BOILER_HP	Boiler horsepower, 33,520 BTU per hour, measure of heating ability. [SDSFIE V2.5]
BTU	British thermal unit - energy. [SDSFIE V2.5]
ERG	Erg - energy. [SDSFIE V2.5]
EV	Electronvolt - energy. [SDSFIE V2.5]
FTLBF	A unit of work equal to the work done by a force of one pound acting through a distance of one foot in the direction of the force. [SDSFIE V2.5
HP	Horsepower - power. [SDSFIE V2.5]
HP_HR	Horsepower hour - energy. [SDSFIE V2.5]
J	Joule - energy. [SDSFIE V2.5 ISO10003-26.1]
KJ	Kilojoule - energy. [SDSFIE V2.5 ISO10003-26.1]
KWH	Kilowatt hour - energy. [SDSFIE V2.5]
MBTU	The quantity of heat equal to one million British Thermal Units. [SDSFIE
MW	A unit of power equal to one million watts. [SDSFIE V2.5 SI]
TONS	12,000 BTU per hour, measure of cooling ability. [SDSFIE V2.5]
W	Watt - power. [SDSFIE V2.5 ISO10005-49]
W_CM2	Watts per square centimeter - power per Area. [SDSFIE V2.5]

azimu_u_d, grade_u_d, mbrd_u_d,

Value	Definition (Notes) [Source]
ARCSEC	Arc seconds. [SDSFIE V2.5]
DDMMSS	Degrees:minutes:seconds. [SDSFIE V2.5]
DEG	Degrees. [SDSFIE V2.5 ANSIX3.50-1986]
EW	East to West [SDSFIE V2.5]
GON	Grades. [SDSFIE V2.5 ISO10001-1]
MICRORAD	Microradians. [SDSFIE V2.5]
MILLIRAD	Milliradians. [SDSFIE V2.5]
MIN_ANGLE	A unit of angular measure equal to one sixtieth of a degree or 60 seconds. [SDSFIE V2.5 SI]
NESW	Northeast to Southwest. [SDSFIE V2.5]
NTOS	North to South. [SDSFIE V2.5]
NWSE	Northwest to Southeast. [SDSFIE V2.5]
QUAD	Quadrant. [SDSFIE V2.5 Air Force]
R	Rotation, [SDSFIE V2.5 SI]
RAD	Radians. [SDSFIE V2.5 ISO10001-1]
SEC_ANGLE	A unit of angular measure equal to one sixtieth of a minute of an arc. [SDSFIE V2.5 SI]
SENW	Southeast to Northwest. [SDSFIE V2.5]
SN	South to North. [SDSFIE V2.5]
SR	Steradians. [SDSFIE V2.5 ISO100001-2]
SWNE	Southwest to Northeast. [SDSFIE V2.5]
WE	West to East [SDSFIE V2.5]

band_u_d, freq_u_d, gain_u_d,

Value	Definition (Notes) [Source]
1	<1% [SDSFIE V1.75]
10	0.09 [SDSFIE V1.75]
11	0.1 [SDSFIE V1.75]
12	11-15% [SDSFIE V1.75]
13	16-20% [SDSFIE V1.75]
14	21-30% [SDSFIE V1.75]
15	>31% [SDSFIE V1.75]
2	0.01 [SDSFIE V1.75]
3	0.02 [SDSFIE V1.75]
4	0.03 [SDSFIE V1.75]
5	0.04 [SDSFIE V1.75]
6	0.05 [SDSFIE V1.75]
7	0.06 [SDSFIE V1.75]
8	0.07 [SDSFIE V1.75]
9	0.08 [SDSFIE V1.75]
AQLFPFT3	aquatic life per cubic foot [SDSFIE V1.75]
AQLFPIN3	aquatic life per cubic inch [SDSFIE V1.75]

AQLFPM3	aquatic life per cubic meter [SDSFIE V1.75]
AQLFPMI3	aquatic life per cubic mile [SDSFIE V1.75]
AQLFPYD3	aquatic life per cubic yard [SDSFIE V1.75]
ARTF_M2	artifacts per square meter [SDSFIE V1.75]
ARTF_YD2	artifacts per square yard [SDSFIE V1.75]
ARTIFACTPM3	artifacts per cubic meter [SDSFIE V1.75]
ARTIFACTPYD3	artifacts per cubic yard [SDSFIE V1.75]
BIOM_FT2	biomes per square foot [SDSFIE V1.75]
BIOM_M2	biomes per square meter [SDSFIE V1.75]
BIOM_YD2	biomes per square yard [SDSFIE V1.75]
CD	candela - luminous intensity [SDSFIE V1.75 ISO10006-29]
CI	curie - radioactivity [SDSFIE V1.75]
CI_D	A radioactivity emission rate equal to one curie in one day. [SDSFIE V1.8
CI_ML	A radioactivity concentration equal to one curie in a milliliter. [SDSFIE
DOLLARS	dollars [SDSFIE V1.75]
DPAS	A unit of viscosity equal to one tenth of a pascal second or one poise. [SDSFIE V1.8 SI ANSI]
DYN	dyne - force [SDSFIE V1.75]
EACH	each [SDSFIE V1.75]
F_CC	fibers per cubic centimeter (air - asbestos) [SDSFIE V1.75]
FAMILIES	families [SDSFIE V1.75]
FEETBERTH	feet of berthing [SDSFIE V1.75]
FIREPOINT	firing points [SDSFIE V1.75]
FRACTURESPFT	fractures per foot [SDSFIE V1.75]
FREQUENCY	frequency [SDSFIE V1.75]
HALFLIFE	half life [SDSFIE V1.75]
HEADS	heads [SDSFIE V1.75]
JOINTS	joints [SDSFIE V1.75]
JTUS	Jackson Turbidity Units [SDSFIE V1.75]
KW	kilowatt - power [SDSFIE V1.75 ISO10005-9]
LANES	lanes [SDSFIE V1.75]
LB_HR_TON	A rate equal to one pound per hour per ton. [SDSFIE V1.8 SI ANSI]
LB_MWHR	A rate equal to one pound per megawatt-hour. [SDSFIE V1.8 SI ANSI]
LBF	A unit of force equal to a force of one pound acting between two bodies. [SDSFIE V1.8 SI ANSI]
LM	The unit of luminous flux equal to luminous flux emitted in a solid angle of one steradian by a uniform point source having an intensity of one candle. [SDSFIE V1.8 SI ANSI]
LM_FT2	The illumination of a surface one foot distant from a source of one candela, equal to one foot-candle. [SDSFIE V1.8 SI ANSI]
MDSTATIONS	physician stations [SDSFIE V1.75]
MINLAT	minutes of latitude [SDSFIE V1.75]
MOL	mole - amount of substance [SDSFIE V1.75 ISO10008-3]
N	Newton [SDSFIE V1.8 ANSIX3.50-1986 SI]
NOOPERATIONS	number of operations [SDSFIE V1.75]
OPERATEUNITS	operating units [SDSFIE V1.75]
OTHER	other [SDSFIE V1.75]
P_F_	power factor [SDSFIE V1.75]
PCI	A unit of radioactivity equal to one trillionth of a curie. [SDSFIE V1.8 SI]
PCI_D	A radioactivity emission rate equal to one trillionth of a curie in one day. [SDSFIE V1.8 SI ANSI]
PCI_L	A radioactive concentration equal to one trillionth of a curie in a liter. [SDSFIE V1.8]
PCI_MG	A radioactive concentration equal to one trillionth of a curie in a milligram. [SDSFIE V1.8 SI]
PCI_MIN	A radioactivity emission rate equal to one trillionth of a curie in one minute. [SDSFIE V1.8 SI ANSI]
PCI_ML	A radioactive concentration equal to one trillionth of a curie in a milliliter. [SDSFIE V1.8 SI]
PCT	percent [SDSFIE V1.75]
PERCENT	percent [SDSFIE V1.75]
PH	pH = -log10[H+] [SDSFIE V1.75]
PPB	parts per billion [SDSFIE V1.75]
PPL_FT2	people per square foot [SDSFIE V1.75]
PPL_MI2	people per square mile [SDSFIE V1.75]
PPM	parts per million [SDSFIE V1.75]
PPT	parts per trillion [SDSFIE V1.75]
PPTH	parts per thousand [SDSFIE V1.75]
RAIL_TRACKS	railroad tracks [SDSFIE V1.75]
RATIO	ratio [SDSFIE V1.75]

RELHUMIDITY	relative humidity [SDSFIE V1.75]
ROOMS	rooms [SDSFIE V1.75]
ROUNDS	rounds [SDSFIE V1.75]
SEATS	seats [SDSFIE V1.75]
SPACES	spaces [SDSFIE V1.75]
STALLS	stalls [SDSFIE V1.75]
STRUCTURES	structures [SDSFIE V1.75]
TBD	to be determined [SDSFIE V1.75]
TREES_A	trees per acre [SDSFIE V1.75]
UCI	A unit of radioactivity equal to one millionth of a curie. [SDSFIE V1.8 SI]
UCI_ML	A radioactive concentration equal to one millionth of a curie in a millilter. [SDSFIE V1.8 SI]
UNITS	units [SDSFIE V1.75]
UNKNOWN	unknown [SDSFIE V1.75]
VEHICLES	vehicles [SDSFIE V1.75]
VEHICLSPACES	vehicle parking spaces [SDSFIE V1.75]
WILD_A2	wildlife per acre [SDSFIE V1.75]
WILD_FT2	wildlife per square foot [SDSFIE V1.75]
WILD_IN2	wildlife per square inch [SDSFIE V1.75]
WILD_M2	wildlife per square meter [SDSFIE V1.75]
WILD_MI2	wildlife per square mile [SDSFIE V1.75]
WILD_YD2	wildlife per square yard [SDSFIE V1.75]
XRAYROOMS	x-ray rooms [SDSFIE V1.75]

bank_d

Value	Definition (Notes) [Source]
L_DESCENDING	Left descending bank [SDSFIE V1.8 REEGIS]
LEFT	left [SDSFIE V1.8 REEGIS]
NON_RIVERINE	non riverine [SDSFIE V2.6 LEVEE DATABASE]
R_DESCENDING	Right descending bank [SDSFIE V1.8 REEGIS]
RIGHT	right [SDSFIE V1.8 REEGIS]

bed_mat_d

Value	Definition (Notes) [Source]
AQUATCWEED	aquatic weed [SDSFIE V1.4]
CEMENTED_STONE	cemented stones [SDSFIE V1.4]
CLAY	clay [SDSFIE V1.4]
CONCRETE_LINED	concrete lined [SDSFIE V1.4]
CRSAND_GRAVEL	coarse sand and gravel [SDSFIE V1.4]
EXPOSED_ROCK	exposed rock [SDSFIE V1.4]
FINE_SAND	fine sand [SDSFIE V1.4]
GRASSED	grassed [SDSFIE V1.4]
GRAVEL_STONE	gravel to larger stone [SDSFIE V1.4]
ORGANIC_MUD	organic mud [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PLACED_STONE	placed stone [SDSFIE V1.4]
SAND	Sand. [SDSFIE V2.5 USACE]
SILT_SAND	Silty sand. [SDSFIE V2.5 USACE]
TBD	to be determined [SDSFIE V1.4]
UNDERBRUSH	underbrush [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

bil_rat_d

Value	Definition (Notes) [Source]
15KV	15kv basic insulation level [SDSFIE V1.4]
25KV	25kv basic insulation level [SDSFIE V1.4]
5KV	5kv basic insulation level [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]

brdg_typ_d

Value	Definition (Notes) [Source]
BXBM_GRDRS_MULTI	Box Beam or Girders (Multiple) [SDSFIE V2.1 U.S. D.O.T.]
BXBM_GRDRS_SNGL	Box Beam or Girders (Single or Spread) [SDSFIE V2.1 U.S. D.O.T.]
COVERED	covered [SDSFIE V2.1]
DRAW	The main portion of the span can be raised or rotated to permit vessels through. [SDSFIE V1.4]
FRAME_EXCPT_CULV	Frame (Except Culverts) [SDSFIE V2.1 U.S. D.O.T.]
GIRDER_FLOORBEAM	girder and floorbeam system [SDSFIE V2.1 U.S. D.O.T.]
ORTHOTROPIC	orthotropic [SDSFIE V2.1 U.S. D.O.T.]
OTHER	other [SDSFIE V2.1]

SLAB	slab [SDSFIE V2.1 U.S. D.O.T.]
STRNGR_MULTIBM	Stringer /Multi-Beam or Girder [SDSFIE V2.1 U.S. D.O.T.]
SUSPENSION	The main portion of the span is suspended from cables or wires [SDSFIE
TBD	to be determined [SDSFIE V1.4]
TEE_BEAM	tee beam [SDSFIE V2.1 U.S. D.O.T.]
TRUSS	The main portion of the span is supported by trusses [SDSFIE V1.4]
TRUSS_DECK	truss deck [SDSFIE V2.1 U.S. D.O.T.]
TRUSS_THRU	truss thru [SDSFIE V2.1 U.S. D.O.T.]
UNCLASSIFIED	unclassified [SDSFIE V2.1]
UNKNOWN	unknown [SDSFIE V1.4]

buf_typ_d

Value	Definition (Notes) [Source]
CRITICAL_AREA	The area that is 1000 feet landward of the mean high tide coastline and any tidal waterways. [SDSFIE V1.75]
LOOSE_TUBE	Loose tube. [SDSFIE V2.3 Tinker Air Force Base]
MATERIAL_TYPE	The material type. [SDSFIE V2.3 Tinker Air Force Base]
NO_BUILD_ZONE	The area that is 100 feet landward of the mean high tide coastline and any tidal waterways. [SDSFIE V1.75]
TIGHT_TUBE	Tight tube. [SDSFIE V2.3 Tinker Air Force Base]

buoy_typ_d

Value	Definition (Notes) [Source]
GREEN_LIGHTED	A green buoy, lighted, marking the left side of the channel. [SDSFIE V1.6
GREEN_NOLITE	A green buoy, unlighted, marking the left side of the channel. [SDSFIE
LATERAL	Standard buoy for marking channel for navigation [SDSFIE V2.3 IENC]
OTHER	Some other type of buoy. [SDSFIE V2.3 IENC]
RED_LIGHTED	A red buoy, lighted, marking the right side of the channel. [SDSFIE V1.6]
RED_NOLITE	An unlighted red buoy marking the right side of the channel. [SDSFIE
SPECIAL	Buoys placed to identify special areas requiring attention. [SDSFIE V1.6]
WRECK	Buoy that marks a wreck location [SDSFIE V2.3 IENC]

bus_mat_d

Value	Definition (Notes) [Source]
ALUMINUM	aluminum metal [SDSFIE V1.4]
COPPER	copper metal [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

cab_elev_d

Value	Definition (Notes) [Source]
MAIN_BURIED	Underground main communications cables [SDSFIE V1.6]
MAIN_OHEAD	Overhead communications cables, normally suspended from or between poles. [SDSFIE V1.6]
MAIN_SUBMERGE	Submerged communications cables, either on the bottom or buried in the bottom of a water body or water course. [SDSFIE V1.6]
SERV_BURIED	The cable is a secondary service line which has been buried below ground. [SDSFIE V1.6]
SERV_OHEAD	A secondary service line which is suspended overhead, normally between poles. [SDSFIE V1.6]
SERV_SUBMERGE	A secondary service line which lies on the bottom of a watercourse or water body or which has been buried in the bottom. [SDSFIE V1.6]

cab_typ_d, cbl_ty_d, cbltyp1_d,

Value	Definition (Notes) [Source]
FIBER_OPTICS	Fiber Optics Cable. [SDSFIE V2.3 Tinker Air Force Base]
PORTAL	Portal. [SDSFIE V2.31 Air Force]
RECEIVE	Receive. [SDSFIE V2.31 Air Force]
REMOTE	Remote. [SDSFIE V2.31 Air Force]
SENSOR	Sensor. [SDSFIE V2.31 Air Force]
TRANSMIT	Transmit. [SDSFIE V2.31 Air Force]
TWINAX	Twin Coaxial Cable [SDSFIE V2.31]
TWISTED_PAIR	Twisted Pair Cable. [SDSFIE V2.3 Tinker Air Force Base]
UNKNOWN	Unknown [SDSFIE V2.31 ATT]
WAVEGUIDE	Waveguide [SDSFIE V2.31 ATT]

cab_use_d

Value	Definition (Notes) [Source]
OTHER	other cable [SDSFIE V2]
TBD	to be determined [SDSFIE V2]

TELEGRAPH	Telegraph [SDSFIE V2.2]
TELEPHONE	telephone cable [SDSFIE V2]
TELEVISION	television cable [SDSFIE V2]
UNKNOWN	unknown use [SDSFIE V2]

cabins_d, ins_typ_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned [SDSFIE V1.6]
ABOVEGROUND	above ground [SDSFIE V1.6]
AER	aerial attachment [SDSFIE V2 Austin and Pitts]
BORE	jack and bore, pull cable [SDSFIE V2 Austin and Pitts]
BURY	direct bury cable [SDSFIE V2 Austin and Pitts]
DB	directional bore conduit, pull cable [SDSFIE V2 Austin and Pitts]
INSIDE	inside [SDSFIE V1.6]
JSC	jet submarine cable [SDSFIE V2 Austin and Pitts]
OUTSIDE	outside [SDSFIE V1.6]
OVERHEAD	overhead [SDSFIE V1.6]
TR	trench and place conduit, pull cable [SDSFIE V2 Austin and Pitts]
TUNNEL	tunnel [SDSFIE V1.6]
UNDERGROUND	underground [SDSFIE V1.6]

cam_typ_d

Value	Definition (Notes) [Source]
CCD	Charge Coupled Device [SDSFIE V2 Tinker Air Force Base]
CLOSED_CIRCUIT	closed circuit camera [SDSFIE V2]
INFRARED	Infrared. [SDSFIE V2.5 AIR FORCE]
OTHER	other type of camera [SDSFIE V2 Tinker Air Force Base]

camfil_d

Value	Definition (Notes) [Source]
CLEAR	clear filter [SDSFIE V1.4]
CYAN	cyan (blue-green) filter [SDSFIE V1.4]
ORANGE	orange filter [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
RED	red filter [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
YELLOW	yellow filter [SDSFIE V1.4]

cap_u_d, cpctr_u_d, currnt_u_d,

Value	Definition (Notes) [Source]
A	Ampere - current. [SDSFIE V2.5 ISO10005-1 ANSI]
AMPLITUDE	Amplitude. [SDSFIE V2.5]
ATTEN_LOSS	Attenuation loss. [SDSFIE V2.5]
BD	Baud - signaling rate. [SDSFIE V2.5]
BW	Bandwidth. [SDSFIE V2.5]
C	COULOMB - electric charge. [SDSFIE V2.5 ISO10004-2 ANSIX3.5-1986]
DB	Decibels. [SDSFIE V2.5 ISO10007-21]
G	Gauss (1.0E-4 tesla(T)). [SDSFIE V2.5 ISO10003-1 ANSI3.50-1986]
GB	Gilbert - magnetomotive force. [SDSFIE V2.5]
H	Henry. [SDSFIE V2.5 Air Force]
HZ	Cycles per second. [SDSFIE V2.5 ISO10007-2]
KA	Kiloampere - current. [SDSFIE V2.5 ISO10005-1]
KEV	Kiloelectronvolt - energy. [SDSFIE V2.5]
KHZ	Thousands of cycles per second. [SDSFIE V2.5 ISO10007-2]
KOHM	Kilohm - resistance. [SDSFIE V2.5 ISO10005-33]
KV	Kilovolt - potential. [SDSFIE V2.5 ISO10005-6.1]
KVA	Kilovolt ampere - power (absolute). [SDSFIE V2.5]
KVAR	Kilovolt ampere reactive. [SDSFIE V2.5]
MCF	MICROFARAD - A unit of capacitance equal to one millionth of a Farad. [SDSFIE V2.5 Air Force]
MF	MILLIFARAD - A unit of capacitance equal to one thousandth of a Farad. [SDSFIE V2.5 Air Force]
MH	MILLIHENRY - A unit of inductance equal to one thousandth of a Henry. [SDSFIE V2.5 Air Force]
MHZ	Millions of cycles per second. [SDSFIE V2.5 ISO10007-2]
MV	The unit of electric potential and electromotive force equal to one thousandth of a volt. [SDSFIE V2.5 SI]
OE	Oerstad - magnet field strength. [SDSFIE V2.5]
OHM	Ohm - resistance, impedance, reactance. [SDSFIE V2.5 ANSIX3.50-1986]
RELS	Reluctance - opposition to magnetic flux flow. [SDSFIE V2.5]

S	Siemens - conductance, mho. [SDSFIE V2.5 ISO10005-34/10001-7]
T	TESLA - Magnetic flux density. [SDSFIE V2.5 ISO10003-1]
THD	Total harmonic distortion. [SDSFIE V2.5]
US	A unit of conductance equal to one millionth of a siemens (ampere per volt). [SDSFIE V2.5 SI]
US_CM	A conductivity ratio equal to one millionth of a siemens (equal to a mho)per centimeter. [SDSFIE V2.5 SI]
V	Volt - potential. [SDSFIE V2.5 ISO10005-6.1]
WB	Weber - magnetic flux. [SDSFIE V2.5 ISO10005-20]

cap_u_d, cpcty_u_d, disc_u_d,

Value	Definition (Notes) [Source]
ACR_FT	The volume of water, 43,560 cubic feet, that will cover an area of one acre to a depth of one foot. [SDSFIE V2.5 SI]
AFT	Acre feet. [SDSFIE V2.5]
BBL	A unit of capacity or volume equal to 31.50 gallons, 119.24 liters or 4.21 cubic feet. [SDSFIE V2.5 SI ANSI]
BF	Board feet. [SDSFIE V2.5 ANSIX3.50-1986]
CC	Cubic centimeters. [SDSFIE V2.5]
CDFT	Cord-Foot. [SDSFIE V2.5]
CFT	Cubic feet. [SDSFIE V2.5 ANSIX3.50-1986]
CIN	Cubic inches. [SDSFIE V2.5 ANSIX3.50-1986]
CM3	A volume equal to a cube whose edge is one centimeter. [SDSFIE V2.5
CR	Cords. [SDSFIE V2.5 ANSIX3.50-1986]
CYD	Cubic yards. [SDSFIE V2.5 ANSIX3.50-1986]
DL	A volume equal to one tenth of a liter. [SDSFIE V2.5 SI]
FOZ	A unit of capacity or volume used in liquid measure equal to 1.804 cubic inches, 1/16 of a pint or 29.574 milliliters. [SDSFIE V2.5 SI ANSI]
FT3	A volume equal to a cube whose edge is one foot. [SDSFIE V2.5 SI ANSI]
GAL_UK	A unit of volume in the British Imperial System, used in liquid and dry measure, equal to 4.546 liters. [SDSFIE V2.5 SI]
GAL_US	A unit of capacity or volume used in liquid measure equal to 4 quarts or 3.785 liters. [SDSFIE V2.5 SI ANSI]
GIL	Gills (U.S. liquid). [SDSFIE V2.5 ANSIX3.50-1986]
HL	Hectoliters. [SDSFIE V2.5 ISO10001-5]
IN3	A volume equal to a cube whose edge is one inch. [SDSFIE V2.5 SI ANSI]
KGAL	A unit of capacity or volume equal to 1000 gallons. [SDSFIE V2.5 SI]
KL	Kiloliters. [SDSFIE V2.5]
KM3	Cubic kilometers. [SDSFIE V2.5]
L	Liters. [SDSFIE V2.5 ISO10001-5]
M3	Cubic meters - stere. [SDSFIE V2.5 ISO10001-5]
MGAL	A unit of capacity or volume equal to one million gallons. [SDSFIE V2.5
MI3	Cubic miles. [SDSFIE V2.5]
MILLION_GALLONS	Million gallons. [SDSFIE V2.5 AWWA]
ML	Milliliters. [SDSFIE V2.5 ISO10001-5]
MM3	Cubic millimeters. [SDSFIE V2.5 ISO10001-5]
PT	A unit of capacity or volume used in liquid measure equal to 16 fluid ounces or 0.473 liter. [SDSFIE V2.5 SI ANSI]
QT	A unit of capacity or volume used in liquid measure equal to 2 pints or 0.946 liter. [SDSFIE V2.5 SI ANSI]
TUN	A volume of liquid equal to approximately 254 gallons (954 liters).
UKBBL	Dry barrels (U.K. dry). [SDSFIE V2.5]
UKBUDRY	Bushels (U.K. dry). [SDSFIE V2.5]
UKGAL	Gallons (U.K. liquid). [SDSFIE V2.5]
UKGI	Gills (U.K. liquid). [SDSFIE V2.5]
UKHHD	Hogsheads (U.K. liquid). [SDSFIE V2.5]
UKPK	Peck (U.K. dry). [SDSFIE V2.5]
UKPT	Liquid pints (U.K. liquid). [SDSFIE V2.5]
UKQT	Liquid quarts (U.K. liquid). [SDSFIE V2.5]
USBBL_DRY	Dry barrels (U.S. dry). [SDSFIE V2.5]
USBBL_LIQ	Liquid barrels (U.S. liquid). [SDSFIE V2.5]
USBUDRY	Bushels (U.S. dry). [SDSFIE V2.5 ANSIX3.50-1986]
USGAL	Gallons (U.S. liquid). [SDSFIE V2.5 ANSIX3.50-1986]
USHHD	Hogsheads (U.S. liquid). [SDSFIE V2.5]
USPK	Peck (U.S. dry). [SDSFIE V2.5 ANSIX3.50-1986]
USPT_DRY	Dry pints (U.S. dry). [SDSFIE V2.5 ANSIX3.50-1986]
USPT_LIQ	Liquid pints (U.S. liquid). [SDSFIE V2.5]
USQT_DRY	Dry quarts (U.S. dry). [SDSFIE V2.5 ANSIX3.50-1986]
USQT_LIQ	lLquid quarts (U.S. liquid). [SDSFIE V2.5]
YD3	A volume equal to a cube whose edge is one yard. [SDSFIE V2.5 SI ANSI]

cas_mat_d

Value	Definition (Notes) [Source]
AL	Aluminum [SDSFIE V2 Austin and Pitts]
EVA	Ethylene Vinyl Acetate (Heat Shrinkable Tubing). [SDSFIE V2.5 AIR
FIBER	Fiberglass [SDSFIE V2 Austin and Pitts]
IRON	Cast Iron [SDSFIE V2 Austin and Pitts]
LEAD	Lead [SDSFIE V2 Austin and Pitts]
OTHER	Other [SDSFIE V2]
PE	Polyethylene. [SDSFIE V2.5 AIR FORCE]
PP	Polypropylene. [SDSFIE V2 5 AIR FORCE]
PVC	Polyvinyl Chloride [SDSFIE V2 Austin and Pitts]
SS	Stainless Steel [SDSFIE V2 Austin and Pitts]
TBD	To Be Determined [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown [SDSFIE V2]

cas_typ_d

Value	Definition (Notes) [Source]
12_5SS	12.5 Inch Stainless Steel. [SDSFIE V2.5 AIR FORCE]
2_TYPE	3 Type. [SDSFIE V2.5 AIR FORCE]
3BB	4 Inch Better Buried. [SDSFIE V2.5 AIR FORCE]
3RS	4 Inch ReddiSeal. [SDSFIE V2.5 AIR FORCE]
3SS	4 Inch Stainless Steel. [SDSFIE V2.5 AIR FORCE]
4BB	5 Inch Better Buried [SDSFIE V2.5 AIR FORCE]
4RS	5 Inch ReddiSeal. [SDSFIE V2.5 AIR FORCE]
4SS	5 Inch Stainless Steel. [SDSFIE V2.5 AIR FORCE]
6_5BB	6.5 Inch Better Buried. [SDSFIE V2.5 AIR FORCE]
6_5RE	6.5 Inch ReddiSeal. [SDSFIE V2.5 AIR FORCE]
6_5SS	6.5 Inch Stainless Steel. [SDSFIE V2.5 AIR FORCE]
9_5BB	9.5 Inch Better Buried. [SDSFIE V2.5 AIR FORCE]
9_5RS	9.5 Inch ReddiSeal. [SDSFIE V2.5 AIR FORCE]
9_5SS	9.5 Inch Stainless Steel. [SDSFIE V2.5 AIR FORCE]
FOSC_100_B_H	Raychem FOSC-100 B/H [SDSFIE V2 Austin and Pitts]
HS	Heat Shrinkable. [SDSFIE V2.5 AIR FORCE]
KBV	K and B Vault. [SDSFIE V2.5 AIR FORCE]
LEAD	Lead Tube. [SDSFIE V2.5 AIR FORCE]
OTHER	Other [SDSFIE V2]
READY_ACCESS	Ready Access Aerial Terminal. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined [SDSFIE V2]
UC_6_9	Siemens UC 6-9 [SDSFIE V2 Austin and Pitts]
UCN_7_10	Siemens UCN 7-10 [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown [SDSFIE V2]

case_typ_d

Value	Definition (Notes) [Source]
OTHER	Other [SDSFIE V2]
PED12	12 Inch Pedestal [SDSFIE V2 Austin and Pitts]
PED4	4 Inch Pedestal [SDSFIE V2 Austin and Pitts]
PED6	6 Inch Pedestal [SDSFIE V2 Austin and Pitts]
PED8	8 Inch Pedestal [SDSFIE V2 Austin and Pitts]
TBD	To Be Determined [SDSFIE V2]
TRANS	Transducer [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown [SDSFIE V2]

catnav_d

Value	Definition (Notes) [Source]
CLEARING_LINE	Clearing Line [SDSFIE V2.2 S-57]
LD_LN_BEAR_A_TRA	Leading Line Bearing A Recommended Track [SDSFIE V2.2 S-57]
TRANSIT_LINE	Transit Line [SDSFIE V2.2 S-57]

catpip_d

Value	Definition (Notes) [Source]
BUBBLER_SYSTEM	Bubbler System [SDSFIE V2.2 S-57]
INTAKE_PIPE	Intake Pipe [SDSFIE V2.2 S-57]
OUTFALL_PIPE	Outfall Pipe [SDSFIE V2.2 S-57]
SEWER	Sewer [SDSFIE V2.2 S-57]
SUPPLY_PIPE	Supply Pipe [SDSFIE V2.2 S-57]

cause_d

Value	Definition (Notes) [Source]
DISCHARGE_GW	Direct discharge from a pipe or outfall to the groundwater. [SDSFIE V2]

DISCHARGE_SOIL	Direct discharge from a pipe or outfall to the soil. [SDSFIE V2]
DISCHARGE_SW	Direct discharge from a pipe or outfall to a surface water body (e.g., river, stream, lake, or ocean). [SDSFIE V2]
IMP_DISPOSAL	Improper disposal. [SDSFIE V2]
INDUSTRIAL_ACT	Industrial activity or process. [SDSFIE V2]
LEAKING_ADRUM	Leaking above ground drum or container. [SDSFIE V2]
LEAKING_AST	Leaking above ground storage tank. [SDSFIE V2]
LEAKING_BDRUM	Leaking buried drum or container. [SDSFIE V2]
LEAKING_PIPE	Leaking plant or process piping. [SDSFIE V2]
LEAKING_UST	Leaking underground storage tank. [SDSFIE V2]
SPILL	Uncontrolled release or accidental spill of a chemical or waste. [SDSFIE
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

caw_typ_d

Value	Definition (Notes) [Source]
BRIDGE	Cable Bridge [SDSFIE V2 Tinker Air Force Base]
RACK	Cable Rack [SDSFIE V2]
TRAY	Cable Tray [SDSFIE V2 Tinker Air Force Base]

cbl_dim_d, cbl_size_d, condsize_d,

Value	Definition (Notes) [Source]
#1/0	#1/0 [SDSFIE V2.1 FGDC Utilities Classification]
#10	#10 [SDSFIE V2.1 FGDC Utilities Classification]
#14	#14 [SDSFIE V2.1 FGDC Utilities Classification]
#16	#16 [SDSFIE V2.1 FGDC Utilities Classification]
#18	#18 [SDSFIE V2.1 FGDC Utilities Classification]
#19	#19 [SDSFIE V2.1 FGDC Utilities Classification]
#2/0	#2/0 [SDSFIE V2.1 FGDC Utilities Classification]
#20	#20 [SDSFIE V2.1 FGDC Utilities Classification]
#22	#22 [SDSFIE V2.1 FGDC Utilities Classification]
#24	#24 [SDSFIE V2.1 FGDC Utilities Classification]
#26	#26 [SDSFIE V2.1 FGDC Utilities Classification]
#28	#28 [SDSFIE V2.1 FGDC Utilities Classification]
#3/0	#3/0 [SDSFIE V2.1 FGDC Utilities Classification]
#30	#30 [SDSFIE V2.1 FGDC Utilities Classification]
#32	#32 [SDSFIE V2.1 FGDC Utilities Classification]
#34	#34 [SDSFIE V2.1 FGDC Utilities Classification]
#36	#36 [SDSFIE V2.1 FGDC Utilities Classification]
#4/0	#4/0 [SDSFIE V2.1 FGDC Utilities Classification]
0.375	3/8 inch [SDSFIE V2.1 FGDC Utilities Classification]
0.5	0.5 inch [SDSFIE V2.1 FGDC Utilities Classification]
0.75	0.75 inch [SDSFIE V2.1 FGDC Utilities Classification]
0_375	3/8 inch [SDSFIE V2.1 FGDC Utilities Classification]
0_5	0.5 inch [SDSFIE V2.1 FGDC Utilities Classification]
0_75	0.75 inch [SDSFIE V2.1 FGDC Utilities Classification]
1	1 inch [SDSFIE V2.1 FGDC Utilities Classification]
1.25	1.25 inches [SDSFIE V2.1 FGDC Utilities Classification]
1.5	1.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
1_25	1.25 inches [SDSFIE V2.1 FGDC Utilities Classification]
1_5	1.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
1000_MCM	1000 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
1033.5_MCM	1033.5 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
1113_MCM	1113 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
12	12 inches [SDSFIE V2.1 FGDC Utilities Classification]
1272_MCM	1272 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
1431_MCM	1431 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
1590_MCM	1590 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
2	2 inches [SDSFIE V2.1 FGDC Utilities Classification]
2.5	2.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
2_5	2.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
2156_MCM	2156 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
250_MCM	250 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
266.8_MCM	266.8 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
3	3 inches [SDSFIE V2.1 FGDC Utilities Classification]
3.5	3.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
3_5	3.5 inches [SDSFIE V2.1 FGDC Utilities Classification]
300_MCM	300 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
336.4_MCM	336.4 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
336_MCM	336 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]

350_MCM	350 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
397.5_MCM	397.5 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
4	4 inches [SDSFIE V2.1 FGDC Utilities Classification]
400_MCM	400 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
477_MCM	477 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
477_MCM_A	477 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
5	5 inches [SDSFIE V2.1 FGDC Utilities Classification]
500_MCM	500 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
556.5_MCM	556.5 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
556_5_MCM_A	556.5 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
6	6 inches [SDSFIE V2.1 FGDC Utilities Classification]
600_MCM	600 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
636_MCM	636 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
636_MCM_A	636 K circular mils, ACSR [SDSFIE V2 1 FGDC Utilities Classification]
7	7 inches [SDSFIE V2.1 FGDC Utilities Classification]
700_MCM	700 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
750_MCM	750 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
795_MCM_A	795 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
8	8 inches [SDSFIE V2.1 FGDC Utilities Classification]
800_MCM	800 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
9	9 inches [SDSFIE V2.1 FGDC Utilities Classification]
900_MCM	900 K circular mils [SDSFIE V2.1 FGDC Utilities Classification]
954_MCM_A	954 K circular mils, ACSR [SDSFIE V2.1 FGDC Utilities Classification]
BITTERN	1272 K circular mils, ACSR,45/7 [SDSFIE V2.1 FGDC Utilities
BLUEBIRD	2156 K circular mils, ACSR,84/19 [SDSFIE V2.1 FGDC Utilities
BLUEJAY	1113 K circular mils, ACSR,45/7 [SDSFIE V2.1 FGDC Utilities
BOBOLINK	1431 K circular mils, ACSR,45/7 [SDSFIE V2.1 FGDC Utilities
CARDINAL	954 K circular mils, ACSR,54/7 [SDSFIE V2.1 FGDC Utilities
CHICKADEE	397.5 K circular mils, ACSR,18/1 [SDSFIE V2.1 FGDC Utilities
DOVE	556.5 K circular mils, ACSR,26/7 [SDSFIE V2 1 FGDC Utilities
DRAKE	795 K circular mils, ACSR,26/7 [SDSFIE V2.1 FGDC Utilities
FALCON	1590 K circular mils, ACSR,54/19 [SDSFIE V2.1 FGDC Utilities
FINCH	1113 K circular mils, ACSR,54/19 [SDSFIE V2.1 FGDC Utilities
FLICKER	477 K circular mils, ACSR,24/7 [SDSFIE V2.1 FGDC Utilities
GROSBEAK	636 K circular mils, ACSR,24/7 [SDSFIE V2.1 FGDC Utilities
HAWK	477 K circular mils, ACSR,26/7 [SDSFIE V2.1 FGDC Utilities
HEN	477 K circular mils, ACSR,30/7 [SDSFIE V2.1 FGDC Utilities
IBIS	397.5 K circular mils, ACSR,26/7 [SDSFIE V2.1 FGDC Utilities
LAPWING	1590 K circular mils, ACSR,45/7 [SDSFIE V2.1 FGDC Utilities
LINNET	336.4 K circular mils, ACSR,26/7 [SDSFIE V2.1 FGDC Utilities
MERLIN	336.4 K circular mils, ACSR,18/1 [SDSFIE V2.1 FGDC Utilities
N1	#1 [SDSFIE V2.1 FGDC Utilities Classification]
N1_0	#1/0 [SDSFIE V1.4]
N10	#10 [SDSFIE V1.4]
N12	#12 [SDSFIE V1.4]
N14	#14 [SDSFIE V1.4]
N16	#16 [SDSFIE V1.4]
N18	#18 [SDSFIE V1.4]
N19	#19 [SDSFIE V1.4]
N2	#2 [SDSFIE V1.4]
N2_0	#2/0 [SDSFIE V1.4]
N20	#20 [SDSFIE V1.4]
N22	#22 [SDSFIE V1.4]
N24	#24 [SDSFIE V1.4]
N26	#26 [SDSFIE V1.4]
N28	#28 [SDSFIE V1.4]
N3	#3 [SDSFIE V1.4]
N3_0	#3/0 [SDSFIE V1.4]
N30	#30 [SDSFIE V1.4]
N32	#32 [SDSFIE V1.4]
N34	#34 [SDSFIE V1.4]
N36	#36 [SDSFIE V1.4]
N4	#4 [SDSFIE V1.4]
N4_0	#4/0 [SDSFIE V1.4]
N5	#5 [SDSFIE V1.4]
N6	#6 [SDSFIE V1.4]
N8	#8 [SDSFIE V1.4]
ORIOLE	336.4 K circular mils, ACSR,30/7 [SDSFIE V1.7]
ORTOLAN	1033.5 K circular mils,45/7 [SDSFIE V1.7]
OSPREY	556.5 K circular mils, ACSR,18/1 [SDSFIE V1.7]

OSTRICH	300 K circular mils, ACSR,26/7 [SDSFIE V1.7]
OTHER	other [SDSFIE V1.4]
PARAKEET	556.5 K circular mils, ACSR,24/7 [SDSFIE V1.7]
PARTRIDGE	556.5 K circular mils, ACSR,26/7 [SDSFIE V1.7]
PELICAN	266.8 K circular mils, ACSR,18/1 [SDSFIE V1.7]
PHEASANT	477 K circular mils, ACSR,54/19 [SDSFIE V1.7]
PLOVER	1272 K circular mils, ACSR,54/19 [SDSFIE V1.7]
RAIL	1431 K circular mils, ACSR,45/7 [SDSFIE V1.7]
ROOK	954 K circular mils, ACSR,24/7 [SDSFIE V1.7]
TBD	to be determined [SDSFIE V1.4]
TERN	795 K circular mils, ACSR,45/7 [SDSFIE V1.7]
UNKNOWN	unknown [SDSFIE V1.4]
WAXWING	266.8 K circular mils, ACSR,18/1 [SDSFIE V1.7]

cbl_mat_d

Value	Definition (Notes) [Source]
AL	Al [SDSFIE V1.6]
ALUM_ALLOY	Al, alloy [SDSFIE V1.6]
ALUM_ANOD	Al, anodized [SDSFIE V1.6]
ALUM_COPPER	Al, Cu coated [SDSFIE V1.6]
ALUM_STEEL	Al, steel reinforced [SDSFIE V1.6]
COPPER	Cu [SDSFIE V1.6]
COPPER_ALLOY	Cu, alloy [SDSFIE V1.6]
COPPER_ALUM	Cu, Al coated [SDSFIE V1.6]
COPPER_LEAD	Cu, Pb coated [SDSFIE V1.6]
COPPER_NICKEL	Cu, Ni coated [SDSFIE V1.6]
COPPER_STEEL	Cu, steel coated [SDSFIE V1.6]
COPPER_TIN	Cu, tinned [SDSFIE V1.6]
FIBER_OPT	fiber optical [SDSFIE V1.4]
IRON	Fe [SDSFIE V1.6]
IRON_ALLOY	Fe, alloy [SDSFIE V1.6]
IRON_GALV	Fe, galvanized [SDSFIE V1.6]
LEAD	Pb [SDSFIE V1.6]
LEAD_COPPER	Pb, Cu [SDSFIE V1.6]
LEAD_IRON	Pb, Fe [SDSFIE V1.6]
LEAD_STEEL	Pb, steel [SDSFIE V1.6]
OTHER	other [SDSFIE V1.4]
STEEL	steel [SDSFIE V1.6]
STEEL_AL_CLAD	steel, Al clad [SDSFIE V1.6]
STEEL_CU_CLAD	steel, Cu clad [SDSFIE V1.6]
STEEL_GALV	steel, galvanized [SDSFIE V1.6]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

cbl_sht_d, chl_sht_d, insl_typ_d,

Value	Definition (Notes) [Source]
ALPETH	Aluminum Polyethylene [SDSFIE V2 Austin and Pitts]
ARP	Aluminum Rodent Protected Polyethylene [SDSFIE V2 Austin and Pitts]
ASBEST_SIL	asbestos-silicone bond [SDSFIE V1.4]
ASBESTOS	asbestos [SDSFIE V1.4]
AT	Aerial Tape Armor [SDSFIE V2 Austin and Pitts]
BT	Buried Tape Armor [SDSFIE V2 Austin and Pitts]
CAMBRIC_PB_COV	varnished cambric, Pb covered [SDSFIE V1.4]
CELLULOSE	cellulose-acetate fiber [SDSFIE V1.4]
COTTON_YARN	cotton yarn [SDSFIE V1.4]
CP	Corrosion Protection [SDSFIE V2 Austin and Pitts]
CPNM	Cross Ply Non Metallic [SDSFIE V2 Austin and Pitts]
DA	Double Wire Armor [SDSFIE V2 Austin and Pitts]
DJ	Jacketed Double Wire Armor [SDSFIE V2 Austin and Pitts]
DOUBLE_TAPE	double tape armored [SDSFIE V1.4]
F_FILLED	Foam Filled. [SDSFIE V2.5 AIR FORCE]
FIBER_PAPER	polyimide fiber paper [SDSFIE V1.4]
GLASS_FIBER	glass fiber-organic bond [SDSFIE V1.4]
GLASS_ORGANIC	glass/polyesterfib-organic bond [SDSFIE V1.4]
GLASS_SILICONE	glass/polyesterfib-silicone bond [SDSFIE V1.4]
GT	Gopher Tape Armor [SDSFIE V2 Austin and Pitts]
JP	Jute Protection [SDSFIE V2 Austin and Pitts]
JUTE	jute protected [SDSFIE V1.4]
KP	Kevlar Polyethylene [SDSFIE V2 Austin and Pitts]
KPSP	Kevlar Polyethylene Corrugated Steel [SDSFIE V2 Austin and Pitts]

LA	Light Armor [SDSFIE V2 Austin and Pitts]
LJ	Jacketed Light Wire Armor [SDSFIE V2 Austin and Pitts]
MG	Modified Gopher Tape Armor [SDSFIE V2 Austin and Pitts]
MP	Mechanical Protection [SDSFIE V2 Austin and Pitts]
NEOPRENE	neoprene [SDSFIE V1.4]
NONE	No outer sheath protection [SDSFIE V2 Austin and Pitts]
OPEN_WIRE	open wire [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PAP	Polyethylene Fused Aluminum [SDSFIE V2 Austin and Pitts]
PAPER	paper [SDSFIE V1.4]
PAPER_PB_COV	paper insulated Pb covered [SDSFIE V1.4]
PB_ARMOR	Pb armored [SDSFIE V1.4]
PB_COVER	Pb covered [SDSFIE V1.4]
PLASTIC_CLAD	plastic clad [SDSFIE V1.4]
PLASTIC_FOAM	Plastic, Foam Filled. [SDSFIE V2.5 AIR FORCE]
PLASTIC_GEL	plastic, gel-filled [SDSFIE V1.4]
POLY_CROSS	polyethylene (XLPE), cross-linked [SDSFIE V1.4]
POLY_FOAM	polyethylene (PE), foamed [SDSFIE V1.4]
PPP	polypropylene (PPP) [SDSFIE V1.4]
PVC	polyvinyl chloride [SDSFIE V1.4]
QUAD_TAPE	quad tape, armored [SDSFIE V1.4]
RPS	Rodent Protection Shield Polyethylene [SDSFIE V2 Austin and Pitts]
RUBBER_BUT	rubber-butyl [SDSFIE V1.4]
RUBBER_EPT	rubber-EPT [SDSFIE V1.4]
RUBBER_NBR	rubber-NBR [SDSFIE V1.4]
SA	Single Wire Armor [SDSFIE V2 Austin and Pitts]
SHIELDED	shielded [SDSFIE V1.4]
SJ	Jacketed Single Wire Armor [SDSFIE V2 Austin and Pitts]
SUBDA	Submarine Double Wire Armor [SDSFIE V2 Austin and Pitts]
SUBDJ	Submarine Jacketed Double Wire Armor [SDSFIE V2 Austin and Pitts]
TAPE_ARMOR	tape armored [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TFE	polytetrafluroethylene (TFE) [SDSFIE V1.4]
UM	Unsoldered Mechanical Protection [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
WEATHERPROOF	weatherproofed [SDSFIE V1.4]
WIRE_ARMOR	single wire, armored [SDSFIE V1.4]

cbl_ty_d

Value	Definition (Notes) [Source]
18_7_FC	18x7 FC [SDSFIE V1.4]
19_7	19x7 [SDSFIE V1.4]
3_19_FLUSHER	3x19 slusher [SDSFIE V1.4]
3_7_GRD_RAIL	3x7 guard rail [SDSFIE V1.4]
5_19_CLAD	5x19 marlin clad FC [SDSFIE V1.4]
6_12_FILLER_FC	6x12 filler wire FC [SDSFIE V1.4]
6_12_GALV_FC	6x12 galvanized running rope FC [SDSFIE V1.4]
6_19_CLAD	6x19 marlin clad [SDSFIE V1.4]
6_19_SEALE_IWRC	6x19 Seale IWRC [SDSFIE V1.4]
6_24_HAWSER	6x24 hawser [SDSFIE V1.4]
6_25_FILL_IWRC	6x25 filler wire IWRC [SDSFIE V1.4]
6_25B_FLAT_FC	6x25B flattened strand FC [SDSFIE V1.4]
6_26_WARR_IWRC	6x26 Warrington Seale IWRC [SDSFIE V1.4]
6_27H_FLAT_FC	6x27H flattened strand FC [SDSFIE V1.4]
6_3_19_SPRING	6x3x19 spring lay [SDSFIE V1.4]
6_30_HAWSER	6x30 hawser [SDSFIE V1.4]
6_30G_FLAG_FC	6x30G flattened strand FC [SDSFIE V1.4]
6_31_FILL_IWRC	6x31 filler wire IWRC [SDSFIE V1.4]
6_31_WARR_IWRC	6x31 Warrington Seale IWRC [SDSFIE V1.4]
6_36_SEALE_IWRC	6x36 Seale filler wire IWRC [SDSFIE V1.4]
6_36_WARR_IWRC	6x36 Warrington Seale IWRC [SDSFIE V1.4]
6_41_SEALE_IWRC	6x41 Seale filler wire IWRC [SDSFIE V1.4]
6_41_WARR_IWRC	6x41 Warrington Seale IWRC [SDSFIE V1.4]
6_42_TILLER_FC	6x42 tiller rope FC [SDSFIE V1.4]
6_46_SEALE_IWRC	6x46 Seale filler wire IWRC [SDSFIE V1.4]
6_49_FILL_FC	6x49 filler wire Seale FC [SDSFIE V1.4]
6_6_7_TILLER	6x6x7 tiller rope [SDSFIE V1.4]
6_7_FC	6x7 FC [SDSFIE V1.4]
8_19_SEALE_FC	8x19 Seale FC [SDSFIE V1.4]
8_25_FILLER_IWR	8x25 filler wire IWRC [SDSFIE V1.4]

8_9_SEALE_IWRC	8x9 Seale IWRC [SDSFIE V1.4]
BARE	bare [SDSFIE V1.4]
DUPLEX	duplex [SDSFIE V1.4]
EHS	Extra High Strength Steel [SDSFIE V1.4]
EIP	Extra Improved Plow Steel [SDSFIE V1.4]
FC	FiberCore [SDSFIE V1.4]
FE	Iron [SDSFIE V1.4]
HSS	High Strength Steel [SDSFIE V1.4]
IPS	Improved Plow Steel [SDSFIE V1.4]
IWRC	Independent Wire Rope Core [SDSFIE V1.4]
MPS	Mild Plow Steel [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PRIMARY	primary [SDSFIE V1.4]
PS	Plow Steel [SDSFIE V1.4]
SECONDARY	secondary [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TRIPLEX	triplex [SDSFIE V1.4]
TS	Traction Steel [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WEATHRPROFCU	weatherproofed-Copper [SDSFIE V1.4]
WSC	Wire-Strand Core [SDSFIE V1.4]

cbl_ty_d, wire_typ_d

Value	Definition (Notes) [Source]
1_WIRE	1-wire, single conductor [SDSFIE V1.4]
3_WIRE_PRKWY	3-wire parkway [SDSFIE V1.4]
3_WIRE_ROUND	3-wire, round [SDSFIE V1.4]
3_WIRE_SGMNT	3-wire, segmental [SDSFIE V1.4]
4_WIRE_ROUND	4-wire, quad conductor [SDSFIE V1.4]
COAX	coaxial [SDSFIE V1.4]
DUPLEX	2-wire, dual conductor [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SOLIDCORE	solid core [SDSFIE V1.4]
SOLIDCORETB	solid core-twisted bundle around [SDSFIE V1.4]
SOLIDCORETS	solid core-twisted strand around [SDSFIE V1.4]
SOLIDIELEC	solid dielectric [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TS	twisted strands [SDSFIE V1.4]
TSCORE	twisted strands core [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

cbl_typ_d, instl_ty_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned/inactive [SDSFIE V2.1 FGDC Utilities Classification]
AIRFIELD_UG	Underground Airfield Cable. [SDSFIE V2.4 Cherry Point]
PRIMARY_OH	primary overhead [SDSFIE V2.1 FGDC Utilities Classification]
PRIMARY_UG	primary underground [SDSFIE V2.1 FGDC Utilities Classification]
PRIMARY_UG_DB	Underground primary electrical cable installed direct burial (i.e., without conduit). [SDSFIE V2.2 Air Force Academy]
PRIMARY_UG_ENC	Underground primary electrical cable installed in conduit. [SDSFIE V2.2 Air Force Academy]
SECONDARY_OH	secondary overhead [SDSFIE V2.1 FGDC Utilities Classification]
SECONDARY_UG	secondary underground [SDSFIE V2.1 FGDC Utilities Classification]
SECONDARY_UG_DB	Underground secondary electrical cable installed direct burial (i.e., without conduit). [SDSFIE V2.2]
SECONDARY_UG_ENC	Underground secondary electrical cable installed in conduit. [SDSFIE V2.2 Air Force Academy]
SENSOR	Sensor Type Cable. [SDSFIE V2.3 Tinker Air Force Base]
SERVICE_OH	service overhead [SDSFIE V2.1 FGDC Utilities Classification]
SERVICE_UG	service underground [SDSFIE V2.1 FGDC Utilities Classification]
SERVICE_UG_DB	Underground service electrical cable installed direct burial (i.e., without conduit). [SDSFIE V2.2 Air Force Academy]
SERVICE_UG_ENC	Underground service electrical cable installed in conduit. [SDSFIE V2.2 Air Force Academy]

cbl_use_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned/inactive cable [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PRIMARY_OH	primary overhead cable [SDSFIE V1.4]
PRIMARY_UG	primary underground cable [SDSFIE V1.4]

SECONDARY_OH	secondary overhead cable [SDSFIE V1.4]
SECONDARY_UG	secondary underground cable [SDSFIE V1.4]
SERVICE_OH	service, overhead cable [SDSFIE V1.4]
SERVICE_UG	service, underground cable [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

cbldim3_d

Value	Definition (Notes) [Source]
100_UM	101 micron core (obsolete). [SDSFIE V2.5 AIR FORCE]
1000_UM	2 mm (Plastic Optical Fiber). [SDSFIE V2.5 AIR FORCE]
125_UM	126 micron cladding. [SDSFIE V2.5 AIR FORCE]
140_UM	141 micron cladding (obsolete). [SDSFIE V2.5 AIR FORCE]
200_UM	201 micron core. [SDSFIE V2.5 AIR FORCE]
240_UM	241 micron cladding. [SDSFIE V2.5 AIR FORCE]
50_UM	51 micron core. [SDSFIE V2.5 AIR FORCE]
62_5_UM	62.5 micron core. [SDSFIE V2.5 AIR FORCE]
8_3_UM	8.3 micron core. [SDSFIE V2.5 AIR FORCE]
N14	#14 or 14 Gage. [SDSFIE V2.5 AIR FORCE]
N16	#16 or 16 Gage. [SDSFIE V2.5 AIR FORCE]
N18	#18 or 18 Gage. [SDSFIE V2.5 AIR FORCE]
N19	#19 or 19 Gage. [SDSFIE V2.5 AIR FORCE]
N20	#20 or 20 Gage. [SDSFIE V2.5 AIR FORCE]
N22	#22 or 22 Gage. [SDSFIE V2.5 AIR FORCE]
N24	#24 or 24 Gage. [SDSFIE V2.5 AIR FORCE]
N26	#26 or 26 Gage. [SDSFIE V2.5 AIR FORCE]
N28	#28 or 28 Gage. [SDSFIE V2.5 AIR FORCE]
N30	#30 or 30 Gage. [SDSFIE V2.5 AIR FORCE]
N32	#32 or 33 Gage. [SDSFIE V2.5 AIR FORCE]
N34	#34 or 34 Gage. [SDSFIE V2.5 AIR FORCE]
N36	#36 or 36 Gage. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

cfg_ty_d

Value	Definition (Notes) [Source]
ARMLESS	The cable group is mounted in a cluster at the top of the pole. [SDSFIE
CROSSARM_EQL	The individual line mounts in a cable group are equally spaced on a standard length crossarm. [SDSFIE V1.4]
CROSSARM_UNEQL	The individual line mounts in a cable group are not equally spaced on a standard crossarm. [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SHORTARM	The individual line in a cable group are mounted on a cross arm less than 24-inches long. [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VERTICAL	The individual line mounts in a cable group are vertically spaced down the pole. [SDSFIE V1.4]

chan_st_d

Value	Definition (Notes) [Source]
CANALCMPLSEC	canal complex section [SDSFIE V1.4]
CANALTRPZSEC	canal trapezoidal section [SDSFIE V1.4]
LAKE	lake [SDSFIE V1.4]
OPENDRAINAGE	open drainage [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PAVEDDITCH	paved ditch [SDSFIE V1.4]
PAVEDINVRTDR	paved invert drain [SDSFIE V1.4]
POND	pond [SDSFIE V1.4]
RIVER	river [SDSFIE V1.4]
STORMWATER	storm water retention reservoir [SDSFIE V1.4]
SWALE	swale [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNPAVEDITCH	unpaved ditch [SDSFIE V1.4]

cntr_ty_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
PRIMARY	Primary. [SDSFIE V2.31 Air Force]

REMOTE	Remote. [SDSFIE V2.31 Air Force]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

CodeActivity

Value	Definition (Notes) [Source]
accident	Accident investigation area
acrobat	Acrobatic flights, aerobatics
airgun	Aerial gunnery
airshow	Air show
antihail	Anti-hail rocket firing
artillery	Artilery firing
ascent	Ascent of radio probe, radiosonde, meteorological balloons
ats	Air traffic services
balloon	Hot air balloonis
bird	Bird hazard
bird-mgr	Bird migration
blast	Blasting operations
drop	Droppings
dusting	Seasonal crop dusting
equipment	Special equipment
equipment-833	8.33 channel equipment required
equipment-rnav	Air navigation device equipment required
equipment-rvsm	Reduced vertical separation minimum equipment required
exercise	Air combat and exercises
fauna	Sensitive fauna
fire	Heavy fire suppression work
firework	Fireworks
gaz	Gas field or gasoline vaporization
glider	Glider
hangglider	Hang gliding
hi-light	High intensity lights
hi-radio	High intensity radio transmission (HIRTA)
ind-chem	Chemical plant
ind-nuclear	Nuclear energy plant/activity
ind-oil	Oil refinery
jetclimb	Climb-out sector for jet aircraft
laser	Laser light activity
milops	Military operations
missiles	Flight of guided missiles
nature	Natural reserve
naval	Ship exercises
no-noise	Noise abatement
oil	Oil field
other	other activites/reasons
parachute	Parachute jumping
paraglider	Paragliding
population	Highly populated area
procedure	Special procedure
refuel	Refueling
shoot	Shooting from ground
spaceflight	Space flight operations
sport	Aerial sporting
technical	Technical activity
tfc-ad	Airport/aerodrome traffic
tfc-heli	Helicopter/gyrocopter traffic
towing	Target towing
trg	Training
uav	Unmanned (or uninhabitied) aeronautical (or aerial) vehicle
ulm	Ultra light flights
vip	Very important person
vip-pres	Very important person - president
vip-vice	Very important person - vice president
waterblast	Underwater expolsions
work	Aerial work

CodeAirportFacilityType

Value	Definition (Notes) [Source]
AD	Airport/aerodrome only
AH	Airport with helicopter landing area

HP	Heliport only
LS	Landing site

CodeApproachCategory

Value	Definition (Notes) [Source]
A	Speed less than 91 knots
B	Speed 91 knots or more but less than 121 knots
C	Speed 121 knots or more but less than 141 knots
D	Speed 141 knots or more but less than 166 knots
E	Speed 166 knots or more

CodeApproachType

Value	Definition (Notes) [Source]
AP1	ANA PC CAT 1 REVISION DATE: 1/28/2004
AP2	ANA PC CAT 2/3 REVISION DATE: 1/28/2004
CA	
NUL	NUL
other	
PC1	ANA PC CAT 1
PC2	ANA PC CAT 2/3
STA	
STA1	
STA2	
STA3A	
STA3B	
STA3C	

CodeApronType

Value	Definition (Notes) [Source]
accessRamp	Access pavement between maintenance hangars opening to the apron and the apron edge
apron	Apron
cargoLoading	Cargo loading area used for the loading/unloading of cargo
de-icing	Area used for the de-icing of aircraft
fuelingArea	Area used for aircraft fueling
hardstand	Area for parking a single aircraft; more temporary than a PARKING_AREA [U.S. CADD]
maintenance	Area used for aircraft maintenance
military	Area used by the military
other	Other
parkingArea	Area used to park aircraft
passengerLoading	Passenger loading area used for the loading/unloading of passengers
taxilane	Taxi lane area
turnaround	Area for aircraft to turn around [U.S. CADD]

CodeArrestingGearMaterial

Value	Definition (Notes) [Source]
EMAS	Engineering material arresting system
other	

CodeBuoyType

Value	Definition (Notes) [Source]
blackRed(FL2)	Danger - Black and red alternating horizontal stripes indicates position of isolated danger [SailingIssues]
green	Lateral buoy - Marks port side of the channel when sailing toward the sea [SailingIssues]
greenRed(GFL)	Lateral buoy - Preferred channel is to port when a red horizontal stripe is sandwiched between two green horizontal stripes [SailingIssues]
Q(3)/VQ(3)	Cardinal buoy - Yellow stripe sandwiched between two black stripes and/or two triangles, apex on one pointing up and apex of other pointing down indicates safe water is to the east [SailingIssues]
Q(6)/VQ(6)	Cardinal buoy - Yellow stripe is atop a black stripe and/or twp triangles, apex of both pointing down indicates safe water is to the south
Q(9)/QV(9)	Cardinal buoy - Black stripe sandwiched between two yellow stripes and/or two triangles apex of both point toward each other indicates safe water is to the west [SailingIssues]
Q/VQ	Cardinal buoy - Black stripe atop a yellow stripe and/or two triangles apex of both point up indicates safe water is to the north [SailingIssues]
red	Lateral buoy - Marks port side of the channel when returning from the sea [SailingIssues]
redGreen(RFL)	Lateral buoy - Preferred channel to starboard when a green horizontal

	strips is sandwiched between two red horizontal stripes [SailingIssues]
redWhite	Safe water buoy - Alternating red and white vertical stripes indicates safe water [SailingIssues]
white	No color is stated on the chart [SailingIssues]
yellow	Special buoy - Area used by navies, pipelines, surfing [SailingIssues]

CodeCategoryOfAircraft

Value	Definition (Notes) [Source]
A	Category A
A20	Category A with 2% climb gradient ability
A30	Category A with 3 climb gradient ability
A35	Category A with 3.5 climb gradient ability
AB	Categories A and B
ABC	Categories A, B, and C
ABCD	Categories A, B, C, and D
B	Category B
BCD	Categories B, D, and D
C	Category C
CD	Category C and D
CDE	Category C, D, and E
D	Category D
DE	Categories D and E
E	Category E
H	Category H - helicopter
other	Other

CodeClassAirspace

Value	Definition (Notes) [Source]
A	Class of Airspace per ICAO Annex 11, Appendix 4
B	Class of Airspace per ICAO Annex 11, Appendix 4
C	Class of Airspace per ICAO Annex 11, Appendix 4
D	Class of Airspace per ICAO Annex 11, Appendix 4
E	Class of Airspace per ICAO Annex 11, Appendix 4
F	Class of Airspace per ICAO Annex 11, Appendix 4
G	Class of Airspace per ICAO Annex 11, Appendix 4
other	Other

CodeClassHelicopter

Value	Definition (Notes) [Source]
1	Helicopter class 1
2	
3	
other	

CodeClassNonDirectionalRadioBea

Value	Definition (Notes) [Source]
B	
L	
M	
other	

CodeColor

Value	Definition (Notes) [Source]
amber	
black	
blue	
brown	
green	
grey	
lightGrey	
magenta	
orange	
other	
pink	
purple	
red	
tbd	
violet	
white	
yellow	

CodeDesignGroup

Value	Definition (Notes) [Source]
I	Up to but not including 49 ft (15 m)
II	49 ft (15 m) up to but not including 79 ft (24 m)
III	79 ft (24 m) up to but not including 118 ft (36 m)
IV	118 ft (36 m) up to but not including 171 ft (52 m)
other	Other
V	171 ft (52 m) up to but not including 214 ft (65 m)
VI	214 ft (65 m) up to but not including 262 ft (80 m)

CodeDesignSurfaceType

Value	Definition (Notes) [Source]
BRL	Building restriction line (not a standard)
OFZ	Obstacle free zone (See FAA AC 150/5070-6B, paragraph 306)
other	Other
POFA	Precision object free area (See FAA AC 150/5070-6B, paragraph 307)
PRSIFR	Parallel runway separation simultaneous IFR operations
PRSVFR	Parallel runway separation simultaneous VFR operations
ROFA	Runway object free area (See FAA AC 150/5070-6B, paragraph 307)
RPZ	Runway protection zone (See FAA AC 150/5070-6B, paragraph 212)
RSA	Runway safety area
RSZ	Runway safety zone
RWYPTX	Runway to parallel taxiway and taxiline separation
TOFA	Taxiway and taxilane object free area (See FAA AC 150/5070-6B,
TSA	Threshold sighting area
TSS	Threshold siting surface (See FAA AC 150/5070-6B, Appendix 2)
TXSA	Taxiway safety area (See FAA AC 150/5070-6B, paragraph 403)

CodeDirection

Value	Definition (Notes) [Source]
Inbound	Baggage flow is from non-secure areas to secure areas of the airport.
Outbound	Baggage flow is from secure areas to non-secure areas of the airport.
Unknown	Baggage flow direction is unknown

CodeDirectionality

Value	Definition (Notes) [Source]
bi	Bidirectional
es	One way from end-to-startpoint
se	One way from start-to-endpoint

CodeDistanceVertical

Value	Definition (Notes) [Source]
ALT	Altitude - The distance measured from mean sea level
HEI	Height - The distance measured from ground
other	Other
QFE	A reading of 0 on the altimeter setting which occurs on the ground
QNH	Altimeter setting gives field elevation on ground (approximately equal to 0 at mean sea level)
STD	The altimeter setting is set to standard atmosphere
W84	The distance measured from WGS84 ellipsoid

CodeElementType

Value	Definition (Notes) [Source]
displaced	
intersection	
normal	
shoulder	

CodeEmissionRadio

Value	Definition (Notes) [Source]
A2	Telegraphy, no voice
A3A	Single side-band, reduced carrier
A3B	Two independent side bands
A3E	AM double side-band telephony
A3H	Single side-band, full carrier
A3J	Single side-band telephony
A3L	Lower single side-band, carrier unknown
A3U	Upper single side-band, carrier unknown
A8W	AM unkeyed plys ON/OFF keying of ident tone
A9W	Composite AM/FM unkeyed plus ON/OFF keying of ident tone
GID	DPSK data transmission
J3E	AM double side-band suppressed carrier telephony

NONA1A	Unmodulated transmission, morse ident., carrier emission interrupted
NONA2A	Unmodulated transmission, morse ident., carrier emission continuous
NOX	Unmodulated carrier
other	Other
PON	

CodeFaaRegion

Value	Definition (Notes) [Source]
AAL	Alaska
ACE	Central
AEA	Eastern
AGL	Great Lakes
ANE	New England
ANM	Northwest Mountain
ASO	Southern
ASW	Southwest
AWP	Western Pacific

CodeFloodZoneType

Value	Definition (Notes) [Source]
100Year	Area subject to flooding approximately once every 100 years
10Year	Area subject to flooding approximately once every 10 years
15Year	Area subject to flooding approximately once every 15 years
25Year	Area subject to flooding approximately once every 25 years
500Year	Area subject to flooding approximately once every 500 years
50Year	Area subject to flooding approximately once every 50 years
5Year	Area subject to flooding approximately once every 5 years
general	Area subject to general flooding
projected	Area subject to projected flooding

CodeGateStandType

Value	Definition (Notes) [Source]
ang-ni	
hs	Hard stand
iso	
jb	Jet bridge
nag-no	
ni	
other	
parkingArea	
pr	Portable ramp
rmt	
sr	Stairs
tm	Temporary
unk	unknown

CodeGridType

Value	Definition (Notes) [Source]
ed50	European Datum 1950
gaussKruger	Gauss Kruger
georef	World Geographic Reference System
ing	Irish National Grid Reference Survey
lcc	Lambert Conformal Conic
ll	Latitude, longitude
mil	Military
other	Other
rt90	Swedish Coordinate System
spcs	State Plane Coordinate System
ups	Universal Polar Stereographic
usng	United States National Grid for Spatial Addressing
utm	Universal Transverse Mercator

CodeHazardType

Value	Definition (Notes) [Source]
bash	[U.S. CADD]
deerStrike	Deer strike area [U.S. CADD]
tbd	To be determined [U.S. CADD]
tortoisePitfall	[U.S. CADD]
unknown	Unknown hazard [U.S. CADD]

CodeLandmarkType

Value	Definition (Notes) [Source]
airport	Noticeable landmark is an airport
fence	Noticeable landmark is a fence
levee	Noticeable landmark is a levee
other	Other noticeable landmark
quarry	Noticeable landmark is a quarry
railroad	Noticeable landmark is a railroad
road	Noticeable landmark is a road
shoreline	Noticeable landmark is a shoreline
shorelineFeatureBoundary	Noticeable landmark is a shoreline feature boundary
utilityLine	Noticeable landmark is an utility line

CodeLandUse

Value	Definition (Notes) [Source]
1000	Residential activities [APA LBCS]
1100	Household activities [APA LBCS]
1200	Transient living [APA LBCS]
1300	Institutional living [APA LBCS]
2000	Shopping, business, or trade activities [APA LBCS]
2100	Shopping [APA LBCS]
2110	Goods-oriented shopping [APA LBCS]
2120	Service-oriented shopping [APA LBCS]
2200	Restaurant-type activity [APA LBCS]
2210	Restaurant-type activity with drive-through [APA LBCS]
2300	Office activities [APA LBCS]
2310	Office activities with high turnover of people [APA LBCS]
2320	Office activities with high turnover of automobiles [APA LBCS]
3000	Industrial, manufacturing, and waste-related activities [APA LBCS]
3100	Plant, factory, or heavy goods storage or handling activities [APA LBCS]
3110	Primarily plant or factory-type activities [APA LBCS]
3120	Primarily goods storage or handling activities [APA LBCS]
3200	Solid waste management activities [APA LBCS]
3210	Solid waste collection and storage [APA LBCS]
3220	Landfilling or dumping [APA LBCS]
3230	Waste processing or recycling [APA LBCS]
3300	Construction activities (grading, digging, and so on) [APA LBCS]
4000	Social, institutional, or infrastructure-related activities [APA LBCS]
4100	School or library activities [APA LBCS]
4110	Classroom-type activities [APA LBCS]
4120	Training or instructional activities outside classrooms [APA LBCS]
4130	Other instructional activities including those that occur in libraries [APA
4200	Emergency response or public-safety-related activities [APA LBCS]
4210	Fire and rescue-related activities [APA LBCS]
4220	Police, security, and protection-related activities [APA LBCS]
4230	Emergency or disaster-response-related activities [APA LBCS]
4300	Activities associated with utilities (water, sewer, power, and so on) [APA
4310	Water-supply-related activities [APA LBCS]
4311	Water storing, pumping, or piping [APA LBCS]
4312	Water purification and filtration activities [APA LBCS]
4313	Irrigation water storage and distribution activities [APA LBCS]
4314	Flood control, dams, and other large irrigation activities [APA LBCS]
4320	Sewer-related control, monitor, or distribution activities [APA LBCS]
4321	Sewage storing, pumping, or piping [APA LBCS]
4322	Sewer treatment and processing [APA LBCS]
4330	Power generation, control, monitor, or distribution activities [APA LBCS]
4331	Power transmission lines or control activities [APA LBCS]
4332	Power generation, storage, or processing activities [APA LBCS]
4340	Telecommunications-related control, monitor, or distribution activities
4350	Natural gas or fuels-related control, monitor, or distribution activities [APA
4400	Mass storage, inactive [APA LBCS]
4410	Water storage [APA LBCS]
4420	Storage of natural gas, fuels, and so on [APA LBCS]
4430	Storage of chemical, nuclear, or other materials [APA LBCS]
4500	Health care, medical, or treatment activities [APA LBCS]
4600	Interment, cremation, or grave digging activities [APA LBCS]
4700	Military base activities [APA LBCS]
4710	Ordnance storage [APA LBCS]
4720	Range and test activities [APA LBCS]
5000	Travel or movement activities [APA LBCS]
5100	Pedestrian movement [APA LBCS]

5200	Vehicular movement [APA LBCS]
5210	Vehicular parking, storage, and so on [APA LBCS]
5220	Drive-in, drive through, stop-n-go, and so on [APA LBCS]
5400	Trains or other rail movement [APA LBCS]
5410	Rail maintenance, storage, or related activities [APA LBCS]
5500	Sailing, boating, and other port, marine and water-based activities [APA
5510	Boat mooring, docking, or servicing [APA LBCS]
5520	Port, ship-building, and related activities [APA LBCS]
5600	Aircraft takeoff, landing, taxiing, and parking [APA LBCS]
5700	Spacecraft launching and related activities [APA LBCS]
6000	Mass assembly of people [APA LBCS]
6100	Passenger assembly [APA LBCS]
6200	Spectator sports assembly [APA LBCS]
6300	Movies, concerts, or entertainment shows [APA LBCS]
6400	Gatherings at fairs and exhibitions [APA LBCS]
6500	Mass training, drills, and so on [APA LBCS]
6600	Social, cultural, or religious assembly [APA LBCS]
6700	Gatherings at galleries, museums, aquariums, zoological parks, and so on [APA LBCS]
6800	Historical or cultural celebrations, parades, reenactments, and so on [APA
7000	Leisure activities [APA LBCS]
7100	Active leisure sports and related activities [APA LBCS]
7110	Running, jogging, bicycling, aerobics, exercising, and so on [APA LBCS]
7120	Equestrian sporting activities [APA LBCS]
7130	Hockey, ice skating, and so on [APA LBCS]
7140	Skiing, snowboarding, and so on [APA LBCS]
7150	Automobile and motorbike racing [APA LBCS]
7160	Golf [APA LBCS]
7180	Tennis [APA LBCS]
7190	Track and field, team sports (baseball, basketball, and so on), or other sports [APA LBCS]
7200	Passive leisure activity [APA LBCS]
7210	Camping [APA LBCS]
7220	Gambling [APA LBCS]
7230	Hunting [APA LBCS]
7240	Promenading and other activities in parks [APA LBCS]
7250	Shooting [APA LBCS]
7260	Trapping [APA LBCS]
7300	Flying or air-related sports [APA LBCS]
7400	Water sports and related leisure activities [APA LBCS]
7410	Boating, sailing, and so on [APA LBCS]
7420	Canoeing, kayaking, and so on [APA LBCS]
7430	Swimming, diving, and so on [APA LBCS]
7440	Fishing, angling, and so on [APA LBCS]
7450	Scuba diving, snorkeling, and so on [APA LBCS]
7460	Water-skiing [APA LBCS]
8000	Natural resources-related activities [APA LBCS]
8100	Farming, tilling, plowing, harvesting, or related activities [APA LBCS]
8200	Livestock related activities [APA LBCS]
8300	Pasturing, grazing, and so on [APA LBCS]
8400	Logging [APA LBCS]
8500	Quarrying or stone cutting [APA LBCS]
8600	Mining including surface and subsurface strip mining [APA LBCS]
8700	Drilling, dredging, and so on [APA LBCS]
9000	No human activity or unclassifiable activity [APA LBCS]
9100	Not applicable to this dimension [APA LBCS]
9200	Unclassifiable activity [APA LBCS]
9300	Subsurface activity [APA LBCS]
9900	To be determined [APA LBCS]
9990	To be determined [APA LBCS]
9999	To be determined [APA LBCS]

CodeLightingCategory

Value	Definition (Notes) [Source]
ABN	
beacon	
flood	
HBNC	
IBN	
marine	

other	Other
RSP	
signal	
strobe	

CodeLightingSystemType

Value	Definition (Notes) [Source]
airport	
approach	
obstruction	
other	Other
runway	
taxiway	

CodeLightingType

Value	Definition (Notes) [Source]
ALSF-1	High intensity approach lighting system - configuration 1
ALSF-2	High intensity approach lighting system - configuration 2
APAP	Alignment of elements systems
APTBCN	Airport or heliport beacon
CLRBAR	Taxiway clearance bar lights
CODEBCN	Code beacon
COURSE	Course lights
HIRL	High intensity runway edge light system
LAHSO	Land and hold short lights
LIH	High intensity light
LIL	Low intensity light
LIM	Medium intensity light
LIRL	Low intensity runway edge light system
LITL	Low intensity taxiway edge lights
MALSF	Medium intensity approach lighting systems with with sequenced flashing
MALSR	Medium intensity approach lighting systems with runway alignment indicator lights (RAIL)
MIRL	Medium intensity runway edge light system
MITL	Medium intensity taxiway edge lights
OBSCAT	Catenary lighting
OBSDUAL	A combination of OBSRED and OBSDUAL
OBSRED	Aviation red obstruction lights
OBSWHT	Flashing white obstruction lights
ODALS	Omni directional approach lighting system
other	Other type of light
PAPI-2	Precision approach path indicator with 2 lights
PAPI-4	Precision approach path indicator with 4 lights
PVASI	Pulsating visual approach slope indicators
RCLS	Runway centerline lighting system
REIL	Runway end identifier lights
RWYGRD	Runway guard lights
SSALR	Simplified short approach lighting system
STPBAR	Stop bar lights
TCTL	Taxiway centerline lights
TDZL	Touchdown zone lighting
TLOF	Taxiway lead-off lights
TRCV	Tri-color visual approach slope indicator
VASI-12	Visual approach slope indicator with 2 bars and 12 boxes
VASI-16	Visual approach slope indicator with 3 bars and 16 boxes
VASI-2	Visual approach slope indicator with 2 bars
VASI-2-2	Visual approach slope indicator with 2 bars and 2 boxes
VASI-3	Visual approach slope indicator with 3 bars

CodeLowVisibilityCategory

Value	Definition (Notes) [Source]
0	No low visibility operation supported
1	Supports ILS CAT I low visibility operations
2	Supports ILS CAT II III low visibility operations

CodeMarkingFeatureType

Value	Definition (Notes) [Source]
aimingPoint	Runway aiming point [FAA AC 150/5340-1J]
apronSign	Surface painted apron position/entrance sign [FAA AC 150/5340-1J]
arrow	Arrows identify the dsiplaced threshold area to provide centerline guidance for takeoffs and rollouts

arrowhead	Arrow heads are used in conjunction with a threshold bar to further highlight the beginning of a runway
chevron	A marking used to designate blast pads and other areas that are not suitable for aircraft [FAA AC 150
demarcation	Demarcation bar [FAA AC 150/5340-1J]
dirSign	Surface painted taxiway direction signs [FAA AC 150/5340-1J]
gateLine	All painted taxilines covering a parking stand area are regarded as stand guidance lines and will be individual objects in the database. There may be several stand guidance taxilines leading to an aircraft stand to accommodate different aircraft types [FA
gateSign	Surface painted gate position signs [FAA AC 150/5340-1J]
holdSign	Surface painted holding position signs [FAA AC 150/5340-1J]
intersectionHold	Holding position markings for instrument landing systems [FAA AC
islSign	Holding position marking for taxiway/taxiway intersections [FAA AC
LAHSO	Marking associated with a land and hold short operations (LAHSO)
locationSign	Surface painted taxway location signs [FAA AC 150/5340-1J]
nonMoveArea	Non-movement area marking [FAA AC 150/5340-1J]
other	Other type of sign
otherLine	Other markings suitable for representation as a line
otherPoly	Other markings suitable for representation as a polygon
permClosed	Markings for permanently closed runways and taxiways [FAA AC
posSign	Geographic position markings [FAA AC 150/5340-1J]
rwyCtl	Runway centerline [FAA AC 150/5340-1J]
rwyHold	Runway holding position markings on runways [FAA AC 150/5340-1J]
rwyId	Runway designation marking [FAA AC 150/5340-1J]
rwyShd	Runway shoulder markings [FAA AC 150/5340-1J]
rwyThrsh	Runway threshold marking [FAA AC 150/5340-1J]
sideStrp	Runway side stripe marking [FAA AC 150/5340-1J]
tdzMark	Runway touchdown zone marking [FAA AC 150/5340-1J]
tempClosed	Markings for temporarily closed runways and taxiways [FAA AC
thrshBar	Runway threshold bar [FAA AC 150/5340-1J]
twyCtl	Taxiway centerline [FAA AC 150/5340-1J]
twyEdge	Taxiway edge marking [FAA AC 150/5340-1J]
twyHold	Runway hold position markings on taxiways [FAA AC 150/5340-1J]
twyShd	Taxway shoulder marking [FAA AC 150/5340-1J]
vehicle	Vehicle roadway markings [FAA AC 150/5340-1J]

CodeMonumentType

Value	Definition (Notes) [Source]
1stOrderClassI	Othometric elevation of the point is certified to have an elevation difference accuracy of 0.5 mm/?(Km) [NGS]
1stOrderClassII	Othometric elevation of the point is certified to have an elevation difference accuracy of 0.7mm/?(Km) [NGS]
2ndOrderClassI	Othometric elevation of the point is certified to have an elevation difference accuracy of 1.0/?(Km) [NGS]
2nOrderClassII	Othometric elevation of the point is certified to have an elevation difference accuracy of 1.3/?(Km) [NGS]
3rdOrderNoTablet	Othometric elevation of the point is certified to have an elevation difference accuracy of 2.0/?(Km). [NGS] No tablet is necessary to mark the
3rdOrderWithTablet	Othometric elevation of the point is certified to have an elevation difference accuracy of 2.0/?(Km). [NGS] A tablet is similar to a benchmark in that it is placed to permanently mark an elevation and horizontal position that has been surveyed as accurat
BM	Benchmark is a location whose elevation and horizontal position has been surveyed as accurately as possible. Benchmarks are designed for use as reference points, and are usually marked by small brass plates
foundClosingCorner	A found corner is a corner whose original or restored monument or mark is recovered, or whose position is definitely established by one or more witness corners or monuments
foundSectionCorner	A found corner is a corner whose original or restored monument or mark is recovered, or whose position is definitely established by one or more witness corners or monuments
meanderCorner	A corner established where a township line, section line, or other survey intersects the bank of a navigable stream or other meanderable body of water [USGS, 1996, Part 5: Public Land Survey System]
spot	A point with a measured vertical position of less than third order accuracy, measured relative to a reference datum [USGS, 2001, Part 7:
unmonumented	Indicates that no permanent marker has been placed
weakCorner	Corners established by the USDA Forest Service that have been found but their location has not been tied to their true ground position [USGS, 2003]

witnessCorner	A monumented station on a line of the survey that is used to perpetuate an important location more or less remote from and without special relation to any regular corner [USGS, 1996, Part 5: Public Land Survey

CodeNavaidEquipmentType

Value	Definition (Notes) [Source]
ARSR - ARSR	Required. Air route surveillance radar. Air Route Traffic Control Center (ARTCC) radar used primarily to detect and display an aircraft's position while en route between terminal areas. The ARSR enables controllers to provide radar air traffic control
ASR - ASR	Required. Airport surveillance radar
DF - DF	Required. Direction finder
DME - DME	Required. Distance measuring equipment
FAN - FAN	Required. FAN marker beacon
ILS - GS	Required. Instrument landing system - ground stop
ILS - LOC	Required. Instrument landing system - localizer
LOC - LOC	Required. Localizer system
MLS - AZ	Required. Microwave landing system - azimuth
MLS - DME	Required. Microwave landing system - distance measuring equipment
MLS - ELEV	Required. Microwave landing system - elevation
MSBLS - AZ	Required. Microwave scan beam landing system - azimuth
MSBLS - DME	Required. Microwave scan beam landing system - distance measuring
MSBLS - ELEV	Required. Microwave scan beam landing system - elevation
NDB/C - NDB	Required. Nondirectional radio beacon -- compass locator
NDB/H - NDB	Required. Nondirectional radio beacon -- high frequency
NDB/M - NDB	Required. Nondirectional radio beacons/medium HF
NDB/U - NDB	Required. Nondirectional radio beacons/ultra HF
other	Other type of navigational equipment
PAR - PAR	Required. Precision approach radar - PAR
SDF - SDF	Required. Simplified direction facility
SECRA - SECRA	Required. Secondary radar
TACAN - TACAN	Required. Tactical air navigation aid. An ultra-high frequency electronic rho-theta air navigation aid which provides suitably equipped aircraft with a continuous indication of bearing and distance to the TACAN station
TLS - APGS	Required. Transponder landing system - APGS
TLS - APLOC	Required. Transponder landing system - APLOC
VDME - DME	Required. Vertical distance measuring equipment - distance measuring equipment
VDME - VOR	Required. Vertical distance measuring equipment - VOR
VOR - VOR	Required. Very high frequency omni range - VOR
VORTAC - TACAN	Required. A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site
VORTAC - VOR	Required. A navigation aid providing VOR azimuth, TACAN azimuth, and VOR at one site
VOT - VOT	Required. VOR test

CodeNavaidSystemType

Value	Definition (Notes) [Source]
ARSR	Air route surveillance radar
ASR	Airport surveillance radar
DF	Direction finder
DME	Distance measuring equipment
FAN	FAN marker beacon
ILS	Instrument landing system
LOC	Localizer system
MLS	Microwave landing system
MSBLS	Microwave scan beam landing system
NDB/C	Nondirectional radio beacon -- compass locator
NDB/H	Nondirectional radio beacon -- high frequency
NDB/M	Nondirectional radio beacons/medium HF
NDB/U	Nondirectional radio beacons/ultra HF
other	Other type of navigational aid system
PAR	Precision approach radar
SDF	Simplified direction facility
SECRA	Secondary radar
TACAN	Tactical air navigation
TLS	Transponder landing system
VDME	VHF omnirange w/distance measuring equipment
visual	Visual navigational aid system
VOR	VHF omnirange

VORTAC	VHF omnirange w/tactical air navigation
VOT	VOR test

CodeObstacleType

Value	Definition (Notes) [Source]
AN	ANA area navigation approach [FAA AC 150/5300-18]
AR	Army [FAA AC 150/5300-18]
FI	FIFO [FAA AC 150/5300-18]
OC	Obstacle chart [FAA AC 150/5300-18]
OP	OEP [FAA AC 150/5300-18]
OR	Other [FAA AC 150/5300-18]
SE	Spot elevations [FAA AC 150/5300-18]
ST	State-coded [FAA AC 150/5300-18]
WW	Worldwide DOD [FAA AC 150/5300-18]

CodeObstructionAreaType

Value	Definition (Notes) [Source]
agEquip	Agricultural equipment
building	Buildings
ground	Ground
mobileCrane	Mobile crane
other	Other type of obstruction area
tree	Trees
urban	Urban area

CodeObstructionIdentificationSurfa

Value	Definition (Notes) [Source]
ANA	Area navigational approach
CGR	Congressional
F77	FAR part 77
OEP	Operational evolution plan
other	Other
RBI	Ron Brown airport initiative

CodeObstructionIdentificationSurfa

Value	Definition (Notes) [Source]
approach	
conical	
horizontal	
other	
primary	
transition	

CodeObstuctionIdentificationSurfa

Value	Definition (Notes) [Source]
Name	Definition
primary	
supplementary	

CodeOperationsType

Value	Definition (Notes) [Source]
civil	Civil operations only
joint	Joint military and civil operations
mil	Military operations only
milEst	Military operations + civil operations allowed
other	Other

CodeOwner

Value	Definition (Notes) [Source]
AA	Ann Arundel County
BGE	Baltimore Gas & Electric
FAA	FAA
MAA	Maryland Aviation Administration
Other	Other
TransCon	Transcontinental Gas Pipeline Corp.

CodePassengerLoadingBridgeTyp

Value	Definition (Notes) [Source]
arm	
movableArm	
other	
portableRamp	

portableStairs	

CodePavementClassificationNumb

Value	Definition (Notes) [Source]
T	Technical evaluation
U	

CodePavementClassificationNumb

Value	Definition (Notes) [Source]
W	High: no pressure limit
X	Medium: pressure limited to 1.50 MPa (217 psi)
Y	Low: pressure limited to 1.00 MPa (145 psi)
Z	Very low: pressure limited to 0.50 MPa (73 psi)

CodePavementClassificationNumb

Value	Definition (Notes) [Source]
F	Flexible pavement
R	Rigid pavement

CodePavementClassificationPavem

Value	Definition (Notes) [Source]
A	High strength subgrade
B	Medium strength subgrade
C	Low strength subgrade
D	Ultra-low strength subgrade

CodePointType

Value	Definition (Notes) [Source]
0	Airport reference point (ARP)
1	Primary airport control station (PAC)
2	Secondary airport control station (SAC)
3	RunwayControlPoint
4	CenterlinePoint
5	ElevationPoint
6	NavaidControlPoint
7	HelipadReferencePoint
8	VerticalPointObject
9	Spot elevation point
airportElev	Airport elevation
centerlineElev	This may be the same as CenterlinePoint
displacedThreshold	Displaced threshold
runwayEnd	This item should be deleted, see RunwayEnd feature
stopwayEnd	Stopway end
TACS	Traffic and alert collision avoidance system
undefined/Other	

CodePositionInstrumentLandingSy

Value	Definition (Notes) [Source]
C	Backcourse
I	Inner
M	Middle
O	Outer
other	Other

CodePositionOfAxisRelativeToCen

Value	Definition (Notes) [Source]
both	Either side of the centerline
left	To the left of the centerline
other	Other or unknown position
right	To the right of the centerline

CodePrecisionApproachGuidance

Value	Definition (Notes) [Source]
0	Non-precision approach runway
1	ILS precision approach runway, category I
2	ILS precision approach runway, category II
3	ILS precision approach runway category III A
4	ILS precision approach runway category III B
5	ILS precision approach runway category III C
6	ILS precision approach runway category III D
7	Microwave landing system precision approach

CodeProjectStatus

Value	Definition (Notes) [Source]
inProgress	In progress
planned	Approved and planned
proposed	Not yet approved

CodeReferenceObstacleClearance

Value	Definition (Notes) [Source]
ARP	Airport
other	Other
THR	Threshold

CodeRouteType

Value	Definition (Notes) [Source]
alley	Hard-surface or loose-surface narrow street or passageway primarily found between or behind buildings
autobahn	Controlled access hard-surface superhighways
county	Hard-surface roads not included in a higher class and improved, loose-surface roads passable in all kinds of weather. These roads are adjuncts to the primary and secondary highway systems. These roads are under the jurisdiction and maintained by county
fifthClass	Unimproved roads passable only with 4-wheel-drive vehicles [USGS, 2001, Part 3: Transportation]
firstClass	Hard-surface highways including Interstate and U.S. numbered highways (including alternates), primary State routes, and all controlled access highways [USGS, 2001, Part 3: Transportation]
fourthClass	Unimproved roads which are generally passable only in fair weather and used mostly for local traffic. Also included are driveways, regardless of construction [USGS, 2001, Part 3: Transportation]
interstate	Hard-surface controlled access highways
jeepTrail	Unimproved roads passable only with 4-wheel-drive vehicles
motorway	Hard-surface controlled access highways
other	Other class of road
secondClass	Hard-surface highways including secondary State routes, primary county routes, and other highways that connect principal cities and towns, and link these places with primary highway system [USGS, 2001, Part 3:
state	Hard-surface State routes under the control and jurisdiction of State
thirdClass	Hard-surface roads not included in a higher class and improved, loose-surface roads passable in all kinds of weather. These roads are adjuncts to the primary and secondary highway systems. Also included are important private roads such as main logging o
trail	Unimproved roads passable only with 4-wheel-drive vehicles, snowmobiles, motocross bikes, and so forth

CodeRunwayType

Value	Definition (Notes) [Source]
FATO	Final approach and take off
RWY	Runway

CodeSamplePointLocation

Value	Definition (Notes) [Source]
as	Air sample
bh	Borehole
bio	Biological sample
gws	Ground water sample
other	Other
seds	Sediment sample
soil	Soil sample
solm	Solid material sample
surf	Surface water sample
was	Waste water sample
wl	Well

CodeShorelineType

Value	Definition (Notes) [Source]
apparent	Apparent edge of vegetation. Representation of the vegetative border is considered approximate because this line cannot be accurately identified on the ground, due to intricate growth patterns and change over time
indefinite	Conditions prevent the feature from being confidently positioned. Horizontal data are confidently positioned within 0.02", at map scale, of

	the true ground position. Vertical data are confidently positioned within one-half contour interval of true groun
meanHighWater	The average limit of dry land during periods of highest water level (for example, high tide)
meanLowWater	The average limit of dry land during periods of lowest water level (for example, low tide)
meanSeaLevel	The arithmetic mean of hourly heights observed over some specified time [American Geological Institute]

CodeSignType

Value	Definition (Notes) [Source]
apron	Inbound destination sign - general parking, servicing, and loading areas
cargo	Inbound destination sign - areas set aside for cargo handling
civil	Inbound destination sign - areas set aside for civil aircraft
FBO	Inbound destination sign - fixed base operator
fuel	Inbound destination sign - areas where aircraft are fueled or serviced
holdInstrumentLandingSystem	Holding position sign for ILS critical areas
holdRunwayApproach	Holding position sign for runway approach areas
holdRunwayIntersection	Holding position sign for runway/runway intersections
holdTaxiwayRunway	Holding position sign for taxiway/runway
info	Signs installed on the airside of an airport, other than taxiway guidance signs or runway distance remaining signs
instrumentLandingSystemCritical	Instrument landing system critical area boundary sign
intl	Inbound destination sign - areas set aside for handling international flights
mil	Inbound destination sign - areas set aside for military aircraft
noEntry	No entry sign
other	Other types of sign
outboundDestination	Outbound destination sign
PAX	Inbound destination sign - areas set aside for passenger handling
roadStop	Stop sign in areas where vehicle roadways intersect runways or taxiways
roadYield	Yield sign in areas where vehicle roadways intersect runways or taxiways
rsaRwyAppr	Runway safety area/OFZ and runway approach boundary dign
runwayExit	Runway exit sign
runwayLocation	Runway location sign
rwyDistRem	Sign that designates the remaining runway distance to pilots during takeoff and landing operations
taxiwayDirection	Taxiway direction sign
taxiwayEnd	Taxiway ending marker
taxiwayLocation	Taxiway location sign
terminal	Inbound destination sign - gate positions at which aircraft are loaded and

CodeStatus

Value	Definition (Notes) [Source]
abandoned	Abandoned [U.S. CADD]
active	Active surface [U.S. CADD]
broken	Broken or rough surface
closed	Closed surface [U.S. CADD]
failAide	Failure or irregular operation of visual aides
inactive	Inactive
limited	Limited operations [U.S. CADD]
nonOperational	Non operational [U.S. CADD]
operational	Operational (fully) [U.S. CADD]
parked	Parked or disabled aircraft
sPower	Secondary power supply in operation
tbd	To be determined [U.S. CADD]
terminated	Project terminated
underConstruction	Planned or under construction [U.S. CADD]
workInProgress	Construction or work in progress

CodeSurfaceComposition

Value	Definition (Notes) [Source]
ags	Asphalt and turf
asph	Asphalt
be	Bare earth
bitum	Bitumen
brick	Brick
ca	Concrete and asphalt
cg	Concrete grooved
cgs	Concrete and turf
clay	Clay
conc	Concrete

coral	Coral
ds	Desert/Sand
grade	Graded surface
gravel	Gravel
gs	Turf
ice	ice
laterite	Laterite
macadam	Macadam
mats	
membrane	
metal	
other	Other type of surface composition
psp	
sand	
si	Snow/Ice
snow	Snow
stone	Stone
water	Water
wood	Wood

CodeSurfaceCondition

Value	Definition (Notes) [Source]
fair	Fair condition
good	Good condition
other	Other condition
poor	Poor condition

CodeSurfacePreparation

Value	Definition (Notes) [Source]
afsc	
graded	Graded surface
grooved	Grooved surface
natural	
oiled	
other	Other type of surface preparation
paved	Paved (specially prepared hard surface)
pfc	
rfsc	
rolled	
ungrooved	Ungrooved surface
unpaved	Unpaved (specially prepared hard surface)

CodeTaxiwayType

Value	Definition (Notes) [Source]
airTLane	Air taxilane
airTwy	Air taxiway
apron	Apron taxiway
bypass	Bypass holding bay
exit	Exit/turnoff taxiway
fastExit	Rapid exit/turnoff taxiway
gateStandTLane	Gate/stand taxilane
groundStandTLane	Ground taxiway
leadInTLane	Lead-in taxilane
leadOutTLane	Lead-out taxilane
other	Other
paralledTwy	Parallel taxiway
stub	Stub taxiway
turnAround	Turn around taxiway

CodeThresholdType

Value	Definition (Notes) [Source]
displaced	An indication that the landing threshold is located at a point other than the runway end
normal	An indication that the landing threshold cooresponds to the end of the

CodeTurnDirection

Value	Definition (Notes) [Source]
either	Turn may be either direction
left	Turn is to the left
right	Turn is to the right

CodeTypeAirspace

Value	Definition (Notes) [Source]
A	Alert area
ADIZ	Air defense identification zone
AMA	Minimum altitude area
ASR	Altimeter setting region
ATZ	Aerodrome traffic zone
ATZ-P	Part of an aerodrome traffic zone
AWY	Airway (corridor)
BIRD	Bird migration area
CBA	Cross border area (FUA)
CDA	Client defined airspace
CFMU	CFMU area
CLASS	Airspace having a specified class
CTA	Control area
CTA-P	Part of a control area
CTR	Control zone
CTR-P	Part of a control zone
D	Danger area
D-AMC	AMC manageable danger area
D-OTHER	Activities of dangerous nature (other than a danger area)
ECAC	ECAC region
FIR	Flight information region
FIR-P	Part of a flight information region
HTZ	Helicopter traffic zone
ICAO	International civil aviation organization region (for example, EUR, NAT, and so forth)
IFPS	IFPS area
LMA	Limited airspace
MIL	Military training/exercise area
MINPSA-P	Minimum navigation performance specifications area
MNPSA	Part of minimum navigation performance specifications area
NAS	National airspace system
NAS-P	A part of a national airspace system
NO-FIR	Airspace for which not even and FIR is defined
OCA	Oceanic control area
OCA-P	Part of an oceanic control area
OIL	Oil field
OTA	Oceanic transition area
P	Prohibited area
PART	Part of an airspace (used in airspace aggregations)
POLITICAL	Political/administrative area
PROTECT	Protected
R	Restricted area
R-AMC	AMC manageable restricted area
RAS	Regulated airspace (not otherwise covered)
RCA	Reduced coordination area
RTECL	Route centerline
SECTOR	Control sector
SECTOR-C	Temporarily consolidated (collapsed) sector
SPORT	Aerial sporting/recreational area
TACT	Tactical area
TMA	Terminal control area
TMA-P	Part of a terminal control area
TRA	Temporary reserved area
TSA	Temporary segregated area (FUA)
UIR	Upper flight information region
UIR-P	Part of an upper flight information region
UTA	Upper control area
UTA-P	Part of upper control area
W	Warning area

CodeTypeAirspaceSignificantPoint

Value	Definition (Notes) [Source]
B	Situated on the border of the airspace
EE	Entry/exit point
EN	Entry point
EX	Exit point
IN	Situated within the airspace
other	Other

CodeTypeNavigationalAidCheckPoi

Value	Definition (Notes) [Source]
DME	Distance measuring equipment
GNSS	Global navigation satellite system
INS	Inertial navigation system
NDB	Non-directional radio beacon
other	Other
TACAN	Tactical air navigation
VOR	VHF omnidirectional radio range

CodeTypeOfProtectionArea

Value	Definition (Notes) [Source]
cwy	Clearway
ils	Instrument landing system
ofs	
ofz	Obstacle free zone
other	Other protect area
safe	Safe area

CodeTypeSegmentPath

Value	Definition (Notes) [Source]
GDS	
GRC	Great circle
other	Other
RHL	Rhumb line

CodeTypeVisualApproachSlopeIndi

Value	Definition (Notes) [Source]
3B-ATVASIS	3-bar abbreviated "T-shaped" visual approach slope indicator system
3B-AVASIS	3-bar abbreviated visual approach slope indicator system
3B-VASIS	3-bar visual approach slope indicator system
APAPI	Abbreviated precision approach path indicator
AVASIS	Abbreviated visual approach slope indicator system
HAPI	Heliport precision approach path indicator
ILU	Number of identical light units
LCVASI	Low cost visual approach slope indicator "r"; 3 sets of "r" white lights on 3 mounts usually on only one side of the runway
OLS	Optical landing system for ship decks and aircraft carriers (sometimes available on ground air bases for training purposes)
other	Other type of visual approach slope indicator
PAPI	Precision approach path indicator
PNI	Precision navigation instrument
PVASI	Pulsating visual approach slope indicator
TRCV	Tri-colored visual approach slope indicator, normally a single light unit projecting three colors
TVASIS	T-shaped visual approach slope indicator
VASIS	Visual approach slope indicator system

CodeUtilitySystemType

Value	Definition (Notes) [Source]
compressedAirSystem	The components of a compressed air system
controlMonitoringSystem	The components of an electronic monitoring and control system (EMCS) including cables, devices, and so on
electricalExitLight	The components of an electrical exterior lighting system including cables, switches, devices, transformers, and so on. Does not include field, navaid, or approach lighting
electricalSystem	The components of an electrical distribution system including cables, switches, devices, motors, transformers, and so on
fuelSystem	The components of a fuel distribution system consisting of pipes, fittings, fixtures, pumps, tanks, and so on
general	The components of utility system which are universal in use and purpose and do not belong to a specific utility
heatCoolSystem	The components of a heating and cooling distribution system consisting of pipes, fittings, fixtures, and so on
industrialSystem	The components of an industrial waste collection system including pipes, fittings, fixtures, tanks, lagoons, and so on
naturalGasSystem	The components of a natural gas distribution system consisting of pipes, fittings, fixtures, and so on
nuclear	The components of a nuclear system such as nuclear fuel, nuclear research, nuclear waste, and nuclear weapons

other	The components of another utility system. Specify what the component is
saltwaterSystem	The components of a salt water collection system
stormSystem	The components of a storm drainage collection system including pipes, fittings, fixtures, and so on
transmissionSystem	Objects related to the long distance transmission of gas, oil, or hazardous
wastewaterSystem	The components of a wastewater collection system including pipes, fittings, fixtures, treatment plants, collection locations, and so forth
waterSystem	The components of a water system including pipes, fittings, fixtures, treatment plants, and so on

CodeUtilityType

Value	Definition (Notes) [Source]
line	A utility line such as an electrical transmission or pipeline
other	Other type of utility
point	A utility point such as a tower
polygon	A utility polygon such as a tank site

CodeVerticalStructureMaterial

Value	Definition (Notes) [Source]
1	Concrete
2	Metal
3	Stone/brick
4	Composition
5	Rock
6	Wood
7	Other

CodeZoningClass

Value	Definition (Notes) [Source]
commercial	Areas which are zoned for merchandising, shopping, or other commercial development [U.S. CADD]
industrial	Areas which are zoned for factory, manufacturing, or other industrial development [U.S. CADD]
other	Other zoning class
quasiPublic	Areas which are zoned public although under private ownership or control [U.S. CADD]
residential	Areas which are zoned for housing or residential development [U.S.

commody1_d, commody2_d,

Value	Definition (Notes) [Source]
AA	Anhydrous Ammonia [SDSFIE V2.1 DOT - NPMS]
CHEMICALS	Chemicals - type unspecified [SDSFIE V2.2 S-57]
CO2	Carbon Dioxide [SDSFIE V2.1 DOT - NPMS]
CRD	Crude or unprocessed oil. [SDSFIE V2.3 DOT - NPMS]
EMP	empty [SDSFIE V2.1 DOT - NPMS]
GAS	Gas - type not specified [SDSFIE V2.2 S-57]
HG	Hydrogen Gas [SDSFIE V2.1 DOT - NPMS]
HVL	Highly Volatile Liquid [SDSFIE V2.1 DOT - NPMS]
LPG	Liquefied Petroleum Gas [SDSFIE V2.1 DOT - NPMS]
NG	Natural Gas [SDSFIE V2.1 DOT - NPMS]
NGL	Natural Gas Liquids [SDSFIE V2.1 DOT - NPMS]
PRD	Product is not known. [SDSFIE V2.1 DOT - NPMS]
WATER	Water - potable or otherwise. [SDSFIE V2.2 S-57]

con_type_d

Value	Definition (Notes) [Source]
FIRE_CONNECT	fire department connection [SDSFIE V2.1 FGDC Utilities Classification]
FIRE_HYDRANT	fire hydrant [SDSFIE V2.1 FGDC Utilities Classification]

cond_d

Value	Definition (Notes) [Source]
BOARDEDUP	boarded up [SDSFIE V1.4]
BROKENNOUSE	broken and unusable [SDSFIE V1.4]
BURNTNOUSE	burnt and not useable [SDSFIE V1.4]
BURNTUSEABLE	burnt but useable [SDSFIE V1.4]
CONDEMNED	condemned [SDSFIE V1.4]
CRACKED	cracked [SDSFIE V1.4]
CRACKED	cracked but useable [SDSFIE V2.1 FGDC Utilities Classification]
DAMAGED	damaged [SDSFIE V1.4]
DAMAGEHEVUSE	heavily damage, but useable [SDSFIE V1.4]
DAMAGELITUSE	light damage, but useable [SDSFIE V1.4]

DAMAGEMODUSE	moderate damage, but useable [SDSFIE V1.4]
DAMAGHEVNO	heavy damage, and unusable [SDSFIE V1.4]
DAMAGLITNO	light damage, and unusable [SDSFIE V1.4]
DAMAGMODNO	moderate damage, and unusable [SDSFIE V1.4]
DANGEROUS	dangerous to use [SDSFIE V1.4]
FAIR	fair condition [SDSFIE V2.1 FGDC Utilities Classification]
FAIR	fair or medium condition [SDSFIE V1.4]
FAIR	Fair or medium condition. [SDSFIE V2.31 Air Force]
FAIRESTIMATED	Estimated in fair condition. [SDSFIE V2.31 Air Force]
GOOD	good condition [SDSFIE V2.1 FGDC Utilities Classification]
GOOD	good condition [SDSFIE V1.4]
GOOD	Good condition. [SDSFIE V2.31 Air Force]
GOODESTIMATED	Estimated in good condition. [SDSFIE V2.31 Air Force]
GOODNOTNEW	good, but not new [SDSFIE V1.4]
HABITABLE	habitable [SDSFIE V1.4]
HABITABLENO	not habitable [SDSFIE V1.4]
MINORUSE	minor use [SDSFIE V1.4]
NEWLYBUILT	newly built [SDSFIE V1.4]
NEWUNFINISH	newly built, but not yet finished [SDSFIE V1.4]
NOTRESPASSNG	no trespassing [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V2.1 FGDC Utilities Classification]
POOR	poor or unsuitable condition [SDSFIE V1.4]
POOR	poor [SDSFIE V1.4]
POORESTIMATED	Estimated in poor condition. [SDSFIE V2.31 Air Force]
QUARANTINED	quarantined [SDSFIE V1.4]
RADIOACTIVE	radioactive [SDSFIE V1.4]
SPLINTER	splintered but useable [SDSFIE V2.1 FGDC Utilities Classification]
TBD	to be determined [SDSFIE V2.1 FGDC Utilities Classification]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNDERCONSTRUCT	Planned or under construction. [SDSFIE V2.31 Air Force]
UNKNOWN	unknown [SDSFIE V1.4]
UNSERVICEABLE	Unserviceable or not a weight bearing surface. [SDSFIE V2.31 Air Force]
UNUSEABLE	unusable [SDSFIE V2.1 FGDC Utilities Classification]
USEABLE	useable [SDSFIE V1.4]
USEABLENO	not useable [SDSFIE V1.4]

conn_typ_d, connt_d, connt1_d,

Value	Definition (Notes) [Source]
1_0_2_3_F	1.0/2.3, Female. [SDSFIE V2.5 AIR FORCE]
1_0_2_3_M	1.0/2.3, Male. [SDSFIE V2.5 AIR FORCE]
1_6_5_6_F	1.6/5.6, Female. [SDSFIE V2.5 AIR FORCE]
1_6_5_6_M	1.6/5.6, Male. [SDSFIE V2.5 AIR FORCE]
7_16_DIN_F	7-16 Deutsh Industries Norm (DIN), Female. [SDSFIE V2.5 AIR FORCE]
7_16_DIN_M	7-16 Deutsh Industries Norm (DIN), Male. [SDSFIE V2.5 AIR FORCE]
AMC_F	Amphenol Micro Coaxial (AMC), Male. [SDSFIE V2.5 AIR FORCE]
AMC_M	Amphenol Micro Coaxial (AMC), Female. [SDSFIE V2.5 AIR FORCE]
BI_F	Bionic, Female. [SDSFIE V2.5 AIR FORCE]
BI_M	Bionic, Male. [SDSFIE V2.5 AIR FORCE]
BNC_F	Bayonet Neill Concelman (BMC), Female. [SDSFIE V2.5 AIR FORCE]
BNC_M	Bayonet Neill Concelman (BMC), Male. [SDSFIE V2.5 AIR FORCE]
C_F	C Connector, Female. [SDSFIE V2.5 AIR FORCE]
C_M	C Connector, Male. [SDSFIE V2.5 AIR FORCE]
D4_F	D4, Female. [SDSFIE V2.5 AIR FORCE]
D4_M	D4, Male. [SDSFIE V2.5 AIR FORCE]
DB_25_F	25-pin D-type connector, Female. [SDSFIE V2.5 AIR FORCE]
DB_25_M	25-pin D-type connector, Male. [SDSFIE V2.5 AIR FORCE]
DB_9_F	9-pin D-type connector, Female. [SDSFIE V2.5 AIR FORCE]
DB_9_M	9-pin D-type connector, Male. [SDSFIE V2.5 AIR FORCE]
DE_9_F	9-pin D-type connector, Female AKA DB-10. [SDSFIE V2.5 AIR FORCE]
DE_9_M	9-pin D-type connector, Male AKA DB-10. [SDSFIE V2.5 AIR FORCE]
F_TYPE_F	F TYPE, Female. [SDSFIE V2.5 AIR FORCE]
F_TYPE_M	F-M - F TYPE, Male. [SDSFIE V2.5 AIR FORCE]
FC_F	MIL-C-39012 category D type, FO connector, Female. [SDSFIE V2.5 AIR FORCE]
FC_M	MIL-C-39012 category D type, FO connector, Male. [SDSFIE V2.5 AIR
FDDI_F	Fiber Distributed Data Interface, FO connector, Female. [SDSFIE V2.5 AIR FORCE]
FDDI_M	Fiber Distributed Data Interface, FO connector, Male. [SDSFIE V2.5 AIR

FIREWIRE_4F	IEEE 1394 Fire wire connector, 4-pin, Female. [SDSFIE V2.5 AIR FORCE]
FIREWIRE_4M	IEEE 1394 Fire wire connector, 4-pin, Male. [SDSFIE V2.5 AIR FORCE]
FIREWIRE_6F	IEEE 1394 Fire wire connector, 6-pin, Female. [SDSFIE V2.5 AIR FORCE]
FIREWIRE_6M	IEEE 1394 Fire wire connector, 6-pin, Male. [SDSFIE V2.5 AIR FORCE]
FME_F	FME, Female. [SDSFIE V2.5 AIR FORCE]
FME_M	FME, Male. [SDSFIE V2.5 AIR FORCE]
G_TYPE_F	G-F - Type G, Female. [SDSFIE V2.5 AIR FORCE]
G_TYPE_M	G-M - Type G, Male. [SDSFIE V2.5 AIR FORCE]
HM_F	HN, weatherproof, RF connector, Female. [SDSFIE V2.5 AIR FORCE]
HN_M	HN, weatherproof, RF connector, Male. [SDSFIE V2.5 AIR FORCE]
LC_F	Limited Co-ordination Specification (LC Spec.), Female. [SDSFIE V2.5 AIR FORCE]
LC_M	Limited Co-ordination Specification (LC Spec.), Male. [SDSFIE V2.5 AIR
MINI_UHF_F	MINI UHF, Female. [SDSFIE V2.5 AIR FORCE]
MINI_UHF_M	MINI UHF, Male. [SDSFIE V2.5 AIR FORCE]
MT_RJ_F	MT-RJ, FO, RJ45 footprint connector, Female. [SDSFIE V2.5 AIR FORCE]
MT_RJ_M	MT-RJ, FO, RJ45 footprint connector, Male. [SDSFIE V2.5 AIR FORCE]
N_TYPE_F	N TYPE, Female. [SDSFIE V2.5 AIR FORCE]
N_TYPE_M	N TYPE, Male. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
RJ21_F	RJ21, RJ21 AKA Telco 50-pin connector, Female. [SDSFIE V2.5 AIR
RJ21_M	RJ21 AKA Telco 50-pin connector, Male. [SDSFIE V2.5 AIR FORCE]
RJ45_F	RJ45, Female. [SDSFIE V2.5 AIR FORCE]
RJ45_M	RJ45, Male. [SDSFIE V2.5 AIR FORCE]
SC_F	Plug and socket, push-pull latch, FO connector, Female. [SDSFIE V2.5 AIR FORCE]
SC_M	Plug and socket, push-pull latch, FO connector, Male. [SDSFIE V2.5 AIR FORCE]
SMA_F	SubMiniature Version A, Female. [SDSFIE V2.5 AIR FORCE]
SMA_M	Subminiature Version A, Male. [SDSFIE V2.5 AIR FORCE]
SMC_F	Subminiature Version C, Female. [SDSFIE V2.5 AIR FORCE]
SMC_M	Subminiature Version C, Male. [SDSFIE V2.5 AIR FORCE]
ST_F	ST, Female. [SDSFIE V2.5 AIR FORCE]
ST_M	ST, Male. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
TNC_F	TNC Female. [SDSFIE V2.5 AIR FORCE]
TNC_M	TNC Male. [SDSFIE V2.5 AIR FORCE]
UHF_F	UHF, Female. [SDSFIE V2.5 AIR FORCE]
UHF_M	UHF, Male. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
USB_F	Universal Serial Bus, Female. [SDSFIE V2.5 AIR FORCE]
USB_M	Universal Serial Bus, Male. [SDSFIE V2.5 AIR FORCE]

cool_mth_d, cool_ty_d

Value	Definition (Notes) [Source]
AIR	air [SDSFIE V1.4]
FAN	fan [SDSFIE V1.4]
OIL	oil [SDSFIE V1.4]
OILAIR	oil and air (OA) [SDSFIE V1.4]
OILAIRFAN	oil, air, and fan (FA) [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
REFRIGERATE	refrigeration units [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]

core_typ_d

Value	Definition (Notes) [Source]
AIR_CORE	Air core [SDSFIE V2 Tinker Air Force Base]
FILLED	Filled Core by unknown substance. [SDSFIE V2.5 AIR FORCE]
INSULATION	Insulation core [SDSFIE V2 Tinker Air Force Base]
PAPER	Paper Core [SDSFIE V2 Tinker Air Force Base]
PRESSURIZED	Pressurized core [SDSFIE V2 Tinker Air Force Base]

costrm_d, mat_d, mh_mat_d,

Value	Definition (Notes) [Source]
AL	Aluminum. [SDSFIE V2.5 AIR FORCE]
CIS	Concrete Cast inSitu/Cast in Place. [SDSFIE V2.5 AIR FORCE]
COMBINATION	Combination of materials. [SDSFIE V2.5 AIR FORCE]
FIBERGLASS	Fiberglass. [SDSFIE V2.5 AIR FORCE]
IRON	Iron (Cast or Forged). [SDSFIE V2.5 AIR FORCE]
MASONRY	Masonry (Brick or Block). [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]

PLASTIC	Plastic. [SDSFIE V2.5 AIR FORCE]
PRECAST	Pre-Cast Concrete. [SDSFIE V2.5 AIR FORCE]
STEEL	Steel. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtbk_d

Value	Definition (Notes) [Source]
303	303. [SDSFIE V2.5 AIR FORCE]
305	305. [SDSFIE V2.5 AIR FORCE]
355	355. [SDSFIE V2.5 AIR FORCE]
399	399. [SDSFIE V2.5 AIR FORCE]
700	700. [SDSFIE V2.5 AIR FORCE]
713	713. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtht_d

Value	Definition (Notes) [Source]
11_FT_6_IN	11 Foot 6 Inch. [SDSFIE V2.5 AIR FORCE]
7_FT	7 Foot. [SDSFIE V2.5 AIR FORCE]
8_FT	8 Foot. [SDSFIE V2.5 AIR FORCE]
9_FT	9 Foot. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtma_d

Value	Definition (Notes) [Source]
126_IN	126 Inch. [SDSFIE V2.5 AIR FORCE]
76_IN	76 Inch. [SDSFIE V2.5 AIR FORCE]
84_IN	84 Inch. [SDSFIE V2.5 AIR FORCE]
92_IN	92 Inch. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtmb_d

Value	Definition (Notes) [Source]
8_IN	8 Inch. [SDSFIE V2.5 AIR FORCE]
NONE	None. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To be determined. [SDSFIE V2.5 AIR FORCE]
UNIVERSAL	Universal. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtsw_d

Value	Definition (Notes) [Source]
14_IN	14 Inch. [SDSFIE V2.5 AIR FORCE]
20_5_IN	20.5 Inch. [SDSFIE V2.5 AIR FORCE]
26_5_IN	26.5 Inch. [SDSFIE V2.5 AIR FORCE]
32_5_IN	32.5 Inch. [SDSFIE V2.5 AIR FORCE]
5_5_IN	5.5 Inch. [SDSFIE V2.5 AIR FORCE]
8_5_IN	8.5 Inch. [SDSFIE V2.5 AIR FORCE]
9_IN	9 Inch. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

covtty_d

Value	Definition (Notes) [Source]
DOUBLE_SIDED	Double sided. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
SINGLE_SIDED	Single sided. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
WALL_MOUNT	Wall Mount. [SDSFIE V2.5 AIR FORCE]

cpctr_kv_d, kva_1_d, kva_2_d

Value	Definition (Notes) [Source]
10	10 kvar [SDSFIE V1.4]

100	100 kvar [SDSFIE V1.4]
1000	1000 kvar [SDSFIE V1.4]
10000	10000 kvar [SDSFIE V1.4]
112.5	112.5 kvar [SDSFIE V1.7]
112_5	112.5 kvar [SDSFIE V1.4]
1250	1250 kvar [SDSFIE V1.4]
14K20K	14000 20000 kvar [SDSFIE V1.4]
15	15 kvar [SDSFIE V1.4]
150	150 kvar [SDSFIE V1.4]
1500	1500 kvar [SDSFIE V1.4]
167	167 kvar [SDSFIE V1.4]
16K22K	16000 22000 kvar [SDSFIE V1.4]
225	225 kvar [SDSFIE V1.4]
25	25 kvar [SDSFIE V1.4]
250	250 kvar [SDSFIE V1.4]
300	300 kvar [SDSFIE V1.4]
333	333 kvar [SDSFIE V1.4]
37.5	37.5 kvar [SDSFIE V1.7]
37_5	37.5 kvar [SDSFIE V1.4]
3750	3750 kvar [SDSFIE V1.4]
45	45 kvar [SDSFIE V1.4]
50	50 kvar [SDSFIE V1.4]
500	500 kvar [SDSFIE V1.4]
5000	5000 kvar [SDSFIE V1.4]
55	55 kvar [SDSFIE V1.4]
7.5	7.5 kvar [SDSFIE V1.7]
7_5	7.5 kvar [SDSFIE V1.4]
75	75 kvar [SDSFIE V1.4]
750	750 kvar [SDSFIE V1.4]
775	775 kvar [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

dbk_size_d

Value	Definition (Notes) [Source]
NA	not applicable [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNK	unknown [SDSFIE V1.4]

design_d

Value	Definition (Notes) [Source]
DOUBLE_POLE	double pole [SDSFIE V2.1 FGDC Utilities Classification]
DOWN_GUY	A wire guy running from the top of a pole to an anchor in the ground. [SDSFIE V2.1 FGDC Utilities Classification]
EJECTOR	ejector system [SDSFIE V1.6]
FAUCET	faucet [SDSFIE V2.1 FGDC Utilities Classification]
HYDRANT	hydrant [SDSFIE V2.1 FGDC Utilities Classification]
METER	meter [SDSFIE V1.4]
OPEN_DRAINAGE	The channel is part of an unaltered drainage system [SDSFIE V2.1 FGDC Utilities Classification]
PARSHALL_FLUME	parshall flume meter [SDSFIE V1.4]
PAVED_DITCH	The channel has a concrete or other paved surface [SDSFIE V2.1 FGDC Utilities Classification]
POLE	pole [SDSFIE V2.1 FGDC Utilities Classification]
PUMP	pump station [SDSFIE V1.6]
RISER_POLE	riser pole [SDSFIE V2.1 FGDC Utilities Classification]
SPAN_GUY	A wire guy running from the top of a pole to the top of the adjacent pole [SDSFIE V2.1 FGDC Utilities Classification]
SPRINKLER	sprinkler head [SDSFIE V2.1 FGDC Utilities Classification]
TBD	To Be Determined [SDSFIE V2.1]
TOWER	tower [SDSFIE V2.1 FGDC Utilities Classification]
UNKNOWN	Unknown [SDSFIE V2.1]
UNPAVED_DITCH	The channel has no constructed or prepared surface [SDSFIE V2.1 FGDC Utilities Classification]

design_d, instl_ty_d, sta_ty_d

Value	Definition (Notes) [Source]
BOOSTER	booster station [SDSFIE V2.1 FGDC Utilities Classification]
PUMP	pump station [SDSFIE V2.1 FGDC Utilities Classification]

dev_st_d, vlv_st_d

Value	Definition (Notes) [Source]
ANGLE	angle [SDSFIE V1.4]
BALL	ball [SDSFIE V1.4]
BUTTERFLY	butterfly [SDSFIE V1.4]
CHECK	check [SDSFIE V1.4]
DRYPIPE	dry pipe [SDSFIE V1.4]
GATE	gate [SDSFIE V1.4]
GLOBE	globe [SDSFIE V1.4]
NEEDLE	needle [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHERPOSTIND	other post indicator [SDSFIE V1.4]
PLUG	plug [SDSFIE V1.4]
PRESSREDUCNG	pressure reducing [SDSFIE V1.4]
PRESSRELIEF	pressure relief [SDSFIE V1.4]
QUAD	quad [SDSFIE V1.4]
REGULATING	regulating [SDSFIE V1.4]
STOP_WASTE	stop and waste [SDSFIE V1.4]
SWINGCHECK	swing check [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TRIPLEDUTY	triple duty [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

dev_ty_d

Value	Definition (Notes) [Source]
FIELD_INTERFC	field interface [SDSFIE V1.8]
MULTIPLEX	multiplexer [SDSFIE V1.8]

dispostn_d, status_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned in place (not in use) [SDSFIE V1.4]
BURIED	buried [SDSFIE V1.75]
IN_SERVICE	In service and being used. [SDSFIE V2.1 DOT - NPMS]
INCOMPLETE	incomplete or unfinished [SDSFIE V1.4]
NATURAL	Natural. [SDSFIE V2.31 Air Force]
OTHER	other [SDSFIE V1.4]
PERMANENT	permanent [SDSFIE V1.4]
PROPOSED	proposed [SDSFIE V1.4]
RETIRED	Permanently retired, or taken out of service. [SDSFIE V2.1 DOT - NPMS]
TBD	to be determined [SDSFIE V1.4]
TEMPORARY	temporary [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

dist_typ_d

Value	Definition (Notes) [Source]
ASPHALT	Asphalt Production. [SDSFIE V2.3 HSIP]
CO2	CO2 Production. [SDSFIE V2.3 HSIP]
DISTALLATES	Distallates Production. [SDSFIE V2.3 HSIP]
H2	H2 Production. [SDSFIE V2.3 HSIP]
HE	He Production. [SDSFIE V2.3 HSIP]
S	S Production. [SDSFIE V2.3 HSIP]

distrub_d

Value	Definition (Notes) [Source]
DESTROYED	destroyed [SDSFIE V1.4]
MAJORIMPACT	major impact (51-99%) disturbed [SDSFIE V1.4]
MINORIMPACT	minor impact (1-25%) disturbed [SDSFIE V1.4]
MODERIMPACT	moderate impact (26-50%) disturbed [SDSFIE V1.4]
NONE	none [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

drain_ty_d

Value	Definition (Notes) [Source]
FAN	fan [SDSFIE V1.4]
NETWORK	network [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SEALED	sealed [SDSFIE V1.4]
SEEPAGEPIT	seepage pit [SDSFIE V1.4]
STORMCONNECT	connected to storm system [SDSFIE V1.4]

SUBDRAIN	sub drain (French drain) [SDSFIE V1.4]
SUMPPUMP	sump pump [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TILEFIELD	tile field [SDSFIE V1.4]

drgvesty_d

Value	Definition (Notes) [Source]
BACKHOE	A dredge with a single bucket on an arm which moves towards the vessel as the bucket excavates the soil. [SDSFIE V2.2 COE Dredging]
CLAMSHELL	Type of mechanical cable excavator dredge that uses a single bucket attached to the dredge crane with cables. [SDSFIE V2.2 COE Dredging]
CUTTERHEAD	A hydraulic dredge that uses a cutterhead at the suction entrance to dislodge bottom material. [SDSFIE V2.2 COE Dredging]
DIPPER	A power shovel operated from a barge. [SDSFIE V2.2 COE Dredging]
DRAGLINE	An excavating machine with a bucket that is dropped by a boom and then dragged toward the machine by a cable. [SDSFIE V2.2 COE Dredging]
HOPPER	A self-propelled floating plant capable of dredging material, storing it, transporting it to the disposal area, and placing the material at a designated site. [SDSFIE V2.2 COE Dredging]
OTHER	Dredges using non-conventional means or a combination of hydraulic and mechanical processes, e.g., pneumatic, agitation, etc. [SDSFIE V2.2 COE Dredging]
PLAIN_SUCTION	Hydraulic dredge with no mechanical device at suction mouth, a cutter for dislodging bottom material [SDSFIE V2.2 COE Dredging]
TUGBOAT	Used for agitation dredging [SDSFIE V2.2 COE Dredging]
WATER_INJECTION	A type of dredge that injects water at high velocity and/or volume, into the shoaled material to move it to deeper area. [SDSFIE V2.2 COE Dredging]

drnfl_st_d

Value	Definition (Notes) [Source]
FAN	fan drain field [SDSFIE V1.4]
NETWORK	network drain field [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SEEP_PIT	seepage pit [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TILE	tile field [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

drng_pat_d

Value	Definition (Notes) [Source]
ANGULATE	Angulate. [SDSFIE V1.4]
ANNULAR	Annular. [SDSFIE V1.4]
ARTIFICIAL	Artificial. [SDSFIE V1.4]
BARBED	Barbed. [SDSFIE V1.4]
BRAIDED	Braided. [SDSFIE V1.4]
CENTRIPETAL	Centripetal. [SDSFIE V1.4]
COMPLEX	Complex. [SDSFIE V1.4]
COMPOUND	Compound. [SDSFIE V1.4]
CONTORTED	Contorted. [SDSFIE V1.4]
DENDRITANAST	Dendritic Anastomotic. [SDSFIE V1.4]
DENDRITDISTR	Dendritic Distributary (dichotomic). [SDSFIE V1.4]
DENDRITPINNT	Dendritic Pinnate. [SDSFIE V1.4]
DENDRITSUBDN	Dendritic Subdendritic. [SDSFIE V1.4]
DERANGED	Deranged. [SDSFIE V1.4]
INTERNAL	Internal. [SDSFIE V1.4]
MULTIBSKARST	Multibasinal Karst. [SDSFIE V1.4]
MULTIBSTHERM	Multibasinal Thermokarst. [SDSFIE V1.4]
MULTIELNGBAY	Multibasinal Elongate Bay. [SDSFIE V1.4]
MULTIGLACLDS	Multibasinal Glacially Disturbed. [SDSFIE V1.4]
NODEVLSYSTEM	No developed system. [SDSFIE V1.4]
OTHER	Other. [SDSFIE V1.4]
PALIMPSEST	Palimpsest. [SDSFIE V1.4]
PARLLCOLINER	Parallel Collinear. [SDSFIE V1.4]
PARLLSUBPARL	Parallel Subparallel. [SDSFIE V1.4]
PINNATE	Pinnate. [SDSFIE V1.4]
RADILCENTRIP	Radial Centripetal. [SDSFIE V1.4]
RECTANGLARAN	Rectangular Angulate. [SDSFIE V1.4]
TBD	To be determined. [SDSFIE V1.4]
TRELISUBTREL	Trellis Subtrellis. [SDSFIE V1.4]
TRELSDIRECTN	Trellis Directional. [SDSFIE V1.4]
TRELSFAULT	Trellis Fault. [SDSFIE V1.4]

TRELSJOINT	Trellis Joint. [SDSFIE V1.4]
TRELSRECURVE	Trellis Recurved. [SDSFIE V1.4]
UNKNOWN	Unknown. [SDSFIE V1.4]

drng_tex_d, mat_tex_d

Value	Definition (Notes) [Source]
COARSE	coarse [SDSFIE V1.4]
FINE	fine [SDSFIE V1.4]
MEDIUM	medium [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

drng_zon_d, fld_zon_d

Value	Definition (Notes) [Source]
MERLIN	Merlin Drainage District [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
ZONE_1	zone 1 [SDSFIE V1.4]

duct_mat_d, mat_d

Value	Definition (Notes) [Source]
ABS	acrylonitrile butadiene styrene [SDSFIE V1.4]
AC	asbestos cement [SDSFIE V1.4]
AL	Aluminum [SDSFIE V1.4]
ARMORED_GLASS	Armored-glass. [SDSFIE V2]
ASBESTCEMENT	asbestos cement [SDSFIE V1.4]
BI	black iron [SDSFIE V1.4]
BLACK_FE	black iron [SDSFIE V1.4]
BRICK	brick [SDSFIE V1.4]
C	concrete [SDSFIE V1.4]
CASTIRON	cast iron [SDSFIE V1.4]
CEMENT	cement [SDSFIE V1.4]
CI	cast iron [SDSFIE V1.4]
CIS	Concrete Cast inSitu/Cast in Place [SDSFIE V2 Tinker Air Force Base]
CM	corrugated metal [SDSFIE V1.4]
COATWRAPSTEL	coated and wrapped steel [SDSFIE V1.4]
COMPOSOLITE	Composolite [SDSFIE V2 Tinker Air Force Base]
CONCRETE	concrete [SDSFIE V1.4]
CORR_METAL	corrugated metal [SDSFIE V1.4]
CORR_STEEL	corrugated steel [SDSFIE V1.4]
CORRALBITMEN	corrugated Aluminum with bituminous coating [SDSFIE V1.4]
CORRALPAVINV	corrugated Aluminum with paved invert [SDSFIE V1.4]
CORRMETLBITM	corrugated metal with bituminous coating [SDSFIE V1.4]
CORRMETPAVIN	corrugated metal with paved invert [SDSFIE V1.4]
CORRSTELBITM	corrugated steel with bituminous coating [SDSFIE V1.4]
CORRSTELPAVI	corrugated steel with paved invert [SDSFIE V1.4]
CORRUGATEDAL	corrugated Aluminum [SDSFIE V1.4]
CRESOTEDWOOD	creosoted wood [SDSFIE V1.4]
CU	Copper [SDSFIE V1.4]
DI	ductile iron [SDSFIE V1.4]
DUCTILEFE	ductile iron [SDSFIE V1.4]
FEPT_STEEL	FEP Teflon-lined steel. [SDSFIE V2]
FIBER	fiber [SDSFIE V1.4]
FIBERGLASS	fiberglass [SDSFIE V1.4]
FRP	Fiberglass reinforced polyester. [SDSFIE V2]
FRV	Fiberglass Reinforced Vinylester. [SDSFIE V2]
GALVANIZEDFE	galvanized iron [SDSFIE V1.4]
GALVNIZSTEEL	galvanized steel [SDSFIE V1.4]
GI	galvanized iron [SDSFIE V1.4]
GLASS	glass [SDSFIE V1.4]
GLASS_LINED	Glass-lined [SDSFIE V2]
GS	galvanized steel [SDSFIE V1.4]
HASTELLOY	Hastelloy [SDSFIE V2]
HDPE	High Density Polyethylene (HDPE) [SDSFIE V2]
HELIWOUND	helically wound [SDSFIE V1.4]
INCONEL	Inconel [SDSFIE V2]
INSULATCONCR	insulating concrete [SDSFIE V1.4]
KYN_STEEL	Kynar-lined steel. [SDSFIE V2]
METAL	metal conduit [SDSFIE V1.4]

MONEL	Monel [SDSFIE V2]
MULTIPLECLAY	multiple clay [SDSFIE V1.4]
MULTIPLETILE	multiple tile [SDSFIE V1.4]
NICKEL	Nickel [SDSFIE V2]
OTHER	other [SDSFIE V1.4]
OTHERMASONRY	other [SDSFIE V1.4]
PFA	PFA Teflon-lined. [SDSFIE V2]
PLASTIC	plastic [SDSFIE V1.4]
POLYETHYLENE	polyethylene [SDSFIE V1.4]
POLYSTYRENE	polystyrene [SDSFIE V1.4]
PPE_STEEL	Polypropylene-lined steel. [SDSFIE V2]
PRECAST	precast [SDSFIE V1.4]
PRESTRESSED	prestressed [SDSFIE V1.4]
PTFE	PTFE Teflon-lined. [SDSFIE V2]
PVC	polyvinyl chloride [SDSFIE V1.4]
RC	reinforced concrete [SDSFIE V1.4]
REINFORCONCR	reinforced concrete [SDSFIE V1.4]
REINFPLASMOR	reinforced plastic mortar [SDSFIE V1.4]
RUB_STEEL	Rubber-lined steel. [SDSFIE V2]
S	steel [SDSFIE V1.4]
SARAN_LINED	Saran lined [SDSFIE V2]
SINGLE_CLAY	single clay [SDSFIE V1.4]
SINGLE_TILE	single tile [SDSFIE V1.4]
STAINLESS_STEEL	Stainless steel [SDSFIE V2]
STEEL	steel [SDSFIE V1.4]
STEEL_WRAPED	steel wrapped [SDSFIE V1.4]
STONE	stone [SDSFIE V1.4]
TAN_STEEL	Tantalum-lined steel [SDSFIE V2]
TBD	to be determined [SDSFIE V1.4]
TERRACOTTA	terra cotta [SDSFIE V1.4]
TILE_RESIN	tile resin [SDSFIE V1.4]
TITANIUM	Titanium [SDSFIE V2]
UNEARTHEN	Unearthen. [SDSFIE V2.4 USGS]
UNKNOWN	unknown [SDSFIE V1.4]
VC	vitrified clay [SDSFIE V1.4]
VITRIFIDCLAY	vitrified clay [SDSFIE V1.4]
WI	wrought iron [SDSFIE V1.4]
WROUGHT_FE	wrought iron [SDSFIE V1.4]
ZIRCONIUM	Zirconium [SDSFIE V2]

dwslocty_d

Value	Definition (Notes) [Source]
DISTRIBUTION_SYS	Distribution System [SDSFIE V2 Mississippi Dept. of Health]
PLANT_TREATED	Finished water from a water treatment plant. [SDSFIE V2 Mississippi Dept. of Health]
SOURCE_RAW	Raw water from the water source (i.e., well or surface water) prior to treatment. [SDSFIE V2 Mississippi Dept. of Health]
WELL	Chlorinated well water. [SDSFIE V2 Mississippi Dept. of Health]

ecs_typ_d

Value	Definition (Notes) [Source]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
RE	Reenterable compound. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

efpa_u_d, plarea_u_d

Value	Definition (Notes) [Source]
AC	Acre - 43,560 Square Feet [SDSFIE V2.6 RPI Core Data]
ACR	Acres – 43,560 sq. feet. [SDSFIE V2.5 ANSIX3.50-1986]
ARE	Ares - 1 sq. decameter. [SDSFIE V2.5 ANSIX3.50-1986]
CM2	Square centimeters - 0.115 sq. inches. [SDSFIE V2.5 ISO10001-4]
DARE	Deciares - 11.96 sq. yards. [SDSFIE V2.5]
DM2	Square decimeters - 15.5 sq. inches. [SDSFIE V2.5 ISO10001-4]
FT2	An area equal to a square whose edge is one foot. [SDSFIE V2.5 SI ANSI]
HA	Hectares = 2.471044 acres. [SDSFIE V2.5]
IN2	An area equal to a square whose edge is one inch. [SDSFIE V2.5 SI ANSI]
KM2	Square kilometers - .3861006 sq. miles. [SDSFIE V2.5 ISO10001-4]
M2	Square meters - 10.76387 sq. feet - 1 centare. [SDSFIE V2.5 ISO10001-4]
MI2	An area equal to a square whose edge is one mile. [SDSFIE V2.5 SI
MM2	Square millimeters - 0.00155 sq. inches. [SDSFIE V2.5 ISO10001-4]

SFT	Square feet - 144 sq. inches. [SDSFIE V2.5 ANSIX3.50-1986]
SIN	Square inches - 6.4516258 sq. cm. [SDSFIE V2.5 ANSIX3.50-1986]
SMI	Square miles - 640 acres. [SDSFIE V2.5 ANSIX3.50-1986]
SQCH	Square chains (Surveyor) - 4356 sq. feet - 16 sq. rods. [SDSFIE V2.5]
SRD	Square rods - 30.25 sq. yards. [SDSFIE V2.5 ANSIX3.50-1986]
SYD	Square yard - 0.83613 sq. meters. [SDSFIE V2.5 ANSIX3.50-1986]
YD2	An area equal to a square whose edge is one yard. [SDSFIE V2.5 SI ANSI]

ehazcat_d

Value	Definition (Notes) [Source]
BIO_WARFARE	Residues of biological warfare items, materials, or waste are present. [SDSFIE V1.4]
BLDG_ENV_HAZARD	Building environmental hazards are present. [SDSFIE V1.4]
CHEM_POLLUTION	Polluted by the residues of one or more chemical (nonpetroleum) products or wastes. [SDSFIE V1.4]
CHEM_WARFARE	Residues of chemical warfare items, materials, or waste are present. [SDSFIE V1.4]
MED_POLLUTION	Polluted by the residues of one or more medical or infectious products or wastes. [SDSFIE V1.4]
MIXED_POLLUTION	Polluted by the residues of one or more chemical, petroleum, and radioactive products or wastes. [SDSFIE V1.4]
NONE	Investigation and/or further study has revealed that there are no environmental hazards present at the site. [SDSFIE V1.4]
OEW	Residues of ordnance and explosive waste items, materials, or waste are present. [SDSFIE V1.4]
PETRO_POLLUTION	Polluted by the residues of one or more petroleum products or wastes. [SDSFIE V1.4]
RAD_POLLUTION	Polluted by the residues of one or more radioactive products or wastes. [SDSFIE V1.4]
RAD_WARFARE	Residues of radioactive warfare items, materials, or waste are present. [SDSFIE V1.4]
SOLID_WASTE	Solid waste. [SDSFIE V1.6]
UNKNOWN	The category of environmental hazard has not yet been determined. [SDSFIE V1.4]

elmpur_d

Value	Definition (Notes) [Source]
BUILDING_ENTER	Conduit Entrance to Building. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
ROAD_CROSSING	Road Crossing. [SDSFIE V2.5 AIR FORCE]
ROUTE	Cable or Duct Route. [SDSFIE V2.5 AIR FORCE]
ROUTE_CHANGE	Change in Direction of Cable or Duct Route. [SDSFIE V2.5 AIR FORCE]
SPLICE	Cable Splice Location. [SDSFIE V2.5 AIR FORCE]
STUBOUT	Manhole Stubout. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

enc_max_d

Value	Definition (Notes) [Source]
I	First [SDSFIE V2.3 Tinker Air Force Base]
II	Second [SDSFIE V2.3 Tinker Air Force Base]
III	Third [SDSFIE V2.3 Tinker Air Force Base]
IV	Fourth [SDSFIE V2.3 Tinker Air Force Base]
V	Fifth [SDSFIE V2.3 Tinker Air Force Base]

enc_prot_d

Value	Definition (Notes) [Source]
3DES	Triple DES encryption (will be replaced by AES). [SDSFIE V2.3 Tinker Air Force Base]
A_NEEDH_SCHR_SK	Amended Needham Schroeder Symmetric Key. [SDSFIE V2.5 AIR
AES	Advanced Encryption Standard, a Type I capable encryption module. [SDSFIE V2.3 Tinker Air Force Base]
AS_RPC	Andrew Secure RPC. [SDSFIE V2.5 AIR FORCE]
BAN_CON_AS_RPC	BAN concrete Andrew Secure RPC. [SDSFIE V2.5 AIR FORCE]
BAN_MOD_AS_RPC	BAN modified Andrew Secure RPC. [SDSFIE V2.5 AIR FORCE]
BAN_MOD_CCITT_3	BAN modified version of CCITT X.509 (3). [SDSFIE V2.5 AIR FORCE]
BAN_YAHALOM	BAN simplified version of Yahalom. [SDSFIE V2.5 AIR FORCE]
CAM	CAM. [SDSFIE V2.5 AIR FORCE]
CCITT_X_509_1	CCITT X.509 (1). [SDSFIE V2.5 AIR FORCE]
CCITT_X_509_1C	CCITT X.509 (1c). [SDSFIE V2.5 AIR FORCE]
CCITT_X_509_3	CCITT X.509 (3). [SDSFIE V2.5 AIR FORCE]

CJ_HC_SPLICE_AS	Clark and Jacob modified Hwang and Chen modified Splice/As. [SDSFIE V2.5 AIR FORCE]
DENNING_SACCO_SK	Denning-Sacco shared key. [SDSFIE V2.5 AIR FORCE]
DES	Digital Encryption Standard [SDSFIE V2.3 Tinker Air Force Base]
DES-OFB	Digital Encryption Standard - Output Feedback [SDSFIE V2.3 Tinker Air Force Base]
DIFFIE_HELMAN	Diffie Helman. [SDSFIE V2.5 AIR FORCE]
DNSSEC	Domain Name Server Security. [SDSFIE V2.5 AIR FORCE]
DSS	DSS. [SDSFIE V2.5 AIR FORCE]
FASCINATOR	Fascinator is a series of Type I capable encryption module. [SDSFIE V2.31 Tinker Air Force Base]
GJM	GJM. [SDSFIE V2.5 AIR FORCE]
GNUPG_PGP	GnuPG/PGP. [SDSFIE V2.5 AIR FORCE]
GONG	Gong. [SDSFIE V2.5 AIR FORCE]
GSSAPI	Generic Security Services API. [SDSFIE V2.5 AIR FORCE]
HC_SPLICE_AS	Hwang and Chen modified Splice/As. [SDSFIE V2.5 AIR FORCE]
HWANG_NEUM_STUB	Hwang modified version of Neumann Stubblebine. [SDSFIE V2.5 AIR
IDEA	IDEA. [SDSFIE V2.5 AIR FORCE]
IEEE_P1363	IEEE P1364. [SDSFIE V2.5 AIR FORCE]
IPSEC	IP Secure Protocol. [SDSFIE V2.5 AIR FORCE]
KAO_CHOW_AUTH_1	Kao Chow Authentication v.1. [SDSFIE V2.5 AIR FORCE]
KAO_CHOW_AUTH_2	Kao Chow Authentication v.2. [SDSFIE V2.5 AIR FORCE]
KAO_CHOW_AUTH_3	Kao Chow Authentication v.3. [SDSFIE V2.5 AIR FORCE]
KERBEROS_V5	Kerberos V6. [SDSFIE V2.5 AIR FORCE]
KSL	KSL. [SDSFIE V2.5 AIR FORCE]
L_BAN_CON_AS_RPC	Lowe modified BAN concrete Andrew Secure RPC. [SDSFIE V2.5 AIR
L_DENNING_SAC_DK	Lowe modified Denning-Sacco shared key. [SDSFIE V2.5 AIR FORCE]
L_NEEDH_SCHR_PK	Lowes fixed version of Needham-Schroder Public Key. [SDSFIE V2.5 AIR FORCE]
LOWE_MOD_KSL	Lowe modified KSL. [SDSFIE V2.5 AIR FORCE]
LOWE_WMF	Lowe modified Wide Mouthed Frog. [SDSFIE V2.5 AIR FORCE]
LOWES_YAHALOM	Lowes modified version of Yahalom. [SDSFIE V2.5 AIR FORCE]
MARS	MARS. [SDSFIE V2.5 AIR FORCE]
NEEDHAM_SCHR_PK	Needham-Schroeder Public Key. [SDSFIE V2.5 AIR FORCE]
NEEDHAM_SCHR_SK	Needham Schroeder Symmetric Key. [SDSFIE V2.5 AIR FORCE]
NEUMANN_STUBBLE	Neumann Stubblebine. [SDSFIE V2.5 AIR FORCE]
OPENPGP	OpenPGP. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
OTWAY_REES	Otway Rees. [SDSFIE V2.5 AIR FORCE]
PAULSONS_YAHALOM	Paulsons strengthened version of Yahalom. [SDSFIE V2.5 AIR FORCE]
PKCS	Public Key Encryption Standards. [SDSFIE V2.5 AIR FORCE]
RC4	RC5. [SDSFIE V2.5 AIR FORCE]
ROT	ROT. [SDSFIE V2.5 AIR FORCE]
RSA	RSA. [SDSFIE V2.5 AIR FORCE]
SEAL	SEAL. [SDSFIE V2.5 AIR FORCE]
SERPENT	Serpent. [SDSFIE V2.5 AIR FORCE]
SHTTP	Secure Hypertext Transfer Protocol. [SDSFIE V2.5 AIR FORCE]
SK3	SK3. [SDSFIE V2.5 AIR FORCE]
SMARTRIGHT_VO	SmartRight view-only. [SDSFIE V2.5 AIR FORCE]
SOBER	SOBER. [SDSFIE V2.5 AIR FORCE]
SPLIC_AS	SPLICE/AS. [SDSFIE V2.5 AIR FORCE]
SSH1	Secure Shell v2. [SDSFIE V2.5 AIR FORCE]
SSH2	Secure Shell v3. [SDSFIE V2.5 AIR FORCE]
SSL	Secure Socket Layer. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
TLS	TLS. [SDSFIE V2.5 AIR FORCE]
TMN	TMN. [SDSFIE V2.5 AIR FORCE]
TWOFISH	Twofish. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
WAKE	WAKE. [SDSFIE V2.5 AIR FORCE]
WEP	Wired Equivalent Privacy. [SDSFIE V2.5 AIR FORCE]
WMF	Wide Mouthed Frog. [SDSFIE V2.5 AIR FORCE]
WOO_AND_LAM_P_3	Woo and Lam Pi 3. [SDSFIE V2.5 AIR FORCE]
WOO_AND_LAM_PI	Woo and Lam Pi. [SDSFIE V2.5 AIR FORCE]
WOO_AND_LAM_PI_1	Woo and Lam Pi 1. [SDSFIE V2.5 AIR FORCE]
WOO_AND_LAM_PI_2	Woo and Lam Pi 2. [SDSFIE V2.5 AIR FORCE]
WOO_LAM_MA	Woo and Lam Mutual Authentication. [SDSFIE V2.5 AIR FORCE]

WOO_LAM_PI_F	Woo and Lam Pi f. [SDSFIE V2.5 AIR FORCE]
WPA	Wi-Fi Protected Access. [SDSFIE V2.5 AIR FORCE]
XOR	XOR. [SDSFIE V2.5 AIR FORCE]
YAHALOM	Yahalom. [SDSFIE V2.5 AIR FORCE]

encl_typ_d, enclty_d

Value	Definition (Notes) [Source]
AIR/AIR	totally enclosed, air-to-air cooled [SDSFIE V1.4]
AIR_OVER	totally enclosed, air-over [SDSFIE V1.4]
DUST_PROOF	totally enclosed, dust-ignition proof [SDSFIE V1.4]
ENCL_FAN	totally enclosed, fan cooled [SDSFIE V1.4]
ENCL_FANG	totally enclosed, fan cooled, guarded [SDSFIE V1.4]
ENCL_NON	totally enclosed, nonventilated [SDSFIE V1.4]
ENCL_WAC	totally enclosed, water/air cooled [SDSFIE V1.4]
ENCL_WATER	totally enclosed, water cooled [SDSFIE V1.4]
EXPL_PROOF	totally enclosed, explosion proof [SDSFIE V1.4]
OPEN	open [SDSFIE V1.4]
OPEN_DGUARD	open, drip-proof guarded [SDSFIE V1.4]
OPEN_DP	open, drip-proof [SDSFIE V1.4]
OPEN_EV	open, externally ventilated [SDSFIE V1.4]
OPEN_GUARD	open, guarded [SDSFIE V1.4]
OPEN_PVENT	open, pipe ventilated [SDSFIE V1.4]
OPEN_SG	open, semiguarded [SDSFIE V1.4]
OPEN_SP	open, splash-proof [SDSFIE V1.4]
OPEN_WEATI	open, weather protected - Type I [SDSFIE V1.4]
OPEN_WEATII	open, weather protected - Type II [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PIPE_VENT	totally enclosed, pipe ventilated [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WATER_PROOF	totally enclosed, water-proof [SDSFIE V1.4]

equiptyp_d

Value	Definition (Notes) [Source]
AN/FPN-62	AN/FPN-62. [SDSFIE V2.31 Air Force]
AN/GPN-11	AN/GPN-11. [SDSFIE V2.31 Air Force]
AN/GPN-12	AN/GPN-12. [SDSFIE V2.31 Air Force]
AN/GPN-20	AN/GPN-20. [SDSFIE V2.31 Air Force]
AN/GPN-22	AN/GPN-22. [SDSFIE V2.31 Air Force]
ARSR-4	ARSR-4. [SDSFIE V2.31 Air Force]
ASR-11	ASR-11. [SDSFIE V2.31 Air Force]
ASR-5	ASR-5. [SDSFIE V2.31 Air Force]
ASR-7	ASR-7. [SDSFIE V2.31 Air Force]
ASR-8	ASR-8. [SDSFIE V2.31 Air Force]
ASR-9	ASR-9. [SDSFIE V2.31 Air Force]
MACS	MACS. [SDSFIE V2.31 Air Force]
WSR-88D	WSR-88D. [SDSFIE V2.31 Air Force]

fac_typ_d

Value	Definition (Notes) [Source]
ADMIN	Administration. [SDSFIE V2.31 HSIP]
ARM_DE_ARM_PAD	Provides a paved area for activating or deactivating weapons systems on board aircraft. [SDSFIE V1.8]
ARREST_GEAR	Wires and other facilities for arresting aircraft [SDSFIE V1.4]
CATAPULT	A steam driven slingshot device that propels aircraft off a short runway. [SDSFIE V1.8]
COMPASS_ROSE	A paved area in a magnetically quiet zone where the compass in the aircraft is calibrated. [SDSFIE V1.8]
LANDING_AID	Landing aids and instruments [SDSFIE V1.4]
OTHER	Other. [SDSFIE V2.31 HSIP]
PWR_CK_PAD_W_SS	Used to test and adjust engines mounted in aircraft, concrete airfield pavement with secure fitting and where required protection walls and blast deflectors. [SDSFIE V1.8]
PWR_CK_PAD_WO_SS	Used to test and adjust engines mounted in aircraft, concrete airfield pavement with secure fittings and where required protection walls and blast deflectors. [SDSFIE V1.8]
RADAR_ANTENNA	Radar transmitting devices [SDSFIE V1.4]
RADAR_REFLECTOR	Radar Reflector [SDSFIE V2]
RINSE_FACILITY	Provides an unattended taxi-through, treadle operated, freshwater deluge system to rinse aircraft. [SDSFIE V1.8]
STUDIO	Studio. [SDSFIE V2.31 HSIP]

TBD	to be determined [SDSFIE V1.4]
TIE_DOWN	A device, normally imbedded in the airfield surface, which can be used to secure an aircraft in place. [SDSFIE V1.6]
TOW_WAY	A paved roadway used for towing fixed or rotary wing aircraft. It differs from a taxiway in that aircraft do not move on it under their own power.
TRANSMITTER	Transmitter. [SDSFIE V2.31 HSIP]
UNKNOWN	unknown [SDSFIE V1.4]
WASHRACK	Aircraft washracks are provided at all air installations for cleaning of aircraft in conjunction with periodic maintenance. [SDSFIE V1.8]
WIND_SOCK	Any device which is intended to provide a visual presentation of wind direction and velocity. [SDSFIE V1.6]

fc_typ_d

Value	Definition (Notes) [Source]
MRND25	Round (25 centimeter diameter). [SDSFIE V2.5 AIR FORCE]
MRND40	Round (40 centimeter diameter). [SDSFIE V2.5 AIR FORCE]
MRND45	Round (45 centimeter diameter). [SDSFIE V2.5 AIR FORCE]
REC	Rectangular (24 inch by 36 inch) [SDSFIE V2 Austin and Pitts]
RND24	Round (24 inch diameter) [SDSFIE V2 Austin and Pitts]
RND27	Round (27 inch diameter) [SDSFIE V2 Austin and Pitts]
RND28	Round (28 inch diameter) [SDSFIE V2 Austin and Pitts]
RND30	Round (30 inch diameter) [SDSFIE V2 Austin and Pitts]
RND36	Round (36 inch diameter) [SDSFIE V2 Austin and Pitts]
RND38	Round (38 inch diameter) [SDSFIE V2 Austin and Pitts]
RND42	Round (42 inch diameter) [SDSFIE V2 Austin and Pitts]
RND48	Round (48 inch diameter) [SDSFIE V2 Austin and Pitts]

fea_typ_d

Value	Definition (Notes) [Source]
CONSERVATION	The reservoir is used primarily for water conservation and storage. [SDSFIE V1.6]
FLOOD_CONTROL	The reservoir is used primarily for control of excessive rain fall to temporarily store excessive water. [SDSFIE V1.6]
RECREATION	Recreation [SDSFIE V1.9 REEGIS]

feat_typ_d

Value	Definition (Notes) [Source]
BOG_HEATH	temperate/cold scrub [SDSFIE V1.4]
HANDHOLE	Handhole [SDSFIE V2.2 Aerial Data Service]
MANGROVSWAMP	mangrove swamp [SDSFIE V1.4]
MANHOLE	Manhole [SDSFIE V2.2 Aerial Data Service]
MARSHBRACKWT	marsh - brackwater [SDSFIE V1.4]
MARSHFRESHWT	marsh - freshwater [SDSFIE V1.4]
MARSHSALTYWT	marsh - saltwater [SDSFIE V1.4]
SWAMPBRACKWT	Swamp - Brackwater. [SDSFIE V2.31]
SWAMPFRESHWT	swamp - freshwater [SDSFIE V1.4]
SWAMPSALTYWT	swamp - saltwater [SDSFIE V1.4]
TIDALEMUDFLT	tidal mud flats [SDSFIE V1.4]
TIDALSLTMRSH	tidal saltwater marsh [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VALVE	Valve [SDSFIE V2.2 Aerial Data Service]

fenc_typ_d, gate_typ_d

Value	Definition (Notes) [Source]
BARB_WIRE	barbed wire [SDSFIE V1.4]
CHAIN	Metal chain. [SDSFIE V2.22 Cherry Point]
CHAIN_LINK	chain link [SDSFIE V1.4]
CROSSBAR	Metal bars that lock. [SDSFIE V2.31 Air Force]
EARTHEN_BERM	Piled up earth or other debris. [Applies to Acc_typ_d = Barrier only) [SDSFIE V2.3 ITAM]
GUARD_RAIL	Guard rail. [SDSFIE V2.22 Cherry Point]
METAL_RAIL	Metal rail or pipe. [SDSFIE V2.22 Cherry Point]
PCB	PCB. [SDSFIE V2.31 Navy]
PLASTIC	Plastic. [SDSFIE V2.31 Navy]
POST_AND_CABLE	Posts with metal cable between them. [SDSFIE V2.3 ITAM]
POST_AND_FRAME	Posts with swinging metal frame, usually a cattle gate. [SDSFIE V2.3
POST_AND_RAIL	wooden post and rails [SDSFIE V1.4]
SMOOTH_WIRE	smooth wire [SDSFIE V1.9 REEGIS]

STEEL	Steel. [SDSFIE V2.4 Navy]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WIRE_MESH	Wire mesh. [SDSFIE V2.22 Cherry Point]
WOODEN_SLATS	vertical wooden boards [SDSFIE V1.4]
WROUGHT_IRON	Posts with swinging wrought iron (heavy duty and decorative) frame. [SDSFIE V2.3 ITAM]
YELLOW_STEEL	Posts with swinging steel frame, painted yellow. Reserved for some security or force protection . [SDSFIE V2.3 ITAM]

fitloc_d

Value	Definition (Notes) [Source]
CHILLWATER_TANK	chilled water tank [SDSFIE V2.3 Cherry Point]
CLEANING_BOOTH	Cleaning Booth. [SDSFIE V2.3 Cherry Point]
CONDENSATE_TANK	condensate tank [SDSFIE V2.3 Cherry Point]
COOKER	cooker [SDSFIE V2.3 Cherry Point]
COOLING_TOWER	cooling tower [SDSFIE V2.3 Cherry Point]
COOLING_WATER	cooling water [SDSFIE V2.3 Cherry Point]
CORROSION_REMOVE	corrosion remover [SDSFIE V2.3 Cherry Point]
DESCALER	descaler [SDSFIE V2.3 Cherry Point]
DISHWASHER	dishwasher [SDSFIE V2.3 Cherry Point]
DRINK_FOUNTAIN	drinking fountain [SDSFIE V2.3 Cherry Point]
EYEWASH_STATION	eyewash station [SDSFIE V2.3 Cherry Point]
HOT_WATER_RINSE	hot water rinse [SDSFIE V2.3 Cherry Point]
HUMIDIFIER	humidifier [SDSFIE V2.3 Cherry Point]
ICE_DISPENER	ice dispenser [SDSFIE V2.3 Cherry Point]
PAINT_BOOTH	paint booth [SDSFIE V2.3 Cherry Point]
PARTS_WASHER	parts washer [SDSFIE V2.3 Cherry Point]
PHOTO_TRAY	photo tray [SDSFIE V2.3 Cherry Point]
PIT	pit [SDSFIE V2.3 Cherry Point]
RESPIRATOR_WASH	respirator washer [SDSFIE V2.3 Cherry Point]
SINK	sink [SDSFIE V2.3 Cherry Point]
STACK	stack [SDSFIE V2.3 Cherry Point]
STEAM_CONDEN	steam condensate [SDSFIE V2.3 Cherry Point]
STRIPPER_VAT	stripper vat [SDSFIE V2.3 Cherry Point]
TEST_TEE	test tee [SDSFIE V2.3 Cherry Point]
TOILET	toilet [SDSFIE V2.3 Cherry Point]
URINAL	urinal [SDSFIE V2.3 Cherry Point]
VENT_PIPE	vent pipe [SDSFIE V2.3 Cherry Point]
WASTE_OIL_DISC	waste oil discharge [SDSFIE V2.3 Cherry Point]

fittyp_d

Value	Definition (Notes) [Source]
CAP	Pipe Cap [SDSFIE V1.75]
CROSS	Pipe Cross [SDSFIE V1.75]
FLANGE	Pipe Flange [SDSFIE V1.75]
TEE	Pipe Tee [SDSFIE V1.75]

fix_ty_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

fix_use_d

Value	Definition (Notes) [Source]
EX_LIGHT	exterior light [SDSFIE V1.4]
IN_LIGHT	interior light [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SEC_LIGHT	security light [SDSFIE V1.4]
ST_LIGHT	street light [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

frame_ty_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

fuel_del_d

Value	Definition (Notes) [Source]
CONVEYOR	Conveyor. [SDSFIE V2.31 HSIP]
OTHER	Other. [SDSFIE V2.31 HSIP]
PIPELINE	Pipeline. [SDSFIE V2.31 HSIP]
RAIL	Railroad. [SDSFIE V2.31 HSIP]
SHIP_BARGE	Ship or Fuel Barge. [SDSFIE V2.31 HSIP]
TRUCK	Truck/Vehicle. [SDSFIE V2.31 HSIP]

fuel_src_d, source_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

fuel_ty_d, gas_ty_d, type_d

Value	Definition (Notes) [Source]
ANTIFREEZE	antifreeze [SDSFIE V1.4]
AVGAS	aviation gas [SDSFIE V1.4]
BUTANEGAS	butane gas [SDSFIE V1.4]
COALGAS	coal gas [SDSFIE V1.4]
DIESELFUEL	diesel fuel [SDSFIE V1.4]
EMPTY	empty [SDSFIE V1.4]
ETHANEGAS	ethane gas [SDSFIE V1.4]
ETHANOL	ethyl alcohol [SDSFIE V1.4]
FUELOIL4	fuel oil - no. 4 [SDSFIE V1.4]
FUELOIL6	fuel oil - no. 6 [SDSFIE V1.4]
GASOLINE	gasoline [SDSFIE V1.4]
HYDRAULICFLD	hydraulic fluid [SDSFIE V1.4]
JET_A	Jet A, Kerosene fuel, without icing inhibitor. [SDSFIE V2.31 Air Force]
JET_A_1	Jet A-1. Type A-1 (Jet A-1), without icing inhibitor. [SDSFIE V2.31 Air
JET_A_1_PLUS	Jet A-1+. Jet A-1 with icing inhibitor. [SDSFIE V2.31 Air Force]
JET_A_PLUS	Jet A+. Kerosene fuel, Type A, Jet A or JP-1, with icing inhibitor. [SDSFIE V2.31 Air Force]
JET_B	Jet B. Wide Cut turbine fuel, Type B, without icing inhibitor. [SDSFIE V2.31 Air Force]
JET_B_PLUS	Jet B+. Jet B wide cut turbine fuel with icing inhibitor. [SDSFIE V2.31 Air
JETFUEL_UNKNOWN	Jet fuel available but type is unknown. [SDSFIE V2.31 Air Force]
JP4FUEL	jet fuel 4 [SDSFIE V1.4]
JP5FUEL	jet fuel 5 [SDSFIE V1.4]
JP7	Jet Fuel 7 [SDSFIE V2.2 Chevron: Av Fuels Technical Review]
JP8_100	JP8+100: U.S. Air Force fuel containing an additive that provides improved thermal stability [SDSFIE V2.2 Chevron: Av Fuels Technical
JP8FUEL	jet fuel 8 [SDSFIE V1.4]
JPTS	JPTS Jet Fuel (higher thermal stability [SDSFIE V2.2 Chevron: Av Fuels Technical Review]
KEROSENE	kerosene [SDSFIE V1.4]
LEADGAS_80_87OCT	80/87 octane gasoline, leaded, MIL-L-5572F (red). [SDSFIE V2.31 Air
LEADGAS_91_96OCT	91/96 octane gasoline, leaded, no MIL Specification. [SDSFIE V2.31 Air
LEDGAS100_130OCT	100/130 octane gasoline, leaded, MIL-L-5572F (green). [SDSFIE V2.31
LEDGAS108_135OCT	108/135 octane gasoline, leaded, no MIL Specification. [SDSFIE V2.31
LEDGAS115_145OCT	115/145 octane gasoline, leaded, MIL-L-5572F (purple). [SDSFIE V2.31 Air Force]
LQNATURALGAS	liquefied natural gas [SDSFIE V1.4]
LQPETROGAS	liquefied petroleum gas [SDSFIE V1.4]
LQPROPANEGAS	liquefied propane gas [SDSFIE V1.4]
METHANEGAS	methane gas [SDSFIE V1.4]
METHANOL	methyl alcohol [SDSFIE V1.4]
MILSPEC100_130	100/130 Mil Spec, low lead, aviation gasoline (blue). [SDSFIE V2.31 Air
MINERALOIL	mineral oil [SDSFIE V1.4]
MOGAS	mogas [SDSFIE V1.4]
MOTOROIL	motor oil [SDSFIE V1.4]
NATGAS	natural gas [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PROPANEGAS	propane gas [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TRANSMISNFLD	transmission fluid [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNLEADGAS_73OCT	73 octane gasoline, unleaded, no MIL Specification. [SDSFIE V2.31 Air
UNLEADGAS_80OCT	80 octane gasoline, unleaded, no MIL Specification. [SDSFIE V2.31 Air
WASTEOIL	waste oil [SDSFIE V1.4]

WASTEPOLLUTE	waste pollutants [SDSFIE V1.4]

function_d

Value	Definition (Notes) [Source]
COIL	slack - coil [SDSFIE V2 Austin and Pitts]
OTHER	Other [SDSFIE V2 Austin and Pitts]
SPL	Splice [SDSFIE V2 Austin and Pitts]
T_SPL	T-splice [SDSFIE V2 Austin and Pitts]
TBD	To Be Determined [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown [SDSFIE V2 Austin and Pitts]

fuse_ty_d, swt_ty_d

Value	Definition (Notes) [Source]
DISCONNECT	disconnect [SDSFIE V1.4]
ISO	ISO switch [SDSFIE V1.4]
OIL	oil switch [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
RAC6WOIL	RAC 6way oil switch [SDSFIE V1.4]
RACOIL	RAC oil switch [SDSFIE V1.4]
RAMOIL	RAM oil switch [SDSFIE V1.4]
SOLIDBLADISC	solid blade disconnect [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VACUUM	vacuum [SDSFIE V1.4]

gat_type_d

Value	Definition (Notes) [Source]
GATED	The culvert is equipped with gates to block or divert water flow. [SDSFIE V1.8 REEGIS]
NONGATED	The culvert contains no provision to block or divert water flow. [SDSFIE V1.8 REEGIS]

gate_st_d

Value	Definition (Notes) [Source]
FLAP	flap gate [SDSFIE V1.4]
LIFT	lift gate [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

gen_ty_d

Value	Definition (Notes) [Source]
BACKUP	Backup generator. [SDSFIE V2 Cherry Point]
EMERGENCY	Emergency generator. [SDSFIE V2 Cherry Point]
OTHER	other [SDSFIE V1.4]
PRIMARY	Primary generator. [SDSFIE V2 Cherry Point]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

GovernmentalUnitType

Value	Definition (Notes) [Source]
alaskaNativeRegionalCorporation	A corporate entity established to conduct both business and nonprofit affairs of Alaska Natives, pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92-203, as amended by Public Law 94-204). Twelve ANRCs are legally bounded geographic
alaskaNativeVillage (ANV)	A local governmental unit in Alaska that constitutes an association, band, clan, community, group, tribe, or village, recognized pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92-203, as amended Public Law 94-204). ANVs do not ha
americanIndianReservation	A Federal American Indian reservation is an area that has been set aside by the United States for the use of one or more federally recognized American Indian tribes. Together with off-reservation trust land, a reservation covers territory over which one
americanIndianTribalSubdivision	A legal subdivision of a federally recognized American Indian reservation, off-reservation trust land, or Oklahoma Tribal statistical area. These entities are internal units of self-government or administration that serve social, cultural, and/or economi
borough	A legally established geographic entity in Alaska, which the Census Bureau treats as statistically equivalent to a county in other States; a minor civil division in each of the five counties that comprise New York city; a type of incorporated place in Con

city	A type of incorporated place in all States and the District of Columbia. In agreement with Hawaii, the U.S. Census Bureau does not recognize the city of Honolulu for presentation of census data. In Virginia, all cities are not part of any county, and so
cityAndBorough	A legally established geographic entity in Alaska, which the U.S. Census Bureau treats as the statistical equivalent of a county in other States; also, a type of incorporated place in Alaska
consolidatedCity	The U.S. Census Bureau refers to a governmental unit for which the functions of an incorporated place and its county or minor civil division have merged as a consolidated government. If one or more other incorporated places continue to function as separa
country	An independent, self-governing, political entity
county	The primary legal division of every State except Alaska and Louisiana
elementarySchoolDistrict	A school district inclusive of kindergarten through either the eighth or ninth grade or the first through either the eighth or ninth grade
minorCivilDivision (MCD)	A type of governmental unit that is the primary governmental or administrative division of a county or statistically equivalent entity in many States. MCDs are identified by a variety of terms, such as township, town (in eight States), or district. The
mosquitoControlDistrictMosquitoAb	A geographic area defined for purposes of administering mosquito abatement or mosquito surveillance programs
municipality	A governmental unit that is a primary legal division in Alaska and the Northern Mariana Islands
municipio	A governmental unit that is the primary legal division of Puerto Rico
parish	A governmental unit that is the primary legal division of Louisiana
schoolDistrict	A geographic entity within which State, county, or local officials or the U.S. Department of Defense provides public educational services for an area's residents
secondarySchoolDistrict	A school district inclusive of only high school (either the ninth through the twelfth grades or the tenth through the twelfth grades)
specialTaxationDistrict	An area defined for purposes of raising revenue to fund specific projects or programs, or to meet specific ongoing needs, such as security, trash collection, or infrastructure maintenance. Also known as business improvement districts (BID), downtown impr
state	A primary governmental division of the United States
town	A governmental unit that is a functioning minor civil division found in the New England States, New York, and Wisconsin; and a type of incorporated place in 30 States and the U.S. Virgin Islands
township	A governmental unit that is a functioning minor civil division in 12 States (townships are administrative units in Arkansas, New Hampshire, and North Carolina). Townships in Missouri can be either functioning governmental units or nonfunctioning administ
unifiedSchoolDistrict	A school district inclusive of kindergarten through twelfth grade
village	A type of incorporated place in 20 States and American Samoa

guy_ty_d

Value	Definition (Notes) [Source]
ANCHOR_GUY	anchor guy [SDSFIE V1.4]
BUILDING_GUY	building guy [SDSFIE V1.4]
COMPRESS_GUY	compressive guy [SDSFIE V1.4]
DOWN_GUY	A wire guy running from the top of a pole to an anchor in the ground. [SDSFIE V1.75]
OTHER	other [SDSFIE V1.4]
SPAN_GUY	A wire guy running from the top of a pole to the top of the adjacent pole [SDSFIE V1.75]
STUB_GUY	stub guy [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

habcat_d

Value	Definition (Notes) [Source]
AD	Proposed Delisting. [SDSFIE V2.2 Endangered Species Act]
AE	Proposed Reclassification to Endangered. [SDSFIE V2.2 Endangered Species Act]
AT	Proposed Reclassification to Threatened. [SDSFIE V2.2 Endangered Species Act]
C	Candidate Taxon, Ready for Proposal. [SDSFIE V2.2 Endangered Species
D3A	Delisted Taxon, Evidently Extinct. [SDSFIE V2.2 Endangered Species Act]
D3B	Delisted Taxon, Invalid Name in Current Scientific Opinion. [SDSFIE V2.2 Endangered Species Act]

D3C	Delisted Taxon, Recovered. [SDSFIE V2.2 Endangered Species Act]
DA	Delisted Taxon, Amendment of the Act. [SDSFIE V2.2 Endangered
DM	Delisted Taxon, Recovered, Being Monitored First Five Years. [SDSFIE V2.31 Center]
DO	Delisted Taxon, Original Commercial Data erroneous. [SDSFIE V2.2 Endangered Species Act]
DP	Delisted Taxon, Discovered Previously Unknown Additional Populations and/or Habitats. [SDSFIE V2.2 Endangered Species Act]
DR	Delisted Taxon, original Commercial Data. [SDSFIE V2.2 Endangered Species Act]
EME	Emergency Listing, Endangered. [SDSFIE V2.2 Endangered Species Act]
EMT	Emergency Listing, Threatened. [SDSFIE V2.2 Endangered Species Act]
ENDANGERED	Endangered. [SDSFIE V1.6]
EXPE	Experimental Population, Essential. [SDSFIE V2.2 Endangered Species
EXPN	Experimental Population, Non-Essential. [SDSFIE V2.2 Endangered
NONE	None. [SDSFIE V2 Yokosuka Naval Station GIS]
PE	Proposed Endangered. [SDSFIE V2.2 Endangered Species Act]
PEXPE	Proposed Experimental Population, Essential. [SDSFIE V2.2 Endangered Species Act]
PEXPN	Proposed Experimental Population, Non-essential. [SDSFIE V2.2 Endangered Species Act]
PSAE	Proposed Similarity of Appearance to an Endangered Taxon. [SDSFIE V2.2 Endangered Species Act]
PSAT	Proposed Similarity of Appearance to a Threatened Taxon. [SDSFIE V2.31 Endangered Species Act]
PT	Proposed Threatened. [SDSFIE V2.2 Endangered Species Act]
RARE	Rare. [SDSFIE V2 Yokosuka Naval Station GIS]
SAE	Similarity of Appearance to an Endangered Taxon. [SDSFIE V2.2 Endangered Species Act]
SAT	Similarity of Appearance to a Threatened Taxon. [SDSFIE V2.2 Endangered Species Act]
SENSITIVE	Sensitive. [SDSFIE V1.6]
THREATENED	Threatened. [SDSFIE V1.6]
UNK	Unknown. [SDSFIE V2.2]

haz_typ_d

Value	Definition (Notes) [Source]
BASH	Bash. [SDSFIE V2.22 Endangered Species Act]
DEER_STRIKE	Deer_strike. [SDSFIE V2.22 Endangered Species Act]
TBD	To Be Determined. [SDSFIE V2.22 Endangered Species Act]
TORTOISE_PITFALL	Tortoise Pitfalls. [SDSFIE V2.22 Endangered Species Act]
UNKNOWN	Unknown. [SDSFIE V2.22 Endangered Species Act]

head_u_d, press_u_d

Value	Definition (Notes) [Source]
ATM	Atmosphere (101325 kg per m*sec2(PA)). [SDSFIE V2.5 Air Force]
BAR	Bar (1.0E+5 kg per m*sec2(PA)). [SDSFIE V2.5 Air Force]
BARYEA	Barye - dynes/cm2 (absolute). [SDSFIE V2.5]
BARYEG	Barye - dynes/cm2 (gauge). [SDSFIE V2.5]
CMHG	Centimeter mercury (atmosphere/76). [SDSFIE V2.5 AIR FORCE]
DPA	A unit of pressure equal to one tenth of a Pascal. [SDSFIE V2.5 SI]
INH2O	A unit or degree of atmospheric pressure measured by a barometer or manometer equal to the pressure balanced by a 1 in column of water. [SDSFIE V2.5 SI ANSI]
INH2OA	Inches of water at 4°C. (absolute). [SDSFIE V2.5]
INH2OG	Inches of water at 4°C. (gauge). [SDSFIE V2.5]
INHG	A unit or degree of atmospheric pressure measured by a barometer or manometer equal to the pressure balanced by a 1 in column of mercury. [SDSFIE V2.5 SI ANSI]
INHGA	Inches of mercury at 0°C. (absolute). [SDSFIE V2.5]
INHGG	Inches of mercury at 0°C. (gauge). [SDSFIE V2.5]
LBF_IN2	The amount of absolute pressure generated by a weight of a one-pound mass applied over a surface area of one square inch. [SDSFIE V2.5 SI
LBF_IN2_FT	The amount of absolute pressure generated by a weight of a one-pound mass applied over a surface area of one square inch per foot. [SDSFIE
MEGABARYEA	Megabarye (absolute). [SDSFIE V2.5]
MEGABARYEG	Megabarye (gauge). [SDSFIE V2.5]
MMGA	Millimeters of Hg at 0°C. (absolute). [SDSFIE V2.5]
MMGG	Millimeters of Hg at 0°C. (gauge). [SDSFIE V2.5]
MMH2O	A unit or degree of atmospheric pressure measured by a barometer or

	manometer equal to the pressure balanced by a 1 mm column of water. [SDSFIE V2.5 SI]
MMHG	Millimeters of Hg (torr). [SDSFIE V2.5]
MPA	A unit of pressure equal to one thousandth of a pascal. [SDSFIE V2.5 SI]
MPAS	A unit of viscosity equal to one thousandth of a pascal second or one centipoise. [SDSFIE V2.5 SI ANSI]
PA	A unit of pressure equal to one newton per square meter. [SDSFIE V2.5
PAS	A centimeter-gram-second unit of dynamic viscosity equal to one dyne-second per square centimeter. [SDSFIE V2.5 SI ANSI]
PSFT	Pounds/ft2. [SDSFIE V2.5]
PSI	Pounds per square inch. [SDSFIE V2.5]
PSIA	Pounds/in2 (absolute). [SDSFIE V2.5]
PSIG	Pounds/in2 (gauge). [SDSFIE V2.5]

hertz_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

hsb_cat_d

Value	Definition (Notes) [Source]
HAZMAT	hazardous material [SDSFIE V1.8]
HAZMAT_HAZWASTE	hazardous material and hazardous waste. [SDSFIE V1.8]
HAZWASTE	hazardous waste [SDSFIE V1.8]

hyd_ty_d

Value	Definition (Notes) [Source]
AIRPORT	airport hydrant [SDSFIE V1.4]
BUILDING	building hydrant [SDSFIE V1.4]
DRINKFOUNT	drinking fountain [SDSFIE V1.4]
DRYBARREL	dry barrel [SDSFIE V1.4]
FREEZEPROOF	freeze proof [SDSFIE V1.4]
FUEL	fuel hydrant [SDSFIE V1.4]
NATGAS	natural gas hydrant [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
STREETWASH	street washer [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WASHRACK	wash rack hydrant [SDSFIE V1.4]
WATER	water hydrant [SDSFIE V1.4]
WETBARREL	wet barrel [SDSFIE V1.4]
YARD	yard hydrant [SDSFIE V1.4]

hydclass_d

Value	Definition (Notes) [Source]
GREEN	green - Class A - rated capacity of 1000-1499 gpm (3785-5675 L/min). [SDSFIE V1.8]
LT_BLUE	light blue - Class AA - rated capacity of 1500 gpm or greater (5680 L/min). [SDSFIE V1.8]
ORANGE	orange - Class B - rated capacity of 500-999 gpm (1900-3780 L/min). [SDSFIE V1.8]
RED	red - Class C - rated capacity less than 500 gpm (1900 L/min). [SDSFIE

inlet_st_d

Value	Definition (Notes) [Source]
AC_CONDENSATE	air conditioner condensate [SDSFIE V2.3 Cherry Point]
BWV_DRAIN	backwater valve drain [SDSFIE V2.3 Cherry Point]
BWV_DRAIN	backwater valve drain [SDSFIE V2.3 Cherry Point]
CATCH_BASIN	catch basin [SDSFIE V2.3 Cherry Point]
CATCHBASIN	catch basin [SDSFIE V1.4]
CONDENSATE_DRAIN	condensate drain [SDSFIE V2.3 Cherry Point]
CURB_INLET	curb opening inlet [SDSFIE V2.1 FGDC Utilities Classification]
DRAIN	drain [SDSFIE V2.3 Cherry Point]
DROP_INLET	drop inlet [SDSFIE V2.1 FGDC Utilities Classification]
GRATECRBOPEN	combined grate and curb opening inlet [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
ROOF_DRAIN	roof drain [SDSFIE V2.3 Cherry Point]
STANDARDA	inlet standard type A inlet [SDSFIE V1.4]
STANDARDB	inlet standard type B inlet [SDSFIE V1.4]
STANDARDC	inlet standard type C inlet [SDSFIE V1.4]

STANDARDD	inlet standard type D inlet [SDSFIE V1.4]
SURFACE_LINEAR	surface linear [SDSFIE V2.1 FGDC Utilities Classification]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WASTE_DRAIN	waste drain [SDSFIE V2.3 Cherry Point]
WEIRINLET	weir inlet [SDSFIE V1.4]

instl_ty_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned [SDSFIE V1.4]
CIRCUIT_BRKR	circuit breaker [SDSFIE V2.1 FGDC Utilities Classification]
CUBICLE	installed in a cubicle. [SDSFIE V2.1 FGDC Utilities Classification]
FUSE_CUTOUT	fuse cutout [SDSFIE V2.1 FGDC Utilities Classification]
GANG_DISC	gang operated disconnect [SDSFIE V2.1 FGDC Utilities Classification]
OVERHEAD	overhead [SDSFIE V1.4]
PAD_MOUNTED	mounted on a pad [SDSFIE V2.1 FGDC Utilities Classification]
POLE_MOUNTED	mounted on pole or tower [SDSFIE V2.1 FGDC Utilities Classification]
RECLOSER	reclosure [SDSFIE V2.1 FGDC Utilities Classification]
UNDERGROUND	underground [SDSFIE V1.4]

insul_cl_d

Value	Definition (Notes) [Source]
A	IEEE Std 1, 60- 70 deg C. [SDSFIE V1.4]
B	IEEE Std 1, 80- 90 deg C. [SDSFIE V1.4]
F	IEEE Std 1, 105- 115 deg C. [SDSFIE V1.4]
H	IEEE Std 1, 125- 135 deg C. [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

juntionType

Value	Definition (Notes) [Source]
Neither	A junction feature that neither pushes or pulls flow away or towards itself.
Sink	A junction feature that pulls flow toward itself through the edges of a geometric network [ESRI]
Source	A junction feature that pushes flow away from itself through the edges of a geometric network [ESRI]

kingdom_d

Value	Definition (Notes) [Source]
ANIAMAL	Animalia (animals). Comprising all living or extinct animals . [SDSFIE V2.5 NAVFAC]
FUNGI	Fungus. An organism in the Fungi Kingdom. Fungi are similar to plants, but they cannot make their own food like plants do. [SDSFIE V2.5
MONERAN	The Monerans are the most numerous and widespread organisms on earth. They comprise the only kingdom of prokaryotic organisms. [SDSFIE
PLANT	Plants do not have the ability to move like animals, but they are able to make their own food by pulling water and nutrients from the soil, and by using light. [SDSFIE V2.5 NAVFAC]
PROTIST	Protozoa. A group of organisms in the Protist Kingdom. [SDSFIE V2.5

lab_name_d

Value	Definition (Notes) [Source]
LAW_ENG	Law Engineering [SDSFIE V1.4]
LAW_ENV	Law Environmental [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WES	Waterways Experiment Station [SDSFIE V1.4]

lab_ty_d

Value	Definition (Notes) [Source]
CHEMICAL	chemical testing laboratory [SDSFIE V1.4]
ENVIRONMENTAL	environmental testing laboratory [SDSFIE V1.4]
GEOTECHNICAL	geotechnical (soils and rock) testing laboratory [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
STRUCTURAL	structural testing laboratory [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

ldccas_d

Value	Definition (Notes) [Source]

124C	124C Case. [SDSFIE V2.5 AIR FORCE]
235A	235A Case. [SDSFIE V2.5 AIR FORCE]
236C	236C Case. [SDSFIE V2.5 AIR FORCE]
723	723 Aerial Load Coil Case. [SDSFIE V2.5 AIR FORCE]
724	724 Aerial Load Coil Case. [SDSFIE V2.5 AIR FORCE]
772	772 Aerial Load Coil Case. [SDSFIE V2.5 AIR FORCE]
NREC	Non-reenterable factory sealed case designed to be placed within an enclosure. [SDSFIE V2.5 AIR FORCE]
NREX	Non-reenterable factory sealed case designed to be direct buried or exposed to weather. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
REC	Coils are assembled in a case that can be opened for maintenance, designed to be placed in an enclosure. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

ldcnum_d

Value	Definition (Notes) [Source]
0001	1. [SDSFIE V2.5 AIR FORCE]
0002	2. [SDSFIE V2.5 AIR FORCE]
0003	3. [SDSFIE V2.5 AIR FORCE]
0004	4. [SDSFIE V2.5 AIR FORCE]
0005	5. [SDSFIE V2.5 AIR FORCE]
0006	6. [SDSFIE V2.5 AIR FORCE]
0010	10. [SDSFIE V2.5 AIR FORCE]
0011	11. [SDSFIE V2.5 AIR FORCE]
0012	12. [SDSFIE V2.5 AIR FORCE]
0015	15. [SDSFIE V2.5 AIR FORCE]
0016	16. [SDSFIE V2.5 AIR FORCE]
0018	18. [SDSFIE V2.5 AIR FORCE]
0020	20. [SDSFIE V2.5 AIR FORCE]
0024	24. [SDSFIE V2.5 AIR FORCE]
0025	25. [SDSFIE V2.5 AIR FORCE]
0050	50. [SDSFIE V2.5 AIR FORCE]
0100	100. [SDSFIE V2.5 AIR FORCE]
0200	200. [SDSFIE V2.5 AIR FORCE]
0300	300. [SDSFIE V2.5 AIR FORCE]
0400	400. [SDSFIE V2.5 AIR FORCE]
0600	600. [SDSFIE V2.5 AIR FORCE]
0900	900. [SDSFIE V2.5 AIR FORCE]
1200	1200. [SDSFIE V2.5 AIR FORCE]
1500	1500. [SDSFIE V2.5 AIR FORCE]
1800	1800. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

ldcsym_d

Value	Definition (Notes) [Source]
B88	B88 - 88 Mh Coil Spaced Every 3,000 Feet. [SDSFIE V2.5 AIR FORCE]
D66	D66 - 66 Mh Coil Spaced Every 4,500 Feet. [SDSFIE V2.5 AIR FORCE]
D66DSL	D66DSL - 66 Mh Coil Spaced Every 4,500 Feet. Permits ADSL Services. [SDSFIE V2.5 AIR FORCE]
D88	D88 - 88 Mh Coil Spaced Every 4,500 Feet. [SDSFIE V2.5 AIR FORCE]
H88	H88 - 88 Mh Coil Spaced Every 6,000 Feet. [SDSFIE V2.5 AIR FORCE]
H88DSL	H88DSL - 88 Mh Coil Spaced Every 6,000 Feet. Permits ADSL Services. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

ldctyp_d

Value	Definition (Notes) [Source]
632	633 Type 88 Mh Load Coil. [SDSFIE V2.5 AIR FORCE]
656	657 Type 66 Mh Load Coil. [SDSFIE V2.5 AIR FORCE]
662	663 Type 88 Mh Load Coil. [SDSFIE V2.5 AIR FORCE]
666	667 Type 66 Mh Load Coil. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

liner_ty_d

Value	Definition (Notes) [Source]
GLASS	glass liner [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PLASTIC	plastic liner [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

lit_typ_d

Value	Definition (Notes) [Source]
FLOOD_LIGHT	Lights designed to flood an area with light, as in the case of an athletic field. [SDSFIE V2.1 FGDC Utilities Classification]
POLE_MOUNT	Lights mounted on poles [SDSFIE V2.1 FGDC Utilities Classification]
SECURITY_LIGHT	Security Light [SDSFIE V1.9 REEGIS]
STREET_LIGHT	Lights specifically designed to illuminate the street below. [SDSFIE V1.6]
WALK_LIGHT	Normally a low mounted light designed to illuminate a walkway or beside a driveway. [SDSFIE V2.1 FGDC Utilities Classification]

ltccode_d

Value	Definition (Notes) [Source]
AA	Ambient Air [SDSFIE V2.3 Edwards Air Force Base]
AS	Pump and Treat (Air Stripping) [SDSFIE V1.4]
AV	Sparge and Vent Groundwater Treatment System. [SDSFIE V1.95
BF	Backfilled Location. [SDSFIE V1.95 ERPIMS]
BH	Borehole [SDSFIE V1.4]
BL	Manmade Building materials from Roof, Walls, Basement [SDSFIE V1.4]
BR	Non-Fixed Locations Receptacle Including Barrels and [SDSFIE V1.4]
BT	Baker Tank [SDSFIE V2.2]
CH	Channel/Ditch [SDSFIE V1.4]
CONC	Concrete [SDSFIE V2.2 Edwards Air Force Base]
CP	Cone penetrometer or hydropunch [SDSFIE V2.2 Edwards Air Force Base]
CSA	Composite Surface Air Sample [SDSFIE V2.2 Edwards Air Force Base]
CY	Cryopile [SDSFIE V1.95 ERPIMS]
DH	Dig and Haul [SDSFIE V2.2 Edwards Air Force Base]
EP	Treatability Unit Effluent Monitoring Point. [SDSFIE V1.95 ERPIMS]
FB	Filter Bag [SDSFIE V2.2 Edwards Air Force Base]
FW	Faucet/Tap [SDSFIE V1.4]
G	Grab [SDSFIE V2.2]
GACT	Granular Activated Carbon Tank [SDSFIE V2.2 Edwards Air Force Base]
GT	Grease Trap [SDSFIE V2.2 Edwards Air Force Base]
HA	Hand Auger [SDSFIE V2.2]
HP	Holding Pond/Lagoon [SDSFIE V1.4]
IP	Treatability Unit Influent Monitoring Point [SDSFIE V1.95 ERPIMS]
IWVS	In Well Vapor Stripping [SDSFIE V2.2 Edwards Air Force Base]
LH	Leachate From Landfill [SDSFIE V1.4]
LK	Lake/Pond [SDSFIE V1.4]
MS	Marine Sediment [SDSFIE V1.4]
NQ	Location Type Not Applicable, QC Sample. [SDSFIE V1.95 ERPIMS]
OC	Outcrop [SDSFIE V1.4]
ON	Ocean [SDSFIE V1.4]
OTHER	Other [SDSFIE V2.2]
PH	Cone Pentrometer/Hydropunch [SDSFIE V1.4]
PR	Soil Gas Probe [SDSFIE V1.4]
PZ	Piezometer [SDSFIE V1.4]
RE	Residence [SDSFIE V1.4]
RV	River/Stream [SDSFIE V1.4]
S	Sediment [SDSFIE V2.3 Edwards Air Force Base]
SE	Seep [SDSFIE V1.4]
SG	Soil gas [SDSFIE V2.3 Edwards Air Force Base]
SL	Surface Location [SDSFIE V1.4]
SP	Spring [SDSFIE V1.4]
SPG	Sampling Point - General [SDSFIE V2.2 Edwards Air Force Base]
SPV	Sampling Point - Vapor [SDSFIE V2.2 Edwards Air Force Base]
SPW	Sampling Point - Water [SDSFIE V2.2 Edwards Air Force Base]
SR	Sewer System [SDSFIE V1.4]
SS	Surface Survey [SDSFIE V1.4]
SSP	Split spoon [SDSFIE V2.2 Edwards Air Force Base]
SSS	Surface Soil Sample [SDSFIE V2.2]
STW	Standing water [SDSFIE V2.2 Edwards Air Force Base]
SV	Soil Vapor Extraction System. [SDSFIE V1.95 ERPIMS]

SW	Storm Water [SDSFIE V1.4]
SWS	Surface Water Sample [SDSFIE V2.2]
SWSS	Surface Water/Surface Soil [SDSFIE V2.2 Edwards Air Force Base]
SWWP	Swab or Wipe [SDSFIE V2.2 Edwards Air Force Base]
T	Trenching [SDSFIE V2.2]
TE	Tank/Pipe removal excavation [SDSFIE V1.4]
TK	Fix Loc Receptacle Including Tanks, Containers and Vats. [SDSFIE V1.95 ERPIMS]
TP	Test Pit or Exploratory Pit [SDSFIE V2.2]
VF	Emission isolation flux chamber, utilizing stainless [SDSFIE V1.4]
WF	Waste Water Treatment Facility. [SDSFIE V1.95 ERPIMS]
WL	Well [SDSFIE V1.4]
WLB	Bioventing Well [SDSFIE V2.2 Edwards Air Force Base]
WLBM	Bioventing Monitoring Well [SDSFIE V2.2 Edwards Air Force Base]
WLBT	Bio-Treatment Well [SDSFIE V2.2 Edwards Air Force Base]
WLD	Dry Well [SDSFIE V2.2]
WLDE	Dual Extraction Well [SDSFIE V2.2 Edwards Air Force Base]
WLE	Extraction Well [SDSFIE V2.2 Edwards Air Force Base]
WLH	Historic Well [SDSFIE V2.2 Edwards Air Force Base]
WLI	Injection Well [SDSFIE V2.2]
WLM	Monitoring Well [SDSFIE V2.2 Edwards Air Force Base]
WLO	Observation Well [SDSFIE V2.2]
WLP	Pumping Well [SDSFIE V2.2 Edwards Air Force Base]
WLPZ	Piezometer Well [SDSFIE V2.2 Edwards Air Force Base]
WLR	Recovery Well [SDSFIE V2.2 Edwards Air Force Base]
WLRI	Reinfiltration Well [SDSFIE V2.2 Edwards Air Force Base]
WLS	Sparge Well [SDSFIE V2.2 Edwards Air Force Base]
WLSG	Soil Gas Well [SDSFIE V2.2 Edwards Air Force Base]
WLVE	Vapor Extraction Well [SDSFIE V2.2 Edwards Air Force Base]
WLVM	Vapor Monitoring Well [SDSFIE V2.2 Edwards Air Force Base]
WP	Pumping Well [SDSFIE V2.2 Edwards Air Force Base]
WT	Wetlands/Swamp [SDSFIE V1.95 ERPIMS]
WW	Waste Water [SDSFIE V1.4]

mat_d, pole_mat_d, sign_mat_d

Value	Definition (Notes) [Source]
AL	Aluminum [SDSFIE V1.4]
CEMENT	cement [SDSFIE V1.4]
COMBINATION	combination of materials [SDSFIE V1.4]
CONCRETE	concrete [SDSFIE V1.4]
FIBERGLASS	fiberglass [SDSFIE V1.4]
GLASS	glass [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PLASTIC	plastic [SDSFIE V1.4]
REINFORCONCR	reinforced concrete, metal rods [SDSFIE V1.4]
STEEL	steel [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WOOD	wood [SDSFIE V1.4]

mat_d, pri_matl_d

Value	Definition (Notes) [Source]
AL	Aluminum [SDSFIE V1.4]
BRICK	brick [SDSFIE V1.4]
BUILTUP	builtup [SDSFIE V1.4]
CANVAS	canvas [SDSFIE V1.4]
CARDBOARD	cardboard [SDSFIE V1.4]
CEMENT	cement [SDSFIE V1.4]
CEMENTBLOCK	cement block [SDSFIE V1.4]
CINDERBLOCK	cinder block [SDSFIE V1.4]
CIS	Concrete Cast inSitu/Cast in Place [SDSFIE V2 Tinker Air Force Base]
COMBINATION	combination of materials [SDSFIE V1.4]
COMPO	Composolite [SDSFIE V2 Tinker Air Force Base]
CONCRETBLOCK	concrete block [SDSFIE V1.4]
CONCRETE	concrete [SDSFIE V1.4]
CONCRETEPILE	concrete pile [SDSFIE V1.4]
CONCRT_AND_STEEL	Concrete and Steel. [SDSFIE V2.31 Air Force]
CONCRT_AND_WOOD	Concrete and Wood. [SDSFIE V2.31 Air Force]
EARTHEN	earthen, dirt [SDSFIE V1.4]
FIBERGLASS	fiberglass [SDSFIE V1.4]

GLASS	glass [SDSFIE V1.4]
GLASS_REIN_PLAS	Glass Reinforced Plastic [SDSFIE V2.2 S-57]
GLASSBLOCK	glass block [SDSFIE V1.4]
GRASS	grass [SDSFIE V1.4]
HARD_SURFACED	Hard Surfaced [SDSFIE V2.2 S-57]
HIDES	hides [SDSFIE V1.4]
LOGS	logs [SDSFIE V1.4]
LOOSE_BOULDERS	Loose Boulders [SDSFIE V2.2 S-57]
MASNRY_AND_STEEL	Masonry and Steel. [SDSFIE V2.31 Air Force]
MASONRY	MASONRY [SDSFIE V2.2 S-57]
MASONRY_AND_WOOD	Masonry and Wood. [SDSFIE V2.31 Air Force]
METAL	metal [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PAINTED	Painted [SDSFIE V2.2 S-57]
PLASTIC	plastic [SDSFIE V1.4]
PRECAST	Pre-Cast Concrete [SDSFIE V2 Tinker Air Force Base]
SHEETMETAL	sheet metal [SDSFIE V1.4]
SNOW	snow [SDSFIE V1.4]
STEEL	steel [SDSFIE V1.4]
STEEL_AND_WOOD	Steel and Wood. [SDSFIE V2.31 Air Force]
STEELPILE	steel pile [SDSFIE V1.4]
STONE	stone [SDSFIE V1.4]
STYROFOAM	Styrofoam [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TILE	tile [SDSFIE V1.4]
UNKNOWN	Unknown. [SDSFIE V2.31 Air Force]
UNSURFACED	Unsurfaced [SDSFIE V2.2 S-57]
WOOD	wood [SDSFIE V1.4]
WOODENPILE	wooden pile [SDSFIE V1.4]

material_d

Value	Definition (Notes) [Source]
AL	aluminum [SDSFIE V1.4]
CI	cast iron [SDSFIE V1.4]
GR	graphite [SDSFIE V1.4]
MG	magnesium [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
ZN	zinc [SDSFIE V1.4]

maxcellt_d

Value	Definition (Notes) [Source]
MXC_1_25_1	Standard 1.25" 1 Cell (White - Teardrop) - 1.25" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXC_2_2	Standard 2" 2 Cell (Purple) - 1" Cable OD Max. [SDSFIE V2.5 AIR
MXC_2_3	Standard 2" 3 Cell (Yellow) - 1" Cable OD Max. [SDSFIE V2.5 AIR
MXC_3_3	Standard 3" 3 Cell (Black, Red, or Blue) - 1" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXC_4_3	Standard 4" 3 Cell (Green) - 1.25" Cable OD Max. [SDSFIE V2.5 AIR
MXD_1_25_1	Detachable 1.25" 1 Cell (White - Teardrop) - 1.25" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXD_2_2	Detachable 2" 2 Cell (Purple) - 1" Cable OD Max. [SDSFIE V2.5 AIR
MXD_2_3	Detachable 2" 3 Cell (Yellow) - 1" Cable OD Max. [SDSFIE V2.5 AIR
MXD_3_3	Detachable 3" 3 Cell (Black, Red, or Blue) - 1" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXD_4_3	Detachable 4" 3 Cell (Green) - 1.25" Cable OD Max. [SDSFIE V2.5 AIR
MXP_1_25_1	Plenum 1.25" 1 Cell (White - Teardrop) - 1.25" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXP_2_2	Plenum 2" 2 Cell (Purple) - 1" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXP_2_3	Plenum 2" 3 Cell (Yellow) - 1" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
MXP_3_3	Plenum 3" 3 Cell (Black, Red, or Blue) - 1" Cable OD Max. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

mcnvty_d

Value	Definition (Notes) [Source]
COAX_TO_MM	Coaxial Cable to Multi Mode Fiber. [SDSFIE V2.5 AIR FORCE]
COAX_TO_SM	Coaxial Cable to Single Mode Fiber. [SDSFIE V2.5 AIR FORCE]

OTHER	Other. [SDSFIE V2.5 AIR FORCE]
SM_TO_MM	Single Mode Fiber to Multi Mode Fiber. [SDSFIE V2.5 AIR FORCE]
STP_TO_MM	Shielded Twisted Pair to Multi Mode Fiber. [SDSFIE V2.5 AIR FORCE]
STP_TO_SM	Shielded Twisted Pair to Single Mode Fiber. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
UTP_TO_MM	Unshielded Twisted Pair to Multi Mode Fiber. [SDSFIE V2.5 AIR FORCE]
UTP_TO_SM	Unshielded Twisted Pair to Single Mode Fiber. [SDSFIE V2.5 AIR FORCE]

meas_ty_d

Value	Definition (Notes) [Source]
INSIDE	inside diameter [SDSFIE V1.4]
NOMINAL	nominal or average diameter [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OUTSIDE	outside diameter [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

media_ty_d

Value	Definition (Notes) [Source]
COPPER	Copper. [SDSFIE V2.3 Tinker Air Force Base]
FIBER_OPTIC	Fiber Optics. [SDSFIE V2.31 Air Force]
MICROWAVE	Microwave. [SDSFIE V2.31 Air Force]
MULTI_MODE_FIBER	Multi-Mode Fiber [SDSFIE V2.3 Tinker Air Force Base]
SINGLE_MODE_FIBE	Single Mode Fiber. [SDSFIE V2.3 Tinker Air Force Base]

meter_ty_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

metertyp_d, readout_d

Value	Definition (Notes) [Source]
ANALOG	analog (dial) display [SDSFIE V1.4]
DIGITAL	digital display [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

method_d

Value	Definition (Notes) [Source]
AMP	Amp [SDSFIE V2 Austin and Pitts]
B	B-connectors [SDSFIE V2 Austin and Pitts]
ELAST	Elastomeric Fiber Splice [SDSFIE V2 Austin and Pitts]
FACTORY	Factory Splice [SDSFIE V2 Austin and Pitts]
FUSION	Fusion Fiber Splice [SDSFIE V2 Austin and Pitts]
M	Modular [SDSFIE V2 Austin and Pitts]
MECH	Other Mechanical [SDSFIE V2 Austin and Pitts]
OTHER	Other [SDSFIE V2 Austin and Pitts]
ROTARY	Rotary Fiber Splice [SDSFIE V2 Austin and Pitts]
SL	Scotch Locks (Copper) [SDSFIE V2 Austin and Pitts]
TBD	To Be Determined [SDSFIE V2]
TS	Twist and Solder or Sleeve [SDSFIE V2 Austin and Pitts]
UNKNOWN	Unknown [SDSFIE V2]

mexcellc_d

Value	Definition (Notes) [Source]
BLACK	Black. [SDSFIE V2.5 AIR FORCE]
BLUE	Blue. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
RED	Red. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

mh_size_d

Value	Definition (Notes) [Source]
1X1.5X2	1x1.5x2 Standard Manhole Size as measured in feet [SDSFIE V2.31 Tinker Air Force Base]
3X5X2.5	3x5x2.5 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
3X5X3	3x5x3 Standard Manhole Dimensions in Feet

	[SDSFIE V2.31 Tinker Air Force Base]
3X5X4	3x5x4 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
4X4X3	4x4x3 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
4X4X4	4x4x4 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
4X6X4	4x6x4 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
4X6X6	4x6x6 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
6X10X6	6x10x6 Standard Manhole Dimensions in Feet. [SDSFIE V2.5 AIR
6X12X6	6x12x6 Standard Manhole Dimensions in Feet. [SDSFIE V2.5 AIR
6X4X6	6x4x6 Standard Manhole Dimensions in Feet [SDSFIE V2.31 Tinker Air Force Base]
8X4X7	8x4x7 Standard Manhole Dimensions in Feet. [SDSFIE V2.5 AIR FORCE]
8X6X6	8x6x6 Standard Manhole Dimensions in Feet. [SDSFIE V2.5 AIR FORCE]

mhl_type_d, type_d

Value	Definition (Notes) [Source]
1T1	1T2. [SDSFIE V2.5 AIR FORCE]
4T1	4T2. [SDSFIE V2.5 AIR FORCE]
5T1	5T2. [SDSFIE V2.5 AIR FORCE]
6T1	6T1. [SDSFIE V2.5 AIR FORCE]
6T2	6T2. [SDSFIE V2.5 AIR FORCE]
8T1	8T2. [SDSFIE V2.5 AIR FORCE]
A	A Type. [SDSFIE V2.5 AIR FORCE]
CEMH	controlled environment manhole [SDSFIE V2 Tinker Air Force Base]
HH_TYPE_A	Handhole Type A [SDSFIE V2.31 Tinker Air Force Base]
J3	J3 Manhole. [SDSFIE V2.5 AIR FORCE]
J4	J4 manhole [SDSFIE V2 Tinker Air Force Base]
JC9C	JC9C (2450mm x 1750mm x 1450mm) [SDSFIE V2 Tinker Air Force Base]
L	L Manhole. [SDSFIE V2.5 AIR FORCE]
OTHER	Other [SDSFIE V2 Tinker Air Force Base]
R2A	R2A manhole [SDSFIE V2 Tinker Air Force Base]
T	T Manhole. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined [SDSFIE V2 Tinker Air Force Base]
UNKNOWN	Unknown [SDSFIE V2 Tinker Air Force Base]

mon_typ_d

Value	Definition (Notes) [Source]
A	A type marker. [SDSFIE V2.4]
ACTUAL	Actual. [SDSFIE V2.4 USGS]
B	B type marker. [SDSFIE V2.4]
C	C type marker. [SDSFIE V2.4]
CAP	Cap. [SDSFIE V2.4 REEGIS]
D	D type marker. [SDSFIE V2.4]
E	E type marker. [SDSFIE V2.4]
F	F type marker. [SDSFIE V2.4]
G	G type marker. [SDSFIE V2.4]
INTERMITTENT_CAP	Intermittent cap. [SDSFIE V2.4 REEGIS]
INTERMITTENT_ROD	Intermittent rod. [SDSFIE V2.4 REEGIS]
OTHER	Other. [SDSFIE V2.4 REEGIS]
PIN_ROD_PIPE	Pin, rod, pipe. [SDSFIE V2.4 REEGIS]
REFERENCE	Reference. [SDSFIE V2.4 USGS]

motor_ty_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

mount_d

Value	Definition (Notes) [Source]
CEILING_MOUNTED	Ceiling mounted. [SDSFIE V2.3 Tinker Air Force Base]
PAD_MOUNTED	pad mounted transformer bank [SDSFIE V2.1 FGDC Utilities Classification]
POLE_MOUNTED	pole mounted transformer bank [SDSFIE V2.1 FGDC Utilities
WALL_MOUNTED	Wall mounted [SDSFIE V2.3 Tinker Air Force Base]

mtimzone_d

Value	Definition (Notes) [Source]

CZ	The Contiguous Zone is a U.S. maritime boundary extending to 24 nautical miles from the baseline. [SDSFIE V2.5 NAVFAC]
EEX	The Exclusive Economic Zone is an area beyond and adjacent to the territorial sea. [SDSFIE V2.5 NAVFAC]
FZ	The Fishing Zone area as defined in the Fisheries Management Act 1991 (FMA). [SDSFIE V2.5 NAVFAC]
HS	High Seas, International Waters, meaning the open seas of the world outside the territorial waters of any nation. [SDSFIE V2.5 NAVFAC]
IW	Internal Waters. [SDSFIE V2.5 NAVFAC]
JDZ	Joint Development Zones. [SDSFIE V2.5 NAVFAC]
MZ	Military Zones. [SDSFIE V2.5 NAVFAC]
SZ	Special Zones. [SDSFIE V2.5 NAVFAC]
TS	The Territorial Sea is U.S. maritime boundary extending to 12 nautical miles as measured from the baseline. [SDSFIE V2.5 NAVFAC]

mtr_use_d, reg_use_d

Value	Definition (Notes) [Source]
ACPOWERPANEL	ac power panel [SDSFIE V1.4]
ALARMPULLBOX	alarm pullbox [SDSFIE V1.4]
BATTERY	battery [SDSFIE V1.4]
CAPACITOR	capacitor [SDSFIE V1.4]
CIRCUITBREAK	circuit breaker [SDSFIE V1.4]
COMMERCIAL	commercial service [SDSFIE V1.4]
DCPOWERPANEL	dc power panel [SDSFIE V1.4]
DISTRIBFRAME	distribution frame [SDSFIE V1.4]
DISTRIBPANEL	distribution panel [SDSFIE V1.4]
ELEC_METER	electric meter [SDSFIE V1.4]
ELEC_MOTOR	electric motor [SDSFIE V1.4]
FIELDINTERFC	field interface [SDSFIE V1.4]
GENERATOR	generator [SDSFIE V1.4]
GROUND	ground [SDSFIE V1.4]
INTDISTRFRAM	intermediate distribution frame [SDSFIE V1.4]
JUNCTIONBOX	junction box [SDSFIE V1.4]
LIGHT	light [SDSFIE V1.4]
LOAD_POINT	load point [SDSFIE V1.4]
MAINDISTFRAM	main distribution frame [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
PEDESTAL	pedestal [SDSFIE V1.4]
RECTIFIER	rectifier [SDSFIE V1.4]
RESIDENTIAL	residential service [SDSFIE V1.4]
SPLICE	splice [SDSFIE V1.4]
SWITCH	switch [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TRAFFICSIGNL	traffic signal [SDSFIE V1.4]
TRANSFORMER	transformer [SDSFIE V1.4]
TRFSIGCONBOX	traffic signal control box [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VOLTREGULATE	voltage regulator [SDSFIE V1.4]

name_d

Value	Definition (Notes) [Source]
5	lagoon #5 [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

name_d, src_name_d

Value	Definition (Notes) [Source]
ART_WELL_7	Artisan Well #7 [SDSFIE V1.6]

FEDERALES	Arroyo Federales [SDSFIE V1.6]
LAFOUCHE	Bayou LaFouche [SDSFIE V1.6]
MAGEES_CREEK	Magees Creek [SDSFIE V1.6]
OTHER	other [SDSFIE V1.6]
TBD	to be determined [SDSFIE V1.4]
TYLERTOWN	Tylertown Wellfield [SDSFIE V1.6]
UNKNOWN	unknown [SDSFIE V1.4]

net_aff_d

Value	Definition (Notes) [Source]
ABC	ABC Network. [SDSFIE V2.31 HSIP]
CBL	CBL Network. [SDSFIE V2.31 HSIP]
CBS	CBS Network. [SDSFIE V2.31 HSIP]
FOX	FOX Network. [SDSFIE V2.31 HSIP]
NBC	NBC Network. [SDSFIE V2.31 HSIP]
PBS	PBS Network. [SDSFIE V2.31 HSIP]

netbw_d

Value	Definition (Notes) [Source]
0_3	300 bps - 300 Bits Per Second (Bell 103, ITU-T V.21). [SDSFIE V2.5 AIR FORCE]
1_1_2	1200 bps - 1200 Bits Per Second (Bell 212A, ITU-T V.22). [SDSFIE V2.5 AIR FORCE]
1_14_4	14.4K bps - 14.4K Bits Per Second (ITU-T V.32bis, V.33). [SDSFIE V2.5 AIR FORCE]
1_19_2	19.2K bps - 19.2K Bits Per Second (ITU-T V.34, V.32terbo) [SDSFIE V2.5 AIR FORCE]
1_2_4	2400 bps - 2400 Bits Per Second (ITU-T V.22bis). [SDSFIE V2.5 AIR
1_28_8	28.8K bps - 28.8K Bits Per Second (ITU-T V.34). [SDSFIE V2.5 AIR
1_33_6	33.6K bps - 33.6K Bits Per Second (ITU-T V.34). [SDSFIE V2.5 AIR
1_38_4	38.4K bps - 38.4K Bits Per Second. [SDSFIE V2.5 AIR FORCE]
1_4_8	4800 bps - 4800 Bits Per Second (Bell 208 A/B, ITU-T V.29). [SDSFIE V2.5 AIR FORCE]
1_48_0	48K bps - 48K Bits Per Second. [SDSFIE V2.5 AIR FORCE]
1_56_0	56K bps - 56K Bits Per Second (ITU-T V.9x). [SDSFIE V2.5 AIR FORCE]
1_57_6	57.6K bps - 57.6K Bits Per Second. [SDSFIE V2.5 AIR FORCE]
1_64_0	64K bps - 64K Bits Per Second. [SDSFIE V2.5 AIR FORCE]
1_7_2	7200 bps - 7200 Bits Per Second (ITU-T V.29). [SDSFIE V2.5 AIR FORCE]
1_9_6	9600 bps - 9600 Bits Per Second (ITU-T V.29, V.32, V.22bis). [SDSFIE V2.5 AIR FORCE]
1115_2	115.2K bps - 115.2K Bits Per Second. [SDSFIE V2.5 AIR FORCE]
2_1_544_T_1	1.544 Mbps (T-1, DS-1). [SDSFIE V2.5 AIR FORCE]
2_10_BT	10 Mbps (10 BaseT Copper). [SDSFIE V2.5 AIR FORCE]
2_2_048_E_1	2.048 Mbps (E-1). [SDSFIE V2.5 AIR FORCE]
2_44_736_T_3	44.736 Mbps (T-3, DS-3). [SDSFIE V2.5 AIR FORCE]
2_51_84_OC1	51.84 Mbps (OC1). [SDSFIE V2.5 AIR FORCE]
2100_BTF	100 Mbps (100 BaseT Copper, 100 BaseF Fiber). [SDSFIE V2.5 AIR
2155_52_OC3	155.52 Mbps (OC3c, OC3/STM-1). [SDSFIE V2.5 AIR FORCE]
2622_08_OC12	622.08 Mbps (OC12c, OC12/STM-4). [SDSFIE V2.5 AIR FORCE]
3_1_BTF	1 Gbps (1000 BaseT Copper, 1000 BaseF Fiber). [SDSFIE V2.5 AIR
3_10_BF	10 Gbps (10000 BaseF Fiber). [SDSFIE V2.5 AIR FORCE]
3_2_488_OC48	2.488 Gbps (OC48c, OC48/STM-16). [SDSFIE V2.5 AIR FORCE]
3_39_81_OC768	39.81 Gbps (OC-768c, OC-768/STM-256). [SDSFIE V2.5 AIR FORCE]
3_40_OC48WDM	40 Gbps (OC48 WDM). [SDSFIE V2.5 AIR FORCE]
3_9_952_OC192	9.952 Gbps (OC192c, OC192/STM-64). [SDSFIE V2.5 AIR FORCE]
3160_OC3072	160 Gbps (OC-3072). [SDSFIE V2.5 AIR FORCE]
4_6_4_OC768DWDM	6.4 Tbps (OC-768 DWDM). [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

netprc_d

Value	Definition (Notes) [Source]
ADSL	Asymmetric Digital Subscriber Loop. [SDSFIE V2.5 AIR FORCE]
ATM	Asynchronous Transfer Mode. [SDSFIE V2.5 AIR FORCE]
DSL	Digital Subscriber Loop. [SDSFIE V2.5 AIR FORCE]
ETHERNET	Ethernet. [SDSFIE V2.5 AIR FORCE]
FDDI	Fiber Distributed Data Interface. [SDSFIE V2.5 AIR FORCE]
FIBERCHANNEL	Fiber Channel. [SDSFIE V2.5 AIR FORCE]
FRAMERELAY	Frame Relay. [SDSFIE V2.5 AIR FORCE]
ISDN	Integrated Services Digital Network. [SDSFIE V2.5 AIR FORCE]

OTHER	Other. [SDSFIE V2.5 AIR FORCE]
SONET	Synchronous Optical Network. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
TOKENRING	Token Ring. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

node_typ_d

Value	Definition (Notes) [Source]
DBGROUP	Virtual Ductbank Group (not drawn). [SDSFIE V2.5 AIR FORCE]
DUCT_OPENING	Duct or Inner duct Opening. [SDSFIE V2.5 AIR FORCE]
DUCT2DIRECT	Duct to/from a Direct-Buried Path. [SDSFIE V2.5 AIR FORCE]
GENERAL	General Transition (i.e. PVC to PE duct). [SDSFIE V2.5 AIR FORCE]
HOLE	Vault Vertical Hole. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
RISER	Vertical pipe or covering. [SDSFIE V2.5 AIR FORCE]

nozzl_ty_d

Value	Definition (Notes) [Source]
OVERWING	Jumbo VASI with a TCH to accommodate long-bodied or jumbo aircraft. [SDSFIE V2.4 Air Force]
SINGLE_PT	None. [SDSFIE V2.4 Air Force]
SINGLEPT_OVRWING	Not Applicable. [SDSFIE V2.4 Air Force]
UNKNOWN	PVASI (Pulsating VASI). [SDSFIE V2.4 Air Force]

ops_typ_d

Value	Definition (Notes) [Source]
AROT	air refueling operations track [SDSFIE V1.4]
BDP	butterfly dart pattern [SDSFIE V1.4]
CTR	conventional air traffic route [SDSFIE V1.4]
DATGRANG	dual air-to-ground range flight pattern [SDSFIE V1.4]
DZFP	drop zone flight pattern [SDSFIE V1.4]
FAI	Federal Aeronautics International (FAI) course [SDSFIE V1.4]
FIGURE8DP	figure 8 dart pattern [SDSFIE V1.4]
GAEE	general aviation entry/exit route [SDSFIE V1.4]
HLAEE	helicopter/light aircraft entry/exit route [SDSFIE V1.4]
HLP	helicopter landing pattern [SDSFIE V1.4]
JET	Jet Route. [SDSFIE V2.22 AFCEE]
LASCC	low altitude speed calibration course [SDSFIE V1.4]
LLMTR	low level military training route [SDSFIE V1.4]
LOWLIF_DRG	low lift over drag approach route [SDSFIE V1.4]
MBTR	Main Base traffic route [SDSFIE V1.4]
NBTR	North Base traffic route [SDSFIE V1.4]
NRTP	North Range traffic pattern [SDSFIE V1.4]
SIDR	standard instrument departure route [SDSFIE V1.4]
SRTP	South Range traffic pattern [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TFBP	tower flyby pattern [SDSFIE V1.4]
TFRR	terrain following radar route [SDSFIE V1.4]
TR	transit route [SDSFIE V1.4]

p_class_d

Value	Definition (Notes) [Source]
CLASS_1	Class 1, MHBL 4500, Minimum Top Circumference 27 [SDSFIE V1.75]
CLASS_2	Class 2, MHBL 3700, Minimum Top Circumference 25 [SDSFIE V1.75]
CLASS_3	Class 3, MHBL 3000, Minimum Top Circumference 23 [SDSFIE V1.75]
CLASS_4	Class 4, MHBL 2400, Minimum Top Circumference 21 [SDSFIE V1.75]
CLASS_5	Class 5, MHBL 1900, Minimum Top Circumference 19 [SDSFIE V1.75]
CLASS_6	Class 6, MHBL 1500, Minimum Top Circumference 17 [SDSFIE V1.75]
CLASS_7	Class 7, MHBL 1200, Minimum Top Circumference 15 [SDSFIE V1.75]

parc_use_d

Value	Definition (Notes) [Source]
ADMINISTRATE	administration [SDSFIE V1.4]
AGRIFIELD	agricultural field [SDSFIE V1.4]
AIRFLDCLEAR	airfield clearance [SDSFIE V1.4]
AIRFLDPAVEMT	airfield pavement [SDSFIE V1.4]
AIROPSMAINTN	aircraft operations and maintenance [SDSFIE V1.4]
AMMOSTORAGE	ammunition storage [SDSFIE V1.4]
BEQ	bachelor enlisted quarters [SDSFIE V1.4]
BOQ	bachelor officer quarters [SDSFIE V1.4]
CIV_AEROPLANE_AP	civil aeroplane airport [SDSFIE V2.2 S-57]

CIVIL_HELIPORT	CIVIL_HELIPORT [SDSFIE V2.2 S-57]
COMMCOMMERCE	community commercial [SDSFIE V1.4]
COMMFACILITY	community facility [SDSFIE V1.4]
COMMSERVICE	community service [SDSFIE V1.4]
COMMSERVICES	commercial services [SDSFIE V1.4]
CROP_PRODUCT	crop production [SDSFIE V1.4]
ELECOMBTTEST	electronic combat ground test [SDSFIE V1.4]
EMERGENCY_AFIELD	emergency airfield [SDSFIE V2.2 S-57]
ENLISTBARRAK	enlisted barracks [SDSFIE V1.4]
EXPLOSIVSAFZ	munitions/explosive safety hazard zone [SDSFIE V1.4]
FAMILYHOUSNG	family housing [SDSFIE V1.4]
FARM_CROPS	farming, crops [SDSFIE V1.4]
FARM_GRAZING	farming, grazing [SDSFIE V1.4]
FARM_NUTREE	farming, nuts [SDSFIE V1.4]
FARM_ORCHARD	farming, orchard fruit [SDSFIE V1.4]
FARM_VINEYRD	farming, vineyard [SDSFIE V1.4]
FLOW_EASEMENT	Flowage Easement [SDSFIE V1.9 REEGIS]
FLTLIN_RDTE	flight line/research-development-testing-evaluation [SDSFIE V1.4]
FLYWAY	flyway [SDSFIE V1.4]
FOREST	forest [SDSFIE V1.4]
FUELS_AREA	fuels area [SDSFIE V1.4]
GLIDER_AIRFIELD	GLIDER_AIRFIELD [SDSFIE V2.2 S-57]
GOVERNMENTAL	governmental [SDSFIE V1.4]
GRANT	grant [SDSFIE V1.4]
GRAZING_AREA	grazing area [SDSFIE V1.4]
HAY_PRODUCE	hay production area [SDSFIE V1.4]
HELIPORT	heliport [SDSFIE V1.4]
HISTORIC	historic [SDSFIE V1.4]
HOUSEACCOMPD	housing accompanied [SDSFIE V1.4]
HOUSUNACOMPD	housing unaccompanied [SDSFIE V1.4]
HQ	headquarters, HQ [SDSFIE V1.4]
HUNTING_AREA	hunting area [SDSFIE V1.4]
INSTRUCOMMUN	instrumentation/communication [SDSFIE V1.4]
LAND_RESTORE	land restoration [SDSFIE V1.4]
LEASED_LAND	leased land [SDSFIE V1.4]
LEVEE	Levee [SDSFIE V1.9 REEGIS]
MAINTENANCE	maintenance [SDSFIE V1.4]
MANUF_PRODUC	manufacturing and production [SDSFIE V1.4]
MEDIC_DENTAL	medical/dental [SDSFIE V1.4]
MIL_AEROPLANE_AP	military aeroplane airport [SDSFIE V2.2 S-57]
MILITARY	military [SDSFIE V1.4]
MILITARY_HELIPOR	MILITARY_HELIPORT [SDSFIE V2.2 S-57]
MINING	mining [SDSFIE V1.4]
MOBILE_HOME	Mobile Home. [SDSFIE V2.4 USGS]
NOISEOVRFLGT	noise/overflight [SDSFIE V1.4]
OPENBUFFZONE	open space/buffer zone [SDSFIE V1.4]
OPERATIONS	operations [SDSFIE V1.4]
OUTDOOR_REC	outdoor recreation [SDSFIE V1.4]
PARCEL	parcel [SDSFIE V1.4]
PASTURE	pasture [SDSFIE V1.4]
PRIVATE	private [SDSFIE V1.4]
RAILROAD	railroad [SDSFIE V1.4]
RANGE	range [SDSFIE V1.4]
RDTE	research, development, testing, and evaluation [SDSFIE V1.4]
REAL_ESTATE	real estate [SDSFIE V1.4]
REC_CENTER	recreation center [SDSFIE V1.4]
RECREATIONAL	recreational [SDSFIE V1.4]
RESIDEOTHER	residence, other [SDSFIE V1.4]
RESIDPRIMARY	residence, primary [SDSFIE V1.4]
ROAD	road [SDSFIE V1.4]
SANITATION	sanitation [SDSFIE V1.4]
SCHOOL	school [SDSFIE V1.4]
SMALL_PLANE_AFLD	small planes airfield [SDSFIE V2.2 S-57]
SPACEPORT	space port [SDSFIE V1.4]
SUPPLY_STORE	supply/storage [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TEST_RANGE	test range [SDSFIE V1.4]
TIMBER	timber [SDSFIE V1.4]
TRAINING	training [SDSFIE V1.4]
TROOP_HOUSE	troop housing [SDSFIE V1.4]

TROOPSUPPORT	troop support [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UTILCORRIDOR	utilities corridor [SDSFIE V1.4]
UTILITY	utility [SDSFIE V1.4]
VOQ	visiting officers quarters [SDSFIE V1.4]
WATER	water [SDSFIE V1.4]

park_use_d

Value	Definition (Notes) [Source]
CENTRALIZED	an area for temporary vehicle parking due to heightened security levels. [SDSFIE V2.3 NAVAIR]
COMBINED	Parking is for multiple facilities. [SDSFIE V1.4]
HOSPITAL	Parking is for medical or hospital facilities. [SDSFIE V1.4]
HUNTING	Hunting [SDSFIE V1.9]
OFFICE_WORK	Parking is for office or work facilities [SDSFIE V1.4]
RECREATION	Parking is for recreation facilities. [SDSFIE V1.4]
SHOPPING	Parking is for shopping facilities. [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

path_cnt_d

Value	Definition (Notes) [Source]
3	Fiber and Copper (twisted-pair). [SDSFIE V2.5 AIR FORCE]
4	Coax. [SDSFIE V2.5 AIR FORCE]
5	Coax and Fiber. [SDSFIE V2.5 AIR FORCE]
6	Coax and Copper (twisted-pair). [SDSFIE V2.5 AIR FORCE]
7	Coax, Copper (twisted-pair), Fiber. [SDSFIE V2.5 AIR FORCE]

path_typ_d

Value	Definition (Notes) [Source]
AERIAL	Above ground path between, poles, towers or buildings. [SDSFIE V2.5 AIR FORCE]
CABLE_BRIDGE	Bridge only used for cables. [SDSFIE V2.5 AIR FORCE]
CABLE_TROUGH	Pathway on top of ground for cables. [SDSFIE V2.5 AIR FORCE]
DIRECT_BURIED	Below ground path where soil has direct contact with cable. [SDSFIE V2.5 AIR FORCE]
DUCT	Single communications duct. [SDSFIE V2.5 AIR FORCE]
DUCTBANK	A container for multiple ducts. [SDSFIE V2.5 AIR FORCE]
ROAD_CROSSING	A duct for cables, usually under a road. [SDSFIE V2.5 AIR FORCE]
STUB_OUT	Short duct used with manholes and vaults. [SDSFIE V2.5 AIR FORCE]

percent_d

Value	Definition (Notes) [Source]
0	Unknown. [SDSFIE V2.5 NAVFAC]
1	Bare. [SDSFIE V2.5 NAVFAC]
2	Sparse. [SDSFIE V2.5 NAVFAC]
3	Patchy. [SDSFIE V2.5 NAVFAC]
4	Continuous. [SDSFIE V2.5 NAVFAC]

phas_ltr_d

Value	Definition (Notes) [Source]
A	A phase [SDSFIE V1.4]
AB	AB phase [SDSFIE V1.4]
ABC	ABC phase [SDSFIE V1.4]
AC	AC phase [SDSFIE V1.4]
B	B phase [SDSFIE V1.4]
BC	BC phase [SDSFIE V1.4]
C	C phase [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

phase_1_d, phase_2_d

Value	Definition (Notes) [Source]
A	1 [SDSFIE V1.9]
B	2 [SDSFIE V1.9]
C	3 [SDSFIE V1.9]

phn_typ_d

Value	Definition (Notes) [Source]
COURTESY	Courtesy [SDSFIE V2 Tinker Air Force Base]
EMERGENCY	Emergency [SDSFIE V2]
EXTENSION	Extension [SDSFIE V2 Tinker Air Force Base]

HOTLINE	Hotline [SDSFIE V2 Tinker Air Force Base]
OTHER	Other [SDSFIE V2]
PAYPHONE	Payphone [SDSFIE V2 Tinker Air Force Base]
TBD	To Be Determined [SDSFIE V2]
UNKNOWN	Unknown [SDSFIE V2]

piplty_d

Value	Definition (Notes) [Source]
ABOVE_GROUND	above ground [SDSFIE V1.8 USGS]
ELEVATED	elevated [SDSFIE V1.8 USGS]
SUBMERGED	submerged [SDSFIE V1.8 USGS]
TBD	to be determined [SDSFIE V1.8 USGS]
UNDERGROUND	underground [SDSFIE V1.8 USGS]
UNKNOWN	unknown [SDSFIE V1.8 USGS]

plnt_typ_d

Value	Definition (Notes) [Source]
EPIPHYTES	epiphyte-aerophyte-aparasitic-Spanish moss [SDSFIE V1.4]
FORBS	forbs-weed or broadleaf herb other than grass [SDSFIE V1.4]
GRASSES	grass-moncotyledonous plant, family Gramineae [SDSFIE V1.4]
HERBS	herb-fleshy stemmed, annual plant [SDSFIE V1.4]
LIANAS	liana-woody or herbaceous climber with roots in the ground [SDSFIE V1.4
SAPROPHYTE	saprophyte-plant that lives on decaying or organic matter [SDSFIE V1.4]
SHRUBS	shrub-low woody plant having several stems-bush [SDSFIE V1.4]
SUCCULENTS	succulent-plant with juicy, fleshy tissue [SDSFIE V1.4]
TREES	perennial woody plant with a single trunk [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

pol_src_d

Value	Definition (Notes) [Source]
AGRI_OTHER	Other type of Agricultural activity or area. [SDSFIE V2]
AIRCRAFT_CRASH	Aircraft crash site. [SDSFIE V2.3 CH2MHILL]
BIO_CHEM_WARFARE	An area or site where biological or chemical warfare materials have been manufactured, stored, used, or disposed of. [SDSFIE V2]
BURIAL_PIT	Burial Pit. [SDSFIE V2.5 AIR FORCE]
CONSTRUCTION	Area of past or present construction activity. [SDSFIE V2]
CROPLAND	Agricultural Cropland. [SDSFIE V2]
FOREST	Forested area. [SDSFIE V2]
FUEL_TANK	A tank (either above or below ground) used to store fuel. [SDSFIE V2]
GRASSLAND	Area used to grow grass or grain to be harvested for livestock or human consumption. [SDSFIE V2]
HAZWASTE_DIS	An area or site where hazardous waste has been buried or disposed of. [SDSFIE V2]
INDUSTRIAL	An industrial activity or area. [SDSFIE V2]
INDUSTRIAL_TANK	Storage tank (either above or below ground) used to store chemicals, hazardous materials, or hazardous waste. [SDSFIE V2]
LANDFILL	Area or site of a past or present solid waste landfill. [SDSFIE V2]
MINING	Present or past mining operations [SDSFIE V2]
MUNITIONS	Area or site used for testing, training, or disposal of conventional munitions. [SDSFIE V2]
ORCHARD	Area where fruit and nut trees are grown. [SDSFIE V2]
PASTURE	Pasture or area where grass is grown for the purpose of feeding domestic animals (e.g., cattle, horses, sheep, swine). [SDSFIE V2]
RADIOACTIVE	An area or site where radioactive materials or waste have been manufactured, stored, used, or disposed of. [SDSFIE V2]
SPILL_LAND	An uncontrolled release or spill occurring on land. [SDSFIE V2]
SPILL_WATER	An uncontrolled release or spill occurring on a water body (e.g., river, stream, lake, ocean). [SDSFIE V2]
STOCKYARD	An area where domestic animals (e.g., cattle, sheep, swine, or horses) are kept temporarily for slaughter, market, or shipping. [SDSFIE V2]
TANK_FARM	An area consisting of several storage tanks (either above or below ground) which contain fuel or chemicals regulated by environmental regulatory authorities. [SDSFIE V2]
TBD	to be determined [SDSFIE V1.4]
URBAN	An urban or municipal area. [SDSFIE V2]
WASTEWATER_DOM	Wastewater originating from a residential or urban area. [SDSFIE V2]
WASTEWATER_IND	Wastewater originating from an industry or industrial complex. [SDSFIE V2

poll_typ_d

Value	Definition (Notes) [Source]
CARBON_MONOXIDE	The measured pollutant is Carbon Monoxide (CO).

	[SDSFIE V2.22 EMA]
DISCHARGE_GWATER	Uncontrolled release or non-permitted discharge to groundwater. [SDSFIE
DISCHARGE_LAND	Uncontrolled release or non-permitted discharge originating on land.
DISCHARGE_WATER	Uncontrolled or non-permitted release or discharge to a water body.
LEAD	The measured pollutant is Lead (Pb). [SDSFIE V2.22 EMA]
NITROGEN_DIOXIDE	The measured pollutant is Nitrogen Dioxide (NO2). [SDSFIE V2.22 EMA]
OZONE	The measured pollutant is Ozone (O3). [SDSFIE V2.22 EMA]
PARTICULATE_MATT	The measured pollutant is Particulate Matter (PM). [SDSFIE V2.22 EMA]
SPILL_LAND	Spill originating or occurring on land. [SDSFIE V2.22]
SPILL_WATER	Spill occurring on a water body (e.g., river, stream, lake or ocean).
SULFUR_DIOXIDE	The measured pollutant is Sulfur Dioxide (SO2). [SDSFIE V2.22 EMA]
WASTEWATER	Waste Water [SDSFIE V2 REEGIS]

polr_typ_d

Value	Definition (Notes) [Source]
CLOCKWISE	Installed with the plane of polarization rotating right-hand circular. [SDSFIE V2.5 AIR FORCE]
COUNT_CLOCKWISE	Installed with the plane of polarization rotating left-hand circular. [SDSFIE V2.5 AIR FORCE]
HORIZONTAL	Installed with the plane of polarization parallel to earth's surface. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
VERTICAL	Installed with the plane of polarization perpendicular to earth's surface. [SDSFIE V2.5 AIR FORCE]

pos_acc_d

Value	Definition (Notes) [Source]
EXCELLENT	Excellent (0 to 50 feet). [SDSFIE V2.1 DOT - NPMS]
GOOD	Good (301 to 500 feet). [SDSFIE V2.1 DOT - NPMS]
POOR	Poor (501 to 1000 feet). [SDSFIE V2.1 DOT - NPMS]
UNKNOWN	Unknown [SDSFIE V2.1 DOT - NPMS]
VERY_GOOD	Very Good (51 to 300 feet). [SDSFIE V2.1 DOT - NPMS]

power_d

Value	Definition (Notes) [Source]
AC	Alternating Current [SDSFIE V2.3 Tinker Air Force Base]
DC	Direct Current [SDSFIE V2.3 Tinker Air Force Base]

pri_volt_d, pwr_req_d, sec_volt_d,

Value	Definition (Notes) [Source]
110V	110 volts [SDSFIE V1.4]
115000V	115,000 volts [SDSFIE V1.4]
115V	115 volts [SDSFIE V1.4]
120_240V	120/240 volts [SDSFIE V1.4]
12000V	12,000 volts [SDSFIE V1.4]
12000Y_6930V	12,000Y/6,930 volts [SDSFIE V1.4]
120V	120 volts [SDSFIE V1.4]
12470V	12,470 volts [SDSFIE V1.4]
12470Y_7200V	12,470Y/7,200 volts [SDSFIE V1.4]
12V	12 volts [SDSFIE V1.4]
13200V	13,200 volts [SDSFIE V1.4]
13200Y_7620V	13,200Y/7,620 volts [SDSFIE V1.4]
138000V	138,000 volts [SDSFIE V1.4]
15000V	15,000 volts [SDSFIE V1.4]
15930V	15,930 volts [SDSFIE V1.4]
19920V	19,920 volts [SDSFIE V1.4]
20780V	20,780 volts [SDSFIE V1.4]
20780Y_12000V	20,780Y/12,000 volts [SDSFIE V1.4]
208V	208 volts [SDSFIE V1.4]
208Y_120V	208Y/120 volts [SDSFIE V1.4]
220V	220 volts [SDSFIE V1.4]
22860V	22,860 volts [SDSFIE V1.4]
22860Y_13200V	22,860Y/13,200 volts [SDSFIE V1.4]
230000V	230,000 volts [SDSFIE V1.4]

230V	230 volts [SDSFIE V1.4]
2400V	2,400 volts [SDSFIE V1.4]
240V	240 volts [SDSFIE V1.4]
24940V	24,940 volts [SDSFIE V1.4]
24940Y_14400V	24,940Y/14,400 volts [SDSFIE V1.4]
24V	24 volts [SDSFIE V1.4]
27600V	27,600 volts [SDSFIE V1.4]
27600Y_15930V	27,600Y/15,930 volts [SDSFIE V1.4]
277V	277 volts [SDSFIE V1.4]
345000V	345,000 volts [SDSFIE V1.4]
34500V	34,500 volts [SDSFIE V1.4]
34500Y_19920V	34,500Y/19,920 volts [SDSFIE V1.4]
400V	400 volts [SDSFIE V1.4]
4160V	4,160 volts [SDSFIE V1.4]
4160Y_2400V	4,160Y/2400 volts [SDSFIE V1.4]
43800V	43,800 volts [SDSFIE V1.4]
460V	460 volts [SDSFIE V1.4]
4800V	4,800 volts [SDSFIE V1.4]
480V	480 volts [SDSFIE V1.4]
480Y_277V	480Y/277 volts [SDSFIE V1.4]
48V	48 volts [SDSFIE V1.4]
500000V	500,000 volts [SDSFIE V1.4]
5000V	5,000 volts [SDSFIE V1.4]
52V	52 volts [SDSFIE V1.4]
600V	600 volts [SDSFIE V1.4]
69000V	69,000 volts [SDSFIE V1.4]
7200V	7,200 volts [SDSFIE V1.4]
7620V	7,620 volts [SDSFIE V1.4]
765000V	765,000 volts [SDSFIE V1.4]
7970V	7,970 volts [SDSFIE V1.4]
8320V	8,320 volts [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

prod_typ_d

Value	Definition (Notes) [Source]
CHW	chilled water: water less than 45 deg. F. [SDSFIE V1.4]
HTW_CHW	high temp - chilled water [SDSFIE V1.4]
LTW	low temperature water: water less than 250 deg. F. [SDSFIE V1.4]
LTW_CHW	low temp - chilled water [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
S	steam [SDSFIE V1.4]
S_CHW	steam - chilled water [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

prodct_d

Value	Definition (Notes) [Source]
BAUXITE	BAUXITE [SDSFIE V2.2 S-57]
CEMENT	CEMENT [SDSFIE V2.2 S-57]
CHEMICALS	CHEMICALS [SDSFIE V2.2 S-57]
COAL	COAL [SDSFIE V2.2 S-57]
COKE	COKE [SDSFIE V2.2 S-57]
DRINKING_WATER	DRINKING_WATER [SDSFIE V2.2 S-57]
GAS	GAS [SDSFIE V2.2 S-57]
GRAIN	GRAIN [SDSFIE V2.2 S-57]
IRON_INGOTS	IRON_INGOTS [SDSFIE V2.5 S-57CENTER]
LIQUIF_PETROGAS	LIQUIFIED_PETROLEUM_GAS [SDSFIE V2.2 S-57]
LIQUIFIED_NATGAS	LIQUIFIED_NATURAL_GAS [SDSFIE V2.2 S-57]
MILK	MILK [SDSFIE V2.2 S-57]
OIL	OIL [SDSFIE V2.2 S-57]
ORE	ORE [SDSFIE V2.2 S-57]
SALT	SALT [SDSFIE V2.2 S-57]
SAND	SAND [SDSFIE V2.2 S-57]
SAWDUST_WOODCHIP	SAWDUST_WOODCHIPS [SDSFIE V2.2 S-57]
SCRAP_METAL	SCRAP_METAL [SDSFIE V2.2 S-57]
STONE	STONE [SDSFIE V2.2 S-57]
TIMBER	TIMBER [SDSFIE V2.2 S-57]
WATER	WATER [SDSFIE V2.2 S-57]

WINE	WINE [SDSFIE V2.2 S-57]

pstatus_d

Value	Definition (Notes) [Source]
ACTIVE	active [SDSFIE V1.8 REEGIS]
CLOSED	closed [SDSFIE V1.9]
CLOSED_NF	Non-Federal closed range. [SDSFIE V2.4 Army]
HISTORIC	A range that no longer exists, but is not closed, transferred, or transferring. [SDSFIE V2.4 Army]
INACTIVE	inactive [SDSFIE V1.8 REEGIS]
TBD	TBD [SDSFIE V1.9]
TRANSFERRED	transferred [SDSFIE V1 9]
TRANSFERRED_NF	Non-Federal transferred range. [SDSFIE V2.4 Army]
TRANSFERRING	transferring [SDSFIE V1.9]
TRANSFERRING_NF	Non-Federal transferring range. [SDSFIE V2.4 Army]
UNKNOWN	unknown [SDSFIE V1.9]

ptz_typ_d

Value	Definition (Notes) [Source]
FIXED_FIXED	Fixed position, Fixed lens. [SDSFIE V2.5 AIR FORCE]
FIXED_ZOOM	Fixed position, Zoom lens. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
PT_FIXED	Pan and Tilt capabilities with a Fixed lens. [SDSFIE V2.5 AIR FORCE]
PT_ZOOM	Pan and Tilt capabilities with a Zoom lens. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

pwsource_d

Value	Definition (Notes) [Source]
GROUNDWATER	Water source originates from ground water. [SDSFIE V2 AWWA]
PUR_GROUNDWATER	Source of water supply originates from ground water, but is purchased from another water utility. [SDSFIE V2 AWWA]
PUR_SURFACEWATER	Source of water supply originates from a surface water body, but is purchased from another water utility. [SDSFIE V2 AWWA]
SURFACE_WATER	Source of water supply originates from a surface water body, e.g., a river, lake, or stream. [SDSFIE V2 AWWA]

rad_typ_d

Value	Definition (Notes) [Source]
HF	High Frequency. [SDSFIE V2.3 Tinker Air Force Base]
LF	Low Frequency. [SDSFIE V2.3 Tinker Air Force Base]
UHF	Ultra High Frequency. [SDSFIE V2.3 Tinker Air Force Base]
VHF	Very High Frequency. [SDSFIE V2.3 Tinker Air Force Base]

radio_ty_d

Value	Definition (Notes) [Source]
BASE_STATION	Base Station Type. [SDSFIE V2.3 Tinker Air Force Base]
MOBILE	Mobile Type. [SDSFIE V2.3 Tinker Air Force Base]
PORTABLE	Portable Type. [SDSFIE V2.3 Tinker Air Force Base]
REPEATOR	Repeator Type. [SDSFIE V2.3 Tinker Air Force Base]

reg_type_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VOLTREG_1	1-phase, 7.5-19.9 Kvs, 50-418 amps, 7.6-19.9 Kva, metered or digital parameters, multiple microprocessor controlled step-voltage regulator. [SDSFIE V1.4]
VOLTREG_3	3-phase, 13-34 Kvs, 220-445 amps, 500-2670 Kva, metered or digital parameters, multiple microprocessor controlled step-voltage regulator. [SDSFIE V1.4]

rel_typ_d

Value	Definition (Notes) [Source]
FINITESTEADY	finite - steady [SDSFIE V1.4]
FINITEVARIABLE	finite - variable [SDSFIE V1.4]
INFINITESTEADY	infinite - steady [SDSFIE V1.4]
INFINITVARIABLE	infinite - variable [SDSFIE V1.4]
INSTANTLY	instantaneous [SDSFIE V1.4]
SLOW_RELEASE	slow release [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]

UNKNOWN	unknown [SDSFIE V1.4]

rem_urg_d

Value	Definition (Notes) [Source]
CRITICAL	Critical [SDSFIE V1.8]
ESSENTIAL	Essential [SDSFIE V1.8]
HIGH	High. [SDSFIE V2.4 Project 03.019]
LOW	Low. [SDSFIE V2.4 Project 03.019]
MEDIUM	Medium. [SDSFIE V2.4 Project 03.019]
N_A	Not applicable [SDSFIE V1.8]
NON_CRITICAL	Non-Critical [SDSFIE V1.8]
TBD	to be determined [SDSFIE V1.4]

res_typ_d

Value	Definition (Notes) [Source]
LAGOON	lagoon [SDSFIE V1.4]
LAKE	lake [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
POND	pond [SDSFIE V1.4]
TANK	tank [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

restrict_d

Value	Definition (Notes) [Source]
OTHER	other [SDSFIE V1.9]
TBD	To be determined [SDSFIE V1.9]
UNKNOWN	unknown [SDSFIE V1.9]

rock_cnd_d

Value	Definition (Notes) [Source]
HIGH	high dry strength/toughness [SDSFIE V1.4]
LOW	low dry strength/toughness [SDSFIE V1.4]
MEDIUM	medium dry strength/toughness [SDSFIE V1.4]
NONE	very weak, no strength, probably should class as soil [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VERYHIGH	very high dry strength/toughness [SDSFIE V1.4]

rou1_typ_d, rou2_typ_d, rou3_typ_d

Value	Definition (Notes) [Source]
COUNTY	County Highway/Road/Route or Secondary State Route [SDSFIE V1.8
FEDERAL	Federal control not otherwise classified as an Interstate or US Highway, but located on Federal Property installations [SDSFIE V1.8 USGS]
INTERSTATE	Interstate Highway [SDSFIE V1.8 USGS]
INTERSTATE_BL	Interstate Highway (Business Loop) [SDSFIE V1.8 USGS]
INTERSTATE_BS	Interstate Highway (Business Spur) [SDSFIE V1.8 USGS]
LOCAL	City or other local jurisdiction beneath the County level [SDSFIE V1.8
OTHER	Otherwise defined road [SDSFIE V1 8 USGS]
PRIVATE	Privately owned/maintained [SDSFIE V1.8 USGS]
STATE	(Primary) State Highway/Road/Route [SDSFIE V1.8 USGS]
UNKNOWN	Unknown owner/maintainer [SDSFIE V1.8 USGS]
US_HWY	US Highway. Includes Alternate, Business, and Bypass US Highways. [SDSFIE V1.8 USGS]

scrn_ty_d

Value	Definition (Notes) [Source]
HORZBAR	horizontal bar/pipe [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VERTBAR	vertical bar/pipe [SDSFIE V1.4]

severity_d

Value	Definition (Notes) [Source]
EPI	Environmental Practice Issue. [SDSFIE V1.4]
MAJOR	Major violation of an environmental law or regulation which will result, or has resulted, in fines and/or civil penalties. [SDSFIE V1.4]
MEDIUM	Medium violation of an environmental law or regulation which could result in fines and/or civil penalties if not quickly resolved. [SDSFIE V1.4]
MINOR	Minor violation of an environmental law or regulation which does not

	result in a fine and/or civil penalty. [SDSFIE V1.4]
TBD	to be determined. [SDSFIE V1.4]
UNKNOWN	Unknown as to what extent an environmental law or regulation has occurred. [SDSFIE V1.4]

shr_typ_d

Value	Definition (Notes) [Source]
MHW	The average of all observed high tides for the shoreline. [SDSFIE V1.6]
MLLW	The average height of the lower low tides observed over a specific interval for the shoreline. [SDSFIE V1.6]
MLW	The average of all observed low tides for the shoreline. [SDSFIE V1.6]

size_d, vlv_dia_d, vlv_size_d

Value	Definition (Notes) [Source]
0.25	1/4 inch (0.25 inch) [SDSFIE V2]
0.5	1/2 inch (0.5 inch) [SDSFIE V2]
0.75	3/4 inch (0.75 inch) [SDSFIE V2]
1	1inch (1.0 inch) [SDSFIE V2]
1.25	1 1/4 inch (1.25 inches) [SDSFIE V2]
1.5	1 1/2 inch (1.5 inches) [SDSFIE V2]
1.75	1 3/4 inch (1.75 inches) [SDSFIE V2]
10	10 inch (10.0 inches) [SDSFIE V2]
12	12 Inch (12.0 inches) [SDSFIE V2]
14	14 Inch (14.0 inches) [SDSFIE V2 Cherry Point]
15	15 Inch (15.0 inches) [SDSFIE V2 Cherry Point]
16	16 Inch (16.0 inches) [SDSFIE V2 Cherry Point]
18	18 Inch (18.0 inches) [SDSFIE V2 Cherry Point]
2	2 inch (2.0 inches) [SDSFIE V2]
2.5	2 1/2 inch (2.5 inches) [SDSFIE V2]
20	20 Inch (20.0 inches) [SDSFIE V2]
21	21 Inch (21.0 inches) [SDSFIE V2 Cherry Point]
22	22 Inch (22.0 inches) [SDSFIE V2]
24	24 Inch (24.0 inches) [SDSFIE V2 Cherry Point]
28	28 Inch (28.0 inches) [SDSFIE V2]
3	3 inch (3.0 inches) [SDSFIE V2]
30	30 Inch (30.0 inches) [SDSFIE V2 Cherry Point]
32	32 Inch (32.0 inches) [SDSFIE V2]
36	36 Inch (36.0 inches) [SDSFIE V2]
4	4 inch (4.0 inches) [SDSFIE V2]
42	42 Inch (42.0 inches) [SDSFIE V2]
48	48 Inch (48.0 inches) [SDSFIE V2]
5	5 Inch (5.0 inches) [SDSFIE V2 Cherry Point]
6	6 inch (6.0 inches) [SDSFIE V2]
60	60 Inch (60.0 inches) [SDSFIE V2]
64_INCH	64 Inch (64.0 inches). [SDSFIE V2.5 AIR FORCE]
65_INCH	65 Inch (65.0 inches). [SDSFIE V2.5 AIR FORCE]
66_INCH	66 Inch (66.0 inches). [SDSFIE V2.5 AIR FORCE]
67_INCH	67 Inch (67.0 inches). [SDSFIE V2.5 AIR FORCE]
72	72 Inch (72.0 inches) [SDSFIE V2]
8	8 inch (8.0 inches) [SDSFIE V2]
84_INCH	84 Inch (84.0 inches). [SDSFIE V2.5 AIR FORCE]
85_INCH	85 Inch (84.0 inches). [SDSFIE V2.5 AIR FORCE]
OTHER	other [SDSFIE V1.4]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

soil_cdn_d, soil_cnd_d

Value	Definition (Notes) [Source]
FIRM	firm [SDSFIE V1.4]
HARD	hard [SDSFIE V1.4]
MEDIUMFIRM	medium firm [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SOFT	soft [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VERYHARD	very hard [SDSFIE V1.4]
VERYSOFT	very soft [SDSFIE V1.4]

soil_ero_d

Value	Definition (Notes) [Source]
0.02	0.02 [SDSFIE V1.7 FGDC Soils Classification]

0.05	0.05 [SDSFIE V1.7 FGDC Soils Classification]
0.10	0.10 [SDSFIE V1.7 FGDC Soils Classification]
0.17	0.17 [SDSFIE V1.7 FGDC Soils Classification]
0.20	0.20 [SDSFIE V1.7 FGDC Soils Classification]
0.24	0.24 [SDSFIE V1.7 FGDC Soils Classification]
0.28	0.28 [SDSFIE V1.7 FGDC Soils Classification]
0.32	0.32 [SDSFIE V1.7 FGDC Soils Classification]
0.37	0.37 [SDSFIE V1.7 FGDC Soils Classification]
0.43	0.43 [SDSFIE V1.7 FGDC Soils Classification]
0.49	0.49 [SDSFIE V1.7 FGDC Soils Classification]
0.55	0.55 [SDSFIE V1.7 FGDC Soils Classification]
0.64_OR_MORE	0.64 or more [SDSFIE V1.7 FGDC Soils Classification]
0_02	0.02 [SDSFIE V1.4 FGDC Soils Classification]
0_05	0.05 [SDSFIE V1.4 FGDC Soils Classification]
0_10	0.10 [SDSFIE V1.4 FGDC Soils Classification]
0_15	0.15 [SDSFIE V1.8 FGDC Soils Classification]
0_17	0.17 [SDSFIE V1.4 FGDC Soils Classification]
0_20	0.20 [SDSFIE V1.4 FGDC Soils Classification]
0_24	0.24 [SDSFIE V1.4 FGDC Soils Classification]
0_28	0.28 [SDSFIE V1.4 FGDC Soils Classification]
0_32	0.32 [SDSFIE V1.4 FGDC Soils Classification]
0_37	0.37 [SDSFIE V1.4 FGDC Soils Classification]
0_43	0.43 [SDSFIE V1.4 FGDC Soils Classification]
0_49	0.49 [SDSFIE V1.4 FGDC Soils Classification]
0_55	0.55 [SDSFIE V1.4 FGDC Soils Classification]
0_64_OR_MORE	0.64 or more [SDSFIE V1.4 FGDC Soils Classification]
TBD	to be determined [SDSFIE V1.4 FGDC Soils Classification]
UNKNOWN	unknown [SDSFIE V1.4 FGDC Soils Classification]

soil_fam_d

Value	Definition (Notes) [Source]
ALTAVISTA	fine-loamy, mixed, thermic Aquic Hapludults [SDSFIE V1.4]
AUTRYVILLE	loamy, siliceous, thermic Arenic Paleudults [SDSFIE V1.4]
AYCOCK	fine-silty, siliceous, thermic Typic Paleudults [SDSFIE V1.4]
BLANEY	loamy, siliceous, thermic Arenic Hapludults [SDSFIE V1.4]
BRAGG	fine-loamy, siliceous, acid, thermic Typic Udorthents [SDSFIE V1.4]
BUTTERS	coarse-loamy, siliceous, thermic Typic Paleudults [SDSFIE V1.4]
BYARS	clayey, kaolinitic, thermic Umbric Paleaquults [SDSFIE V1.4]
CANDOR	sandy, siliceous, thermic Arenic Paleudults [SDSFIE V1.4]
CAPEFEAR	clayey, mixed, thermic Typic Umbraquults [SDSFIE V1.4]
CHEWACLA	fine-loamy, mixed, thermic Fluvaquentic Dystrochrepts [SDSFIE V1.4]
COXVILLE	clayey, kaolinitic, thermic Typic Paleaquults [SDSFIE V1.4]
CRAVEN	clayey, mixed, thermic Aquic Hapludults [SDSFIE V1.4]
CROATAN	loamy, siliceous, dysic, thermic Terric Medisaprists [SDSFIE V1.4]
DELOSS	fine-loamy, mixed, thermic Typic Umbraquults [SDSFIE V1.4]
DOGUE	clayey, mixed, thermic Aquic Hapludults [SDSFIE V1.4]
DOTHAN	fine-loamy, siliceous, thermic Plinthic Paleudults [SDSFIE V1.4]
DUNBAR	clayey, kaolinitic, thermic Aeric Paleaquults [SDSFIE V1.4]
DUPLIN	clayey, kaolinitic, thermic Aquic Paleudults [SDSFIE V1.4]
DYSTROCHREPT	loamy, thermic Dystrochrepts [SDSFIE V1.4]
EXUM	fine-silty, siliceous, thermic Aquic Paleudults [SDSFIE V1.4]
FACEVILLE	clayey, kaolinitic, thermic Typic Paleudults [SDSFIE V1.4]
FUQUAY	loamy, siliceous, thermic Arenic Plinthic Paleudults [SDSFIE V1.4]
GILEAD	clayey, kaolinitic, thermic Aquic Hapludults [SDSFIE V1.4]
GOLDSBORO	fine-loamy, siliceous, thermic Aquic Paleudults [SDSFIE V1.4]
GRANTHAM	fine-silty, siliceous, thermic Typic Paleaquults [SDSFIE V1.4]
JOHNSTON	coarse-loamy, siliceous, acid, thermic Cumulic Humaquepts [SDSFIE V1.4
KALMIA	fine-loamy over sandy or sandy skeletal, siliceous, thermic Typic Hapludults [SDSFIE V1.4]
KENANSVILLE	loamy, siliceous, thermic Arenic Hapludults [SDSFIE V1.4]
KUREB	thermic, uncoated Spodic Quartzipsamments [SDSFIE V1.4]
LAKELAND	thermic, coated Typic Quartzipsamments [SDSFIE V1.4]
LENOIR	clayey, mixed, thermic Aeric Paleaquults [SDSFIE V1.4]
LEON	sandy, siliceous, thermic Aeric Haplaquods [SDSFIE V1.4]
LYNCHBURG	fine-loamy, siliceous, thermic Aeric Paleaquults [SDSFIE V1.4]
LYNNHAVEN	sandy, siliceous, thermic Typic Haplaquods [SDSFIE V1.4]
MCCOLL	clayey, kaolinitic, thermic Typic Fragiaquults [SDSFIE V1.4]
NAHUNTA	fine-silty, siliceous, thermic Aeric Paleaquults [SDSFIE V1.4]
NORFOLK	fine-loamy, siliceous, thermic Typic Paleudults [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]

PACTOLUS	thermic, coated Aquic Quartzipsamments [SDSFIE V1.4]
PANTEGO	fine-loamy, siliceous, thermic Umbric Paleaquults [SDSFIE V1.4]
RAINS	fine-loamy, siliceous, thermic Typic Paleaquults [SDSFIE V1.4]
ROANOKE	clayey, mixed, thermic Typic Ochraquults [SDSFIE V1.4]
STALLINGS	coarse-loamy, siliceous, thermic Aeric Paleaquults [SDSFIE V1.4]
TARBORO	mixed, thermic Typic Udipsamments [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TORHUNTA	coarse-loamy, siliceous, acid, thermic Typic Humaquepts [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VAUCLUSE	fine-loamy, siliceous, thermic Typic Hapludults [SDSFIE V1.4]
WAGRAM	loamy, siliceous, thermic Arenic Paleudults [SDSFIE V1.4]
WAHEE	clayey, mixed, thermic Aeric Ochraquults [SDSFIE V1.4]
WICKHAM	fine-loamy, mixed, thermic Typic Hapludults [SDSFIE V1.4]
WOODINGTON	coarse-loamy, siliceous, thermic Typic Paleaqults [SDSFIE V1.4]

soil_tex_d

Value	Definition (Notes) [Source]
ASHY	Ashy [SDSFIE V1.8 FGDC Soils Classification]
BOLDGRAVEL	boulder gravel [SDSFIE V1.4]
BY	Bouldery [SDSFIE V1.8 FGDC Soils Classification]
BYV	Very bouldery [SDSFIE V1.8 FGDC Soils Classification]
BYX	Extremely bouldery [SDSFIE V1.8 FGDC Soils Classification]
C/SS	Clay/Sand with Stone. [SDSFIE V2.4 Army]
CB	Cobbly [SDSFIE V1.8 FGDC Soils Classification]
CBV	Very cobbly [SDSFIE V1.8 FGDC Soils Classification]
CBX	Extremely cobbly [SDSFIE V1.8 FGDC Soils Classification]
CLAY	clay [SDSFIE V1.4 FGDC Soils Classification]
CLAYLOAM	clay loam [SDSFIE V1.4 FGDC Soils Classification]
CN	Channery [SDSFIE V1.8 FGDC Soils Classification]
CNV	Very channery [SDSFIE V1.8 FGDC Soils Classification]
CNX	Extremely channery [SDSFIE V1.8 FGDC Soils Classification]
COARSANDYLOM	course sandy loam [SDSFIE V1.4 FGDC Soils Classification]
COARSESAND	coarse sand [SDSFIE V1.4 FGDC Soils Classification]
COARSESILT	coarse silt [SDSFIE V1.4]
COP	Coprogenous [SDSFIE V1.8 FGDC Soils Classification]
CORSCOBLGRAV	coarse cobble gravel [SDSFIE V1.4]
CORSPBLGRAVL	coarse pebble gravel [SDSFIE V1.4]
CS/CS	Clay-Sand/Clay-Silt. [SDSFIE V2.4 Army]
DIA	Diatomaceous [SDSFIE V1.8 FGDC Soils Classification]
FINCOBLGRAV	fine cobble gravel [SDSFIE V1.4]
FINEPBLGRAVL	fine pebble gravel [SDSFIE V1.4]
FINESAND	fine sand [SDSFIE V1.4 FGDC Soils Classification]
FINESANDYLOM	fine sandy loam [SDSFIE V1.4 FGDC Soils Classification]
FINESILT	fine silt [SDSFIE V1.4]
FL	Flaggy [SDSFIE V1.8 FGDC Soils Classification]
FLV	Very flaggy [SDSFIE V1.8 FGDC Soils Classification]
FLX	Extremely flaggy [SDSFIE V1.8 FGDC Soils Classification]
G/GS	Gravel/Gravel-Sand. [SDSFIE V2.4 Army]
GR	Gravelly [SDSFIE V1.8 FGDC Soils Classification]
GRAVEL	gravel [SDSFIE V1.4]
GRC	Coarse gravelly [SDSFIE V1.8 FGDC Soils Classification]
GRF	Fine gravelly [SDSFIE V1.8 FGDC Soils Classification]
GRM	Medium gravelly [SDSFIE V1.8 FGDC Soils Classification]
GRV	Very gravelly [SDSFIE V1.8 FGDC Soils Classification]
GRX	Extremely gravelly [SDSFIE V1.8 FGDC Soils Classification]
GS	Grassy [SDSFIE V1.8 FGDC Soils Classification]
GYP	Gypsiferous [SDSFIE V1.8 FGDC Soils Classification]
HB	Herbaceous [SDSFIE V1.8 FGDC Soils Classification]
HYDR	Hydrous [SDSFIE V1.8 FGDC Soils Classification]
LOAM	loam [SDSFIE V1.4 FGDC Soils Classification]
LOAMCOARSAND	loamy course sand [SDSFIE V1.4 FGDC Soils Classification]
LOAMFINESAND	loamy fine sand [SDSFIE V1.4 FGDC Soils Classification]
LS	loamy sand [SDSFIE V1.8 FGDC Soils Classification]
LVFS	loamy very fine sand [SDSFIE V1.8 FGDC Soils Classification]
MEDCOBLGRAVL	medium cobble gravel [SDSFIE V1.4]
MEDIUMSAND	medium sand [SDSFIE V1.4]
MEDIUMSILT	medium silt [SDSFIE V1.4]
MEDL	Medial [SDSFIE V1.8 FGDC Soils Classification]
MEDPEBLGRAVL	medium pebble gravel [SDSFIE V1.4]
MK	Mucky [SDSFIE V1.8 FGDC Soils Classification]

MR	Marly [SDSFIE V1.8 FGDC Soils Classification]
MS	Mossy [SDSFIE V1.8 FGDC Soils Classification]
OTHER	other [SDSFIE V1.4]
PBY	Parabouldery [SDSFIE V1.8 FGDC Soils Classification]
PBYV	Very parabouldery [SDSFIE V1.8 FGDC Soils Classification]
PBYX	Extremely parabouldery [SDSFIE V1.8 FGDC Soils Classification]
PCB	Paracobbly [SDSFIE V1.8 FGDC Soils Classification]
PCBV	Very paracobbly [SDSFIE V1.8 FGDC Soils Classification]
PCBX	Extremely paracobbly [SDSFIE V1.8 FGDC Soils Classification]
PCN	Parachannery [SDSFIE V1.8 FGDC Soils Classification]
PCNV	Very parachannery [SDSFIE V1.8 FGDC Soils Classification]
PCNX	Extremely parachannery [SDSFIE V1.8 FGDC Soils Classification]
PERMAFROST	permafrost [SDSFIE V1.4]
PF	Permanently frozen [SDSFIE V1.8 FGDC Soils Classification]
PFL	Paraflaggy [SDSFIE V1.8 FGDC Soils Classification]
PFLV	Very paraflaggy [SDSFIE V1.8 FGDC Soils Classification]
PFLX	Extremely paraflaggy [SDSFIE V1.8 FGDC Soils Classification]
PGR	Paragravelly [SDSFIE V1.8 FGDC Soils Classification]
PGRV	Very paragravelly [SDSFIE V1.8 FGDC Soils Classification]
PGRX	Extremely paragravelly [SDSFIE V1.8 FGDC Soils Classification]
PST	Parastony [SDSFIE V1.8 FGDC Soils Classification]
PSTV	Very parastony [SDSFIE V1.8 FGDC Soils Classification]
PSTX	Extremely parastony [SDSFIE V1.8 FGDC Soils Classification]
PT	Peaty [SDSFIE V1.8 FGDC Soils Classification]
ROCK	Rock. [SDSFIE V2.4 Army]
S	sand [SDSFIE V1.8 FGDC Soils Classification]
S/GS	Sand/Gravel Sand. [SDSFIE V2.4 Army]
S/SC	Silt/Silty-Clay. [SDSFIE V2.4 Army]
SANDYCLAY	sandy clay [SDSFIE V1.4 FGDC Soils Classification]
SANDYCLAYLOM	sandy clay loam [SDSFIE V1.4 FGDC Soils Classification]
SANDYLOAM	sandy loam [SDSFIE V1.4 FGDC Soils Classification]
SI	silt [SDSFIE V1.8 FGDC Soils Classification]
SILTYCLAY	silty clay [SDSFIE V1.4 FGDC Soils Classification]
SILTYLOAM	silty loam [SDSFIE V1.4 FGDC Soils Classification]
SLITYCLAYLOM	silty clay loam [SDSFIE V1.4 FGDC Soils Classification]
SR	Stratified [SDSFIE V1.8 FGDC Soils Classification]
SS/SC	Sand-Silt/Sand-Clay. [SDSFIE V2.4 Army]
ST	Stony [SDSFIE V1.8 FGDC Soils Classification]
STONES	stones [SDSFIE V1.4]
STV	Very stony [SDSFIE V1.8 FGDC Soils Classification]
STX	Extremely stony [SDSFIE V1.8 FGDC Soils Classification]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VERYCOARSAND	very coarse sand [SDSFIE V1.4]
VERYFINESAND	very fine sand [SDSFIE V1.4 FGDC Soils Classification]
VERYFINESILT	very fine silt [SDSFIE V1.4]
VRYCRSPBGRVL	very coarse pebble gravel [SDSFIE V1.4]
VRYFINPBLGRV	very fine pebble gravel [SDSFIE V1.4]
VRYFINSANLOM	very fine sandy loam [SDSFIE V1.4 FGDC Soils Classification]
WD	Woody [SDSFIE V1.8 FGDC Soils Classification]

source_d, type_d

Value	Definition (Notes) [Source]
ARROYO	arroyo/draw/wash [SDSFIE V1.4]
ARTISAN_WELL	artisan well [SDSFIE V1.4]
BAYOU	bayou [SDSFIE V1.4]
CREEK	creek [SDSFIE V1.4]
DEEPWELL	deep well [SDSFIE V1.4]
DRY_PLAYA	dry playa [SDSFIE V1.4]
FUMAROLE	fumarole [SDSFIE V1.8 USGS]
GEOTHERMAL	geothermal well [SDSFIE V1.8 USGS]
GEYSER	geyser [SDSFIE V1.4]
GLACIER	glacier [SDSFIE V1.4]
GULF	gulf [SDSFIE V1.4]
HAIL	hail [SDSFIE V1.4]
ICEBERG	iceberg [SDSFIE V1.4]
LAKE	lake [SDSFIE V1.4]
MUD_POT	mud pot [SDSFIE V1.8 USGS]
OCEAN	ocean [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]

POND	pond [SDSFIE V1.4]
RAINFALL	rainfall [SDSFIE V1.4]
RESERVOIR	reservoir [SDSFIE V1.4]
RIME	hoarfrost, dew, condensed fog [SDSFIE V1.4]
RIVER	river [SDSFIE V1.4]
RUNOFF	runoff [SDSFIE V1.4]
SLEET	sleet [SDSFIE V1.4]
SLOUGH	slough [SDSFIE V1.4]
SNOWFALL	snowfall [SDSFIE V1.4]
SPRING	spring [SDSFIE V1.4]
STREAM	stream [SDSFIE V1.4]
SWAMP	swamp [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
WET_PLAYA	wet playa [SDSFIE V1.4]

spcszone_d

Value	Definition (Notes) [Source]
1001	Georgia East State Plane [SDSFIE V2 SEMMS]
1002	Georgia West State Plane [SDSFIE V2 SEMMS]
101	Alabama East State Plane [SDSFIE V2 SEMMS]
102	Alabama West State Plane [SDSFIE V2 SEMMS]
1101	Idaho East State Plane [SDSFIE V2 SEMMS]
1102	Idaho Central State Plane [SDSFIE V2 SEMMS]
1103	Idaho West State Plane [SDSFIE V2 SEMMS]
1201	Illinois East State Plane [SDSFIE V2 SEMMS]
1202	Illinois West State Plane [SDSFIE V2 SEMMS]
1301	Indiana East State Plane [SDSFIE V2 SEMMS]
1302	Indiana West State Plane [SDSFIE V2 SEMMS]
1401	Iowa North State Plane [SDSFIE V2 SEMMS]
1402	Iowa South State Plane [SDSFIE V2 SEMMS]
1501	Kansas North State Plane [SDSFIE V2 SEMMS]
1502	Kansas South State Plane [SDSFIE V2 SEMMS]
1601	Kentucky North State Plane [SDSFIE V2 SEMMS]
1602	Kentucky South State Plane [SDSFIE V2 SEMMS]
1701	Louisiana North State Plane [SDSFIE V2 SEMMS]
1702	Louisiana South State Plane [SDSFIE V2 SEMMS]
1703	Louisiana Offshore State Plane [SDSFIE V2 SEMMS]
1801	Maine East State Plane [SDSFIE V2 SEMMS]
1802	Maine West State Plane [SDSFIE V2 SEMMS]
1900	Maryland State Plane [SDSFIE V2 SEMMS]
2001	Massachusetts Mainland State Plane [SDSFIE V2.2 USGS]
2002	Massachusetts Island State Plane [SDSFIE V2 SEMMS]
201	Arizona East State Plane [SDSFIE V2 SEMMS]
202	Arizona Central State Plane [SDSFIE V2 SEMMS]
203	Arizona West State Plane [SDSFIE V2 SEMMS]
2101	Michigan East State Plane - Obsolete [SDSFIE V2 SEMMS]
2102	Michigan Central State Plane, TM - Obsolete [SDSFIE V2 SEMMS]
2103	Michigan West State Plane - Obsolete [SDSFIE V2 SEMMS]
2111	Michigan North State Plane [SDSFIE V2 SEMMS]
2112	Michigan Central State Plane, L [SDSFIE V2 SEMMS]
2113	Michigan South State Plane [SDSFIE V2 SEMMS]
2201	Minnesota North State Plane [SDSFIE V2 SEMMS]
2202	Minnesota Central State Plane [SDSFIE V2 SEMMS]
2203	Minnesota South State Plane [SDSFIE V2 SEMMS]
2301	Mississippi East State Plane [SDSFIE V2 SEMMS]
2302	Mississippi West State Plane [SDSFIE V2 SEMMS]
2401	Missouri East State Plane [SDSFIE V2 SEMMS]
2402	Missouri Central State Plane [SDSFIE V2 SEMMS]
2403	Missouri West State Plane [SDSFIE V2 SEMMS]
2500	Montana (NAD 83) [SDSFIE V2 SEMMS]
2501	Montana North (NAD 27) [SDSFIE V2 SEMMS]
2502	Montana Central (NAD 27) [SDSFIE V2 SEMMS]
2503	Montana South (NAD 27) [SDSFIE V2 SEMMS]
2600	Nebraska (NAD 83) [SDSFIE V2 SEMMS]
2601	Nebraska North (NAD 27) [SDSFIE V2 SEMMS]
2602	Nebraska South (NAD 27) [SDSFIE V2 SEMMS]
2701	Nevada East State Plane [SDSFIE V2 SEMMS]
2702	Nevada Central State Plane [SDSFIE V2 SEMMS]
2703	Nevada West State Plane [SDSFIE V2 SEMMS]

2800	New Hampshire State Plane [SDSFIE V2 SEMMS]
2900	New Jersey State Plane [SDSFIE V2 SEMMS]
3001	New Mexico East State Plane [SDSFIE V2 SEMMS]
3002	New Mexico Central State Plane [SDSFIE V2 SEMMS]
3003	New Mexico West State Plane [SDSFIE V2 SEMMS]
301	Arkansas North State Plane [SDSFIE V2 SEMMS]
302	Arkansas South State Plane [SDSFIE V2 SEMMS]
3101	New York East State Plane [SDSFIE V2 SEMMS]
3102	New York Central State Plane [SDSFIE V2 SEMMS]
3103	New York West State Plane [SDSFIE V2 SEMMS]
3104	New York Long Island State Plane [SDSFIE V2 SEMMS]
3200	North Carolina State Plane [SDSFIE V2 SEMMS]
3301	North Dakota North State Plane [SDSFIE V2 SEMMS]
3302	North Dakota South State Plane [SDSFIE V2 SEMMS]
3401	Ohio North State Plane [SDSFIE V2 SEMMS]
3402	Ohio South State Plane [SDSFIE V2 SEMMS]
3501	Oklahoma North State Plane [SDSFIE V2 SEMMS]
3502	Oklahoma South State Plane [SDSFIE V2 SEMMS]
3601	Oregon North State Plane [SDSFIE V2 SEMMS]
3602	Oregon South State Plane [SDSFIE V2 SEMMS]
3701	Pennsylvania North State Plane [SDSFIE V2 SEMMS]
3702	Pennsylvania South State Plane [SDSFIE V2 SEMMS]
3800	Rhode Island State Plane [SDSFIE V2 SEMMS]
3900	South Carolina (NAD 83) [SDSFIE V2 SEMMS]
3901	South Carolina North (NAD 27) [SDSFIE V2 SEMMS]
3902	South Carolina South (NAD 27) [SDSFIE V2 SEMMS]
4001	South Dakota North State Plane [SDSFIE V2 SEMMS]
4002	South Dakota South State Plane [SDSFIE V2 SEMMS]
401	California I State Plane [SDSFIE V2 SEMMS]
402	California II State Plane [SDSFIE V2 SEMMS]
403	California III State Plane [SDSFIE V2 SEMMS]
404	California IV State Plane [SDSFIE V2 SEMMS]
405	California V State Plane [SDSFIE V2 SEMMS]
406	California VI State Plane [SDSFIE V2 SEMMS]
407	California VII State Plane [SDSFIE V2 SEMMS]
4100	Tennessee State Plane [SDSFIE V2 SEMMS]
4201	Texas North State Plane [SDSFIE V2 SEMMS]
4202	Texas North Central State Plane [SDSFIE V2 SEMMS]
4203	Texas Central State Plane [SDSFIE V2 SEMMS]
4204	Texas South Central State Plane [SDSFIE V2 SEMMS]
4205	Texas South State Plane [SDSFIE V2 SEMMS]
4301	Utah North State Plane [SDSFIE V2 SEMMS]
4302	Utah Central State Plane [SDSFIE V2 SEMMS]
4303	Utah South State Plane [SDSFIE V2 SEMMS]
4400	Vermont State Plane [SDSFIE V2 SEMMS]
4501	Virginia North State Plane [SDSFIE V2 SEMMS]
4502	Virginia South State Plane [SDSFIE V2 SEMMS]
4601	Washington North State Plane [SDSFIE V2 SEMMS]
4602	Washington South State Plane [SDSFIE V2 SEMMS]
4701	West Virginia North State Plane [SDSFIE V2 SEMMS]
4702	West Virginia South State Plane [SDSFIE V2 SEMMS]
4801	Wisconsin North State Plane [SDSFIE V2 SEMMS]
4802	Wisconsin Central State Plane [SDSFIE V2 SEMMS]
4803	Wisconsin South State Plane [SDSFIE V2 SEMMS]
4901	Wyoming East State Plane [SDSFIE V2 SEMMS]
4902	Wyoming East Central State Plane [SDSFIE V2 SEMMS]
4903	Wyoming West Central State Plane [SDSFIE V2 SEMMS]
4904	Wyoming West State Plane [SDSFIE V2 SEMMS]
5001	Alaska Zone 1 State Plane [SDSFIE V2.2 SEMMS]
5002	Alaska Zone 2 State Plane [SDSFIE V2.2 SEMMS]
5003	Alaska Zone 3 State Plane [SDSFIE V2.2 SEMMS]
5004	Alaska Zone 4 State Plane [SDSFIE V2.2 SEMMS]
5005	Alaska Zone 5 State Plane [SDSFIE V2.2 SEMMS]
5006	Alaska Zone 6 State Plane [SDSFIE V2.2 SEMMS]
5007	Alaska Zone 7 State Plane [SDSFIE V2 SEMMS]
5008	Alaska Zone 8 State Plane [SDSFIE V2 SEMMS]
5009	Alaska Zone 9 State Plane [SDSFIE V2 SEMMS]
501	Colorado North State Plane [SDSFIE V2 SEMMS]
5010	Alaska Zone 10 State Plane - All of the Aleutian Island group lying west and south of Unimak Pass. [SDSFIE V2.2]

502	Colorado Central State Plane [SDSFIE V2 SEMMS]
503	Colorado South State Plane [SDSFIE V2 SEMMS]
5101	Hawaii 1 State Plane [SDSFIE V2 SEMMS]
5102	Hawaii State Plane Zone 2 [SDSFIE V2.2]
5103	Hawaii State Plane Zone 3 [SDSFIE V2.2 USGS]
5104	Hawaii State Plane Zone 4 [SDSFIE V2.2 USGS]
5105	Hawaii 5 State Plane [SDSFIE V2 SEMMS]
5201	Puerto and Virgin Islands State Plane [SDSFIE V2 SEMMS]
5202	St. Croix (NAD 27) [SDSFIE V2.2 SEMMS]
5300	American Samoa (NAD 27) [SDSFIE V2.2 USGS]
5400	Guam [SDSFIE V2.2 USGS]
600	Connecticut State Plane [SDSFIE V2 SEMMS]
700	Delaware State Plane [SDSFIE V2 SEMMS]
901	Florida East State Plane [SDSFIE V2 SEMMS]
902	Florida West State Plane [SDSFIE V2 SEMMS]
903	Florida North State Plane [SDSFIE V2 SEMMS]

spec_con_d

Value	Definition (Notes) [Source]
ALIVE	Alive. [SDSFIE V2.5 NAVFAC]
INJURED	Injured. [SDSFIE V2.5 NAVFAC]
NEST	Nest. [SDSFIE V2.5 NAVFAC]
STRANDING	Stranding. [SDSFIE V2.5 NAVFAC]

spkimp_d

Value	Definition (Notes) [Source]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]
VARIABLE	Variable (selectable). [SDSFIE V2.5 AIR FORCE]

spl_typ_d

Value	Definition (Notes) [Source]
DROP_INSERT	DROP INSERT SPLICE [SDSFIE V2 Air Force]
HALFTAP_FOLDBACK	Halftap fold back splice. [SDSFIE V2 AIR FORCE]
HALFTAP_INLINE	halftap inline splice [SDSFIE V2]
JUNCTION_FOLDBAC	Junction fold back splice. [SDSFIE V2.5 AIR FORCE]
JUNCTION_INLINE	junction inline splice [SDSFIE V2]
LOAD_FOLDBACK	Load fold back splice. [SDSFIE V2.5 AIR FORCE]
LOAD_INLINE	load inline splice [SDSFIE V2]
MULTIPLE_INLINE	Multiple inline splice. [SDSFIE V2.5 AIR FORCE]
MULTIPLEFOLDBACK	Multiple fold back splice. [SDSFIE V2.5 AIR FORCE]
STRAIGHT_INLINE	straight inline splice [SDSFIE V2]
STRAIGHTFOLDBACK	Straight inline splice. [SDSFIE V2.5 AIR FORCE]

splt_typ_d

Value	Definition (Notes) [Source]
2_WAY	2 Way Splitter [SDSFIE V2 Tinker Air Force Base]
3_WAY	3 Way Splitter [SDSFIE V2 Tinker Air Force Base]
4_WAY	4 Way Splitter [SDSFIE V2 Tinker Air Force Base]
5_WAY	5 Way Splitter [SDSFIE V2 Tinker Air Force Base]
6_WAY	6 Way Splitter [SDSFIE V2 Tinker Air Force Base]

srf_typ_d, surf_mat_d

Value	Definition (Notes) [Source]
2SURFACTREAT	double surface treatment [SDSFIE V1.4]
AC	asphaltic concrete [SDSFIE V1.4]
AC_PC	asphalt over concrete overlay [SDSFIE V1.4]
ASPHLCONC	asphaltic concrete [SDSFIE V1.8 NGA/NIMA]
BBM	bitumen bond macadam [SDSFIE V1.8 NGA/NIMA]
BEDROCK	bedrock [SDSFIE V1.8 NGA/NIMA]
BITUMEN_TAR_ASP	Bituminous Tar or Asphalt, mixed in place, oil or bitumen - bound. [SDSFIE V2.31 Air Force]
BRICK	brick [SDSFIE V1.8 NGA/NIMA]
CEMENT	cement [SDSFIE V1.4]
CHIPPEDSEAL	chipped seal [SDSFIE V1.4]
CINDERS	cinders [SDSFIE V1.4]
CLAY	clay [SDSFIE V1.8 NGA/NIMA]
COAL	coal [SDSFIE V1.8 NGA/NIMA]
COMPOSITE	Composite. [SDSFIE V2.31 Air Force]

CONCRETE	concrete [SDSFIE V1.4]
CORAL	coral [SDSFIE V1.8 NGA/NIMA]
CRUSHSTONE	crushed stone [SDSFIE V1.4]
EARTH	earth [SDSFIE V1.8 NGA/NIMA]
FOGSEAL	fog seal [SDSFIE V1.4]
GEOFAB	geofabric [SDSFIE V1.8 NGA/NIMA]
GLASS_REIN_PLAS	Glass Reinforced Plastic [SDSFIE V2.2 S-57]
GRADED_DRAIN	graded and drained [SDSFIE V1.4]
GRASS	grass [SDSFIE V1.4]
GRAVEL	gravel [SDSFIE V1.4]
HARD_SURFACED	Hard Surfaced - specific surface unspecified [SDSFIE V2.2 S-57]
ICE	ice [SDSFIE V1.8 NGA/NIMA]
LATERITE	laterite [SDSFIE V1.8 NGA/NIMA]
LIMESTN	limestone [SDSFIE V1.8 NGA/NIMA]
LOOSE_BOULDERS	Loose Boulders [SDSFIE V2.2 S-57]
LOWBITUMEN	low bituminous [SDSFIE V1.4]
MASONRY	MASONRY [SDSFIE V2.2 S-57]
MEDBITUMEN	medium bituminous [SDSFIE V1.4]
METAL	Metal - specific type unspecified [SDSFIE V2.2 S-57]
METALPORTAB	metal portable runway [SDSFIE V1.4]
OIL_CLAY	oil and clay [SDSFIE V1.4]
OTHER	other [SDSFIE V1.8 NGA/NIMA]
PAINTED	Painted [SDSFIE V2.2 S-57]
PIERCALPLANK	pierced aluminum plank [SDSFIE V1.8 NGA/NIMA]
PIERCSTEELPL	pierced steel planking [SDSFIE V1.4]
PLANTMIXBIT	plant mix bit [SDSFIE V1.4]
PLANTMIXSEAL	plant mix seal coat [SDSFIE V1.4]
PORTLDCEMENT	Portland cement [SDSFIE V1.4]
RECYCLBITMEN	recycled bituminous [SDSFIE V1.4]
REINFORCONCR	reinforced concrete [SDSFIE V1.4]
SALTFLAT	saltflat [SDSFIE V1.4]
SAND	sand [SDSFIE V1.4]
SAND_ASPHALT	sand and asphalt [SDSFIE V1.4]
SAND_CLAY	sand and clay [SDSFIE V1.4]
SAND_OIL	sand and oil [SDSFIE V1.4]
SILT	silt [SDSFIE V1.8 NGA/NIMA]
SLURRYSEAL	slurry seal [SDSFIE V1.4]
SNOW	snow [SDSFIE V1.4]
SOD	sod [SDSFIE V1.4]
SOILCEMENT	Mix-In-Place using non-bituminous binders such as Portland Cement -- also referred to as soil cement. [SDSFIE V2.31 Air Force]
STONEMASTIC	stone mastic [SDSFIE V1.4]
SURFACTREAT	single surface treatment [SDSFIE V2.2]
TBD	to be determined [SDSFIE V1.4]
TUNDRA	tundra [SDSFIE V1.8 NGA/NIMA]
UNIMPROVED	unimproved [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.8 NGA/NIMA]
VOLC_ASH	volcanic ash [SDSFIE V1.8 NGA/NIMA]
WATER	water [SDSFIE V1.4]
WIRE_COMB	wire combined [SDSFIE V1.8 NGA/NIMA]
WOOD	wood [SDSFIE V1.4]

sst_ty_d

Value	Definition (Notes) [Source]
DISTRIBUTION	Substations located in the middle of a load area. [SDSFIE V1.6]
OTHER	other [SDSFIE V1.4]
SUBTRANSMISSION	Electric substations with equipment used to switch circuits operating at voltages in the range of 34.5 to 161kV. [SDSFIE V1.6]
TBD	to be determined [SDSFIE V1.4]
TRANSMISSION	A substation which uses alternating current which contains equipment used to sectionalize the system when a fault or circuit develops. [SDSFIE
UNKNOWN	unknown [SDSFIE V1.4]

sta_ty_d

Value	Definition (Notes) [Source]
BOOSTER	booster station [SDSFIE V2.1 FGDC Utilities Classification]
PRESS_REDUCE	pressure reducer station [SDSFIE V2.1 FGDC Utilities Classification]
PUMP	pump station [SDSFIE V2.1 FGDC Utilities Classification]

start_ty_d

Value	Definition (Notes) [Source]

AUTOTRN_STRT	autotransformer start [SDSFIE V1.4]
CAPCTR_RUN	capacitor run [SDSFIE V1.4]
CAPCTR_STRT	capacitor start [SDSFIE V1.4]
LINE_STRT	line start [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
REACTR_REDUV	reactor type, reduced voltage [SDSFIE V1.4]
RESIST_REDUV	resistor type, reduced voltage [SDSFIE V1.4]
SHADED_POLE	shaded pole [SDSFIE V1.4]
SOLDSTATSTRT	solid state start [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
Y_STRT_D_RUN	Y start delta run [SDSFIE V1.4]

status_d

Value	Definition (Notes) [Source]
ACTIVE	active and working [SDSFIE V1.4]
ACTIVE	active [SDSFIE V1.9]
INACTIVE	inactive [SDSFIE V1.9]
NONACTIVE	not being used [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TERMINATED	terminated [SDSFIE V1.9]
UNKNOWN	unknown [SDSFIE V1.4]

status_d, use_typ_d

Value	Definition (Notes) [Source]
ABANDONED	The transportation feature is inactive and not in use [SDSFIE V1.4]
ACTIVE	The transportation feature is currently in use [SDSFIE V1.4]
UNKNOWN	Unknown. [SDSFIE V2.4 Air Force]

str_stat_d

Value	Definition (Notes) [Source]
DEMOLISHED	Structure that has been demolished. [SDSFIE V2.31 Army]
DEMOLITION	Structural definition and status of a building slated for demolition.
DISPOSAL	Disposal other than demolition [SDSFIE V2.2 OSD Coordination]
EXISTING	Existing structure [SDSFIE V2.1]
INCONCLUSIVE	Inconclusive Analysis. [SDSFIE V2.31 Air Force]
NONOPERATIONAL	Non-Operational. [SDSFIE V2.31 Air Force]
OPERATIONAL	Operational. [SDSFIE V2.31 Air Force]
PERMANENT	Structural definition and status of a permanent building. [SDSFIE V1.4]
PORTABLE	Structural definition and status of a portable building. [SDSFIE V1.4]
SEMI_PERM	Structural definition and status of a semi-permanent building. [SDSFIE
TEMPORARY	Structural definition and status of a temporary building. [SDSFIE V1.4]
UNKNOWN	Unknown. [SDSFIE V2.31 Air Force]

str_type_d

Value	Definition (Notes) [Source]
APARTMENT	apartment building [SDSFIE V1.4]
AQUATHEATER	Aquatheater [SDSFIE V2.4 USGS]
ARENA	Arena. [SDSFIE V2.4 USGS]
BARN	barn [SDSFIE V1.4]
BUNKER	Bunker. [SDSFIE V2.31 Air Force]
CAPITOL	Capitol. [SDSFIE V2.4 USGS]
CHURCH	church/temple [SDSFIE V1.4]
CITY_HALL	City Hall. [SDSFIE V2.4 USGS]
COMMUNITYCENTER	Community Center. [SDSFIE V2.4 USGS]
CONCERT_HALL	Concert Hall. [SDSFIE V2.4 USGS]
CONDO	condominium [SDSFIE V1.4]
COURT_HOUSE	Court House. [SDSFIE V2.4 USGS]
DRY_STO_DOCK	Dry Storage Dock [SDSFIE V1.9 USACE OPERATIONS]
DUPLEX	house, duplex [SDSFIE V1.4]
DWELLING	dwelling [SDSFIE V1.9 REEGIS]
EARTHWORKS	Earthworks. [SDSFIE V2.4 USGS]
EMS_STATION	EMS Station. [SDSFIE V2.4 USGS]
FEDERAL_RESERVE	Federal Reserve. [SDSFIE V2.4 USGS]
FIRE_HOUSE	Fire House. [SDSFIE V2.4 USGS]
GARAGE	A structure used for the maintenance, storage, and display of motor vehicles.
GOVERNORS_HOUSE	Governors House. [SDSFIE V2.4 USGS]
GRAIN_ELEVATOR	Grain Elevator. [SDSFIE V2.4 USGS]
HANGAR	Hangar. [SDSFIE V2.31 Air Force]

HOSPITAL	Hospital. [SDSFIE V2.4 USGS]
HOUSE	house, single family [SDSFIE V1.4]
JAIL_OR_PRISON	Jail or Prison. [SDSFIE V2.4 USGS]
LAW_ENFORCEMENT	Law Enforcement. [SDSFIE V2.4 USGS]
MEDICAL_CENTER	Medical Center. [SDSFIE V2.4 USGS]
MEMORIAL	Memorial. [SDSFIE V2.4 USGS]
MOBILE_HOME	Mobile home or trailer [SDSFIE V1.95 USGS]
MUSEUM	Museum. [SDSFIE V2.4 USGS]
OFFICE	office building [SDSFIE V1.4]
OFSHR_PLTFRM	Offshore Platform. [SDSFIE V2.5 NAVFAC]
OTHER	other [SDSFIE V1.4]
POST_OFFICE	Post Office. [SDSFIE V2.4 USGS]
POWER_PLANT	A facility used in the production and distribution of electrical power. [SDSFIE V2.3 REEGIS]
POWERGEN_FAC	A facility used in the production and distribution of electrical power. [SDSFIE V2.3 HSIP]
RADIO_FACILITY	Radio Facility. [SDSFIE V2.4 USGS]
RAILROAD_STATION	Railroad Station. [SDSFIE V2.4 USGS]
RAIN_SHED	Rain Shed. [SDSFIE V2.4 USGS]
SCHOOL	Any building or structure whose primary purpose is education. [SDSFIE
SECURITY	Security. [SDSFIE V2.4 Air Force]
SKYSCRAPER	skyscraper [SDSFIE V1.4]
SUPREME_COURT	Supreme Court. [SDSFIE V2.4 USGS]
SURVIVALSHLT	survival shelter [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
THEATER	Theater. [SDSFIE V2.4 USGS]
TOWER	Tower. [SDSFIE V2.4 USGS]
TOWN_HALL	Town Hall. [SDSFIE V2.4 USGS]
TOWNHOUSE	townhouse [SDSFIE V1.4]
US_MINT	US Mint. [SDSFIE V2.4 USGS]
WHITE_HOUSE	White House. [SDSFIE V2.4 USGS]

swt_sta_d

Value	Definition (Notes) [Source]
CLOSED	closed [SDSFIE V1.4]
CLOSEDCLOSED	closed - normally closed [SDSFIE V1.4]
CLOSEDOPEN	closed - normally open [SDSFIE V1.4]
OPEN	open [SDSFIE V1.4]
OPENCLOSED	open - normally closed [SDSFIE V1.4]
OPENOPEN	open - normally open [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

systyp_d

Value	Definition (Notes) [Source]
COMMERCIAL	commercial [SDSFIE V1.9 USACE OPERATIONS]
COOLING_COIL	Cooling Coil [SDSFIE V1.9 USACE OPERATIONS]
HEAT_COIL	Heat Coil [SDSFIE V1.9 USACE OPERATIONS]
MUNICIPAL	Municipal [SDSFIE V1.9 USACE OPERATIONS]
PRIVATE	Private [SDSFIE V1.9 USACE OPERATIONS]

tank_des_d, use_d

Value	Definition (Notes) [Source]
DISPOSAL	disposal tank [SDSFIE V1.8]
SEPTIC_TANK	septic tank [SDSFIE V1.8]

tank_st_d, tank_sty_d, trap_st_d

Value	Definition (Notes) [Source]
ABOVEGROUND	A receptacle or chamber of which 90 percent or more is located above the surface of the ground. [SDSFIE V1.4]
ABVGRND_UNDRGRND	Aboveground and underground. [SDSFIE V2.31 Air Force]
ALODINE_TANK	alodine tank [SDSFIE V2.3 Edwards Air Force Base]
BARRELS	Barrels, drums or cans. [SDSFIE V2.31 Air Force]
DRAINSUMP	drain sump tank [SDSFIE V1.4]
ELEVATED	elevated [SDSFIE V1.4]
HOT_WATER_TANK	hot water rinse tank [SDSFIE V2.3 Edwards Air Force Base]
HYDROPNEU	hydropneumatic [SDSFIE V1.4]
IND_WASTE_TANK	industrial waste tank [SDSFIE V2.3 Edwards Air Force Base]
OTHER	other [SDSFIE V1.4]
RAILROAD_TANKCAR	Railroad Tank Car. [SDSFIE V2.31 Air Force]
SCP	self contained propane gas tank [SDSFIE V1.4]

SEMIBRD_UNDRGRND	Semi-buried and Underground. [SDSFIE V2.31 Air Force]
SEMIBURIED	Semi-buried. [SDSFIE V2.31 Air Force]
STANDPIPE	standpipe [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TRUCK	Truck. [SDSFIE V2.31 Air Force]
UNCONFNDRESV	unconfined reservoir [SDSFIE V1.4]
UNDERGROUND	A receptacle or chamber of which 10 percent or more is located beneath the surface of the ground. [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

tank_use_d

Value	Definition (Notes) [Source]
CHEMICAL	chemical [SDSFIE V1.4]
DISPOSAL	disposal tank [SDSFIE V1.4]
EWS	Reserve water source used by emergency firefighting services. [SDSFIE V2.21 Lakenheath AFB]
FUEL	fuel [SDSFIE V1.4]
NATGAS	natural gas [SDSFIE V1.4]
OIL	oil [SDSFIE V1.75]
OTHER	other [SDSFIE V1.4]
POL	Petroleum, Oil, and Lubricants. [SDSFIE V2.31 Air Force]
POTWATER	potable water [SDSFIE V1.4]
PROPGAS	propane gas [SDSFIE V1.4]
RAWWATER	raw water [SDSFIE V1.4]
SEPTIC_TANK	septic tank [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

temp_u_d

Value	Definition (Notes) [Source]
DEG_C	A unit division of a temperature scale that registers the freezing pt of water at 0 deg C and the boiling pt as 100 deg C under standard atmospheric pressure. [SDSFIE V2.5 SI ANSI]
DEG_F	A unit division of a temperature scale that registers the freezing pt of water at 32 deg F and the boiling pt as 212 deg F under standard atmospheric pressure. [SDSFIE V2.5 SI ANSI]
K	Degrees Kelvin. [SDSFIE V2.5 ISO10004-2]

term_typ_d

Value	Definition (Notes) [Source]
BNC_F	BNC-F - Bayonet Neill Concelman (BMC), Female. [SDSFIE V2.5 AIR
BNC_M	BNC-M - Bayonet Neill Concelman (BMC), Male. [SDSFIE V2.5 AIR
ENC	Enclosure [SDSFIE V2 Austin and Pitts]
ENCAP	Encapsulated [SDSFIE V2 Austin and Pitts]
F_TYPE_F	F-F - F TYPE, Female. [SDSFIE V2.5 AIR FORCE]
F_TYPE_M	F-M - F TYPE, Male. [SDSFIE V2.5 AIR FORCE]
FC	Fixed Count [SDSFIE V2 Austin and Pitts]
FC_F	FC-F - MIL-C-39012 category D type, FO connector, Female. [SDSFIE V2.5 AIR FORCE]
FC_M	FC-M - MIL-C-39012 category D type, FO connector, Male. [SDSFIE V2.5 AIR FORCE]
FCCP	Fixed Count Control Point [SDSFIE V2 Austin and Pitts]
FCTP	Fixed Count Taper Point [SDSFIE V2 Austin and Pitts]
FDDI_F	FDDI-F - Fiber Distributed Data Interface, FO connector, Female. [SDSFIE V2.5 AIR FORCE]
FIDDI_M	FDDI-M - Fiber Distributed Data Interface, FO connector, Male. [SDSFIE V2.5 AIR FORCE]
LC_F	LC-F - Limited Co-ordination Specification (LC Spec.), Female. [SDSFIE V2.5 AIR FORCE]
LC_M	LC-M - Limited Co-ordination Specification (LC Spec.), Male. [SDSFIE V2.5 AIR FORCE]
N_TYPE_F	N-F - N TYPE, Female. [SDSFIE V2.5 AIR FORCE]
N_TYPE_M	N-M - N TYPE, Male [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
OTHER	Other [SDSFIE V2]
RA	Ready Access [SDSFIE V2 Austin and Pitts]
RACP	Ready Access Control Point [SDSFIE V2 Austin and Pitts]
RATP	Ready Access Taper Point [SDSFIE V2 Austin and Pitts]
RE	Reenterable [SDSFIE V2 Austin and Pitts]
SC_F	SC-F - Plug and socket, push-pull latch, FO connector, Female. [SDSFIE V2.5 AIR FORCE]

SC_M	SC-M - Plug and socket, push-pull latch, FO connector, Male. [SDSFIE V2.5 AIR FORCE]
SMA_AF	SMA-AF - Subminiature Version A, Female. [SDSFIE V2.5 AIR FORCE]
SMA_AM	SMA-AM - Subminiature Version A, Male. [SDSFIE V2.5 AIR FORCE]
SMC_CF	SMC-CF - Subminiature Version C, Female. [SDSFIE V2.5 AIR FORCE]
SMC_CM	SMC-CM - Subminiature Version C, Male. [SDSFIE V2.5 AIR FORCE]
ST_F	ST-F - ST, Female. [SDSFIE V2.5 AIR FORCE]
ST_M	ST-M - ST, Male. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined [SDSFIE V2 Austin and Pitts]
TNC_F	TNC-F - TNC Female. [SDSFIE V2.5 AIR FORCE]
TNC_M	TNC-M - TNC Male. [SDSFIE V2.5 AIR FORCE]
UNKNOWN	Unknown [SDSFIE V2]
UNKNOWN	Unknown. [SDSFIE V2.5 AIR FORCE]

test_ty_d

Value	Definition (Notes) [Source]
BOD	biological O2 dissolved [SDSFIE V1.4]
COD	chemical O2 dissolved [SDSFIE V1.4]
DO	dissolved O2 [SDSFIE V1.4]
FC	fecal coliform [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
SS	suspended solids [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TC	total coliform bacteria [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

tox_stt_d

Value	Definition (Notes) [Source]
CARCINOGENIC	A substance or agent producing or inciting cancer. [SDSFIE V1.4]
CHRONIC_ABS	Contaminant can exhibit chronic toxicity through skin absorption. [SDSFIE
CHRONIC_CON	Contaminant can exhibit chronic toxicity through skin and/or eye contact. [SDSFIE V1.4]
CHRONIC_ING	Contaminant can exhibit chronic toxicity through ingestion. [SDSFIE V1.4
CHRONIC_INH	Contaminant can exhibit chronic toxicity through inhalation. [SDSFIE
CHRONICTOXICITY	Long term exposure can lead to illness or damage. [SDSFIE V1.4]
HIGHLYTOXIC	Highly toxic in more than one route of entry into the body. [SDSFIE V1.4]
HIGHLYTOXIC_ABS	Contaminant can be highly toxic through skin absorption. [SDSFIE V1.4]
HIGHLYTOXIC_CON	Contaminant can be highly toxic through skin and/or eye contact. [SDSFIE
HIGHLYTOXIC_ING	Contaminant can be highly toxic through ingestion. [SDSFIE V1.4]
HIGHLYTOXIC_INH	Contaminant can be highly toxic through inhalation. [SDSFIE V1.4]
IDLH	Contaminants are present at or above the concentration considered to be immediately dangerous to life or health. [SDSFIE V1.4]
NONTOXIC	Nontoxic [SDSFIE V1.4]
RADANDNONDEADLY	Low level radiation, non-deadly, but may lead to chronic illness or complications. [SDSFIE V1.4]
RADANDTOXIC	Radioactive and toxic [SDSFIE V1.4]
TBD	to be determined. [SDSFIE V1.4]
TOXIC_ABS	Contaminant can be toxic through skin absorption. [SDSFIE V1.4]
TOXIC_CON	Contaminant can be toxic through skin and/or eye contact. [SDSFIE V1.4]
TOXIC_ING	Contaminant can be toxic through ingestion. [SDSFIE V1.4]
TOXIC_INH	Contaminant can be toxic through inhalation. [SDSFIE V1.4]
UNKNOWN	Level of toxicity is currently unknown. [SDSFIE V1.4]

treattyp_d

Value	Definition (Notes) [Source]
CREOSOTE	The pole has been treated with creosote. [SDSFIE V1.6]
OTHER	Other, Not otherwise listed [SDSFIE V1.6]
PAINT	The pole has been painted to prevent corrosion. [SDSFIE V1.6]
TBD	To be determined [SDSFIE V1.6]
UNKNOWN	Unknown [SDSFIE V1.6]

trt_lev_d

Value	Definition (Notes) [Source]
OTHER	Other. [SDSFIE V2.31 HSIP]
PRIMARY	Primary. [SDSFIE V2.31 HSIP]
QUATERNARY	Quaternary. [SDSFIE V2.31 HSIP]
SECONDARY	Secondary. [SDSFIE V2.31 HSIP]
TERTIARY	Tertiary. [SDSFIE V2.31 HSIP]

truck_ty_d

Value	Definition (Notes) [Source]
FUEL_SVC_UNIT	Trailer-mounted Fuel Servicing Unit [SDSFIE V2.31 Air Force]
HOSE_CART	Hose cart - truck only [SDSFIE V2.31 Air Force]
UNKNOWN	Unknown [SDSFIE V2.31 Air Force]
WATER_SEPARATOR	Filter - Water separator [SDSFIE V2.31 Air Force]

tun_typ_d

Value	Definition (Notes) [Source]
CANAL	canal [SDSFIE V1.8 USGS]
OTHER	any other type of tunnel or unknown [SDSFIE V1.8 USGS]
RAILROAD	railroad [SDSFIE V1 8 USGS]
ROAD	road / highway [SDSFIE V1.8 USGS]
TRAIL	pedestrian trail [SDSFIE V1.8 USGS]

type_d

Value	Definition (Notes) [Source]
ABOVEGROUND	above ground [SDSFIE V1.4]
AERATOR	aerator [SDSFIE V1.4]
AEROBIC	aerobic [SDSFIE V1.4]
ANAEROBIC	anaerobic [SDSFIE V1.4]
ANGLE	pipe angle [SDSFIE V1.4]
API	API standard [SDSFIE V1.4]
AUTOREDCNTRL	automated meter reading - centralized system [SDSFIE V1.4]
AUTOREDPITPR	automated meter reading - pit probe [SDSFIE V1.4]
AUTOREDTPAD	automated meter reading - touch pad [SDSFIE V1.4]
BAFFLE	baffle block basin [SDSFIE V1.4]
BALL	Ball Type. [SDSFIE V2.5 AIR FORCE]
BD	Buried Distribution Closure, size unknown. [SDSFIE V2.5 AIR FORCE]
BIOLOGIC	biological treatment process [SDSFIE V1.4]
BOOSTER	booster station [SDSFIE V1.4]
BOX	Rectangular box type enclosure, accessed by removing a cover panel. [SDSFIE V2.5 AIR FORCE]
BOX	box [SDSFIE V1.4]
BOX_FLIP_LID	Box Flip Lid. [SDSFIE V2.31 Air Force]
CAB	Cabinet enclosure, accessed through a hinged door. [SDSFIE V2.5 AIR
CABELTV	cable television [SDSFIE V1.4]
CAD	Controlled Access Distribution Closure. [SDSFIE V2.5 AIR FORCE]
CAP	pipe cap [SDSFIE V2.1 FGDC Utilities Classification]
CAP	pipe cap [SDSFIE V1.4]
CAP	Cap or Plug fitting. [SDSFIE V2.1 FGDC Utilities Classification]
CAP	pipe cap [SDSFIE V1.6]
CEMENT	cement [SDSFIE V1.4]
CHEMICALTRET	chemical treatment process [SDSFIE V1.4]
CHILLING_PLANT	chill water plant [SDSFIE V2.1 FGDC Utilities Classification]
CIRCULAR	circular [SDSFIE V1.4]
CLEANOUT	pipe cleanout [SDSFIE V1.4]
CLEANOUT	pipe cleanout [SDSFIE V1.6]
COMMUNICATE	communication/telephone system [SDSFIE V1.4]
COMPOUND	piston/turbine - single register [SDSFIE V1.4]
CONCRETE	concrete [SDSFIE V1.4]
CONDULET_POLE	condulet and pole mount (above ground) [SDSFIE V1.4]
CROSS	pipe cross [SDSFIE V1.4]
CROSS	Cross Fitting [SDSFIE V2.1 FGDC Utilities Classification]
DEEP_DEPTH_DISK	Disk Type shield for marking features at depths up to eight feet. [SDSFIE V2.5 AIR FORCE]
DETECTOR	detector check valve - turbine - fire line, sprinklers [SDSFIE V1.4]
DIAPHRAGM	diaphragm - positive displacement - normal residence [SDSFIE V1.4]
DIST_BOX	distribution box [SDSFIE V1.4]
DOUBLE_POL	double pole [SDSFIE V1.75]
DRAIN	drainage field [SDSFIE V1.4]
DRAINPIT	drain pit [SDSFIE V1.4]
DUALCASE	pump/rotary/vanes - case in case - normal terminal [SDSFIE V1.4]
ELBOW	pipe elbow [SDSFIE V1.4]
ELECTRICAL	electrical [SDSFIE V1.4]
FACULTATIVE	facultative [SDSFIE V1.4]
FIBERGLASS	fiber glass [SDSFIE V1.4]
FLANGE	pipe flange [SDSFIE V2.1 FGDC Utilities Classification]
FLANGE	pipe flange [SDSFIE V1.4]
FLIPBUCK	flip bucket [SDSFIE V1.4]
FLUSH_GRADE	flush to grade (in ground) [SDSFIE V1.4]

FREE_STANDING_PO	Free Standing Pole. [SDSFIE V2.31 Air Force]
FUEL	fuel system [SDSFIE V1.4]
GARBAGEINCIN	garbage incinerator plant [SDSFIE V1.4]
GATE	gates [SDSFIE V1.4]
GEARCASE	metal gears - positive displacement - normal bulk plant [SDSFIE V1.4]
GENEREMOTE	generator remote system - compound and propeller meters [SDSFIE V1.4]
HEATING_PLANT	high temp, low temp, and/or steam plant [SDSFIE V2.1 FGDC Utilities Classification]
HYDRANT	hydrant meter at fire hydrant - turbine [SDSFIE V1.4]
IMPACT	impact basin [SDSFIE V1.4]
INDUSTRIAL	industrial waste system [SDSFIE V1.4]
INDUSTRIALWS	industrial waste treatment plant [SDSFIE V1.4]
IRRIGATE	irrigation meters - continuous, high flows [SDSFIE V1.4]
JUNCTION_BOX	junction box [SDSFIE V1.4]
LINED_FAB	lagoon with geotextile liner [SDSFIE V1.4]
LINED_SOIL	lagoon with soil liner [SDSFIE V1.4]
METER	Metering Station [SDSFIE V1.4]
METER	meter [SDSFIE V1.4]
MID_DEPTH_MAT	Mat or spoke shield type for marking features at depths up to six feet. [SDSFIE V2.5 AIR FORCE]
NATGAS	natural gas system [SDSFIE V1.4]
NEAR_SURF_STAKE	Cylindrical shaped stake type for marking features at depths of up to two feet. [SDSFIE V2.5 AIR FORCE]
OFF_SITE	off site, off base, out of system [SDSFIE V1.75]
OPEN	open discharge point [SDSFIE V1.4]
ORIFICE	orifice - pressure drop across plate - city gate, transmission company [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
OTHER	other [SDSFIE V1.4]
OTHER	Other. [SDSFIE V2.31 Air Force]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	Other [SDSFIE V2 Austin and Pitts]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OVALONGAXHRZ	oval long axis horizontal [SDSFIE V1.4]
OVALONGAXVRT	oval long axis vertical [SDSFIE V1.4]
OVERFLOW	overflow [SDSFIE V1.75]
PARALELPLATE	parallel plate [SDSFIE V1.4]
PED12	12 inch pedestal [SDSFIE V2 Austin and Pitts]
PED4	4 inch pedestal [SDSFIE V2 Austin and Pitts]
PED6	6 inch pedestal [SDSFIE V2 Austin and Pitts]
PED8	8 inch pedestal [SDSFIE V2 Austin and Pitts]
PEDESTAL	pedestal [SDSFIE V1.4]
PERFORATPIPE	perforated pipe [SDSFIE V1.4]
PIPEARCH	pipe arch [SDSFIE V1.4]
PISTON	pump/3 piston/chamber - normal service station [SDSFIE V1.4]
PISTON	oscillating piston - positive displacement - normal residence [SDSFIE V1.4
PIT	pit [SDSFIE V1.4]
PLUG	pipe plug [SDSFIE V1.4]
POLE	pole [SDSFIE V1.4]
POLYURETHANE	polyurethane [SDSFIE V1.4]
PPSP	Propane Peak Shaving Station [SDSFIE V1.4]
PRESS_REDUCE	pressure reducing station [SDSFIE V1.4]
PRESSREDVAL	pressure reducing valve [SDSFIE V1.4]
PROPELLER	propeller meters - continuous, high flows [SDSFIE V1.4]
PUMP	pumping station [SDSFIE V1.4]
REDUCER	pipe reducer [SDSFIE V2.1 FGDC Utilities Classification]

REDUCER	pipe pressure reducer [SDSFIE V1.4]
REDUCER	reducer [SDSFIE V2.1 FGDC Utilities Classification]
REDUCER	reducer [SDSFIE V1.4]
REDUCER	reducer [SDSFIE V1.8]
REGULATOR	regulator [SDSFIE V1.4]
REGULATOR	regulator [SDSFIE V2.1 FGDC Utilities Classification]
REINFORCONCR	reinforced concrete [SDSFIE V1.4]
RIPRAP	riprap [SDSFIE V1.4]
RISER_POLE	riser pole [SDSFIE V1.75]
ROTARY	pump/rotary/vanes - normal bulk plant [SDSFIE V1.4]
ROTARY	rotary - impeller driven - normal commercial, industrial [SDSFIE V1.4]
ROTARYIMPLER	rotary impeller - pressure driven - normal pipeline [SDSFIE V1.4]
SANITARY	sanitary system [SDSFIE V1.4]
SEEPAGEPIT	seepage pit [SDSFIE V1.4]
SERVICE	Service connection. [SDSFIE V2 AWWA]
SEWAGETREAT	sewage treatment plant [SDSFIE V1.4]
STD_REFCL_JNCBX	Standard Reference Cell Junction Box [SDSFIE V1.4]
STD_RESIS_JNCBX	Standard Resistor Junction Box [SDSFIE V1.4]
STD_SHNT_JNCBX	Standard Shunt Junction Box [SDSFIE V1.4]
STD_TERM_JNCBX	Standard Terminal Junction Box [SDSFIE V1.4]
STEEL1	steel single [SDSFIE V1.4]
STEEL2	steel double [SDSFIE V1.4]
STEELENCASED	steel encased [SDSFIE V1.4]
STILLBASIN	stilling basin [SDSFIE V1.4]
SUBMURCTFG	submersible/centrifugal [SDSFIE V1.4]
SUBMURTRBN	submersible/turbine [SDSFIE V1.4]
SUBSTATION	electrical substation [SDSFIE V1.4]
SUMP	sump [SDSFIE V1.4]
SURFACE	open discharge to surface [SDSFIE V1.75]
TAPE	Tape Type. [SDSFIE V2.5 AIR FORCE]
TAPPING_SLEEVE	Tapping Sleeve [SDSFIE V2 AWWA]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	To Be Determined [SDSFIE V2 Austin and Pitts]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TEE	pipe tee [SDSFIE V1.4]
TEE	Tee fitting. [SDSFIE V2.1 FGDC Utilities Classification]
TOWER	tower [SDSFIE V1.4]
TURBINE	turbine - turbine driven, continuous flow - normal industrial [SDSFIE V1.4]
TURBINE	turbine - turbine driven, continuous flow - normal industrial [SDSFIE V1.4]
UNDERGROUND	under ground [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	Unknown [SDSFIE V2 Austin and Pitts]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]

UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNLINED	lagoon with out engineering designed liner [SDSFIE V1.4]
UTILITY_POLE	Utility Pole. [SDSFIE V2.31 Air Force]
VERTLFTCTFG	vertical lift/centrifugal [SDSFIE V1.4]
VERTLFTDISPL	vertical lift/displacement [SDSFIE V1.4]
VERTLFTMAG	vertical lift/magnetic [SDSFIE V1.4]
VERTLFTTRBN	vertical lift/turbine [SDSFIE V1.4]
WATER	water system [SDSFIE V1.4]
WATERTREAT	water treatment plant [SDSFIE V1.4]
WEIR	open channel weir [SDSFIE V1.4]
WEIR	weir [SDSFIE V1.4]
WYE	Y shaped fitting [SDSFIE V1.9]

use_code_d

Value	Definition (Notes) [Source]
NSU_1	HIGH ALTITUDE [SDSFIE V2 DISA]
NSU_2	LOW ALTITUDE [SDSFIE V2 DISA]
NSU_3	ALL ALTITUDES [SDSFIE V2 DISA]
NSU_4	RANDOM NAVIGATION [SDSFIE V2 DISA]
NSU_5	TERMINAL [SDSFIE V2 DISA]
UNKNOWN	Unknown. [SDSFIE V2.31 Air Force]

use_d

Value	Definition (Notes) [Source]
ABANDONED	abandoned/inactive pipe [SDSFIE V2.1 FGDC Utilities Classification]
ABANDONED	abandoned/inactive pipe [SDSFIE V2.1 FGDC Utilities Classification]
ABANDONED	abandoned line [SDSFIE V2.1 FGDC Utilities Classification]
ABANDONED	Abandoned/inactive hcs-water line. [SDSFIE V2.1 FGDC Utilities
ABANDONED	abandoned/inactive pipe [SDSFIE V1.75]
ABANDONED	abandoned/inactive pipe [SDSFIE V1.6]
AIR	air [SDSFIE V1.4]
BACKFLOW	backflow preventer [SDSFIE V2.1 FGDC Utilities Classification]
BLOW_OFF	a blow-off valve [SDSFIE V2.1 FGDC Utilities Classification]
CHECK	Check Valve. [SDSFIE V2 AWWA]
CHECK	check or one-way valve [SDSFIE V1.4]
CHEMICALS	chemicals [SDSFIE V1.4]
CHILLWATER	chilled water [SDSFIE V1.4]
CHW_M	Chilled Water Main: water less than 45 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
CHW_S	Chilled Water Service: water less than 45 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
CIRCULAR	Circular [SDSFIE V2.31 Air Force]
CONTROL	control valve [SDSFIE V1.4]
DEFUELING	defueling line [SDSFIE V2.1 FGDC Utilities Classification]
DISTRIB_BOX	distribution box [SDSFIE V1.4]
DRAIN	Drain [SDSFIE V2.1 FGDC Utilities Classification]
DRAIN	drain/flush valve [SDSFIE V1.4]
DRIP_POT	drip pot [SDSFIE V2.1 FGDC Utilities Classification]
DTW_M	Dual Temperature Main Service Supply [SDSFIE V2.1 FGDC Utilities Classification]
DTW_S	Dual Temperature Building Service Supply [SDSFIE V2.1 FGDC Utilities Classification]
FIRE	fire protection [SDSFIE V1.7]
FISH_WILD	fish and wildlife [SDSFIE V1.4]
FM	force main [SDSFIE V2.1 FGDC Utilities Classification]
FM	force main [SDSFIE V1.75]
FREON	freon [SDSFIE V1.4]
FUEL	Fuel [SDSFIE V2.3 Cherry Point]
GASOLINE	gasoline [SDSFIE V1.4]
GATE	Gate Valve [SDSFIE V2 AWWA]
GLOBE	Globe Valve [SDSFIE V2 AWWA]
HANDHOLE	handhole [SDSFIE V2.1 FGDC Utilities Classification]
HOTWATER	hot water [SDSFIE V1.4]
HPDRIP	High Pressure Drip [SDSFIE V2.1 FGDC Utilities Classification]
HTW_M	High Temperature Water Main: water greater that 250 deg. F [SDSFIE V2.1 FGDC Utilities Classification]
HTW_S	High Temperature Water Service: water greater that 250 deg. F [SDSFIE V2.1 FGDC Utilities Classification]

HYDRANT_PIT	hydrant control pit [SDSFIE V2.1 FGDC Utilities Classification]
HYDRO	hydropower [SDSFIE V1.4]
IRREGULAR	Irregular (not circular or rectangular) [SDSFIE V2.31 Air Force]
JUNCTION_BOX	junction box [SDSFIE V2.1 FGDC Utilities Classification]
JUNCTION_BOX	junction box [SDSFIE V1.4]
JUNCTION_BOX	junction box [SDSFIE V2.1 FGDC Utilities Classification]
JUNCTION_BOX	junction box [SDSFIE V1.4]
JUNCTION_BOX	junction box [SDSFIE V2.1 FGDC Utilities Classification]
JUNCTION_BOX	junction box [SDSFIE V2.1 FGDC Utilities Classification]
JUNCTION_BOX	junction box [SDSFIE V2.1 FGDC Utilities Classification]
LIQUIDFUEL	liquid fuel [SDSFIE V1.4]
LTW_M	Low Temperature Water Main: water less than 250 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
LTW_S	Low Temperature Water Service: water less than 250 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
MAIN	main line [SDSFIE V2.1 FGDC Utilities Classification]
MAIN	main line [SDSFIE V2.1 FGDC Utilities Classification]
MAIN	main line [SDSFIE V1.75]
MAIN	main line [SDSFIE V2.1 FGDC Utilities Classification]
MAIN	main line [SDSFIE V1.6]
MAIN	main control valve [SDSFIE V1.4]
MANHOLE	manhole [SDSFIE V1.4]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V2.1 FGDC Utilities Classification]
MANHOLE	manhole [SDSFIE V1.4]
NATGAS	natural gas [SDSFIE V1.4]
NOT_APPLICABLE	Not Applicable [SDSFIE V2.31 Air Force]
OIL	oil [SDSFIE V1.4]
ORDNANCE	Ordnance. [SDSFIE V2.31 Cherry Point]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
OVERFLOW	directs excessive wastewater to another location [SDSFIE V1.75]
POSTINDICATOR	post indicator gate valve [SDSFIE V2 AWWA]
PRV	Pressure Reducing Valve [SDSFIE V2.1 FGDC Utilities Classification]
PULL_BOX	pull box [SDSFIE V2.1 FGDC Utilities Classification]
RAW_WATER	raw water line [SDSFIE V1.6]
RECREAT	recreation [SDSFIE V1.4]
RECTANGULAR	Rectangular [SDSFIE V2.31 Air Force]
RET_CHW_M	Chilled Water Main Return: water less than 45 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
RET_CHW_S	Chilled Water Service Return: water less than 45 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
RET_DTW_M	Dual Temperature Main Service Return [SDSFIE V2.1 FGDC Utilities Classification]
RET_DTW_S	Dual Temperature Building Service Return [SDSFIE V2.1 FGDC Utilities Classification]
RET_HTW_M	High Temperature Water Main Return: water greater that 250 deg. F [SDSFIE V2.1 FGDC Utilities Classification]
RET_HTW_S	High Temperature Water Service Return: water greater that 250 deg. F [SDSFIE V2.1 FGDC Utilities Classification]
RET_LTW_M	Low Temperature Water Main Return: water less than 250 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
RET_LTW_S	Low Temperature Water Service Return: water less than 250 deg. F. [SDSFIE V2.1 FGDC Utilities Classification]
RET_S_M	Steam Main Return [SDSFIE V2.1 FGDC Utilities Classification]
RET_S_S	Steam Service Return [SDSFIE V2.1 FGDC Utilities Classification]
RETURN	Miscellaneous Return Line [SDSFIE V2.1 FGDC Utilities Classification]
S_M	Steam Main [SDSFIE V2.1 FGDC Utilities Classification]
S_S	Steam Service [SDSFIE V2.1 FGDC Utilities Classification]
SANITATION	sanitation sewage [SDSFIE V1.4]
SERVICE	building/facility service [SDSFIE V2.1 FGDC Utilities Classification]
SERVICE	building/facility service [SDSFIE V1.75]
SERVICE	building/facility service [SDSFIE V2.1 FGDC Utilities Classification]
SERVICE	service line [SDSFIE V2.1 FGDC Utilities Classification]
SERVICE	service control valve [SDSFIE V1.4]

SERVICE	building/facility service [SDSFIE V1.6]
SIPHON	siphon line used to transport water [SDSFIE V1.8 USGS]
SLUDGE	sludge [SDSFIE V1.4]
SLUDGE	Sludge. [SDSFIE V2.31 Air Force]
SPRINKLER	sprinkler head [SDSFIE V1.6]
STEAM	steam [SDSFIE V1.4]
STORMWATER	storm/rainwater [SDSFIE V1.4]
TAP	line tap [SDSFIE V2.1 FGDC Utilities Classification]
TAP	line tap [SDSFIE V2.1 FGDC Utilities Classification]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
TEST_BOX	test box [SDSFIE V2.1 FGDC Utilities Classification]
TMPHOLD	temporary holding basin [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	Unknown [SDSFIE V2.31 Air Force]
UNKNOWN	unknown [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
VALVE	valve [SDSFIE V2.1 FGDC Utilities Classification]
VALVE	valve [SDSFIE V2.1 FGDC Utilities Classification]
VALVE_PIT	valve pit [SDSFIE V1.4]
VALVE_PIT	valve pit [SDSFIE V2.1 FGDC Utilities Classification]
VALVE_PIT	valve pit [SDSFIE V2.1 FGDC Utilities Classification]
VALVE_PIT	valve pit [SDSFIE V2.1 FGDC Utilities Classification]
VENT	vent line [SDSFIE V2.1 FGDC Utilities Classification]
VENT	vent line [SDSFIE V2.1 FGDC Utilities Classification]
VENT_PIT	vent pit [SDSFIE V2.1 FGDC Utilities Classification]
VENT_PIT	vent pit [SDSFIE V2.1 FGDC Utilities Classification]
WASTEWATER	wastewater [SDSFIE V1.4]
WATER	water [SDSFIE V1.4]
WATERSUP	water supply [SDSFIE V1.4]

utilown_d

Value	Definition (Notes) [Source]
PRIVATE	Private entity (e.g., individual, corporation, etc.). [SDSFIE V2 AWWA]
PUBLIC	Public entity (e.g., federal, state, or local government). [SDSFIE V2

vehtype_d

Value	Definition (Notes) [Source]
GOV	Areas that contain government owned vehicles only. [SDSFIE V2.5]
POV	Areas that contain privately owned vehicles. [SDSFIE V2.5]

vert_loc_d

Value	Definition (Notes) [Source]
ELEVATED	Elevated. [SDSFIE V2.4 USGS]
NEAR	Near. [SDSFIE V2.4 USGS]
UNDERGROUND	Underground. [SDSFIE V2.4 USGS]
UNSPECIFIED	Unspecified. [SDSFIE V2.4 USGS]

volt_req_d

Value	Definition (Notes) [Source]
AC_+120V	+120 Volt AC. [SDSFIE V2.5 AIR FORCE]
DC_+5V	+5 Volt DC. [SDSFIE V2.5 AIR FORCE]
DC_+5V_+12V	+5 and +12 Volt DC. [SDSFIE V2.5 AIR FORCE]
DC_+9V	+9 Volt DC. [SDSFIE V2.5 AIR FORCE]
DC_12V	-12 Volt DC. [SDSFIE V2.5 AIR FORCE]
DC_24V	-24 Volt DC. [SDSFIE V2.5 AIR FORCE]
OTHER	Other. [SDSFIE V2.5 AIR FORCE]
TBD	To Be Determined. [SDSFIE V2.5 AIR FORCE]

watts_d

Value	Definition (Notes) [Source]
100	100w. [SDSFIE V2.4 USMC]
1000	1000w. [SDSFIE V2.4 USMC]
150	150w. [SDSFIE V2.4 USMC]
175	175w. [SDSFIE V2.4 USMC]
200	200w. [SDSFIE V2.4 USMC]
250	250w. [SDSFIE V2.4 USMC]
400	400w. [SDSFIE V2.4 USMC]
7	7w [SDSFIE V1.9]
70	70w [SDSFIE V1.9]

weight_u_d, wght_u_d

Value	Definition (Notes) [Source]
CARAT	Carat. [SDSFIE V2.5]
CWT	Short hundredweights - cental. [SDSFIE V2.5]
DALB	A unit of mass equal to ten pounds. [SDSFIE V2.5 SI]
DWT	Pennyweights. [SDSFIE V2.5]
G_CC	Grams per cubic centimeter. [SDSFIE V2.5]
G_CM3	Gram per cubic centimeter. [SDSFIE V2.5 SI]
G_KG	Gram per kilogram. [SDSFIE V2.5 SI]
G_L	Gram per liter. [SDSFIE V2.5]
G_M2	Gram per square meter. [SDSFIE V2.5 SI]
G_M3	Gram per cubic meter. [SDSFIE V2.5 SI]
G_ML	Gram per milliliter. [SDSFIE V2.5 SI]
GAL_ACR	Gallon per acre. [SDSFIE V2.5 ANSI]
GMP100CC	Grams per 100cc. [SDSFIE V2.5]
GR	Grains. [SDSFIE V2.5 ANSIX3.50-1986]
GR_FT3	Grains per cubic foot. [SDSFIE V2.5 ANSI]
HLB	A unit of mass equal to one hundred pounds. [SDSFIE V2.5 SI]
KG	Kilograms. [SDSFIE V2.5 ISO10003-1]
KG_GAL	Kilogram per gallon. [SDSFIE V2.5 SI ANSI]
KG_HA	Kilogram per hectare. [SDSFIE V2.5 SI]
KG_KG	Kilogram per kilogram. [SDSFIE V2.5 SI]
KG_KGAL	Kilogram per kilogallon. [SDSFIE V2.5 SI ANSI]
KG_L	Kilogram per liter. [SDSFIE V2.5 SI]
KG_M2	Kilogram per square meter. [SDSFIE V2.5 SI]
KG_M3	Kilogram per cubic meter. [SDSFIE V2.5 SI]
KG_MG	Kilogram per megagram. [SDSFIE V2.5 SI ANSI]
KLB	A unit of mass equal to one thousand pounds. [SDSFIE V2.5 SI]
KLB_LB	Kilopound per pound. [SDSFIE V2.5 SI ANSI]
KTONS	Kilotons. [SDSFIE V2.5]
LB	Pounds (Avoirdupois). [SDSFIE V2.5 ANSIX3.50-1986]
LB_ACR	Pound per acre. [SDSFIE V2.5 SI ANSI]
LB_BBL	Pound per barrel. [SDSFIE V2.5 SI ANSI]
LB_GAL	Pound per gallon. [SDSFIE V2.5 SI ANSI]
LB_HLB	Pound per hundred pounds. [SDSFIE V2.5 SI ANSI]
LB_KGAL	Pound per kilogallon. [SDSFIE V2.5 SI ANSI]
LB_KLB	Pound per kilopound. [SDSFIE V2.5 SI ANSI]
LB_MBTU	Pound per million BTU. [SDSFIE V2.5 SI ANSI]
LB_MOL	Molecular weight. [SDSFIE V2.5 SI]
LB_TON	Pound per ton. [SDSFIE V2.5 SI ANSI]
LBT	Pounds (Troy). [SDSFIE V2.5]
MEGAGRAM	Megagrams. [SDSFIE V2.5 Air Force]
MG_CM3	Milligram per cubic centimeter. [SDSFIE V2.5 SI]
MG_G	Milligram per gram. [SDSFIE V2.5 SI]
MG_KG	Milligram per kilogram. [SDSFIE V2.5 SI]
MG_L	Milligram per liter. [SDSFIE V2.5 SI]
MG_M2	Milligram per square meter. [SDSFIE V2.5 SI]
MG_M3	Milligram per cubic meter. [SDSFIE V2.5 SI]
MGL	Milligrams per liter. [SDSFIE V2.5]
MILLIGRAM	Milligrams. [SDSFIE V2.5 ISO10003-1 ANSI]
ML_L	Milliliter per liter. [SDSFIE V2.5 SI]
MLB	A unit of mass equal to one thousandth of a pound or equal to one million pounds. [SDSFIE V2.5 SI]
MOL_L	Mole per liter. [SDSFIE V2.5 SI]
NG	A unit of mass equal to one billionth of a gram. [SDSFIE V2.5 SI]
NG_CM3	Nanogram per cubic centimeter. [SDSFIE V2.5 SI]
NG_G	Nanogram per gram. [SDSFIE V2.5 SI]
NG_KG	Nanogram per kilogram. [SDSFIE V2.5 SI]
NG_L	Nanogram per liter. [SDSFIE V2.5 SI]
NG_M2	Nanogram per square meter. [SDSFIE V2.5 SI]
NG_M3	Nanogram per cubic meter. [SDSFIE V2.5 SI]
OZ	Ounces (Avoirdupois). [SDSFIE V2.5 ANSIX3.50-1986]
OZPTON	Ounces per ton. [SDSFIE V2.5]
PG	A unit of mass equal to one trillionth of a gram. [SDSFIE V2.5 SI]
PG_CM3	Picogram per cubic centimeter. [SDSFIE V2.5 SI]
PG_G	Picogram per gram. [SDSFIE V2.5 SI]
PG_KG	Picogram per kilogram. [SDSFIE V2.5 SI]
PG_L	Picogram per liter. [SDSFIE V2.5 SI]
PG_M2	Picogram per square meter. [SDSFIE V2.5 SI]

PG_M3	Picogram per cubic meter. [SDSFIE V2.5 SI]
PPFT3	Pounds per cubic foot. [SDSFIE V2.5]
PPM3	Pounds per cubic meter. [SDSFIE V2.5]
PPYD3	Pounds per cubic yard. [SDSFIE V2.5]
QNT	Quintals. [SDSFIE V2.5]
T_HA	Metric ton per hectare. [SDSFIE V2.5 SI]
TNL	Tons (long). [SDSFIE V2.5]
TNSH	Tons (short). [SDSFIE V2.5]
TON	A unit of mass equal to 2000 pounds, 0.907 metric ton, or 907.20 kilograms. Also referred to as a short ton. [SDSFIE V2.5 SI ANSI]
TOZ	Ounces (Troy). [SDSFIE V2.5 ANSIX3.50-1986]
UG	A unit of mass equal to one millionth of a gram. [SDSFIE V2.5 SI]
UG_CM3	Microgram per cubic centimeter. [SDSFIE V2.5 SI]
UG_G	Microgram per gram. [SDSFIE V2.5 SI]
UG_KG	Microgram per kilogram. [SDSFIE V2.5 SI]
UG_L	Microgram per liter. [SDSFIE V2.5 SI]
UG_M2	Microgram per square meter. [SDSFIE V2.5 SI]
UG_M3	Microgram per cubic meter. [SDSFIE V2.5 SI]
ULB	A unit of mass equal to one millionth of a pound. [SDSFIE V2.5 SI]
UMOL	Microgram per mole. [SDSFIE V2.5 SI]

wind_ty_d

Value	Definition (Notes) [Source]
DELTA	delta [SDSFIE V1.4]
GROUNDED_Y	grounded wye [SDSFIE V1.4]
HIGHLEG_DELTA	high-leg delta [SDSFIE V1.4]
OPEN_DELTA	open delta [SDSFIE V1.4]
OTHER	other [SDSFIE V1.4]
TBD	to be determined [SDSFIE V1.4]
UNKNOWN	unknown [SDSFIE V1.4]
Y	wye [SDSFIE V1.4]

wsystem_d

Value	Definition (Notes) [Source]
COMMUNITY	Water systems that serve the same people or facilities year-round (e.g., in homes, businesses, or military installations). [SDSFIE V2 AWWA]
NT_NONCOMMUNITY	Water systems that serve the same people and facilities, but not year-round (e.g., schools that have their own system). [SDSFIE V2 AWWA]
TR_NONCOMMUNITY	Water systems that do not consistently serve the same people (e.g., rest stops, campgrounds, gas stations that have their own water system). [SDSFIE V2 AWWA]

wwsystem_d

Value	Definition (Notes) [Source]
COMMERCIAL	Commercial type wastewater system (i.e., serves residential areas, businesses, industry, etc. outside the boundaries of a municipality).
MUNICIPAL	Municipal type of wastewater treatment system or utility (i.e., serves residential areas, businesses, and industry located within a municipality.

Appendix C – CADD TO GIS CROSSWALK

This appendix lists each of the CADD layers defined in MAA's CADD Standards Manual, Issue 1.0 which are associated with GIS layers defined in this document. The CADD layers are grouped by category (i.e. Airfield, Airspace, Environmental, etc.) and by Feature Type (i.e. Air Operations Area, Aircraft Deicing Area, etc.) as the GIS layers were in Appendix. Each Feature Type has one or more CADD layers associated with it. For each CADD layer, the layer name and description are provided. More information about these layers can be found in the CADD Standards Manual. It is important to note that many CADD layers included in the CADD Standards Manual are not relevant for GIS and are therefore excluded from this appendix.

Group: Airfield

AircraftDeicingArea Polygon Accuracy: +/- 5 Ft Sensitivity: Unclassified

An area where frost, ice, or snow is removed from aircraft in order to provide clean surfaces and/or clean surfaces of the aircraft receive protection against the formation of frost or ice and accumulation of snow or slush for a limited period of time [Source: AC 150/5300-13*]

Associated CADD Layers:

Layer Name	Description
C-APRN-DEIC	Aircraft Deicing Area

AircraftGateStand Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

Operational area of gate (parking) stand. If no gate stand area painting is available, a virtual parking stand area should be provided [Source: RTCA DO-272]

Associated CADD Layers:

Layer Name	Description
C-APRN-ACPK	Aircraft gate/stand parking area

AircraftNonMovementArea Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

An area where aircraft cannot be seen by a control tower and therefore are restricted to move.

Associated CADD Layers:

Layer Name	Description
C-APRN-ANOM	Aircraft non-movement area

AirfieldLight Point Accuracy: +/- 5 Ft Sensitivity: Restricted

Any lighting located within or near an airport boundary the provides guidance for airborne and ground maneuvering of aircraft [Source: AIM, AC 150/5340-24]

Associated CADD Layers:

Layer Name	Description
E-AFLD-LITE-APPR	Approach lights
E-AFLD-LITE-DIST	Distance and arresting gear markers
E-AFLD-LITE-LANE	Hoverlane, taxilane, and helipad lights
E-AFLD-LITE-OBST	Obstruction lights
E-AFLD-LITE-RUNW	Runway lights
E-AFLD-LITE-SIGN	Taxiway guidance signs
E-AFLD-LITE-TAXI	Taxiway lights
E-AFLD-LITE-THRS	Threshold lights
E-LITE-APPR	Approach lights
E-LITE-APRN	Apron Lighting
E-LITE-CONS	Constant Current Regulators
E-LITE-DIST	Distance and arresting gear markers and lights
E-LITE-EXTR-IDEN	Exterior light identifier tags, symbol modifiers, and text

E-LITE-IDEN	Light fixture identifier tags
E-LITE-LANE	Hoverlane, taxilane, and helipad lights
E-LITE-OBST	Obstruction lights
E-LITE-RNWY-GARD	Runway guard lights
E-LITE-ROOF	Roof lighting
E-LITE-RUNW-CNTR	Runway Centerline lights
E-LITE-RUNW-DTGS1	Runway Distance to go lights
E-LITE-RUNW-EDGE	Runway edge lights
E-LITE-RUNW-TDZN	Runway Touchdown Zone lights
E-LITE-SIGN	Taxiway guidance signs
E-LITE-TAXI-CNTL	Taxiway centerline lights
E-LITE-TAXI-EDGE	Taxiway edge lights
E-LITE-THRS	Threshold lights
V-AFLD-LITE-APPR	Approach lights
V-AFLD-LITE-DIST	Distance and arresting gear markers
V-AFLD-LITE-LANE	Hoverlane, taxilane, and helipad lights
V-AFLD-LITE-OBST	Obstruction lights
V-AFLD-LITE-RUNW	Runway lights
V-AFLD-LITE-SIGN	Taxiway guidance signs
V-AFLD-LITE-TAXI	Taxiway lights
V-AFLD-LITE-THRS	Threshold lights
V-LITE-APPR	Approach lights
V-LITE-LANE	Hoverlane, taxilane, and helipad lights
V-LITE-OBST	Obstruction lights
V-LITE-RUNW-CNTL	Runway Centerline lights
V-LITE-RUNW-TDZN	Runway Touchdown Zone lights
V-LITE-TAXI	Taxiway lights
V-LITE-THRS	Threshold lights

AirOperationsArea Polygon Accuracy: +/- 5 Ft Sensitivity: Unclassified

Area, specified in the airport security program, where security measures are carried out (aircraft movement, aircraft parking, loading, and safety areas as well as any adjacent areas that are not separated by adequate security systems or procedures) [Source: 49 CFR Part 1542, Airport Security*]

Associated CADD Layers:

Layer Name	Description
C-AFLD-AHOA	Air Operations Area

AirportBoundary Polygon Accuracy: +/- 1 Ft Sensitivity: Restricted

A polygon, or a set of polygons, that encompasses all property owned or controlled by the airport for aviation purposes [Source: AC 150/5300-13, Appendix 7, Order 5190.6A, Section 5]

Associated CADD Layers:

Layer Name	Description
C-AFLD-PROP	Airport property
C-PROP-IDEN	Property annotation
V-PROP-IDEN	Property annotation

AirportSign Point Accuracy: +/-10 Ft Sensitivity: Restricted

Signs at an airport other than surface painted signs [Source: AC 150/5340-18]

Associated CADD Layers:

Layer Name	Description
A-ELEV-SIGN	Signage
A-FLOR-SIGN	Signage
C-APRN-SIGN	Airfield signs on the apron
C-NGAS-SIGN	Surface markers/signs

C-PRKG-SIGN	Signs
C-ROAD-SIGN	Signs
C-RUNW-SIGN	Airfield signs on the runway such as distance remaining signs
C-SSWR-SIGN	Surface markers/signs
C-STRM-SIGN	Surface markers/signs
C-TAXI-SIGN	Airfield signs on the taxiway such as taxiway designator, hold short and directional signs
E-SPCL-TRAF	Traffic signal system
I-FLOR-SIGN	Signage
S-SIGN-BUOY	Sign buoys
S-SIGN-EXTN	Extrusions
S-SIGN-FRMG	Framing & connections
S-SIGN-GAGE	Staff gages
S-SIGN-PANL	Sign panels
S-SIGN-SPRT	Supports
S-SIGN-TEXT	Signage text
V-LITE-DIST	Distance and arresting gear markers
V-LITE-SIGN	Taxiway guidance signs
V-NGAS-SIGN	Surface markers/signs
V-PRKG-SIGN	Signs
V-ROAD-SIGN	Signs
V-SPCL-TRAF	Traffic signal system
V-SSWR-SIGN	Surface markers/signs
V-STRM-SIGN	Surface markers/signs

Apron Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A defined area on an airport or heliport, paved or unpaved, intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance [Source:

Associated CADD Layers:

Layer Name	Description
C-APRN-GRND	Grounding points
C-APRN-IDEN	Airfield apron - annotation
C-APRN-OTLN	Airfield apron - outlines
V-APRN-IDEN	Airfield apron - annotation
V-APRN-OTLN	Airfield apron - outlines

DesignSurface Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A three-dimensional surface that is used in runway design [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-AFLD-DSRF-BLDR	Building Restriction Line
C-AFLD-DSRF-KEYH	Key holes
C-AFLD-DSRF-NMOV	Aircraft Non-Movement Area
C-AFLD-DSRF-OFA_	Object Free Area
C-AFLD-DSRF-OFZ_	Object Free Zone
C-AFLD-DSRF-POFA	Precision Object Free Area
C-AFLD-DSRF-RPZ_	Runway Protection Zone
C-AFLD-DSRF-RSA_	Runway Safety Area
C-HELI-DSRF	Helipad design surface
C-OVRN-CNTR-IDEN	Centerline annotation
C-OVRN-IDEN	Airfield overrun area - annotation
C-OVRN-OTLN	Airfield overrun area - outlines
C-RUNW-CLRW	Runway clearway
V-OVRN-IDEN	Airfield overrun area - annotation

V-OVRN-OTLN	Airfield overrun area - outlines

DisplacedThreshold Point Accuracy: +/- 5 Ft Sensitivity: Restricted

The beginning of that portion of the runway available for landing when it is located at a point other than the physical end of the runway [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-RUNW-DISP	Displaced threshold markings
C-RUNW-THRS	Threshold markers

FrequencyArea Polygon Accuracy: +/-20 Ft Sensitivity: Unclassified

Area specifying the designated part of the surface movement area where a specific frequency is required by ATC or ground control [Source: RTCA DO-272]

Associated CADD Layers:

Layer Name	Description
C-AFLD-FREQ	Frequency Area

Helipad Polygon Accuracy: +/- 5 Ft Sensitivity: Unclassified

A small designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters. Also known as the Touchdown and Lift-Off Area (TLOF) [Source: AC 150/5390-2B]

Associated CADD Layers:

Layer Name	Description
C-HELI-CNTR	Centerline markings

HelipadFATO Polygon Accuracy: +/- 5 Ft Sensitivity: Unclassified

A defined area over which the final phase of the approach to a hover, or a landing, is completed and from which the takeoff is initiated. This area was called the "takeoff and landing area" in previous publications [Source: AC 150/5390-2B]

Associated CADD Layers:

Layer Name	Description
C-HELI-FATO	Helipad FATO

HelipadThreshold Point Accuracy: +/- 5 Ft Sensitivity: Unclassified

Based on the predominant wind direction, the helipad threshold position is congruent with the approach/takeoff paths [Source: RTCA DO-272]

Associated CADD Layers:

Layer Name	Description
C-HELI-DISP	Displaced threshold markings
C-HELI-THRS	Threshold markers

HelipadTLOF Polygon Accuracy: +/- 5 Ft Sensitivity: Unclassified

A load bearing, generally paved area, normally centered in the FATO, on which the helicopter lands or takes off. The TLOF is frequently called a helipad or helideck. TLOFs shall be photogrammetrically determined [Source: AC 150/5390-2B]

Associated CADD Layers:

Layer Name	Description
C-HELI-TLOF	Helipad take off and landing area

MarkingArea Polygon Accuracy: +/- 2 Ft Sensitivity: Unclassified

An element of Marking whose geometry is a polygon [Source: AC 150/5340-1]

Associated CADD Layers:

Layer Name	Description
C-HELI-IDEN	Heliport numbers and letters

C-HELI-TDZM	Touchdown zone markers
C-RUNW-DIST	Fixed distance markings
C-RUNW-IDEN	Airfield runway annotation
C-RUNW-TDZM	Touchdown zone markers
V-RUNW-CNTR-MRKG	Centerline markings
V-RUNW-DISP	Displaced threshold markings
V-RUNW-DIST	Fixed distance markings
V-RUNW-SIDE	Side stripes
V-RUNW-TDZM	Touchdown zone markers
V-RUNW-THRS	Threshold markers

MarkingLine Line Accuracy: +/- 2 Ft Sensitivity: Restricted

An element of Marking whose geometry is a line [Source: AC 150/5340-1, RTCA/DO-272]

Associated CADD Layers:

Layer Name	Description
C-APRN-CNTR	Apron centerlines
C-APRN-HOLD	Holding position markings
C-APRN-MRKG	Apron markings
C-APRN-SECU	Security zone markings
C-APRN-SHLD	Shoulders with annotation
C-APRN-SHLD-MRKG	Shoulder stripes
C-HELI-BLST	Blast pad and stopway markings
C-HELI-CNTR-MARK	Centerline markings
C-HELI-DIST	Fixed distance markings
C-HELI-SIDE	Side stripes
C-OVRN-CNTR	Centerlines
C-OVRN-SHLD-MRKG	Shoulder markings
C-PADS-CNTR	Centerlines
C-PADS-OTLN	Pad - outlines
C-PVMT-MRKG-WHIT	Roadway markings (white)
C-PVMT-MRKG-YELO	Roadway markings (yellow)
C-RUNW-CNTR-MARK	Centerline markings
C-RUNW-CNTR-MRKG	Centerline markings
C-RUNW-SHLD	Shoulder markings
C-RUNW-SIDE	Side stripes
C-TAXI-CNTR-MARK	Centerline markings
C-TAXI-CNTR-MRKG	Centerline markings
C-TAXI-EDGE	Edge markings
C-TAXI-SHLD	Shoulders with annotation
V-APRN-HOLD	Holding position markings
V-APRN-MRKG	Apron markings
V-APRN-SECU	Security zone markings
V-APRN-SHLD-MRKG	Shoulder stripes
V-OVRN-SHLD-MRKG	Shoulder markings
V-PVMT-MRKG	Pavement markings
V-TAXI-CNTR-IDEN	Centerline annotation
V-TAXI-CNTR-MRKG	Centerline markings

PassengerLoadingBridge Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

A bridge for loading/unloading access to airplanes for passengers and crew

Associated CADD Layers:

Layer Name	Description
A-EQPM-JETB	Aircraft Jetbridge

RestrictedAccessBoundary Line Accuracy: +/- 5 Ft Sensitivity: Confidential

A restricted area boundary defines aircraft movement area that is strictly reserved for use by authorized personnel only. These boundaries, typically found on joint civil/military use airports, are often painted red lines on taxiway or apron surfaces. [Source: NGS*]

Associated CADD Layers:

Layer Name	Description
C-AFLD-SECR-RSTR	Military restricted access boundary

RsaBoundary Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

The boundary of the Runway Safety Area (RSA) for which the Airport Authority has maintenance responsibility. [Source: AC 150/53XX-XX (Vol. C)]

Associated CADD Layers:

Layer Name	Description
C-RUNW-SAFT	Runway Safety Area

Runway Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length. Runways are normally numbered in relation to their magnetic direction rounded off to the nearest 10 degrees: e.g., Runway 10/28, Runway 07/25. [Source: AC 150/5300-13*]

Associated CADD Layers:

Layer Name	Description
C-RUNW-EDGE	Airfield runway edges
V-RUNW-EDGE	Airfield runway edges
V-RUNW-IDEN	Airfield runway annotation

RunwayArrestingArea Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

FAA-approved high energy absorbing material of a specific strength that will reliably and predictably bring aircraft to a stop without imposing loads that exceed design limits, cause major structural damage, or impose excessive forces on its occupants. [Source: AC 150/5220-22*]

Associated CADD Layers:

Layer Name	Description
C-RUNW-ARST	Runway Arresting Gear Location

RunwayBlastPad Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A specially prepared surface placed adjacent to the ends of runways to eliminate the erosive effect of the high wind forces produced by airplanes at the beginning of their takeoff rolls [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-RUNW-BLST	Blast pad and stopway markings
V-RUNW-BLST	Blast pad and stopway markings

RunwayCenterline Line Accuracy: +/- 2 Ft Sensitivity: Restricted

Continuous line along the painted centerline of a runway connecting the middle-points of the two outermost thresholds. Centerline is composed of many centerline points (see RunwayControlPoint). It is used to calculate grade and line-of-sight criteria. [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-RUNW-CNTR	Centerlines
V-RUNW-CNTR	Centerlines

RunwayEnd Point Accuracy: +/- 1 Ft Sensitivity: Restricted

End of the runway surface suitable for landing or takeoff of aircraft. They are related to and describe approach and departure procedure characteristics of a runway threshold. It is the same as the runway threshold when the threshold is not displaced. [Source: NGS*]

Associated CADD Layers:

Layer Name	Description
C-RUNW-ENDP	Runway endpoint

RunwayIntersection Polygon Accuracy: +/- 2 Ft Sensitivity: Restricted

The area of intersection between two or more runways [Source: RTCA DO-272]

Associated CADD Layers:

Layer Name	Description
C-RUNW-INTS	Runway intersection

RunwayLabel Point Accuracy: +/- 1 Ft Sensitivity: Secret

The bottom center position of the runway designation marking [Source: NGS]

Associated CADD Layers:

Layer Name	Description
C-RUNW-ENDP-MARK	Runway label marking point

RunwayLAHSO Line Accuracy: +/- 5 Ft Sensitivity: Restricted

Runway markings where an aircraft is to stop when the runway is normally used as a taxiway or used for Land and Hold Short Operations per letter of agreement with the ATCT. [Source: Order 7110.118*]

Associated CADD Layers:

Layer Name	Description
C-RUNW-LAHS	Runway land and hold short area

RunwaySegment Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A section of the runway surface. The runway surface can be defined by a set of non-overlapping RunwaySegment polygons. Use RunwaySegment to model the physical runway pavement in terms of surface, material, strength and condition. [Source: AC 150/5335-5, AC 150/5320-12, AC 150/5320-17, AC 150/5320-6*]

Associated CADD Layers:

Layer Name	Description
C-RUNW-SEGM	Runway segment

Shoulder Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhance drainage; and blast protection [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-HELI-SHLD	Shoulder markings
C-PADS-SHLD	Shoulders with annotation
V-APRN-SHLD	Shoulders with annotation
V-RUNW-SHLD	Shoulder markings
V-TAXI-SHLD	Shoulders with annotation

Stopway Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A defined rectangular surface beyond the end of a runway prepared or suitable for use in lieu of runway to support an airplane, without causing structural damage to the airplane, during an aborted takeoff [Source: AC 150/5300-13]

Associated CADD Layers:

Layer Name	Description
C-RUNW-STWY	Runway stopway markings

TaxiwayHoldingPosition Line Accuracy: +/- 2 Ft Sensitivity: Restricted

A designated position at which taxiing aircraft and vehicles shall stop and hold position, unless otherwise authorized by the aerodrome control tower [Source: RTCA DO-272]

Associated CADD Layers:

Layer Name	Description
C-TAXI-HOLD	Holding lines
V-TAXI-HOLD	Holding lines

TaxiwaySegment

Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

The taxiway segment features are used to represents taxiway, apron taxiway, rapid exit taxiway, taxiway intersection, and aircraft stand taxilane surface [Source: AC 150-5300-13]

Associated CADD Layers:

Layer Name	Description
C-TAXI-IDEN	Taxiway - annotation
C-TAXI-OTLN	Taxiway - outlines
V-TAXI-EDGE	Edge markings
V-TAXI-IDEN	Taxiway - annotation
V-TAXI-OTLN	Taxiway - outlines

Group: Airspace

FlightTrackLine

Line Accuracy: +/-20 Ft Sensitivity: Unclassified

A line indicating the general flight track used in the vicinity of airfields. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-AFLD-ARWY	Airway
C-AFLD-TRKL	Flight Track Line
V-AERI-PATH	Aerial flight lines/paths

FlightTrackPoint

Point Accuracy: +/-20 Ft Sensitivity: Unclassified

A point in space that designates aircraft arrival and departure routes [Source: FAA]

Associated CADD Layers:

Layer Name	Description
C-AFLD-TRKP	Flight Track Point

LandmarkSegment

Line Accuracy: +/-10 Ft Sensitivity: Unclassified

Geographic features located in the vicinity of an airport that aid geographic orientation. The features may or may not have obstruction value. These may include objects such as roads, fences, utility lines, shorelines, levees, quarries and airports, etc [Source: NGS*]

Associated CADD Layers:

Layer Name	Description
C-AIRS-LNDM	Landmark segment

Obstacle

Point Accuracy: +/- Ft Sensitivity: Restricted

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that represent a defined Obstruction Identification Surface [Source: NGS]

Associated CADD Layers:

Layer Name	Description
C-AIRS-OBSC	Airfield obstruction
C-AIRS-OBST-PPNT	Airspace obstructions - Point
C-OBST-AIRS	Airspace obstructions
C-OBST-AIRS-IDEN	Obstruction annotation
V-OBST-AIRS	Airspace obstructions
V-OBST-AIRS-IDEN	Airspace obstruction annotation

ObstructionArea Polygon Accuracy: +/-20 Ft Sensitivity: Restricted

Areas penetrating the plane of a specified or supplemental obstruction identification surface (OIS). Penetrating groups of trees, ground, buildings, and mobile cranes are the most common types of area limits found within the surfaces of a FAR-77 survey. [Source: NGS*]

Associated CADD Layers:

Layer Name	Description
C-AIRS-OBST-LINE	Airspace obstructions - Line
C-AIRS-OBST-POLY	Airspace obstructions - Polygon

ObstructionSurface Polygon Accuracy: +/-20 Ft Sensitivity: Restricted

A derived imaginary Obstruction Identification Surface defined by the FAA. [Source: NGS]

Associated CADD Layers:

Layer Name	Description
C-AIRS-OTHR	Other airspace surfaces
C-AIRS-PART-APRC	FAR Part 77 Approach Surface
C-AIRS-PART-CONL	FAR Part 77 Conical Surface
C-AIRS-PART-HORZ	FAR Part 77 Horizontal Surface
C-AIRS-PART-PRIM	FAR Part 77 Primary Surface
C-AIRS-PART-TRNS	FAR Part 77 Transitional Surface
C-AIRS-TERP	TERPS surfaces

RegulatedAirspaceArea Polygon Accuracy: +/-40 Ft Sensitivity: Confidential

3D airspace which must be confined due to the types of operations in that area. Includes any associated underlying surface and subsurface training areas. [Source: SDSFIE*]

Associated CADD Layers:

Layer Name	Description
C-AIRS-ISOC	Approach surface isoclines
C-TRAF-IDEN	Airfield traffic area annotation
C-TRAF-TYPA	Type A traffic area
C-TRAF-TYPB	Type B traffic area
C-TRAF-TYPC	Type C traffic area
V-TRAF-IDEN	Airfield traffic area annotation
V-TRAF-TYPA	Type A traffic area
V-TRAF-TYPB	Type B traffic area
V-TRAF-TYPC	Type C traffic area

Group: Cadastral

County Polygon Accuracy: +/-50 Ft Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the county government. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-PROP-CNTY	County Boundary

EasementAndRightofWay Polygon Accuracy: +/- 0. Ft Sensitivity: Confidential

A parcel of land for which formal or informal deed easement rights exist [Source: SDSFIE (modified)]

Associated CADD Layers:

Layer Name	Description
C-PROP-ESMT	Easements
C-PROP-RWAY	Right of ways
C-PROP-RWAY-ACQU	Right of way to be acquired in perpetuity
V-PROP-ESMT	Easements

V-PROP-RWAY	Right of ways

FAARegionArea Polygon Accuracy: +/-40 Ft Sensitivity: Unclassified

This feature depicts the FAA regions. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-AFLD-FAAR	FAA Region

LandUse Polygon Accuracy: +/-50 Ft Sensitivity: Confidential

A description of the human use of land and water [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-PROP-LUSE	Land Use Area

LeaseZone Polygon Accuracy: +/- 0. Ft Sensitivity: Unclassified

A parcel of land leased by an individual, agency, or organization for their use. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
A-PROP-LEAS	Lease line (interior)
C-PROP-LEAS	Lease line (exterior / ground lease)
V-PROP-LEAS	Lease line (surveyed)

Municipality Polygon Accuracy: +/-50 Ft Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the municipal government. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-PROP-MUNI	Municipal Boundary

Parcel Polygon Accuracy: +/- 1 Ft Sensitivity: Restricted

A single cadastral unit, which is the spatial extent of the past, present, and future rights and interests in real property and the geographic framework to support the description of the spatial extent. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-PROP-LINE	Property lines (Existing recorded plats)
V-PROP-QTRS	Quarter lines
V-PROP-SECT	Section lines
V-PROP-SXTS	Sixteenth lines (40 lines)

State Polygon Accuracy: +/-50 Ft Sensitivity: Restricted

Boundary line of the land and water under the right, power, or authority of the state government. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-PROP-STAT	State Boundary

Zoning Polygon Accuracy: +/-50 Ft Sensitivity: Restricted

A parcel of land zoned specifically for real estate and land management purposes; more specifically for commercial, residential, or industrial use. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description

V-PROP-ZONG	Zoning Areas

Group: Environmental

ContaminationArea

Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

A facility or other locational entity, (as designated by the Environmental Protection Agency) that is regulated or monitored because of environmental concerns. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
H-POLL-CONC	Polluted area of concern
H-POLL-POTN	Potential spill, emission, or release source

FaunaHazardArea

Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

An area where there are hazards due to wildlife activities. This includes bird aircraft strike hazard (BASH) areas, and deer strike areas. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-BORW-IDEN	Borrow/spoil area annotation
C-BORW-LINE	Borrow/spoil area
C-ECCO-BURR	Burrow
C-ECCO-DENS	Den
C-ECCO-GATR	Gator hole
C-ECCO-HUMK	Hummocks
C-ECCO-IDEN	Habitat annotation
C-ECCO-NEST	Nest, nesting tree
C-ECCO-PRCH	Perch/nesting hole
V-BORW-IDEN	Borrow/spoil area annotation
V-BORW-LINE	Borrow/spoil area
V-ECCO-BURR	Burrow
V-ECCO-DENS	Den
V-ECCO-GATR	Gator hole
V-ECCO-HUMK	Hummocks
V-ECCO-IDEN	Habitat annotation
V-ECCO-NEST	Nest, nesting tree
V-ECCO-PRCH	Perch/nesting hole
V-TOPO-SPEC	Species Site

FloodZone

Polygon Accuracy: +/-10 Ft Sensitivity: Unclassified

Areas subject to 100-year, 500-year and minimal flooding [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-FLHA-025Y	25 year mark
C-FLHA-050Y	50 year mark
C-FLHA-100Y	100 year mark
C-FLHA-200Y	200 year mark
C-FLHA-500Y	500 year mark
C-FLHA-IDEN	Flood hazard area annotation
C-TOPO-FLZN	Flood Zone
V-FLHA-025Y	25 year mark
V-FLHA-050Y	50 year mark
V-FLHA-100Y	100 year mark
V-FLHA-200Y	200 year mark
V-FLHA-500Y	500 year mark
V-FLHA-IDEN	Flood hazard area annotation

FloraSpeciesSite Point Accuracy: +/-20 Ft Sensitivity: Unclassified

The specific location where an individual flora species or an aggregate of flora species has been identified [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
L-PLNT-CTNR	Containers or planters
L-PLNT-IDEN	Annotation
L-PLNT-PLTS	Planting plants (e.g., ornamental annuals and perennials)
L-PLNT-TREE	Trees (e.g., evergreen, deciduous, etc.)

ForestStandArea Polygon Accuracy: +/-10 Ft Sensitivity: Confidential

A forest flora community with similar characteristics. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
L-PLNT-BEDS	Planting beds (perennial and annual beds)
L-PLNT-BUSH	Bushes and shrubs (e.g., evergreen, deciduous, etc.)
L-PLNT-BUSH-LINE	Bush and shrub line
L-PLNT-GRND	Groundcover and vines
L-PLNT-MLCH	Mulches - organic and inorganic
L-PLNT-SPRG	Sprigs
L-PLNT-TREE-LINE	Tree line
L-PLNT-TURF	Lawn areas (turfing limits)
V-SITE-VEGE	Existing treelines and vegetation

HazMatStorageSite Point Accuracy: +/-10 Ft Sensitivity: Unclassified

A defined or bounded geographical area designated and used for the storage of contained hazardous materials. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
H-STOR-HAZM	Hazardous materials
H-STOR-HAZW	Hazardous waste

NoiseContour Polygon Accuracy: +/- 1 Ft Sensitivity: Confidential

An area that describes the noise attributed to operations. For aircraft operations, the Day/Night average sound level (Ldn) descriptor is typically used to categorize noise levels [Source: 14 CFR Part 150]

Associated CADD Layers:

Layer Name	Description
C-TOPO-AUZN	Noise Contour/Zone

NoiseIncident Point Accuracy: +/-10 Ft Sensitivity: Restricted

A formal complaint by an individual or group regarding excessive noise resulting from airport operations

Associated CADD Layers:

Layer Name	Description
C-TOPO-AUCO	Noise Complaint

NoiseMonitoringPoint Point Accuracy: +/-10 Ft Sensitivity: Restricted

The location of noise sensing equipment or where a noise sample is taken. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-TOPO-AUST	Noise Monitoring Station

SampleCollectionPoint Point Accuracy: +/-10 Ft Sensitivity: Confidential

The physical location at which one or more environmental hazards field samples are collected. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
B-BORE-CONE	Cone penetrometer test location
B-BORE-HOLE	Geophysical boring locations
B-BORE-IDEN	Geophysical location identification
B-BORE-LINE	Geophysical transect lines
B-BORE-PUSH	Direct push test location
B-BORE-STRK	Geophysical strike line
B-LOGS-FORM	Bore log form
B-LOGS-FRAM-TEXT	Text associated with boring log frame
B-SAMP-AUGR	Auger sample location
B-SAMP-CORE	Core sample location
B-SAMP-DRVE	Drive sample (shelby split spoon) location
B-SAMP-GRAB	Grab sample location
B-SAMP-IDEN	Sample location identification
B-SAMP-PERC	Percolation test hole
B-SAMP-PITS	Test pit sample location
B-SAMP-VERT	Vertical core hole location
B-SAMP-WASH	Wash bored hole location
B-WELL-ASR~	ASR wells
B-WELL-MONT	Monitoring wells
B-WELL-PIZO	Piezometers
C-TOPO-BORE	Boring locations and text
H-MNST-AIRQ	Air quality
H-MNST-IDEN	Annotation
H-SAMP-AIRS	Air samples
H-SAMP-BIOL	Biological samples
H-SAMP-GWTR	Ground water samples
H-SAMP-IDEN	Annotation
H-SAMP-MAGN	Magnetometer location points
H-SAMP-SEDI	Sediment samples
H-SAMP-SOIL	Soil samples
H-SAMP-SOLI	Solid material samples
H-SAMP-SWTR	Surface water samples
H-SAMP-WAST	Waste samples
V-BORE-GENL-LOCN	General boring X,Y location marker
V-BORE-GENL-NAME	General boring name
V-BORE-GENL-NOTE	General boring notes
V-BORE-GPRO-LOCN	GeoProbe X,Y location marker
V-BORE-GPRO-NAME	GeoProbe boring name
V-BORE-GPRO-NOTE	GeoProbe boring notes
V-BORE-UNDS-LOCN	Undisturbed boring X,Y location marker
V-BORE-UNDS-NAME	Undisturbed boring name
V-BORE-UNDS-NOTE	Undisturbed boring notes
V-BORE-VCOR-LOCN	Vibra-Core X,Y location marker
V-BORE-VCOR-NAME	Vibra-Core name
V-BORE-VCOR-NOTE	Vibra-Core notes
V-TOPO-BORE	Boring locations and text

Shoreline Line Accuracy: +/-10 Ft Sensitivity: Restricted

The boundary of a body of water including oceans, seas, lakes, rivers, streams, ponds, etc.

Associated CADD Layers:

Layer Name	Description
C-CHAN-BANK-IDEN	Channel/canal top of bank annotation
C-CHAN-BANK-TOP~	Channel/canal top of bank
C-CHAN-DACL	De-authorized channel limits, anchorages, etc.
C-CHAN-DACL-IDEN	De-authorized channel limits, anchorages, etc. - annotation
C-CHAN-LIMT	Channel limits, anchorages, turning basins, disposal areas,
C-CHAN-LIMT-IDEN	Channel limits, anchorages, turning basins, disposal areas, etc. - annotation
C-CHAN-SYMB	Channel/canal symbols
C-DRED-OHWM	Ordinary high water marks
C-RIVR-BANK-TOP~	Top of river bank
C-RIVR-EDGE	River edge
C-RIVR-IDEN	Identifier tags, symbol modifiers, and text
H-MNST-GWTR	Ground water
H-MNST-SWTR	Surface water
V-CHAN-BANK-IDEN	Channel/canal top of bank annotation
V-CHAN-BANK-TOP~	Channel/canal top of bank
V-CHAN-DACL	De-authorized channel limits, anchorages, etc.
V-CHAN-DACL-IDEN	De-authorized channel limits, anchorages, etc. - annotation
V-CHAN-LIMT	Channel limits, anchorages, turning basins, disposal areas,
V-CHAN-LIMT-IDEN	Channel limits, anchorages, turning basins, disposal areas, etc. - annotation
V-CHAN-SYMB	Channel/canal symbols
V-CHAN-TEXT	Channel/canal text, annotation with associated leaders
V-RIVR-BANK-TOP~	Top of river bank
V-RIVR-EDGE	River edge
V-RIVR-IDEN	Identifier tags, symbol modifiers, and text
V-SITE-EWAT	Edge of water
V-SITE-WATR	Water features
V-TOPO-SHOR	Shorelines, land features, and references

Wetland Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

Transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. [Source: SDSFIE*]

Associated CADD Layers:

Layer Name	Description
C-WETL-BOGS	Bogs
C-WETL-FENS	Fens
C-WETL-IDEN	Wetland annotation
C-WETL-MRSH	Fresh water marshes
C-WETL-MRSH-SALT	Tidal saltwater marshes
C-WETL-MRSH-TIDL	Tidal freshwater marsh
C-WETL-PCSN	Pocosins
C-WETL-PHOL	Vernal pools, playas, prairie potholes, wet meadows, and wet prairies
C-WETL-RPRN	Riparian forested wetlands
C-WETL-SLGH	Sloughs
C-WETL-SWMP	Swamps
V-TOPO-WETL	Wetland
V-WETL-BOGS	Bogs
V-WETL-FENS	Fens
V-WETL-IDEN	Wetland annotation
V-WETL-MRSH	Fresh water marshes
V-WETL-MRSH-SALT	Tidal saltwater marshes

V-WETL-MRSH-TIDL	Tidal freshwater marsh
V-WETL-PCSN	Pocosins
V-WETL-PHOL	Vernal pools, playas, prairie potholes, wet meadows, and wet prairies
V-WETL-RPRN	Riparian forested wetlands
V-WETL-SLGH	Sloughs
V-WETL-SWMP	Swamps

Group: Geodetic

AirportControlPoint Point Accuracy: +/- 0. Ft Sensitivity: Restricted

A control station established in the vicinity of, and usually on, an airport and tied to the National Spatial Reference System (NSRS) [Source: NGS]

Associated CADD Layers:

Layer Name	Description
C-TOPO-RNYE	Runway centerline elevation point
C-TOPO-SPOT	Spot elevations
C-TOPO-SPOT-IDEN	Spot elevations - annotation
V-CTRL-BMRK	Benchmarks
V-CTRL-HCPT	Horizontal control points
V-CTRL-HVPT	Horizontal/vertical control points
V-CTRL-IDEN	Control point annotation
V-CTRL-TRAV	Traverse points
V-CTRL-VCPT	Vertical control points
V-SURV-DATA	Survey data (benchmarks and horizontal control points or monuments)
V-TOPO-SPOT	Spot elevations

CoordinateGridArea Line Accuracy: +/- 1 Ft Sensitivity: Restricted

A regular pattern of horizontal and vertical lines used to represent regular coordinate intervals along the x and y axis. This grid line can be used to generate an arbitrary grid system which is common on locator maps. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-DETL-GRPH	Graphics, gridlines, non-text items
C-GRID-FRAM	Frame
C-GRID-MAJR	Major grid lines
C-GRID-MINR	Minor grid lines
C-GRID-TEXT	Border text, annotation
C-TOPO-COOR	Coordinate grid ticks and text
C-TOPO-COOR-LALO	Latitude and longitude grid ticks
C-TOPO-COOR-STAT	State Plane coordinate ticks
G-GRID-COOR	X-Y coordinate grid lines
G-GRID-COOR-IDEN	X-Y coordinate grid lines annotation
G-GRID-EXTR	Column grid outside building
G-GRID-IDEN	Column grid tags
G-PROJ-LALO-COOR	Latitude/longitude coordinate grid ticks
G-PROJ-LALO-IDEN	Latitude/longitude coordinate text
G-PROJ-STAT-COOR	State plane coordinate grid ticks
G-PROJ-STAT-IDEN	State plane coordinate text
S-GRID-HORZ	Grid lines (horizontal)
S-GRID-VERT	Grid lines (vertical)
V-CTRL-GRID	Grid
V-GRID-FRAM	Frame
V-GRID-MAJR	Major grid lines

V-GRID-MINR	Minor grid lines
V-GRID-TEXT	Border text, annotation
V-TOPO-COOR	Coordinate grid ticks and text
V-TOPO-COOR-LALO	Latitude and longitude grid ticks
V-TOPO-COOR-STAT	State Plane coordinate ticks

ElevationContour Line Accuracy: +/- 1 Ft Sensitivity: Restricted

Connecting points on the surface of the earth of equal vertical elevation representing some fixed elevation interval. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-GRAD-EXST	Existing grade, ground line
C-GRAD-FNSH	Finished grade
C-TOPO-BKLN	Breaklines
C-TOPO-DTMP	DTM points
C-TOPO-DTMT	DTM triangles
C-TOPO-MAJR	Major contours
C-TOPO-MAJR-IDEN	Major contours - annotation
C-TOPO-MINR	Minor contours
C-TOPO-MINR-IDEN	Minor contours - annotation
C-TOPO-MINR-ONEF	Minor contours - One Foot Intervals
C-TOPO-MINR-TWOF	Minor contours - Two Foot Intervals
C-TOPO-SLOP-FILL	Cut/fill slopes
C-TOPO-SLOP-IDEN	Cut/fill slope, top/toe slope annotation
C-TOPO-SLOP-TOPT	Top/toe slopes
C-TOPO-SOUN	Soundings and overbanks
S-WATR-SURF	Water surface
V-GRAD-AFTR	After dredge depth
V-GRAD-EXST	Existing grade, ground line
V-GRAD-EXST-BASE	Base survey
V-GRAD-EXST-SYR1	Survey year one or area one
V-GRAD-EXST-SYR2	Survey year two or area two
V-GRAD-EXST-SYR3	Survey year three or area three
V-GRAD-EXST-SYR4	Survey year four or area four
V-GRAD-IDEN	Grade annotation
V-GRAD-PRED	Pre-dredge
V-GRAD-SCLN	Stability control line
V-TOPO-BKLN	Breaklines
V-TOPO-DTMP	DTM points
V-TOPO-DTMT	DTM triangles
V-TOPO-MAJR	Major contours
V-TOPO-MAJR-IDEN	Major contours - annotation
V-TOPO-MINR	Minor contours
V-TOPO-MINR-IDEN	Minor contours - annotation
V-TOPO-SLOP-FILL	Cut/fill slopes
V-TOPO-SLOP-IDEN	Cut/fill slope, top/toe slope annotation
V-TOPO-SLOP-TOPT	Top/toe slopes
V-TOPO-SOUN	Soundings and overbanks

ImageArea Polygon Accuracy: +/-20 Ft Sensitivity: Confidential

The image foot print or coverage area. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
V-AERI-BNDY	Aerial photography boundaries

V-AERI-IDEN	Aerial annotation
V-AERI-INDX	Aerial photo index
V-AERI-PHOT	Photo center (exposure station)
V-AERI-PNPT	Panel points

Group: Manmade Structures

Building

Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A three dimensional permanent structure modeled with a bounding polygon. This feature includes all on-airport buildings within an Airport Parcel and any building in the vicinity of the airport that affects air navigation or airport design requirements [Source: FAA]

Associated CADD Layers:

Layer Name	Description
A-ELEV-OTLN	Building outlines
B-EXST-BLDG	Existing building
C-BLDG-IDEN	Building and other stucture annotation
C-BLDG-OTLN	Building and other structure outlines
C-BLDG-OVHD	Building overhangs
C-BLDG-PATT	Building hatching and patterns
G-PLAN-OTLN	Floor outline/perimeter/building footprint
H-BLDG-IDEN	Annotation
H-BLDG-OTLN	Command posts, information centers
M-ELEV-OTLN	Building outlines
S-DECK-FLOR	Floor deck
S-DECK-ROOF	Roof deck
S-OTLN-BLDG	Building outline
S-OTLN-STRC	Misc. structures
V-BLDG-DECK	Outdoor decks (attached, no roof overhead)
V-BLDG-DOCK	Loading docks
V-BLDG-IDEN	Building and other stucture annotation
V-BLDG-OTLN	Building and other structure outlines
V-BLDG-OVHD	Building overhangs
V-BLDG-PRCH	Porches (attached, roof overhead)

ConstructionArea

Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

A defined area that is under construction, not intended for active use until authorized by the concerned authority. The area defines a boundary for personnel, material, and equipment engaged in the construction activity [Source: FAA]

Associated CADD Layers:

Layer Name	Description
C-PROP-CONS	Construction limits/controls, staging area
G-SITE-OTLN	Site plan - key map

Fence

Line Accuracy: +/-10 Ft Sensitivity: Restricted

Any fencing (chain-link, razor wire, PVC, etc. [Source: FAA]

Associated CADD Layers:

Layer Name	Description
C-DETL-FENC-SECU	Security Fencing
C-SITE-FENC	Fences and handrails
L-SITE-FENC	Fencing
S-SAFE-FENC	Fencing rails, fabric, supports, and gates
V-SITE-FENC	Fences and handrails

Gate

Line Accuracy: +/-10 Ft Sensitivity: Restricted

The location of an entry or exit point. These entry or exit points could be security checkpoints or open

access points. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
L-DETL-GATE	Gate
L-SITE-GATE	Gate
S-GATE-AXIS	Gate axis and centerlines
S-GATE-MISC	Gates incidental to structure

Tower Point Accuracy: +/- 5 Ft Sensitivity: Restricted

An existing structure that was created, by man, to facilitate an activity at an elevated level above the ground. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-STRC-TOWR	Tower
V-STRC-TOWR	Tower

Group: Navigational Aids

NAVAIDEquipment Point Accuracy: +/- 5 Ft Sensitivity: Unclassified

Any ground-based visual or electronic device that provides point to point guidance information or position to aircraft in flight. The location is specified by FAA Specification 405 [Source: FAA Specification 405]

Associated CADD Layers:

Layer Name	Description
C-AFLD-AIDS-COMM	Communications airfield navigational aides
C-AFLD-AIDS-CRIT	Airfield Navigational Aid - Critical Area
C-AFLD-AIDS-GPS_	GPS airfield navigational aides
C-AFLD-AIDS-ILS_	Airfield Instrument Landing System
C-AFLD-AIDS-MCWV	Microwave airfield navigational aides
C-AFLD-AIDS-OTHR	Other airfield navigational aides
C-AFLD-AIDS-RADI	Radio airfield navigational aides
C-AFLD-AIDS-RADR	Radar airfield navigational aides
C-AFLD-AIDS-RMTE	Remote airfield navigational aides
C-AFLD-AIDS-SITE	Airfield Navigational Aid - Site
C-AFLD-AIDS-SYST	NAVAID system
C-AFLD-AIDS-WTHR	Weather airfield navigational aides
E-AFLD-BCNS-IDEN	Identifier tags, symbol modifiers, and text
E-AFLD-BCNS-MISC	Miscellaneous navaids - windcones and beacons
E-AFLD-BCNS-STRB	Strobe beacons
V-AFLD-BCNS-IDEN	Identifier tags, symbol modifiers, and text
V-AFLD-BCNS-MISC	Miscellaneous navaids - windcones and beacons
V-AFLD-BCNS-STRB	Strobe beacons

Group: SeaPlane

FloatingDockSite Polygon Accuracy: +/-10 Ft Sensitivity: Unclassified

A floating facility which can serve as a mooring place for vessels or as a floating dry dock. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SEAP-DOCK	Seaplane dock

NavigationBuoy Point Accuracy: +/- 5 Ft Sensitivity: Unclassified

A floating marker which is moored to the bottom at a specific known location, which is used as an aid to navigation or for other special purpose. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SEAP-BUOY	Seaplane navigation buoy

SeaplaneLandingArea Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

An area specifically designated for take-offs and landings of sea planes. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SEAP-LNDA	Seaplane landing area

SeaplaneRampCenterline Line Accuracy: +/- 5 Ft Sensitivity: Restricted

The centerline of ramps specifically designed to transit seaplanes from land to water and vice versa. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SEAP-RAMP-CNTR	Seaplane ramp centerline

SeaplaneRampSite Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

Ramps specifically designed to transit seaplanes from land to water and vice versa. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SEAP-RAMP	Seaplane ramp site

Group: Security

Sida Polygon Accuracy: +/- 5 Ft Sensitivity: Secret

Portions of an airport, specified in the airport security program, in which security measures required by regulation must be carried out. This area includes the security area and may include other areas of the airport. [Source: DHS]

Associated CADD Layers:

Layer Name	Description
C-AFLD-SECR-SIDA	Security Identification Display Area

Group: Surface Transportation

Bridge Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

A structure used by vehicles that allows passage over or under an obstacle such as a river, chasm, mountain, road or railroad. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-BRDG-CNTR	Bridge centerlines
C-BRDG-DECK	Bridge deck
C-BRDG-IDEN	Bridge annotation
C-BRDG-OTLN	Bridge outlines
L-SITE-BRDG	Bridges (pedestrian)
M-MATL-CRAN	Cranes
S-BRDG-BEAR	Bridge bearing
V-BRDG-DECK	Bridge deck
V-BRDG-IDEN	Bridge annotation
V-BRDG-OTLN	Bridge outlines
V-SITE-STRC	Structures (bridges, sheds, foundation pads, footings, etc.)

DrivewayArea Polygon Accuracy: +/-10 Ft Sensitivity: Restricted

An access to a residence or other vehicle parking lot or storage area. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-ROAD-DRIV	Driveway edge of pavement

DrivewayCenterline Line Accuracy: +/-10 Ft Sensitivity: Restricted

The center of the driveway as measured from the edge of the paved surface. The segments of a driveway centerline will coincide with the road segments in order to provide network connectivity. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-ROAD-DRIV-CNTR	Driveway centerline

ParkingLot Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

An area of an airport used for parking of automobiles, buses, etc. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-PRKG-IDEN	Parking lot annotation
C-PRKG-OTLN	Parking lot outlines
V-PRKG-IDEN	Parking lot annotation
V-PRKG-OTLN	Parking lot outlines

RailroadCenterline Line Accuracy: +/- 5 Ft Sensitivity: Confidential

Represents the centerline of each pair of rails [Source: ANSI: Data Content Standards For Transportation Networks: Roads]

Associated CADD Layers:

Layer Name	Description
C-RAIL-CNTR	Railroad track centerlines
C-RAIL-CNTR-IDEN	Railroad track centerline annotation
C-RAIL-IDEN	Railroad - annotation
C-RAIL-TRAK	Railroad tracks
V-RAIL-CNTR	Railroad track centerlines
V-RAIL-CNTR-IDEN	Railroad track centerline annotation
V-RAIL-TRAK	Railroad tracks

RailroadYard Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

Represents a railroad yard [Source: ANSI: Data Content Standards For Transportation Networks: Roads]

Associated CADD Layers:

Layer Name	Description
C-RAIL-YARD	Railroad Yard

RoadCenterline Line Accuracy: +/- 5 Ft Sensitivity: Confidential

The center of the roadway as measured from the edge of the paved surface. The segments of a road centerline will coincide with the road segments in order to have similar characteristics. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-ROAD-CNTR	Road centerlines
V-ROAD-CNTR	Road centerlines
V-ROAD-CNTR-IDEN	Road centerline annotation

RoadPoint Point Accuracy: +/-10 Ft Sensitivity: Confidential

A point along the roadway which has some special significance either for starting or ending a road segment or for representing a significant position along the roadway system such as the start or center of a bridge or the center of an intersection [Source: ANSI: Data Content Standards For Transportation Networks: Roads*]

Associated CADD Layers:

Layer Name	Description
C-ROAD-POIN	Road Point

RoadSegment Polygon Accuracy: +/- 5 Ft Sensitivity: Confidential

A section of the road system designed for, or the result of, human or vehicular movement; must be continuous (no gaps) and cannot branch; no mandates are provided on how to segment the road system except that data providers adopt a consistent method [Source: ANSI: Data Content Standards For Transportation Networks: Roads*]

Associated CADD Layers:

Layer Name	Description
C-ROAD-ASPH	Road outlines - asphalt surface
C-ROAD-CNTR-IDEN	Road centerline annotation
C-ROAD-CONC	Road outlines - concrete surface
C-ROAD-CURB	Curbs and gutters
C-ROAD-GRVL	Road outlines - gravel surface
C-ROAD-IDEN	Road, street, highway annotation
C-ROAD-SHLD	Roadway shoulder
C-ROAD-UPVD	Road outlines - unpaved surface
V-ROAD-ASPH	Road outlines - asphalt surface
V-ROAD-CONC	Road outlines - concrete surface
V-ROAD-GRVL	Road outlines - gravel surface
V-ROAD-IDEN	Road, street, highway annotation
V-ROAD-OTLN	Road outlines
V-ROAD-UPVD	Road outlines - unpaved surface

Sidewalk Line Accuracy: +/-10 Ft Sensitivity: Restricted

A paved or concrete pad used as a pedestrian walkway. Usually is composed of one or more SideWalkSegments. [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
C-SITE-WALK	Walks, trails and bicycle paths
L-SITE-WALK	Walks and steps
S-BRDG-CURB	Curbs/sidewalks on structure
S-GATE-WALK	Walkway
V-SITE-WALK	Walks, trails, and bicycle paths

Tunnel Polygon Accuracy: +/- 5 Ft Sensitivity: Restricted

The area of a transportation passage, open at both ends, used to provide access through or under a natural obstacle [Source: SDSFIE]

Associated CADD Layers:

Layer Name	Description
L-SITE-TUNL	Tunnels
S-ACCS-TUNL	Tunnels
S-FNDN-TUNL	Service tunnel/duct banks

Appendix D - METADATA ELEMENTS

This appendix list the metadata elements defined in this standard. These elements have been extracted from ISO's Geographic Information – Metadata standard (ISO 19115). For each element, the name, type, description and ISO information are provided. Also provided, are indicators as to which level(s) of metadata the element can be applied.

CATEGORY: Overview (1)

status CodeList *Applies to: Collections Classes Attrib.*

Description: Status of the the data being submitted. Acceptable values are (completed, histroicalArchive, obsolete, onGoing, planned, required, under development)

ISO *idStatus (28)*

ISO Definition: *status of the resource(s)*

geometricObjectCount Integer *Applies to: Collections Classes Attrib.*

Description: Number of feature instances being transmitted

ISO *geoObjCnt (185)*

ISO Definition: *Total number of the point or vector object type occurring in the dataset*

abstract String (254) *Applies to: Collections Classes Attrib.*

Description: Description of the contents of the data collection being submitted

ISO *idAbs (25)*

ISO Definition: *brief narrative summary of the content of the resource(s)*

CATEGORY: Useage (62)

specificUsage String (254) *Applies to: Collections Classes Attrib.*

Description: Description of how the data should be used

ISO *specUsage (63)*

ISO Definition: *brief description of the resource and/or resource series usage*

BegusageDateTime See ISO 8601 *Applies to: Collections Classes Attrib.*

Description: The first date/time for which the data described by the scope is valid

ISO *usageDate (64)*

ISO Definition: *date and time of the first use or range of uses of the resource and/or resource series*

endUsageDateTime See ISO 8601 *Applies to: Collections Classes Attrib.*

Description: The last date/time for which the data described by the scope is valid

ISO *usageDate (64)*

ISO Definition:

CATEGORY: Source (92)

city string (50) *Applies to: Collections Classes Attrib.*

Description: City

ISO *city (382)*

ISO Definition: *city of the location*

statement String (254) *Applies to: Collections Classes Attrib.*

Description: Description of the source of the data
ISO *statement (83)*
ISO Definition: *general explanation of the data producer's knowledge about the lineage of the dataset*

individualName String (50) *Applies to: Collections Classes Attrib.*

Description: Name of the person submitting the data
ISO *rpIndName (375)*
ISO Definition: *name of the responsible person- surname, given name, title separated by a delimiter*

organizationName String (75) *Applies to: Collections Classes Attrib.*

Description: Organization of the person submitting the data
ISO *rpOrgName (376)*
ISO Definition: *name of the responsible organization*

deliveryPoint String (254) *Applies to: Collections Classes Attrib.*

Description: Street address of the person submitting the data
ISO *delPoint (381)*
ISO Definition: *address line for the location (as described in ISO 11180, Annex A)*

administrativeArea string (20) *Applies to: Collections Classes Attrib.*

Description: State
ISO *adminArea (383)*
ISO Definition: *state, province of the location*

postalCode string (10) *Applies to: Collections Classes Attrib.*

Description: Zip Code
ISO *postCode (384)*
ISO Definition: *ZIP or other postal code*

electronicMailAddress String (50) *Applies to: Collections Classes Attrib.*

Description: e-Mail address
ISO *eMailAdd (386)*
ISO Definition: *address of the electronic mailbox of the responsible organization or individual*

voice String (20) *Applies to: Collections Classes Attrib.*

Description: Phone
ISO *voiceNum (388)*
ISO Definition: *telephone number by which individuals can speak to the responsible organization or*

positionName String (30) *Applies to: Collections Classes Attrib.*

Description: Title of the person submitting the data
ISO *rpPosName (377)*
ISO Definition: *role or position of the responsible person*

CATEGORY: Data Quality (99)

evalutionMethodDescription String (254) *Applies to: Collections Classes Attrib.*

Description: Description of the evaluation method used
ISO *evalMethDesc (104)*
ISO Definition: *description of the evaluation method*

pass Boolean *Applies to: Collections Classes Attrib.*

Description: Indicatation of whether data described by the scope passed or failed in evaluation
ISO *conPass (132)*
ISO Definition: *indication of the conformance result where 0=fail or 1=pass*

title String (20) *Applies to: Collections Classes Attrib.*

Description: Name of the evaluation method used
ISO *resTitle (360)*
ISO Definition: *name by which the cited resource is known*

CATEGORY: Scope (149)

dataset String *Applies to: Collections Classes Attrib.*

Description: List of feature classes to which the metadata pertains (seperated by commas)
ISO *datasetSet (154)*
ISO Definition: *dataset to which the information applies*

features String *Applies to: Collections Classes Attrib.*

Description: List of feature names to which the metadata pertains (seperated by commas)
ISO *featSet (151)*
ISO Definition: *features to which the information applies*

attributes See ISO *Applies to: Collections Classes Attrib.*

Description: List of attribute names to which the metadata pertains (seperated by commas)
ISO *attribSet (150)*
ISO Definition: *Attributes to which the information applies*

CATEGORY: Coordinate System (189)

projection RS_Identifier *Applies to: Collections Classes Attrib.*

Description: Name of the projection used (SPCS, LL)
ISO *projection (190)*
ISO Definition: *identity of the projection used*

datum RS_Identifier *Applies to: Collections Classes Attrib.*

Description: Horizontal datum of submitted data (NAD27, NAD83 or WGS84)

ISO *datum (192)*

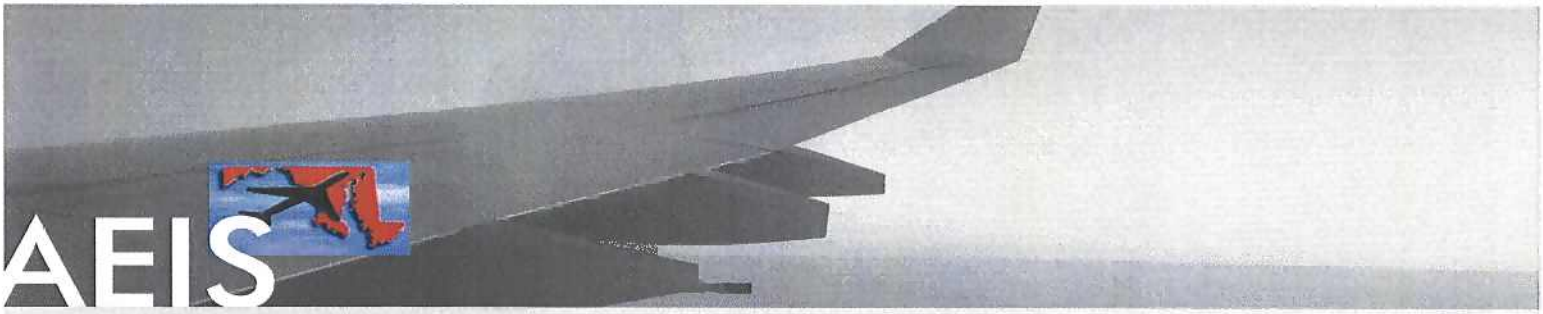
ISO Definition: *identify of the datum used*

code String (4) *Applies to: Collections Classes Attrib.*

Description: Four digit code for the state place coordinate system used. A list of codes can be found in NOAA manual NOS NGS 5.

ISO *identCode (207)*

ISO Definition: *alphanumeric value indicating an instance in the namespace*



Maryland Aviation Administration

Office of Engineering and Construction Management

Airport Engineering Information System

NAMING, IDENTIFICATION & ADDRESSING STANDARD

Version 1.1
July 2007

Airport Engineering Information System
Naming, Identification & Addressing Standard
For the Maryland Aviation Administration
Version 1.1, July 2007

Table of Contents

1. INTRODUCTION

1.1. Purpose

This Naming, Identification & Addressing Standard provides guidance for identifying Maryland Aviation Administration (MAA) owned and/or occupied properties so they can be uniquely and consistently referenced by personnel and information systems alike. The personnel who will use these identifiers include MAA staff, contractors, emergency responders, and in some cases the traveling public. The information systems that will use these identifiers include MAA's Airport Engineering Information System (AEIS), as well as any other information system that contains data on the physical property and assets that MAA manages. This standard also establishes a consistent method for assigning addresses and locational attributes to assets that occupy and events that take place on MAA properties.

1.2. Scope

This standard comprises seven hierarchical levels that define locations within MAA owned and/or occupied property. Each level is a more detailed breakdown of its preceding level. This is often referred to as a parent-child relationship. For example, a floor of a building contains rooms but rooms cannot stand alone, with no relationship to a floor. The levels and an example of the hierarchy follow:

- Facility
- Parcel
- Building
- Zone
- Floor
- Room
- Space

The first three levels, Facility, Parcel and Building, define exterior locations. Zone, Floor, Room, and Space all define interior locations. For each of the seven levels, this Standard defines identifiers to be assigned, along with labeling and database considerations. For example, besides a building number identifier, buildings are assigned a mailing address that is based on the Urban and Regional Information Systems Association (URISA) Street Address Data Standard.

A further element of the Standard is derived from the American Society for Testing and Materials (ASTM) UNIFORMAT II Building and Related Sitework standard. UNIFORMAT II provides a system for classifying assets that are common to most buildings, such as services, equipment, etc. Classification facilitates asset management by enabling locational attributes to be assigned to assets.

A final element of this standard assigns locations and codes to represent events that are recorded on MAA owned or occupied properties. An event is something noteworthy to record, such as mechanical outage, fire, security breach, or injury, which occurs at a specific location at a specific time for a duration of time.

1.3. Audience

The Standard is intended for MAA departments operating at Baltimore-Washington International (BWI) and Martin State (MTN) airports and their surrounds, as well as any other MAA facility in the State of Maryland. Departments specifically using this standard include, but are not limited to, Fire and Rescue, Operations and Security, Planning, Maintenance, Utilities and Terminal Services, Commercial Management, and Engineering and Construction Management.

1.4. Background

The Standard was developed based on existing addressing standards, input from the MAA Airport Engineering Information System (AEIS) Committee members, and from consultation with other airport specialists. The Standard also relies on established industry standards wherever possible. Specifically, the URISA Street Address Data Standard as well as the UNIFORMAT II Building and Related Sitework standard are used.

1.5. Related Material

The following documents have all been used as a resource in the development of the Standard and are referenced herein. The resources are informative versus normative in nature, which means that compliance with their guidelines is not required in order to be in compliance with this Standard. Readers and users of the Standard may wish to review the following documents for further details on a specific topic. In most cases, the documents can be downloaded for free from the Web sites listed. In other cases that are indicated by an asterisk (*), instructions for obtaining the documents are provided on the associated Web site.

- URISA Street Address Data Standard, Urban and Regional Information Systems Association http://www.urisa.org/address_data_standard.htm

- * UNIFORMAT II Standard Classification for Building Elements & Related Sitework http://www.uniformat.com

- Kansas Geospatial Data Addressing Standard, Final, 1999 http://gisdasc.kgs.ku.edu/kgcc/docs/uploaded/2address.pdf

- Oregon Geospatial Data Addressing Standard, Draft, 2004 http://egov.oregon.gov/DAS/IRMD/GEO/standards/docs/OR_Address_Std_110504.pdf

- US Postal Service Publication 28, Postal Addressing Standards, 2000 http://pe.usps.gov/cpim/ftp/pubs/Pub28/pub28.pdf

*Standard is available for a charge.

1.6. Change Control

Following is a chronological list of changes made to this document since it was first released. A version number and the date of release are indicated for each revision.

Version Number	Date of Release	Changes Addressed
1.0	12/23/2005	Original release
1.1	7/9/2007	Section 1.6 added for change control. Title changed from "Addressing Standard" to "Naming, Identification & Addressing Standard" to be more descriptive of contents. Clarification added to Section 2.2 as to the distinction between the Parcel and Airport Parcels feature classes and why Parcel is an important component of land identification.

Readers are encouraged to suggest additional changes to this document. Comments and suggestions should be recorded using the form on the following page and submitted to the AEIS Program Manager for MAA's consideration. Accepted changes will be reflected in a subsequent version of this document.

MAA Naming, Identification & Addressing Standard
Document Revision Form

Date: _____

To:

Marcus Zadi Rouhani MSc. (Eng.)
Chief, Document Mgmt. /Tech. Support
Division of Facilities Design
Maryland Aviation Administration
P. O. Box 8766, Third Floor, Terminal Building
BWI Airport, Maryland 21240-0766
mrouhani@bwiairport.com
410-859-7961

MAA USE ONLY

Change Tracking # _____

Date Received: _____

Assigned To: _____

Date Addressed: _____

Change in Version: _____

From:

Name: _____
Title: _____
Organization: _____
Address: _____
_____
City, State, Zip: _____, _____ _____
E-Mail: _____
Phone:

Comments:

#	Reference*	Comment or Suggested Change	MAA Resolution

** Reference must provide a clear indication of where the change is recommended (e.g. section, page, paragraph and sentence or figure number).*

Additional pages can be used if required.

2. PROPERTY ADDRESSING

Each building or feature on MAA property shall be assigned a unique identifier based on its associated level on the following hierarchy. Examples of unique identifiers are given in parentheses.

- Facility (Example: BWI)
- Parcel (Example: 2434567897685943)
- Building (Example: 100)
- Zone (Example: A)
- Floor (Example: 2)
- Room (Example: 56)
- Space (Example: 56S)

The method for assigning unique identifiers, along with labeling and database considerations, is presented for each level of the hierarchy on the following pages.

2.1. Facility

Assigning Unique Identifiers

A 3-character facility identifier indicates the facility where a building or feature is located.

- BWI is used for Baltimore Washington International Airport
- MTN is used for Martin State Airport
- 991 is used for MAA Offices at 991 Corporate Blvd.
- 902 is used for MAA Offices at 902 Corporate Blvd.

Labeling Considerations

Physical Labeling is not required at this level in the hierarchy.

Database Considerations

In a database environment, the facility identifier attribute shall be referred to as "facility_id". A 3-character string that can accommodate alphanumeric characters should be used.

2.2. Parcel

Assigning Unique Identifiers

Parcels are identified by a 16-digit Maryland Department of Assessment and Taxation parcel account number derived from the Maryland Department of Planning (MDP) Maryland PropertyView Database. These parcels are the equivalent to the Parcel feature class defined by MDP and included in MAA's GIS Data Standard. This is different than the Airport Parcel feature class also defined in the GIS Data Standard, which is used to track parcels acquired by MAA and for which acquisition records may need to be kept to satisfy FAA reporting requirements. Both types of parcels are needed to accurately track MAA land ownership, although the Airport Parcel is primarily used for historical record

keeping and may not reflect how land is used or subdivided my MAA. Tracking MAA property in a manner that is consistent with MDP facilitates data exchange between MAA and surrounding jurisdictions. Below is a detailed breakdown of the MDP account number relevant to property around MAA facilities:

- Anne Arundel positions 1-2 are the jurisdiction (county) code; positions 3-4 are the tax district; positions 5-7 are the subdivision; the remaining 9 positions are the parcel account number.

- Baltimore City positions 1-2 are the jurisdiction (city) code; positions 3-4 are the ward; positions 5-6 are the section; positions 7-11 are the block; positions 12-15 are the lot; position 16 is filler.

- For all other counties, positions 1-2 are the jurisdiction (county) code; positions 3-4 are the tax/election district; the remaining 12 positions are the parcel account number.

See Appendix A1 and Appendix A2 for detailed lists of MAA parcels for BWI and MTN.

Labeling Considerations

Physical Labeling is not required at this level in the hierarchy.

Database Considerations

In a database environment, the Parcel attribute shall be referred to as "acctID". This is consistent with the Maryland Property View database. The field type should be a string of length 13 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

2.3. Building

Assigning Unique Identifiers

The Building identifier uniquely differentiates each of the MAA buildings from others at a given facility. See Appendix B1 and Appendix B2 for complete lists of MAA buildings for BWI and MTN.

In addition to a unique number, each building on MAA property will be assigned a street address, whether the building is located on the airside or landside of airport operations.

If a building is accessible via public roads (landside), then a street address shall be assigned using the appropriate street according to the guidelines established by the URISA Street Address Data Standard.

If a building is not accessible via public roads (airside), then a street address shall be assigned using the nearest airside road that is used to access the building. Airside roads include surfaces such as taxiways, service roads, and runways. Address ranges shall be established for each of these types of thoroughfares on airside properties to accommodate

addressing of existing buildings and features, as well as buildings or features that may be added in the future. Addresses assigned to airside roads shall follow the guidelines established by the URISA Street Address Data Standard.

Labeling Considerations

Buildings shall be labeled at the main entrance with the appropriate building number as established by the MAA Fire and Rescue Department and referenced in Appendix B1 and B2. Consideration shall also be given to labeling the building at all other secondary and auxiliary entrances. Labels shall be visible from roads and approaches to buildings.

Database Considerations

In a database environment, the Building attribute shall be referred to as "building_no". The field type should be a string of length 16 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

2.4. Zone

Assigning Unique Identifiers

The Zone identifier uniquely identifies recognized sections or areas within large MAA buildings. Currently, the only building subdivided into zones is the Main Terminal at BWI. This building includes the following five zones, which are generally called "piers."

- Pier A
- Pier B
- Pier C
- Pier D
- Pier E (International Terminal)

Labeling Considerations

Zones shall be labeled in conspicuous places such as walls adjacent to doors in stairwells. Zones shall be labeled in conjunction with Floor, Room, and Space labels.

Database Considerations

In a database environment, the Zone attribute shall be referred to as "building_zone". The field type should be a string of length 30 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

2.5. Floor

Assigning Unique Identifiers

The Floor identifier differentiates the various floor levels of MAA buildings. Floors shall be numbered using a number starting with "1" for the ground level and progressively increased by one for each subsequent floor (i.e., the 1st floor is Floor 1, the 2nd floor is Floor 2, and so on). Levels below ground such as basement floors shall be identified with a zero. If multiple basement levels exist, they shall carry a suffix with a dash and the number of levels down that they progress (i.e., 0-1, 0-2, 0-3, and so on).

Labeling Considerations

At a minimum, floor labels shall be placed on the walls adjacent to doors in stairwells and near elevator shafts. Floor numbers shall also be incorporated into room labels (e.g, 170 indicates a room on the first floor; 340 indicates a room on the third floor, and so on).

Database Considerations

In a database environment, the Floor attribute shall be referred to as "floorname". The field type should be a string of length 50 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

2.6. Room

Assigning Unique Identifiers

The Room identifier differentiates rooms within MAA buildings. The first digit of the identifier shall represent the floor number of the room, as in the example given in section 2.5, Floor. On piers within a main terminal, the room number shall be prefaced by a letter indicating the pier. Where practical, odd numbers shall be assigned on the right as one walks from landside to airside, and even numbers shall be assigned on the left. For example, "A170" indicates a specific room on the left side of the first floor of Pier A. Room numbers shall be unique within a building and therefore unique across all MAA facilities once the building number is added.

Labeling Considerations

Room number labels shall be attached on the top sill or on the wall near the door handle of doorways leading into that room.

Database Considerations

In a database environment, the Room attribute shall be referred to as "roomname". The field type should be a string of length 50 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

2.7. Space

Assigning Unique Identifiers

The Space identifier differentiates spaces within MAA buildings. Spaces can be areas outside of rooms, such as hallways or common areas, or distinct areas within large rooms. Space numbers are similar to room numbers. On piers within a main terminal, the room number shall be prefaced by a letter indicating the pier. The first digit then represents the floor number and the remaining two digits represent the space number. The letter "S" shall follow the numbers to indicate that the area is a Space. For example, "A170S" indicates space 70 on the first level of Pier A.

Labeling Considerations

Space number labels shall be placed on all walls leading into that space.

Database Considerations

In a database environment, the Space attribute shall be referred to as "spacename". The field type should be a string of length 50 capable of storing alphanumeric characters, as indicated in MAA's GIS standard.

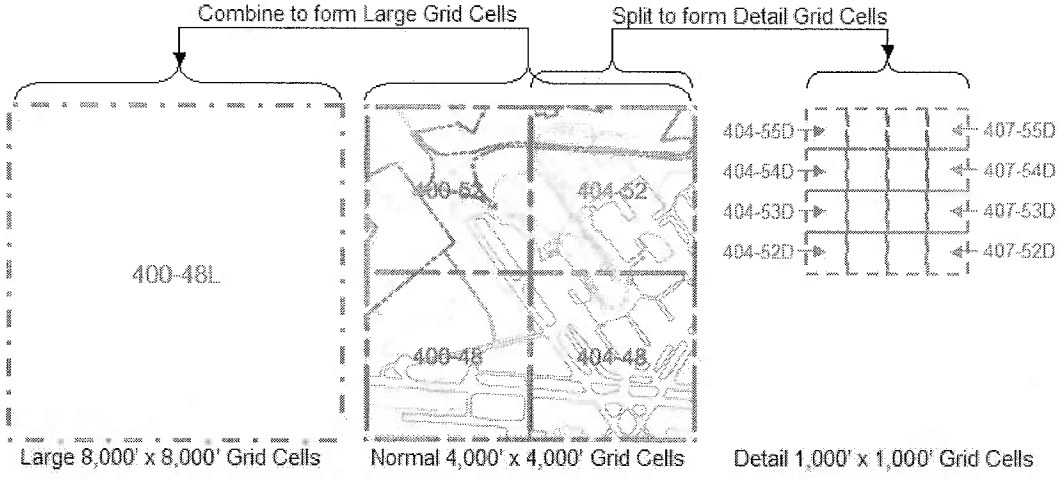
3. GRID MAPS

A grid shall be used to further identify buildings and features with locations at MAA facilities. These grids are complementary to the identification standards established in Section 2 and they do not impact the assignment of identifiers in any way. Some individuals and systems may reference a given feature such as a building by the grid cell(s) it occupies (e.g. the Main Terminal at BWI occupies grid cell 404-48).

Each grid cell should be referenced by the thousands digits of the Northing and Easting coordinate (Maryland State Plane, NAD83, U.S. Survey Foot) of the lower left corner of the grid cell. For example, the Northing and Easting coordinates for the lower left corner of the grid cell that contains the Main Terminal building are 404,000 East and 48,000 North. The grid cell identifier is therefore 404-48. Note that all grid cell identifiers are evenly divisible by 4.

This grid naming convention allows users of the grid to expand or contract their area of interest as desired. For instance, terminal maintenance personnel may wish to focus only on the nine grid cells encompassing the terminal and its immediate surrounds. They can then reference individual 1,000' x 1,000' cells (i.e. 404-50S, 404-51S, etc.) if a more detailed breakdown of these 9 areas is necessary. These detail grid cells references should be followed by an 'D' to avoid confusion with the 4,000' x 4,000' areas (see the figure below). Similarly, emergency rescue personnel may wish to expand the grid by referencing areas further away from BWI (e.g. 384-72 for an area to the Northwest of the airport). If necessary, they could aggregate large grid cells to refer to a broader area by adding an 'L' to the end of the grid cell identifier. When aggregating grid cells to cover larger areas, the coordinates of the lower left corners of the resulting larger grid areas should be evenly divisible by 8 (e.g. 400-48L).

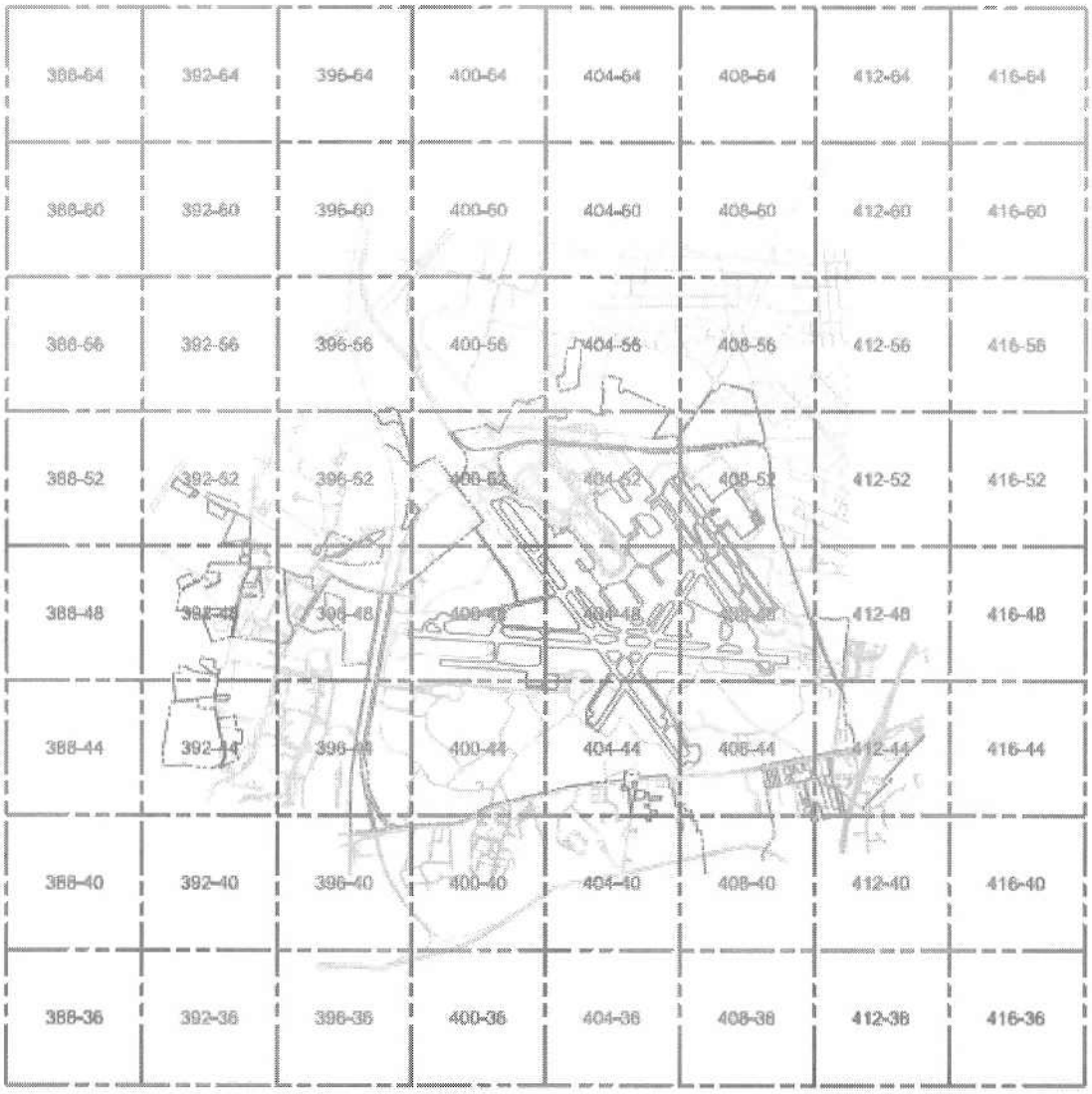
Figure 1
Large, Normal and Detail Grid Cells



3.1. Grid Map for BWI

The following figure shows the BWI Grid superimposed on a basemap of the airport. This figure displays 4,000' x 4,000' grid cells.

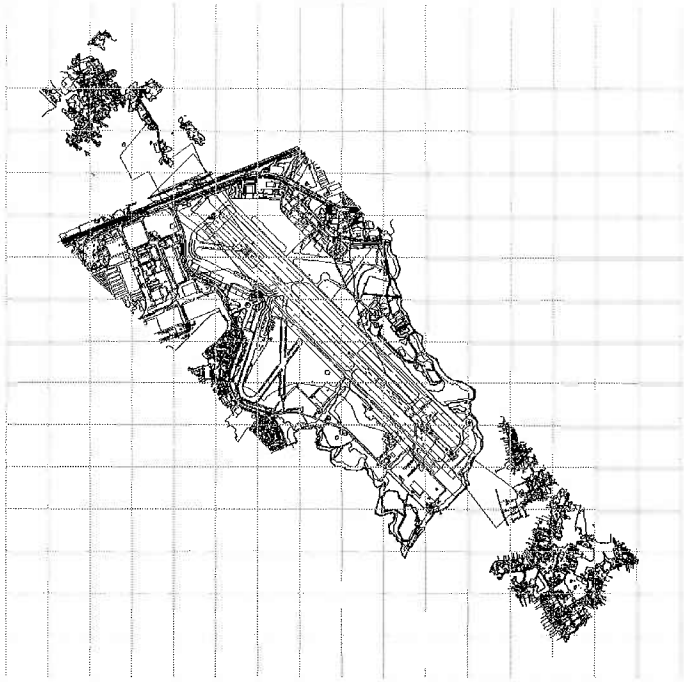
Figure 2
Normal Sized Grid Cells for BWI



3.2. Grid Map for MTN

The following figure shows the 1000' by 1000' MTN Grid superimposed on the Airport Layout Plan (ALP).

Figure 3
Normal Sized Grid Cells for BWI



3.3. Database Considerations

Database field referencing grid cells must be able to accommodate one or more grid cell identifiers. Alternatively, a database may accommodate this by establishing a one-to-many relationship between the feature and the grid cell(s).

4. BOX GRID MAPS

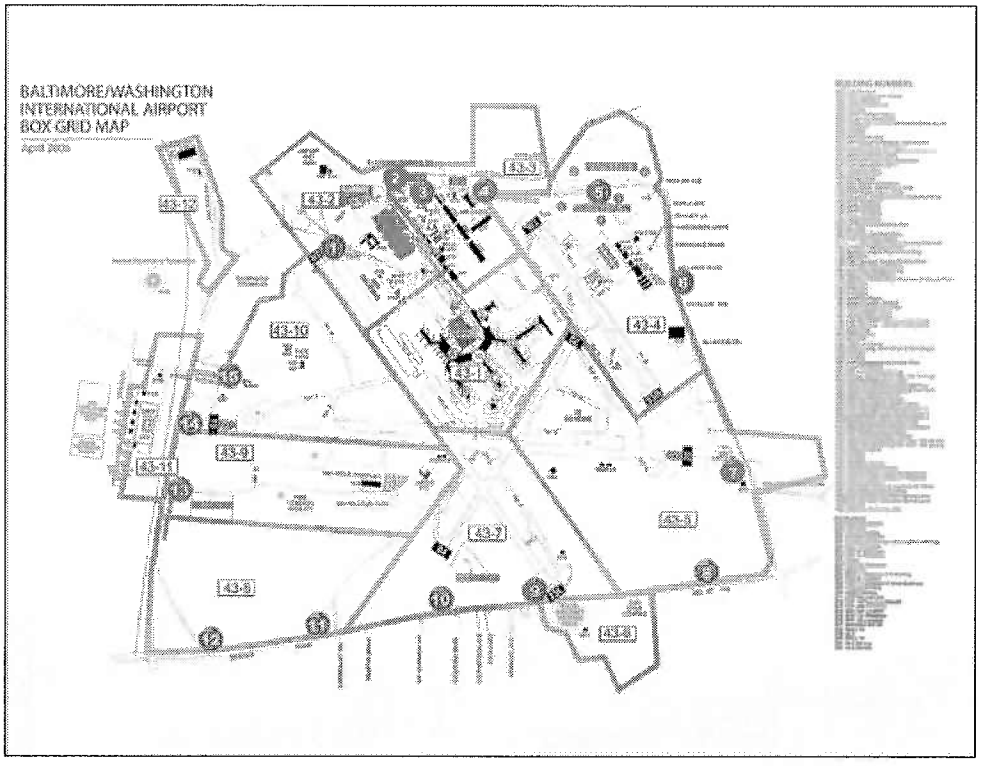
Sections and Posts from the BWI and MTN Box Grid Maps shall be used to further identify buildings and features with locations at MAA facilities. Sections shall be used to subdivide BWI and will contain all buildings and features. These sections and posts are complementary to the identification standards established in Section 2 and they do not impact the assignment of identifiers in any way. Unlike BWI, MTN is not subdivided into sections due to its smaller size. Posts shall be used to indicate the closest gate or emergency entry point, along facility perimeter fences, to each building and feature.

4.1. Box Grid Map for BWI

The BWI Box Grid Map is divided into twelve sections as defined by the MAA Fire and Rescue Division. These sections are labeled "43-1", "43-2", "43-3", etc. Each building shall be assigned the section number in which it is located.

Fifteen gates, also known as posts, are located along the perimeter fence of BWI and are labeled "Post 1", "Post 2", "Post 3" etc. These posts are always locked and are used only for emergency access to the airfield. Each building and facility shall be assigned the closest respective emergency entry post.

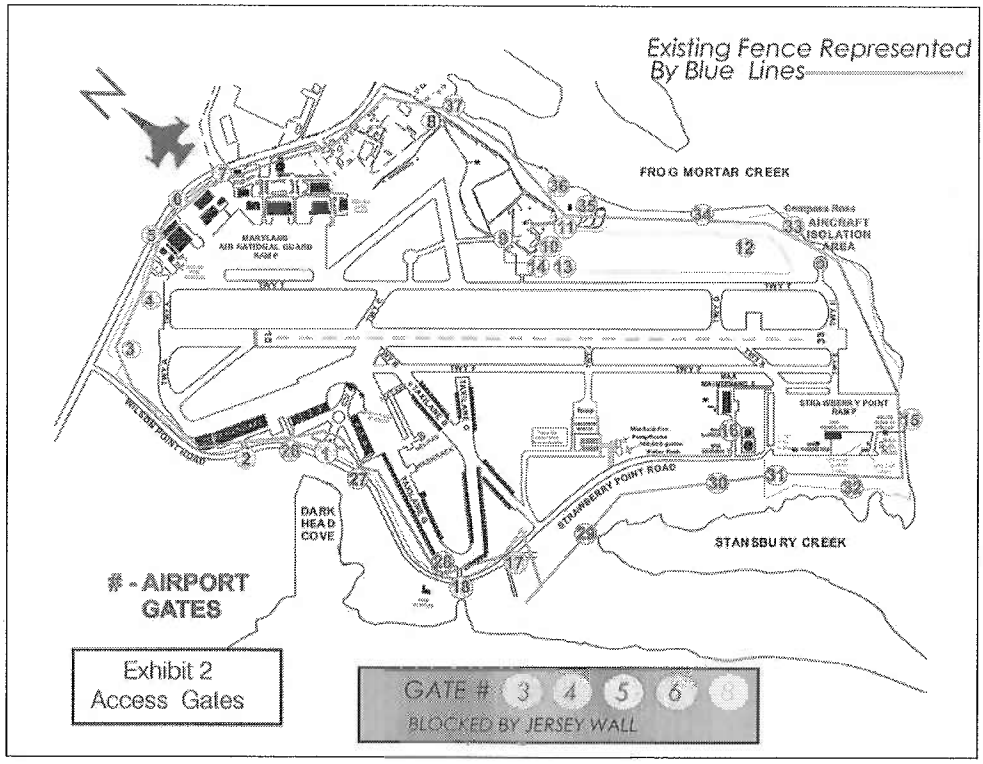
Figure 4
Box grid Map for BWI



4.2. Box Grid Map for MTN

The MTN Box Grid Map is not divided into sections. Only gates, both regular-use and emergency-use, are shown on the map. Please refer to Appendix E for the status of every MTN gate. Each building and facility shall be assigned the closest respective gate used for access.

Figure 5
Box grid Map for MTN



4.3. Database Considerations

In a database environment, the Section and Post (Gate) attributes shall be referred to as "section" and "post" respectively. A string field type and ample field width shall be used to accommodate these attributes, which could include punctuation such as dashes.

5. ASSETS

Selected MAA assets shall be identified and labeled using the UNIFORMAT II Building and Related Sitework standard. This standard provides a classification of assets that are common to most buildings (e.g., services, equipment, etc.). This classification system shall be utilized for management, tracking, and inventory of both stationary and moving assets.

5.1. Type codes based on UNIFORMAT II

See Appendix D for the selected types of assets that will be identified and labeled according to the UNIFORMAT II standard.

5.2. Assignment of Unique Identifiers

Unique identifiers for specific, individual assets shall be assigned following the guidelines previously stated in this standard. In instances where there are multiple assets of the same type, this standard shall be adapted as appropriate to accommodate each individual unit. For example, two separate heating/cooling air handling units sharing a space in a building would receive UNIFORMAT codes D306003-1 and D306003-2 respectively.

Any current identification scheme shall be retained and maintained by MAA along with the UNIFORMAT II classification system. This will provide needed redundancy during transition to the new classification and will establish guidelines to follow for new assets and currents assets that have not yet been identified.

5.3. Navigational Aids

Navigational aids are a special subset of assets that are unique to airports and therefore have an FAA-approved identification system. The Navigational Aid Equipment Types, along with their appropriate abbreviations, are listed in Appendix E.

6. EVENTS

Events are noteworthy emergency, maintenance and operations occurrences (e.g., fire, security breach, injury, work order, wildlife sighting, etc.) on MAA owned or occupied property that are categorized by standard codes. Events occur at a specific location at a specific time or for a duration of time and therefore shall be assigned an identifier and a location.

6.1. Type Codes

Event type codes from nationally accepted incident reporting systems shall be used to categorize events that occur on MAA property. The following code systems are incorporated into this standard.

MAA Fire and Rescue:
National Fire Incident Reporting System (NFIRS)

Maryland Transportation Authority Police:
Associated Public Safety Communications Officers, Inc.
Extract of Police 10-CODES

Event codes and their descriptions are listed in Appendix F.

6.2. Assignment of Unique Identifiers

The event type code systems above shall be used to assign a unique identifier to events occurring on MAA properties. In addition, a date/time stamp shall be assigned, as well as any user comments to further classify and catalog events and incidents.

7. GLOSSARY

The following acronyms have been used in this standard:

ASTM	American Society for Testing and Materials
BWI	Baltimore/Washington International Thurgood Marshall Airport
FAA	Federal Aviation Administration
MAA	Maryland Aviation Administration
MTN	Martin State Airport
NFIRS	National Fire Incident Reporting System
URISA	Urban and Regional Information Systems Association

The key terms and phrases used in this standard are defined below.

Assets refer to features such as equipment, infrastructure, etc. that are owned by MAA.

Building refers to a physical structure located at an MAA facility.

Events refer to emergency- and operations-type occurrences on airport property that are categorized by an incident/occurrence code as defined by MAA.

Facility refers to an airport or other MAA location where a building or feature is located.

Floor refers to physical levels within an MAA building.

Grid refers to a grid system use for locating buildings and features on MAA facilities.

Parcel refers to a delineated portion of land that is owned by MAA.

Room refers to a walled or partitioned part of the inside of an MAA building.

Section refers to divisions or areas of a facility as defined by MAA.

Space refers to an open area, not bounded by partitions or walls, on the inside of an MAA building.

Zone refers to areas or sectors within an MAA building that are made up of floors, rooms, and spaces.

8. APPENDICES

Appendix A1 - List of BWI Parcels

BWI Parcels as provided by the 2003 Maryland Department of Planning
Maryland PropertyView Database

ACCTID	DIGXCORD	DIGYCORD	LEGAL1	LEGAL2	LEGAL3	ACRES
020500212514895	428960.7	165935.4	LTS 45 TO 47 BK B	515 ARUNDEL AVE	ARUNDEL MANOR	0.150
020500212007702	428960.7	165935.4	LTS 25 TO 29 BK A	518 ARUNDEL AVE	ARUNDEL MANOR	0.270
020500212416600	428789.5	165840.7	LTS 2 3 BK R	522 ARUNDEL AVE	ARUNDEL MANOR	0.010
020500207002180	428960.7	165935.4	LTS 3 TO 6 BK K	527 ARUNDEL AVE	ARUNDEL MANOR	0.210
020500001853610	430549.2	166912.5	.601 ACRE	6901 AVIATION BLVD	FERNDALE	0.601
020500001939000	430358.2	167420.7	LT 67X185 IMPS	6931 AVIATION BLVD	NR FERNDALE	0.280
020500001937600	430321.2	167417.5	LT 60X51	6933 AVIATION BLVD	FERNDALE	0.070
020500016955010	430281.7	167459.1	1 ACRE	6935 AVIATION BLVD	GLEN BURNIE	1.000
020500001844850	430323.7	167442.4	.475 ACRE	6937 AVIATION BLVD	FERNDALE	0.475
020500002604709	430324.2	167482.8	LT 150X209	6939 AVIATION BLVD	FERNDALE	0.720
020500015463200	430090.3	167847.7	IMPS26.60 ACRES	6949 AVIATION BLVD	GLEN BURNIE	26.600
020500012074000	430030.0	168096.6	IMPS4.6886 ACRES	7001 AVIATION BLVD	NR FERNDALE FARMS	4.680
020500002668500	428712.2	166039.9	.241 ACRE	7507 W B & A RD	MCPHERSON STATION	0.241
020500003116400	428719.6	165950.0	IMPS.451 ACRE	7511 W B & A RD	MCPHERSON STATION	0.451
020503606701943	424704.2	167968.3	LT 2 BK A	7202 BENTWOODS RD	BENTWOODS	1.000
020503615239703	424835.9	167919.9	LT 2 BK B	7203 BENTWOODS RD	BENTWOODS	1.090
020503617624508	424660.2	167925.5	LT 3 BK A	7204 BENTWOODS RD	BENTWOODS	1.000
020503603571850	424773.7	167910.0	LT 3 BK B	7205 BENTWOODS RD	BENTWOODS	1.000
020503602892700	424623.5	167901.2	LT 4 BK A	7206 BENTWOODS RD	BENTWOODS	1.020
020503614397700	424732.2	167863.4	LT 4 BK B	7207 BENTWOODS RD	BENTWOODS	1.070
020503607418500	424691.2	167848.0	LT 5 BK B	7209 BENTWOODS RD	BENTWOODS	1.030
020500003773050	428710.1	169180.8	.693 ACRE	800 CAMP MEADE RD	HANOVER	0.690
020500003033475	428675.0	169185.8	.387 ACRE	804 CAMP MEADE RD	HANOVER	0.380
020532206452890	430452.4	165921.3	IMPSLT 3	7432 CLASSIC DR	GLENBROOK	0.671
020532200051990	430452.4	165921.3	LT 2	7439 CLASSIC DR	GLENBROOK	0.259
020532203056300	430452.4	165921.3	LT 4 RESUB LT J	7440 CLASSIC DR	GLENBROOK	0.671
020532211897200	430452.4	165921.3	LT 3	7441 CLASSIC DR	GLENBROOK	0.259
020532209990400	430452.4	165921.3	LT 4 RESUB LT K	7443 CLASSIC DR	GLENBROOK	0.259
020532216455630	430452.4	165921.3	LT 5 RESUB LT K	7445 CLASSIC DR	GLENBROOK	0.259
020532211119400	430452.4	165921.3	IMPSLT 5 RESUB LT J	7446 CLASSIC DR	GLENBROOK	0.671
020527090028127	428530.3	166046.8	LT 8 OR 1.281 ACRES	501 DIGIULIAN BLVD	FRIENDSHIP AIRPARK	1.280
020527090028126	428540.3	165981.4	LT 7 OR 1.357 ACRES	505 DIGIULIAN BLVD	FRIENDSHIP AIRPARK	1.350
020527090028125	428575.6	165924.5	LT 6 OR 2.075 ACRES	509 DIGIULIAN BLVD	FRIENDSHIP AIRPARK	2.070
020527090028124	428645.0	165858.3	LT 5 OR 1.927 ACRES	513 DIGIULIAN BLVD	FRIENDSHIP AIRPARK	2.170
020527090028123	428640.9	165786.3	LT 4 OR 1.40 ACRES	517 DIGIULIAN BLVD	FRIENDSHIP AIRPARK	1.400
020532205293400	430452.4	165921.3	PT LT 21	1037 DORSEY RD	GLENBROOK	0.260
020532203172400	430452.4	165921.3	N HLF LT 10	1201 DORSEY RD	GLENBROOK	0.580
020532214505800	430452.4	165921.3	N HLF LT 8	1207 DORSEY RD	GLENBROOK	0.581
020532210029750	430452.4	165921.3	N HLF LT 7	1209 DORSEY RD	GLENBROOK	0.580
020500200051965	428960.7	165935.4	LTS 28 TO 31 BK H	1819 DORSEY RD	ARUNDEL MANOR	0.020

020500002330300	428731.5	166049.4	.5 ACRE	2101 DORSEY RD	MCPHERSON STATION	0.500
020500002677600	428708.0	166079.8	IMPS.252 ACRE	2103 DORSEY RD	MCPHERSON STATION	0.252
020526906253800	428650.1	166071.2	LT 2 BK C	2107 DORSEY RD	FRIENDSHIP MANOR	0.275
020526906244100	428603.9	166066.1	LT 3 BK B	2201 DORSEY RD	FRIENDSHIP MANOR	0.340
020526916758900	428583.0	166064.5	LT 2 BK B	2205 DORSEY RD	FRIENDSHIP MANOR	0.040
020500016114020	424853.3	167004.6	LT 2 OR 7.737 AC	1000 DORSEY RIDGE RD	RIDGE BUSINESS CENTER	7.730
020500016595305	424807.3	166771.4	IMPSLT 3 OR 5.16 AC	1001 DORSEY RIDGE RD	RIDGE BUSINESS CENTER	5.160
020500090079013	424670.7	166993.9	LT 1 OR 12.22 AC	1004 DORSEY RIDGE RD	RIDGE BUSINESS CENTER	12.220
020500015461038	428604.2	167076.6	IMPS778.667 ACRES	7153 ELM RD	BALTO-WASH AIRPORT	778.660
020500090068728	428604.2	167076.6	IMPS778.667 ACRES	7153 ELM RD	BALTO-WASHINGTON AIRPORT	778.660
020532209541938	430452.4	165921.3	IMPSPT LT F	520 FAUBERT RD	GLENBROOK	0.200
020532218381300	430452.4	165921.3	PT LT F	521 FAUBERT RD	GLENBROOK	0.210
020532207025900	430452.4	165921.3	RR PT LT F	525 FAUBERT RD	GLENBROOK	0.940
020532200114000	430452.4	165921.3	PT LTS 8 9 R/S LT E	503 GLENBROOK RD	GLENBROOK	0.620
020532212696600	430452.4	165921.3	LT 7 RESUB LT E	505 GLENBROOK RD	GLENBROOK	0.370
020532212479650	430452.4	165921.3	LT 1 RESUB LT E	507 GLENBROOK RD	GLENBROOK	0.790
020532214412400	430452.4	165921.3	LT 3 RESUB LT E	511 GLENBROOK RD	GLENBROOK	0.250
020532214394808	430452.4	165921.3	LT 4 RESUB LT E	513 GLENBROOK RD	GLENBROOK	0.250
020500012064200	425108.9	168426.3	.500 ACRE	1309 HANOVER RD	HANOVER	0.500
020500016452380	425053.5	168349.6	2.49 ACRES	1311 HANOVER RD	HANOVER	2.490
020500090039714	425053.4	168518.9	TRACT A OR .48 ACRE	1316 HANOVER RD	HANOVER	0.480
020500090039713	425031.9	168539.6	TRACT B OR .39 ACRE	1318 HANOVER RD	HANOVER	0.390
020500011261600	425009.8	168548.6	TRACT C OR .61 ACRE	1320 HANOVER RD	HANOVER	0.610
020500002473110	424954.8	168494.2	LT 5	1321 HANOVER RD	PLT OF CARDER SUB DIV	0.580
020500004439500	424988.1	168568.9	.455 AC	1322 HANOVER RD	HANOVER	0.450
020500002473100	424924.0	168497.6	LT 4	1323 HANOVER RD	PLT OF CARDER SUB DIV	0.580
020500000532930	424964.1	168584.2	IMPS.336 ACRE	1324 HANOVER RD	HANOVER	0.330
020500002473500	424870.7	168576.1	LT 1	1331 HANOVER RD	CARDER PROP SUB DIV	0.600
020500003817500	424898.8	168627.9	.50 ACRE	1332 HANOVER RD	HANOVER	0.500
020500015381800	424924.3	168800.7	IMPS2 ACRES	1338 HANOVER RD	HANOVER	2.000
020500010902500	424743.6	168657.2	1.094 ACRES	1343 HANOVER RD	HANOVER	1.090
020500002510300	424620.2	168588.9	IMPS1 ACRE	1347 HANOVER RD	HANOVER	1.000
020500090054588	424682.7	168652.8	1.40 ACRES	1351 HANOVER RD	HANOVER	1.400
020500006147900	424646.0	168681.4	1.352 ACRES	1357 HANOVER RD	HANOVER	1.350
020500002555110	424618.5	168716.9	IMPS1.238 ACRES	1359 HANOVER RD	HANOVER	1.230
020500015325900	424578.6	168749.3	1.493 ACRES	1361 HANOVER RD	HANOVER	1.490
020400002017400	429861.1	165373.3	1.02 ACRES	501 JONES RD	SNOWDENTOWN	1.020
020400090011768	429892.4	165366.3	1.02 ACRES	505 JONES RD	SEVERN	1.020
020400006374200	429997.9	165106.4	.296 ACRE	552 JONES RD	SNOWDENTOWN	0.290
020500008457700	425365.9	167956.6	LT 4	7207 LINDA AVE	FRIENDSHIP	0.260
020500016902460	425382.4	167931.5	LT 5	7209 LINDA AVE	FRIENDSHIP	0.260
020500009364015	425382.4	167908.6	IMPSLT 6	7211 LINDA AVE	FRIENDSHIP	0.260
020500012371750	425315.5	167899.1	LT 16	7212 LINDA AVE	FRIENDSHIP	0.270
020500000287700	425376.2	167884.4	LT 7	7213 LINDA AVE	FRIENDSHIP	0.260
020500013658408	425315.5	167872.2	LT 15	7214 LINDA AVE	FRIENDSHIP	0.270
020500009374400	425373.0	167858.8	LT 8	7215 LINDA AVE	FRIENDSHIP	0.260
020500003541360	425318.7	167848.0	LT 14	7216 LINDA AVE	FRIENDSHIP	0.270
020500009163100	425373.0	167836.5	LT 9	7217 LINDA AVE	FRIENDSHIP	0.260
020500003541375	425317.5	167826.2	LT 13	7218 LINDA AVE	FRIENDSHIP	0.270

020500001300000	425316.9	167808.4	LT 12	7220 LINDA AVE	FRIENDSHIP	0.270
020500010548300	425374.9	167813.5	LTS 10 11	7221 LINDA AVE	FRIENDSHIP	0.520
020500090039004	425389.0	167668.3	2 ACRES	7223 LINDA AVE	HANOVER	2.000
020541209362875	428615.2	169676.0	PT LT 24	505 LYMAN AVE	HOMELAND PARK	2.500
020541213979051	428525.5	169705.5	LT 23	515 LYMAN AVE	HOMELAND PARK	4.500
020541205149200	427908.0	169413.0	LTS 29TO35 90 91 PT	1007 MAIN AVE	HOMELAND PARK-WHITE FARM	6.130
020526911797900	428677.8	166016.7	LT 4 BK C	503 MCPHERSON AVE	FRIENDSHIP MANOR	0.250
020526916434080	428600.7	166015.0	IMPSLT 7 BK B	504 MCPHERSON AVE	FRIENDSHIP MANOR	0.270
020526904166000	428672.7	165991.5	LT 5 BK C	505 MCPHERSON AVE	FRIENDSHIP MANOR	0.250
020526916642500	428600.7	165991.5	LT 9 BK B	506 MCPHERSON AVE	FRIENDSHIP MANOR	0.270
020526911211200	428676.9	165969.9	LT 6 BK C	507 MCPHERSON AVE	FRIENDSHIP MANOR	0.250
020500090052998	428815.9	169416.5	28.38673 ACRES RESID	525 OLD STONY RUN RD	BWI PLAZA ASSOCS NEW IMP	28.380
020400090007496	430499.0	163828.4	1.07 ACRES	7831 QUARTERFIELD RD	SEVERN	1.070
020500016535008	424222.7	168831.5	1 ACRE	7117 RACE RD	HANOVER	1.000
020500012051000	424192.0	168683.4	.572 ACRE	7131 RACE RD	HANOVER	0.570
020500012168800	424123.7	168662.3	.258 ACRE	7134 RACE RD	HANOVER	0.250
020500011303850	425334.5	168202.4	IMPS2.0224 ACRES	7173 RIDGE RD	STONEY RUN	2.020
020500000580300	425184.1	168257.7	.767 ACRE	7178 RIDGE RD	STONEY RUN	0.760
020500013735400	425191.8	168200.4	LT 180X209	7180-7184 RIDGE RD	HANOVER	0.860
020500006638800	425197.0	168154.7	.449 ACRE	7190 RIDGE RD	NR STONEY RUN	0.440
020500005345000	425162.3	168144.3	IMPS.3716 ACRE	7192 RIDGE RD	HANOVER	0.370
020500011261400	425195.6	168127.7	.418 ACRE	7194 RIDGE RD	HANOVER	0.410
020500007177100	425119.5	168028.5	1.32 ACRES	7202 RIDGE RD	HANOVER	1.320
020500090021214	425128.4	168067.5	1.715 ACRES	7202 RIDGE RD	HANOVER	1.710
020500013597100	425107.2	167991.1	IMPS1.33 ACRES	7206 RIDGE RD	HANOVER	1.330
020500012685400	425217.0	167950.8	IMPS1 ACRE	7209 RIDGE RD	STONEY RUN	1.000
020500012278510	425061.9	167924.2	4.71 ACRES	7210 RIDGE RD	HANOVER	4.710
020500005587400	425193.5	167884.4	IMPS.80 ACRE	7217 RIDGE RD	STONEY RUN	0.800
020500005584600	425196.1	167853.1	1.12 ACRES	7219 RIDGE RD	STONEY RUN	1.120
020500003863400	425101.6	167852.1	1.03 ACRES	7220 RIDGE RD	HANOVER	1.030
020500013883600	424917.2	167753.2	27.37 ACRES	7226 RIDGE RD	HANOVER	27.370
020500006952400	425155.7	167717.9	1 ACRE	7233 RIDGE RD	STONEY RUN	1.000
020500090040473	425245.7	167628.5	18.111 ACRES #8 PAP	NOISE ABATEMENT PROGRAM	HANOVER	18.110
020500006952100	425131.3	167628.5	99X150	7239 RIDGE RD	HANOVER	0.340
020500003984400	425265.9	167475.0	7.6196 ACRES	7243 RIDGE RD	STONEY RUN	7.610
020500003983000	425098.0	167468.1	.705 ACRE	7249 RIDGE RD	STONEY RUN RD	0.700
020500008629600	424940.4	167152.3	IMPS.65 ACRE	7320 RIDGE RD	HANOVER	0.880
020500013882500	424665.8	167271.0	IMPS9.214 ACRES	7322 RIDGE RD	STONEY RUN	9.210
020500003000100	424946.8	166868.9	2.804 ACRES	7353 RIDGE RD	STONEY RUN RD	2.800
020500015756610	424633.7	166764.9	IMPS5 ACRES	7358 RIDGE RD	HANOVER	5.000
020500001647103	424808.9	166702.6	2.643 ACRES	7404 RIDGE RD	HANOVER	2.640
020500003248200	424893.5	166681.0	.246 ACRE	7406 RIDGE RD	HANOVER	0.240
020500012813500	424969.4	166662.5	IMPSLT C OR .66 ACRE	7411 RIDGE RD	HANOVER	0.660
020500001318800	425059.3	166506.3	11.148 ACRES	7415 RIDGE RD	HANOVER	11.140
020500016601160	425040.5	166444.4	1.27 ACRES	7429 RIDGE RD	STONEY RUN	1.270
020500011818900	425041.8	166383.3	IMPSLT 2 OR 1.2770 ACRES	7433 RIDGE RD	MYTYCH PROP	1.270
020500011818105	425029.0	166321.5	IMPSLT 1 OR 2.0093 ACRES	7439 RIDGE RD	MYTYCH PROP	2.000
020500014819565	424788.2	166419.4	13 ACRES	7440 RIDGE RD	HANOVER	13.000
020500000696500	424823.6	166158.4	IMPS.828 ACRE	7456 RIDGE RD	HANOVER	0.828

020500018025000	426339.7	168359.6	IMPS1.15 ACRES	1129 STONEY RUN RD	HANOVER	1.150
020500009884905	426297.3	168331.8	.497 ACRE	1131 STONEY RUN RD	HANOVER	0.490
020500010654000	426261.2	168355.5	.28 ACRE	1140 STONEY RUN RD	HANOVER	0.280
020500013964800	426262.2	168298.4	IMPSLT 36	1141 STONEY RUN RD	HANOVER	0.360
020500007637000	426252.1	168235.9	1.08 ACRES	1149 STONEY RUN RD	HANOVER	1.080
020500090036527	426254.2	168185.4	1.353 ACRES	1151 STONEY RUN RD	HANOVER	1.350
020500002063925	426006.6	168247.1	3.8 ACRES	1168 STONEY RUN RD	STONEY RUN	3.800
020500090036526	426175.5	168238.8	2.647 ACRES	1171 STONEY RUN RD	HANOVER	2.640
020500004097800	426200.3	168114.7	IMPS2.60 ACRES	1175 STONEY RUN RD	HANOVER	2.600
020500012166000	426099.3	168111.8	2.6 ACRES	1181 STONEY RUN RD	HANOVER	2.600
020500008784525	425975.1	168137.2	IMPS3.09 ACRES	1191 STONEY RUN RD	HANOVER	3.090
020500001374128	425872.8	168224.4	1.03 ACRES	1196 STONEY RUN RD	HANOVER	1.030
020500006986300	425730.5	167910.9	IMPS2 ACRES	1225 STONEY RUN RD	STONEY RUN	2.000
020500014373100	425663.0	167945.0	1.73 ACRES	1235 STONEY RUN RD	STONEY RUN	1.730
020500015849200	425657.8	167775.9	1.8702 ACRES	1241 STONEY RUN RD	HANOVER	1.870
020500014614650	425575.8	167896.0	1.47 ACRES #12 PAP	NOISE ABATEMENT PROGRAM	STONEY RUN	1.470
020500007695830	425590.1	167945.2	LT .28 ACRES	1245 STONEY RUN RD	HANOVER	0.280
020500010923000	425538.0	167992.6	.62 ACRE	1249 STONEY RUN RD	HANOVER	0.620
020500011818100	425489.2	167994.8	IMPS1.53 ACRES	1255 STONEY RUN RD	HANOVER	1.530
020500016910630	425454.0	167996.0	1.8720 ACRES #11 PAP	NOISE ABATEMENT PROGRAM	STONEY RUN	1.870
020500005971200	425471.9	168095.1	IMPS1.21 ACRES	1260 STONEY RUN RD	HANOVER	1.210
020500005246800	425417.0	167979.4	1.879 ACRES	1261 STONEY RUN RD	STONEY RUN	1.870
020500010299375	425385.6	168125.7	LT 174X428	1262 STONEY RUN RD	HANOVER	1.700
020500010780200	425427.9	167732.2	IMPS4.638 ACS & 15 FT R/	1263 STONEY RUN RD	STONEY RUN	4.630
020500090005531	425378.1	168007.5	LT 1	1267 STONEY RUN RD	FRIENDSHIP	0.270
020500090005530	425353.2	168004.4	LT 2	1269 STONEY RUN RD	FRIENDSHIP	0.250
020500009160206	425316.1	167996.8	LT 19	1271 STONEY RUN RD	FRIENDSHIP	0.260
020500007014500	425245.9	168011.4	1.30 ACRES	1279 STONEY RUN RD	HANOVER	1.300
020500005487325	425496.2	167844.7	IMPS1.480 ACRES	7212 VALLEY RD	HANOVER	1.480
020500013654500	425652.3	167851.3	2.0298 ACRES	7217 VALLEY RD	HANOVER	2.020
020500004771400	425538.2	167758.2	IMPS2.394 ACRES	7218 VALLEY RD	STONEY RUN	2.390
020500007427480	425593.7	167793.9	.50 ACRE	7221 VALLEY RD	STONEY RUN	0.500
020500013892900	425629.2	167708.0	2.01 ACRES #9 PAP	NOISE ABATEMENT PROGRAM	STONEY RUN	2.010
020500010251300	425656.5	167651.5	1.99 ACRES	7235 VALLEY RD	STONEY RUN	1.990
020500002198900	425546.7	167581.4	2.247 ACS 40X170.75	7236 VALLEY RD	HANOVER	2.400
020500009747200	425629.2	167584.6	2.649 ACRES	7241 VALLEY RD	STONEY RUN	2.640
020532210988600	430452.4	165921.3	IMPSW HLF LT H	500 WALTER RD	GLENBROOK	2.500
020532217649200	430452.4	165921.3	PT LT G 85X100	501 WALTER RD	GLENBROOK	0.200
020532203547700	430452.4	165921.3	PT LT G 85X100	505 WALTER RD	GLENBROOK	0.200
020532216856000	430452.4	165921.3	PT LT G	509 WALTER RD	GLENBROOK	0.390
020541215375125	428590.0	169401.3	LT 17	781 WARREN AVE	HOMELAND PARK	2.000
020541215375150	428532.4	169410.5	LT 16	785 WARREN AVE	HOMELAND PARK	2.000
020541216581190	428502.2	169569.2	LT 20	786 WARREN AVE	HOMELAND PARK	3.000
020541207764500	428471.9	169436.7	LT 15	787 WARREN AVE	HOMELAND PARK	2.300
020500016933300	425029.6	168063.2	1.25 ACRES	1315 WEEPING WILLOW RD	HANOVER	1.250
020500000126540	424984.8	168074.4	1.605 ACRES	1319 WEEPING WILLOW RD	PLT CATH DOWGALSKI PROP	1.600
020500012782800	424933.3	168075.7	1 ACRE	1321 WEEPING WILLOW RD	PLT CATH DOWGALSKI PROP	1.000
020500010920200	424883.7	168066.3	1.107 ACRES	1323 WEEPING WILLOW RD	PLT OF C DOWGALSKI PROP	1.100
020541209283100	428029.9	169380.3	LTS 93 94	1000 WHITE AVE	HOMELAND PARK-WHITE FARM	2.500

020532210490330	430452.4	165921.3	PT LT G	1103 WILSON RD	GLENBROOK	0.304
020532200836075	430452.4	165921.3	NW .25 LT G 85X557	1105 WILSON RD	GLENBROOK	1.080
020532210588900	430342.5	166176.5	S HLF LT 15	1106 WILSON RD	GLENBROOK	0.580
020532211093600	430452.4	165921.3	R LT G 199X556 RW 12	1107 WILSON RD	GLENBROOK	2.540
020532215619803	430452.4	165921.3	S PT LT 14	1108 WILSON RD	GLENBROOK	0.460
020532200756000	430452.4	165921.3	PT LT F	1109 WILSON RD	GLENBROOK	1.620
020532203074085	430452.4	165921.3	S HLF LT 13	1110 WILSON RD	GLENBROOK	0.581
020532213694005	430452.4	165921.3	PT LT F 91X364	1111 WILSON RD	GLENBROOK	0.760
020532201920950	430452.4	165921.3	S HLF LT 12 100X253	1112 WILSON RD	GLENBROOK	0.581
020532205541300	430452.4	165921.3	S HLF LT 11	1114 WILSON RD	GLENBROOK	0.580
020532216171400	430452.4	165921.3	IMPSLT 10 RESUB LT E	1115 WILSON RD	GLENBROOK	0.880
020532203173800	430452.4	165921.3	S HLF LT 10	1200 WILSON RD	GLENBROOK	0.581
020532210490325	430452.4	165921.3	LT D1	1201 WILSON RD	GLENBROOK	0.360
020532200819000	430452.4	165921.3	S HLF LT 9	1202 WILSON RD	GLENBROOK	0.580
020532214597800	430452.4	165921.3	S HLF LT 8	1208 WILSON RD	GLENBROOK	0.585
020532217319505	430452.4	165921.3	SE .25 LT 7	1210 WILSON RD	GLENBROOK	0.290
020532290042562	430452.4	165921.3	IMPSPT LT 4 OR.448AC R/S	1211 WILSON RD	GLENBROOK	0.448
020532206917700	430452.4	165921.3	LT 3 RESUB LT B	1213 WILSON RD	GLEN BROOK	0.300
020532290016459	430452.4	165921.3	IMPSLTS 1 2 RESUB LT B	1215 WILSON RD	GLENBROOK	0.200
020532214527800	430452.4	165921.3	SE .25 OF LT 4 50X25	1220 WILSON RD	GLEN BROOK	0.290
020532205370400	430452.4	165921.3	SW PT LT 4	1222 WILSON RD	GLENBROOK	0.290
020532211251500	430452.4	165921.3	PT LT 1A 75X128	415 WIRTH RD	GLENBROOK	0.220
020532214980740	430452.4	165921.3	IMPSPT LT 25 OR .793 AC	7422 ZACHARY LN	GLENBROOK	0.790
020532203935425	430452.4	165921.3	IMPSPT LT J	7425 ZACHARY LN	GLENBROOK	0.399
020532215903785	430452.4	165921.3	IMPSPT LT J	7427 ZACHARY LN	GLENBROOK	0.982
020500000134520	428604.2	167076.6	IMPS10 AC IMPS	STONEY RUN RD	FRIENDSHIP AIRPORT	10.000
020500000359002	424536.1	166393.3	49.402 ACRES	RIDGE RD	HANOVER	49.400
020500003589650	425291.2	168002.4	.70 ACRE	STONEY RUN RD	STONEY RUN	0.700
020500003984405	425169.1	167439.4	1.8459 ACRES	RIDGE RD	NR BALTO-WASH AIRPORT	1.840
020500003984410	425471.5	167383.4	1.6302 ACRES	VALLEY RD	STONEY RUN	1.630
020500004408000	425602.0	167761.9	.5 ACRE	VALLEY RD	STONEY RUN	0.500
020500005487305	425460.6	167528.5	5.37 ACS	VALLEY RD	STONEY RUN RD	5.370
020500006986900	425790.5	167671.4	IMPS12.31 ACRES	STONEY RUN RD	HANOVER	12.310
020500008628200	424841.7	167230.6	2.56 ACRES	RIDGE RD	HANOVER	2.560
020500008628400	424803.1	167205.2	.948 ACRE	RIDGE RD	HANOVER	0.940
020500009169410	426347.1	168017.5	44.2929 AC	STONEY RUN RD	NR PATAPSCO	44.290
020500012164600	426124.5	168178.0	.74 ACRE	STONEY RUN RD	HANOVER	0.740
020500012169900	424117.5	168701.1	1.334 ACRES	RACE RD	HANOVER	1.330
020500013654550	425597.8	167826.2	1.35 ACRES	VALLEY RD	HANOVER	1.350
020500013883525	424980.1	167170.4	LT 3950 SQ FT	RIDGE RD PAP #125	S OF STONEY RUN RD	0.090
020500014819550	424788.2	166404.8	2 ACRES	RIDGE RD	HARMANS	2.000
020500090014226	426188.8	165794.7	21.198 ACRES	DORSEY RD	HARMANS	21.190
020500090016527	426520.7	169594.2	5.299 ACRES	PENN R R ADJ BWI AIRPORT	HANOVER	5.290
020500090021215	425055.0	168030.3	.353 ACRE	WEEPING WILLOW RD	HANOVER	0.350
020500090032909	424878.0	166523.9	7.421 ACRES	RIDGE RD	HARMANS	7.420
020500090035113	428239.1	169303.9	20 ACRES	STONEY RUN RD	SHIPLEY	20.000
020500090039938	425517.8	167984.8	.69 ACRE	VALLEY RD	HANOVER	0.690
020500090040474	425135.4	167587.4	.859 ACRE	RIDGE RD	HANOVER	0.850
020500090041916	428604.2	167076.6	1555.1007 ACS.	AVIATION BLVD	BALTO-WASH AIRPORT	1555.100

020500090050346	426784.3	169518.1	12.2783ACRES	BALTO WASH PKWY	FRIENDSHIP AIRPORT	12.270
020500090050472	425561.6	167476.4	2.3075 ACRES	VALLEY RD	HANOVER	2.300
020500090059019	430541.4	167313.9	13.583 ACRES OR PAR	HOLLINS FERRY RD	FERNDALE	13.580
020500090060504	428985.8	169451.3	4.306 ACRES P/O RESI	OLD STONY RUN RD	BWI PLAZA ASSOCS NEW IMP	4.300
020500090079014	424567.8	167074.5	2.560 ACRES	RESERVE PARCEL	RIDGE BUSINESS CENTER	2.560
020500090102072	426671.4	168575.3	IMPS4.610 ACS	FT MEADE RD	FRIENDSHIP AIRPORT	4.610
020500090211133	425758.2	167779.6	5.2592 ACRES	STONEY RUN RD	HANOVER	5.250
020500090212960	425982.4	168042.0	9.9183 ACS	STONEY RUN RD	HANOVER	9.910
020500212269608	428960.7	165935.4	LTS 17 18 BK H	JEFFERY AVE	ARUNDEL MANOR	0.010
020500212269615	428960.7	165935.4	LTS 19 20 BK H	JEFFERY AVE	ARUNDEL MANOR	0.110
020500212269620	428960.7	165935.4	LTS 25 TO 27 BK H	JEFFERY AVE	ARUNDEL MANOR	0.160
020500212269625	428960.7	165935.4	LTS 21 TO 24 BK H	JEFFERY AVE	ARUNDEL MANOR	0.210
020500212415200	428789.5	165840.7	LTS 1 4TO20 BK R LTS	16 BK A ARUNDEL AVE	ARUNDEL MANOR	1.010
020500212514890	428960.7	165935.4	LTS 26 TO 28 BK B	BERTRAM AVE	ARUNDEL MANOR	0.150
020500216480825	428960.7	165935.4	LTS 59 60 61 BK B	ARUNDEL AVE	ARUNDEL MANOR	0.150
020500217644675	428960.7	165935.4	LTS 3 4 BK B	DORSEY RD	ARUNDEL MANOR	0.110
020500217644676	428960.7	165935.4	LTS 5 TO 9 BK B	DORSEY RD	ARUNDEL MANOR	0.280
020500217644677	428960.7	165935.4	LTS 10 11 BK B	DORSEY RD	ARUNDEL MANOR	0.110
020532218369200	430452.4	165921.3	PT LT F 91X109	S/S WILSON RD	GLENBROOK	0.230
020541205037200	428630.4	169671.6	PT LT 24	LYMAN AVE	HOMELAND PARK	0.170
020541212450200	428579.8	169546.5	LT 19 OR 2 ACRES	WARREN AVE	HOMELAND PARK	2.000
020541290069847	428650.2	169537.8	LT 18 PT LT 25	LYMAN AVE	HOMELAND PARK	2.250

Appendix A2 - List of MTN Parcels

Martin State Airport Parcels as provided by the 2003 Maryland Department of Planning Maryland PropertyView Database

ACCTID	DIGXCORD	DIGYCORD	LEGAL1	LEGAL2	LEGAL3	ACRES
04152200005872	450179.8	185646.0	8.638 AC	NS EASTERN BLVD	1560 W LYNBROOK RD	8.630
04152000011482	449256.3	185574.9	2.3259 AC		LELAND INDUSTRIAL PARK	2.320
04152000011483	449256.3	185574.9	5.6765 AC		LELAND INDUSTRIAL PARK	5.670
04152000011485	449256.3	185574.9	1.0193 AC		LELAND INDUSTRIAL PARK	1.010
04152000011484	449256.3	185574.9	4.4352 AC		LELAND INDUSTRIAL PARK	4.430
04152000011487	449256.3	185574.9	1.9038 AC PARCEL B		LELAND INDUSTRIAL PARK	1.900
04151700003471	450691.0	183817.7	IMPS740.17 AC PAR EXE	STRAWBERRY POINT RD	SE COR WILSON POINT	740.170
04151521450221	449829.6	185415.5	IMPS24 AC		1100FT E WILSON POINT RD	24.000
04151700003472	449780.4	183824.4	7.74 AC SWS	WILSON POINT RD	SW COR DOGWOOD RD	7.740
04152000001160	449097.5	185642.6	LTS 22-23 19.809 AC		MIDDLE RIVER FARMS	19.800
04152000011486	449256.3	185574.9	.8711 AC PARCEL A		LELAND INDUSTRIAL PARK	0.870

Appendix B1 - List of BWI Buildings

BWI buildings as provided by Fire and Rescue Division - October 2005

Building Number	Building Name/Description
100	Main Terminal
101	Field Lighting Vault (Ramp)
102	Cargo Building F
103	Service Station A&W
104	Trichulator at Fuel Farm
105	ARFF – Midfield Station
106	Budget Car Rental
107	United Auto & MSP- MSFM- Bomb UNIT
108	National Car Rental (QTA)- NRR
109	Avis Car Rental (QTA)
110	Hertz Car Rental (Service \ Admin QTA)
111	MAA Storage/Signature Flight Support
112	United\ American - Air Freight
113	MAA Storage (Elm Road & Spring Lane)
114	HVAC Utility Plant (CUP)
115	MAA Snow Team Dorm\Warehouse
116	Field Maintenance Shop
117	Equipment Shed (behind Field Maint Build)
118	Equipment Shed (behind Field Maint Build)
119	Storage Shed (behind Field Maint storage buildings)
120	Field Maintenance Offices
121	MAA Vehicle Maintenance Shop
122	MTA Police - Canine Facility (old Horse Barn)
123	Equipment Self-Maintenance Shop (Blue Building @ Fuel Farm)
124	Cargo Building A
125	Cargo Building B
126	Cargo Building C
127	Cargo Building D
128	Cargo Building E
129	US Airways Maintenance Shop (down at fuel farm)
130	Alamo Car Rental (QTA) NRR
131	Fuel Farm Monitoring Shack
132	Fuel Farm Pump Station at Colonial Leased space
132A	Pump Station Storage bldg. at Colonial leased space (FF)
133	Sheraton International Hotel
134	Signature Vehicle Maintenance Shop (at fuel farm)
135	Salt Dome (Spring Lane)
136	FMX/Signature Storage bldg. (blue) near Spring Lane
137	FMX/BMX Storage bldg. behind field Maint. build-rear gate
138	AUTO Shop Storage Building/Supplies
139	Safety Storage Building (near Salt Dome)

140	CNG Bus Maintenance Facility
141	T-Hangar 1- GA Ramp
142	T-Hangar 2- GA Ramp
143	T-Hangar 3- GA Ramp
144	Signature Hangar - GA Ramp
145	General Aviation Terminal (Offices) old Signature
146	Northrop-Grumman Hangar at GA Complex
147	Amtrak Station
148	Taxi/Bus Staging Building (Friendship Road)
149	LSG Sky Chiefs
150	LSG Sky Chiefs
151	Alamo Rent-A-Car (old Elkridge-Landing)
152	National Car Rental (old Elkridge-Landing)
153a,b	Avis Admin Service Building (/)
154	CNG Fuel Facility (Signature East)
155	Kaufman Bldg. {MAA Office of Technology)
156	A- Gate Trichulator Building
157	Spare
158	Field Maintenance Equipment garage
159	Thrifty Rent-A-Car Service Building NRR (8)
160	BWI Parking Garage - Hourly
161	BWI Parking Garage Administration Building
162	Field Maintenance Shed
163	Glycol pump/control building @ midfield behind electrical vault
164	Glycol pump/control building @ fuel farm
165	Benson Hammond House
166	BWIA- Central Parking Garage - Daily
167	Hudson General Offices
168	Fuel Farm Shell Oil Building (box trailer)
169	Amtrak Station MTA Parking Garage (old)
169A	Amtrak Station MTA Parking Garage (new)
170	BWI Deicing Control Building at 15R-33L (on top of hill)
171	BWI Deicing Control Building @ 15L-33R GA Ramp
172	MAC Building – BMX
173	Glycol Pumping station 15R/33L (United Airlines) metal shed
174	Glycol Storage bldg. (Red barn building 15R De-ice Area)
175	Glycol Storage bldg. (Red barn building) 15R De-ice Area)
176	Midfield Cargo G
177	Future Cargo H
178	Future Cargo I
179	Rental Car Parking Garage
180	CSB Rental Car Complex
181	General Aviation Hangar #1 (Signature)
182	General Aviation Hangar #2 (Signature)
184	G.A. Facility Terminal & Signature F.S. Office
185	QTA Electrical Substation
186A	Light Rail Electrical Substation (Near Spring Lane)
186B	Light Rail Electrical Substation (Near Spring Lane)

187	Spare
188	Enterprise QTA \Admin.
189	Future RAC #9
190	Future RAC #10
200	R/W 33L Localizer/MALSR (at approach end of R/W 15R) - FAA
203	N/C Shop (located to right of ASR9 Bldg.-labeled "storage")- FAA
204	Storage (left of ASR9 Bldg.) - FAA
205	Environmental Unit (across from Logistics Bldg.) - FAA
207	Landscaping Storage (across from Logistics Bldg.) - FAA
260	R/W 10 Localizer (at approach end of R/W 10) - FAA
261	R/W 28 Glideslope (at approach end of R/W 28) - FAA
262	R/W 15R Glideslope (at approach end of R/W 15R-labeled "RTR Glideslope") - FAA
263	VORTAC (alongside R/W 10 on approach side of R/W 28) - FAA
264	R/W 33L Glideslope (at approach end of R/W 33L and TWY "T" intersection) - FAA
265	BALE SX (next to RTR Transmitter-labeled "RTR Transmitter")
266	R/W 10 Glideslope E/G Bldg. (at approach of R/W 10 and "H" TWY-labeled "RTR Glideslope") - FAA
267	R/W 28 Localizer (at approach of R/W 10)
268	R/W 10 Glideslope (at intersection of R/W 10 and TWY "G" – labeled "R/W 10 Glideslope" (4 small buildings) - FAA
269	Logistics Building (across from Environmental Unit
270	ASR & Storage (top of service road off of TWY "W", to left of N/C Bldg.-used on N/C Shop #203) - FAA
271	RTR Receiver Site (on hill behind taxi stand) - FAA
272	R/W 15R Localizer/MALSR (on Dorsey Rd. next to Observation area) - FAA
273	R/W 33R Glideslope (at intersection of TWY "M" and "S") - FAA
274	R/W 33R Localizer (at approach of R/W 15L) - FAA
275	R/W 15L Glideslope (at intersection of TWY "N" and "S") - FAA
276	R/W 15L Localizer (at approach of R/W 33L) - FAA
277	BWI/OEH MALSR (at approach end of R/W 10) - FAA
278	BALC SX (at approach end of R/W 10) - FAA
279	ALS (on service road at approach of R/W 10) - FAA
280	BALC SX (on service road at approach of R/W 11) - FAA
281	ALS Storage (on service road at approach of R/W 12) - FAA
282	ALS Storage (on service road at approach of R/W 13) - FAA

Appendix B2 - List of MTN Buildings

Martin State Airport buildings as provided by Martin State Airport – December 2005

Building Number	Description
1	Hangar #1
2	Hangar #2
3	Hangar #3
4	Hangar #4
5	Hangar #5
6	Hangar #6
7	Hangar #7
15	Terminal Building
16	Aircraft Service Trailer
499	Corporate Hanger
501	Corporate Hanger
503	Corporate Hanger
505	Corporate Hanger
507	Corporate Hanger
509	Corporate Hanger
511	Corporate Hanger
8	Lockheed Martin Building
16	Mid-field Fire Pumphouse
17	500,000 gallon Water Tank
11	MTN Sand/UREA
12	SHA Sand/Salt
9	MTN Maintenance Shop
10	MTN Maintenance Equipment Storage
18	MTN Maintenance- Supply Storage
19	MTN Maintenance Storage Shed
13	MD State Police
14	Baltimore County Marine Police
20	Baltimore County Aviation Police - (In progress- constructed next to Hangar 6)
21	T-Hangers 1 through 190
22	MTN Fuel Farm
23	Black & Decker Fuel Farm
24	Lockheed Martin Farm
25	Sinclair Farm
26	Control Tower Building - Mid Field - Start Construction 06/07
27	Community Hangar - Mid-field - Start Construction 06
28	MTN - Remote Transmitter Receiver Site
29	MTN Runway Lighting Vault
N/A	Maryland Air National Guard Fire Station - Not Part of AEIS
N/A	Maryland Air National Guard Fuel Farm - Not Part of AEIS
N/A	14 Other Maryland Air National Guard Buildings - Not Part of AEIS

Appendix C - URISA Addressing Standard

The following is extracted from the Urban and Regional Information Systems Association (URISA) Street Address Data Standard Executive Summary. This extract highlights basic address elements to be used for assigning addresses to MAA buildings and features. Please visit http://www.urisa.org/address_data_standard.htm to view or download the entire Executive Summary and the entire URISA Standard.

Introduction

Street addresses are the location identifiers most widely-used by state and local government and the public. Street addresses are critical information for administrative, emergency response, research, marketing, mapping, GIS, routing and navigation, and many other purposes. Because they have evolved over many decades, under the control of thousands of local jurisdictions, in many different record and database formats, and to serve many purposes, different address formats and types pose a number of complex geoprocessing and modeling issues. As a consequence, government agencies struggle with these issues as they seek to integrate large, mission-critical files into master address repositories.

Objective

The Street Address Data Standard provides, in four separate parts, data content, classification quality, and exchange standards for street, landmark, and postal addresses. The standard has been created to meet the following objectives:

- Describe a way to express the content, applicability, data quality, and accuracy of an address dataset or data element.
- Codify some commonly used discrete units of address information, referred to as descriptive elements, and thereby provide standardized terminology and definitions to alleviate inconsistencies in the use of descriptive elements and to simplify the documentation process.
- Provide a method for documenting the content of address information.
- Facilitate street address data exchange, and offer a migration path from legacy formats to standards compliant ones.
- Provide a statement of best practices for street address data content and classification.
- Recognize, as a practical matter, that different users may require different levels of standardization.
- Define standards and tests and means of describing street address data quality.

Scope

This standard covers street addresses. A street address specifies a location by reference to a thoroughfare, or a landmark; or it specifies a point of postal delivery. There are three basic classes of street address:

1. Thoroughfare addresses specify a location by reference to a thoroughfare.
2. Landmark addresses specify a location by reference to a named landmark.
3. Postal addresses specify points of postal delivery which have no definite relation to the location of the recipient, such as post office boxes, rural route boxes, etc.

4. General (for lists including any or all of the above types)

Other important points:

- This definition excludes addressees, occupants, persons, or businesses.
- The definition treats coordinate values as attributes of the address.
- The standard applies only to addresses within the United States.
- The standard excludes electronic addresses, such as e-mail addresses.

Standards Development Procedure

This standard builds on USPS Publication 28, and on the Address Data Content Standard previously proposed by the Federal Geographic Data Committee (FGDC) (Public Review Draft, April 17, 2003). The FGDC effort led the Urban and Regional Information Systems Association (URISA) to propose, with the support of the National Emergency Number Association (NENA) and the U.S. Bureau of the Census, the convening of a Street Address Standards Working Group to include representatives from a range of interested federal, state, regional, and local government agencies, the private-sector, and professional associations. The proposal was accepted by the FGDC Standards Working Group on April 13, 2005.

Maintenance Authority

The Census Bureau will maintain the standard under the auspices of its duties as theme lead for the FGDC Subcommittee on Cultural and Demographic Data (SCDD), ensuring that the standard is revisited on the 5-year schedule as stipulated, or updating and revising as necessary.

Draft Address Standard Part 1: Address Data Content

The address data content standard specifies the data elements that may appear in street addresses. There are simple elements, complex elements, and attribute elements:

1. Simple elements are address components that are defined independently of all other elements
2. Complex elements are formed from two or more simple or other complex elements
3. Attributes contain descriptive information about the address.

ADDRESS NUMBER ELEMENTS

ELEMENT NAME	DEFINITION	EXAMPLE
Address Number Prefix	A non-integer portion of the address number that precedes the address number itself.	**N6W2** 3001 Bluemound Road **A**19 Calle 117
Address Number	The numeric identifier for the house, building or other feature along the thoroughfare.	**1234** North Main Street
Address Number	A non-integer portion of the address number that follows the Suffix address number itself.	123 **1/2** Main Street B317**A** Calle 117

STREET NAME ELEMENTS

ELEMENT NAME	DEFINITION	EXAMPLE
Street Name Pre-Modifier	A word preceding all other elements of the street name that is not a street pre-directional or a street pre-type.	123 **Old** North First Street
Street Name Pre-Directional	A word preceding the street name that indicates the directional taken by the thoroughfare from an arbitrary starting point, or the sector where it is located.	1234 **North** Main Street
Street Pre-Type	The part of the street name preceding the primary name that indicates the type of street.	1234 **Avenue** A 1234 **Calle** Aurora
Street Name	Official name of a street or an alternate (alias) name that is used and recognized.	234 **Central** Street Southwest
Street Post-Type	The part of the street name following the primary name that indicates the type of street.	1234 Central **Street** Southwest
Street Post-Directional	A word following the street name that indicates the directional taken by the thoroughfare from an arbitrary starting point, or the sector where it is located.	1234 Cherry Street **North**
Street Name Post-Modifier	A word following all other elements of the street name that is not a street post-type or street post-directional.	1230 Main Street **Extended**

BUILDING, FLOOR, AND UNIT ELEMENTS

ELEMENT NAME	DEFINITION	EXAMPLE
Building Type	The type of structure (when several structures are found at the same address).	**Building** 6 123 Main Street 123 Main Street **Block** 5
Building ID	The letter, number, or word used to distinguish one structure from another when several occur at the same address.	Tower **B** Block **12**
Floor Type	The word describing level or story of a building where an address is located.	**Floor** 2 Mezzanine **Level**
Floor ID	The number, letter, or word or combination of numbers and letters distinguishing one floor from another within a structure.	Floor **2** **Mezzanine** Level
Unit Type	The name given to an individual occupancy within a building or structure.	**Apartment** 2B **Suite** 1040
Unit ID	The numbers, letters, words, or combination thereof distinguishing one occupancy from another.	123 Main Street Apartment **17** 456 Oak Lane Suite **2C**
Private Mailbox	A mailbox rented from a private commercial mail receiving agency (CMRA).	RR 1 Box 12 **PMB 596** 10 Main Street **PMB 234**

INTERSECTION ADDRESS ELEMENT

ELEMENT NAME	DEFINITION	EXAMPLE
Intersection Connector	The word or symbol placed between the names of intersecting streets.	Eighth Street **and** Pine Street

LANDMARK NAME ELEMENT

ELEMENT NAME	DEFINITION	EXAMPLE
Landmark Name	The name by which a feature is publicly known.	**Statue of Liberty** **White House** **Stanford University**

LARGER-AREA ELEMENTS

ELEMENT NAME	DEFINITION	EXAMPLE
Community (Urbanization) Place Name	A named area, sector, or development that is not an incorporated municipality or other governmental unit, such as a neighborhood or subdivision in a city, or a rural settlement in unincorporated area. Often called "urbanization" or "barrio" in Puerto Rican addressing usage.	**New Hope Community Capitol Hill** neighborhood **Urbanization Los Olmos Jardine Fagota**
Municipality Place Name	The name of the municipality (city, township, or other non-county local government) in which the address is physically located.	**Birmingham**, AL **Castle Rock Township**, MN
USPS Place Name	The name given by the U.S. Postal Service to the post office from which mail is delivered to the address. In many places this will be different from the name of the municipality in which the address is physically located.	**Washington**, DC
County	The primary administrative subdivision of a state in the United States.	**Shelby County**, AL
State	The primary legal subdivision of the United States, represented by its two-letter USPS abbreviation.	San Francisco, **CA** St. Louis, **MO**
ZIP Code	A five-digit code that identifies a specific geographic [postal] delivery area.	Birmingham, AL **35305**
ZIP+4	A four-digit extension of the five-digit ZIP Code that identifies a portion of a carrier route for USPS mail delivery.	Birmingham, AL 35242-**3426**
Nation	The name of the nation in which the address is located.	**United States of America**

ADDRESS ATTRIBUTE ELEMENTS

ELEMENT NAME	DEFINITION	EXAMPLE
Address X Coordinate	The X coordinate of address location.	**80 degrees west longitude**
Address Y Coordinate	The Y coordinate of the address location.	**40 degrees north latitude**

Locational Attributes

Reprinted from the Urban and Regional Information Systems Association (URISA) Draft Street Address Data Standard Executive Summary.

Appendix D - UNIFORMAT II Standard

The following extracted codes from the American Society for Testing and Materials (ASTM) UNIFORMAT II Building and Related Sitework standard shall be used to identify and label selected types of assets on MAA property.

TABLE X1.1 - Example Levels 3 and 4 for the UNIFORMAT II Classification of Building Elements

Level 3 Elements	Level 4 Sub-Elements
B1010 Floor Construction	B101004 Ramps B101005 Exterior Stairs and Fire Escapes B101006 Floor Raceway Systems B101099 Other Floor Construction
B2030 Exterior Doors	B203002 Solid Exterior Doors B203003 Revolving Doors B203004 Overhead Doors B203005 Door Wall Opening Elements B203099 Other Exterior Doors
B3020 Roof Openings	B302001 Glazed Roof Openings B302002 Roof Hatches
C1010 Partitions	C101001 Fixed Partitions C101002 Demountable Partitions C101003 Retractable Partitions C101004 Site Built Toilet Partitions C101005 Site Built Compartments and Cubicles C101006 Interior Balustrades and Screens C101007 Interior Windows & Storefronts
C1020 Interior Doors	C102001 Interior Doors C102002 Interior Door Frames C102003 Interior Door Hardware C102004 Interior Door Wall Opening Elements C102005 Interior Door Sidelights & Transoms C102006 Interior Hatches & Access Doors
C1030 Fittings	C103001 Fabricated Compartments & Cubicles C103003 Storage Specialties C103004 Fabricated Cabinets & Counters C103005 Identifying/Visual Aid Specialties C103006 Internal Traffic Protection/Aids

	C103099 Other Fittings
C2010 Stair Construction	C201001 Regular Stairs C201002 Curved Stairs C201003 Spiral Stairs C201004 Stair Handrails and Balustrades
D1010 Elevators & Lifts	D101001 Passenger Elevators D101002 Freight Elevators D101003 Lifts
D1020 Esc. & Moving Walks	D102001 Escalators D102002 Moving Walks
D1090 Other Conveying Systems	D109001 Dumbwaiters D109002 Pneumatic Tube Systems D109003 Hoists & Cranes D109004 Conveyors D109005 Chutes D109006 Turntables D109007 Baggage Handling & Loading Systems D109008 Transportation Systems
D3050 Terminal & Package Units	D305001 Terminal Self-Contained Units D305002 Package Units
D4030 Fire Protection Specialties	D403001 Fire Extinguishers D403002 Fire Extinguisher Cabinets D403099 Other Fire Protection Specialties
D4090 Other Fire Protection Syst.	D409001 Carbon Dioxide Systems D409002 Foam Generating Equipment D409003 Clean Agent System D409004 Dry Chemical Systems D409005 Hood & Duct Fire Protection D409099 Misc. Other Fire Protection Systems
D5030 Comm. & Security	D503001 Public Address & Music Systems D503002 Intercommunication & Paging Systems D503003 Telephone Systems D503004 Call Systems D503005 Television Systems D503006 Data Networking D503007 Fire Alarm Systems D503008 Security and Detection Systems D503009 Clock and Program Systems

	D503099 Other Communications & Security Systems
E1010 Commercial Equipment	E101001 Security & Vault Equipment E101002 Teller and Service Equipment E101003 Registration Equipment E101004 Checkroom Equipment E101005 Mercantile Equipment E101006 Laundry & Dry Cleaning Equipment E101007 Vending Equipment E101008 Office Equipment E101099 Other Commercial Equipment
E1020 Institutional Equipment	E102005 Auto-visual Equipment E102006 Detention Equipment E102099 Other Institutional Equipment
E1030 Vehicular Equipment	E103001 Vehicular Service Equipment E103002 Parking Control Equipment E103003 Loading Dock Equipment E103009 Other Vehicular Equipment
E2010 Fixed Furnishings	E201001 Fixed Artwork E201002 Fixed Casework E201003 Blinds and Other Window Treatment E201004 Fixed Floor Grilles and Mats E201005 Fixed Multiple Seating E201006 Fixed Interior Landscaping
E2020 Movable Furnishings	E202001 Movable Artwork E202002 Furniture & Accessories E202003 Movable Rugs and Mats E202004 Movable Multiple Seating E202005 Movable Interior Landscaping
F1010 Special Structures	F101001 Air Supported Structures F101002 Pre-engineered Structures F101003 Other Special Structures
F1020 Integrated Construction	F102001 Integrated Assemblies F102002 Special Purpose Rooms F102003 Other Integrated Construction
F1030 Special Construction Syst.	F103003 Special Security Systems F103004 Vaults

	F103099 Other Special Construction Systems
F1040 Special Facilities	F104003 Site Constructed Incinerators F104004 Kennels & Animal Shelters F104005 Liquid & Gas Storage Tanks F104099 Other Special Facilities
F1050 Special Controls & Instru.	F105002 Building Automation Systems F105099 Other Special Controls & Instrumentation
F2020 Hazard. Comp. Abatement	F202001 Removal of Hazardous Components F202002 Encapsulation of Hazardous Components

Reprinted, with permission, from E1557-05 Standard Classification for Building Elements and Related Sitework-UNIFORMAT II

Appendix E – Navigational Aid Equipment Types

ARSR	Air Route Surveillance Radar
ASR	Airport Surveillance Radar
DF	Direction Finder
DME	Distance Measuring Equipment
FAN	FAN Marker Beacon
ILS	Instrument Landing System
LOC	Localizer System
MLS	Microwave Landing System
MSBLS	Microwave Scan Beam Landing System
NDB/C	Nondirectional Radio Beacon -- Compass Locator
NDB/H	Nondirectional Radio Beacon -- High Frequency
NDB/M	Nondirectional Radio Beacons/Medium HF
NDB/U	Nondirectional Radio Beacons/Ultra HF
PAR	Precision Approach Radar
SDF	Simplified Direction Facility
SECRA	Secondary Radar
TACAN	Tactical Air Navigation
TLS	Transponder Landing System
VDME	VHF Omnirange w/Distance Measuring Equipment
VOR	VHF Omnirange
VORTAC	VHF Omnirange w/Tactical Air Navigation
VOT	VOR Test

Appendix F – Event Codes

National Fire Incident Reporting System (NFIRS) Incident Codes
Provided by BWI Fire and Rescue Division

Code	Description
1	**Fire**
10	**Fire, Other**
100	Fire, Other
11	**Structure Fire**
111	Building Fire
112	Fires in structures other than in a building
113	Cooking fire, confined to container
114	Chimney or flue fire, confined to chimney or flue
115	Incinerator overload or malfunction, fire confined
116	Fuel burner/boiler malfunction, fire confined
117	Commercial compactor fire, confined to rubbish
118	Trash or rubbish fire, contained
12	**Fire in mobile property used as a fixed structure**
120	Fire in mobile prop used as a fixed structure, Other
121	Fire in mobile home used as a fixed residence
122	Fire in motor home, camper, recreational vehicle
123	Fire in portable building, fixed location
13	**Mobile property (vehicle) fire**
130	Mobile property (vehicle) fire, Other
131	Passenger vehicle fire
132	Road freight or transport vehicle fire
133	Rail vehicle fire
134	Water vehicle fire
135	Aircraft fire
136	Self-propelled motor home or recreational vehicle
137	Camper or recreational vehicle (RV) fire
138	Off-road vehicle or heavy equipment fire
14	**Natural vegetation fire**
140	Natural vegetation fire, Other
141	Forest, woods, or wildland fire
142	Brush, or brush and grass mixture fire
143	grass fire
15	**Outside rubbish fire**
150	Outside rubbish fire, Other
151	Outside rubbish, trash or waste fire
152	Garbage dump or sanitary landfill fire
153	Construction or demolition landfill fire
154	Dumpster or other outside trash receptacle fire
155	Outside stationary compactor/comoacted trash fire
16	**Special outside fire**
160	Special outside fire, Other
161	Outside storage fire

162	Outside equipment fire
163	Outside gas or vapor combustion explosion
164	Outside mailbox fire
17	**Cultivated vegetation, crop fire**
170	Cultivated vegetation, crop fire, Other
171	Cultivated grain or crop fire
172	Cultivated orchard or vineyard fire
173	Cultivated trees or nursery stock fire
2	**Overpressure Rupture, Explosion, Overheat -no fire**
20	Overpressure rupture, explosion, overheat, Other
200	Overpressure rupture, explosion, overheat, other
21	**Overpressure rupture from steam (no ensuing fire)**
210	Overpressure rupture from steam, Other
211	Overpressure rupture of steam pipe or pipeline
212	Overpressure rupture of steam boiler
213	Steam rupture of pressure or process vessel
22	**Overpressure from air or gas -no fire**
220	Overpressure from air or gas, Other
221	Overpressure rupture of air or gas pipe/pipeline
222	Overpressure rupture of boiler from air or gas
223	Air or gas rupture of pressure or process vessel
23	**Overpressure rupture, chemical reaction - no fire**
231	Chemical reaction rupture of process vessel
24	**Explosion (no fire)**
240	Explosion (no fire), Other
241	Munitions or bomb explosion (no fire)
242	Blasting agent explosion (no fire)
243	Fireworks explosion (no fire)
25	**Excessive heat, scorch burns with no ignition**
251	Excessive heat, scorch burns with no ignition
3	**Rescue & Emergency Medical Service Incidents**
30	**Rescue, emergency medical (EMS) call , Other**
300	Rescue, emergency medical call (EMS), Other
31	**Medical Assist**
311	**Medical assist, assist EMS crew**
32	**Emergency medical service (EMS)**
321	EMS call, excluding vehicle accident with injury
322	Vehicle accident with injuries
323	Motor vehicle/pedestrian accident (MV Ped)
33	**Lock-In**
331	Lock-In (if lock-out, use 511)
34	**Search for lost person**
340	Search, Other
341	Search for person on land
342	Search for person in water
343	Search for person underground
35	**Extrication, rescue**
350	Extrication, rescue, Other
351	Extrication of victim(s) from building/structure
352	Extrication of victim(s) from vehicle

353 Removal of victim(s) from stalled elevator
354 Trench/below grade rescue
355 Confined Space Rescue
356 High Angle Rescue
357 Extrication of victim(s) from machinery

36 Water or ice-related rescue

360 Water & ice related rescue, Other
361 Swimming/recreational water areas rescue
362 Ice Rescue
363 Swift water rescue
364 Surf rescue
365 Watercraft rescue

37 Electrical Rescue

370 Electrical rescue, Other
371 Electrocution or potential electrocution
372 Trapped by power lines

38 Rescue or EMS standby

381 Rescue or EMS standby

4 Hazardous Conditions, (no fire)

40 Hazardous condition, Other

400 Hazardous condition, Other

41 Combustible/flammable spills & leaks

410 Flammable gas or liquid condition, Other
411 Gasoline or other flammable liquid spill
412 Gas leak (natural gas or LPG)
413 Oil or other combustible liquid spill

42 Chemical release, reaction, or toxic condition

420 Toxic condition, Other
421 Chemical hazard (no spill or leak)
422 Chemical spill or leak
423 Refrigeration leak
424 Carbon monoxide incident

43 Radioactive condition

430 Radioactive condition, Other
431 Radiation leak, radioactive material

44 Electrical wiring/equipment problem

440 Electrical wiring/equipment problem, Other
441 Heat from short circuit (wiring), defective/worn
442 Overheated motor
443 Light ballast breakdown
444 Power line down
445 Arcing, shorted electrical equipment

45 Biological hazard

451 Biological hazard, confirmed or suspected

46 Accident, potential accident

460 Accident, potential accident, Other
461 Building or structure weakened or collapsed
462 Aircraft standby
463 Vehicle accident, general cleanup

47 Explosive, bomb removal

471 Explosive, bomb removal (for bomb scare, use 721)

48 Attempted burning, illegal action

480 Attempted burning, illegal action, Other

481 Attempt to burn

482 Threat to burn

5 Service Call

50 Service call, Other

500 Service Call, Other

51 Person in distress

510 Person in distress, Other

511 Lock-Out

512 Ring or jewelry removal

52 Water problem

520 Water problem, Other

521 Water evacuation

522 Water or steam leak

53 Smoke, odor problem

531 Smoke or odor problem, Other

54 Animal problem or rescue

540 Animal problem, Other

541 Animal problem

542 Animal rescue

55 Public service assistance

550 Public service assistance, Other

551 Assist police or other government agency

552 Police matter

553 Public service

554 Assist invalid

555 Defective elevator, no occupants

56 Unauthorized burning

561 Unauthorized burning

57 Cover assignment, standby at fire station, move-up

571 Cover assignment, standby, move-up

6 Good Intent Call

60 Good intent call, Other

600 Good intent call, Other

61 Dispatched and cancelled en route

611 Dispatched and cancelled en route

62 Wrong location

621 Wrong location

63 Controlled burning

631 Authorized controlled burning

632 Prescribed fire

64 Vicinity alarm

641 Vicinity alarm (incident in other location)

65 Steam, Other gas mistaken for smoke

650 Steam, Other gas mistaken for smoke, Other

651 Smoke scare, odor of smoke

652 Steam, vapor, fog or dust thought to be smoke

653 Barbeque, tar kettle

66 EMS call where party has been transported

661 EMS call, party transported by non-fire agency

67 Hazmat release investigation w/no hazmat

671 Hazmat release investigation w/no hazmat

672 Biological hazard investigation

7 False Alarm & False Call

70 False Alarm & False Call, Other

700 False alarm or false call, Other

71 Malicious, mischievous false alarm

710 Malicious, mischievous false alarm, Other

711 Municipal alarm system, malicious false alarm

712 Direct tie to FD, malicious/false alarm

713 Telephone, malicious false alarm

714 Central station, malicious false alarm

715 Local alarm system, malicious false alarm

72 Bomb Scare

721 Bomb scare - no bomb

73 System or detector malfunction

730 System malfunction, Other

731 Sprinkler activation due to malfunction

732 Extinguishing system activation due to malfunction

733 Smoke detector activation due to malfunction

734 Heat detector activation due to malfunction

735 Alarm system sounded due to malfunction

736 CO detector activation due to malfunction

74 Unintentional system/detector operation - no fire

740 Unintentional transmission of alarm, Other

741 Sprinkler activation, no fire - unintentional

742 Extinguishing system activation

743 Smoke detector activation - no fire - unintentional

744 Detector activation - no fire - unintentional

745 Alarm system sounded - no fire - unintentional

746 Carbon monoxide detector activation - no CO

75 Biohazard Scare

751 Biological hazard, malicious false report

8 Severe Weather & National Disaster

800 Severe weather & national disaster, Other

811 Earthquake assessment

812 Flood assessment

813 Wind storm, tornado/hurricane assessment

814 Lightening strike (no fire)

815 Sever weather or natural disaster standby

9 Special type of incident

90 Special type of incident

900 Special type of incident, Other

91 Citizen complaint

911 Citizen complaint

Extract of Associated Public Safety Communications Officers, Inc.
Police 10-CODES
Provided by Maryland Transportation Authority

Code	Description
10-10	Fight In Progress
10-11	Dog Case
10-13	Weather - Road Report
10-14	Prowler Report
10-15	Civil Disturbance
10-16	Domestic Problem
10-26	Detaining Subject, Expedite
10-30	Unnecessary Use of Radio
10-31	Crime In Progress
10-32	Man With A Gun
10-34	Riot
10-35	Major Crime Alert
10-37	(Investigating) Suspicious Vehicle
10-45	Animal carcass At:_____
10-46	Assist Motorist/Disabled Vehicle
10-47	Emergency Road Repair At:_____
10-48	Traffic Standard Repair At:_____
10-49	Traffic Light Out At:_____
10-50	Accident (F, PI, PD)
10-53	Road Blocked At:_____
10-54	Livestock On Highway
10-55	Intoxicated/Drugged Driver
10-56	Intoxicated/Drugged Pedestrian
10-57	Hit And Run (F, PI, PD)
10-70	Fire Alarm
10-73	Smoke Report
10-80	Chase In Progress
10-81	Breathalyzer Report
10-89	**Bomb Threat**
10-90	Bank Alarm At:_____
10-92	Improperly Parked Vehicle
10-93	Blockade
10-94	Drag Racing
10-98	Prison/Jail Break

Agency Codes Utilized

Sig 13	Officer Down Need Back Up **NOW**
10-37P	Hitchhiker
Code 16	Bridge Jumper

Appendix E – Martin State Airport Gate Status

1. Main Entrance – Security Guard – 24 hours
2. Corporate Entrance – Electronic Keypad
3. Emergency use only – Locked W/Jersey Wall
4. Emergency use only – Locked W/Jersey Wall
5. Emergency use only – Locked W/Jersey Wall
6. Emergency use only – Locked W/Jersey Wall
7. Main Entrance – MDANG Base – Security Police
8. Emergency use only – Locked W/Jersey Wall
9. Emergency use only – Locked W/Best Lock
10. Emergency use only – Locked W/Best Lock
11. Emergency use only – Locked W/Best Lock
12. Emergency use only – Locked W/Best Lock
13. Emergency use only – Locked W/Best Lock
14. Emergency use only – Locked W/Best Lock
15. Boat Ramp Gate – Locked W/Best Lock
16. Gate to Sand/UREA Dome, Not perimeter fence Locked/Best Lock
17. Strawberry Point Entrance – Electronic Keypad
18. Emergency use only – Locke W/Best Lock
19. Entrance to Mid-Field Area – Electronic Keypad
20. Vehicle & Pedestrian access point to AOA – Restriction Signs
21. Pedestrian access point to AOA-Restriction Signs

22. Pedestrian access point to AOA-Restriction Signs

23. Pedestrian access point to AOA-Restriction Signs

24. Pedestrian access point to AOA-Restriction Signs

25. Vehicle & Pedestrian access point to AOA – Restriction Sign

26. Vehicle access gate to AOA – Not perimeter fencing – Locked opened/ Closed as required.

27. Vehicle access gate to AOA – Not perimeter fencing – Locked opened/ Closed as required.

28. RS – 1 Lighting vault – Vehicle Gate – Locked W/Best Lock

29. Perimeter Vehicle Gate – Maintenance access to Shoreline – Locked W/Best Lock

30. Perimeter Vehicle Gate – Maintenance access to Shoreline – Locked W/Best Lock

31. Personnel Gate – Maintenance outfall access – Locked W/Best Lock.

32. Vehicle gate access to Emergency Fire Trails – Locked W/Best Lock.

33. Perimeter Vehicle Gate – Maintenance access to Shoreline – Locked W/Best Lock.

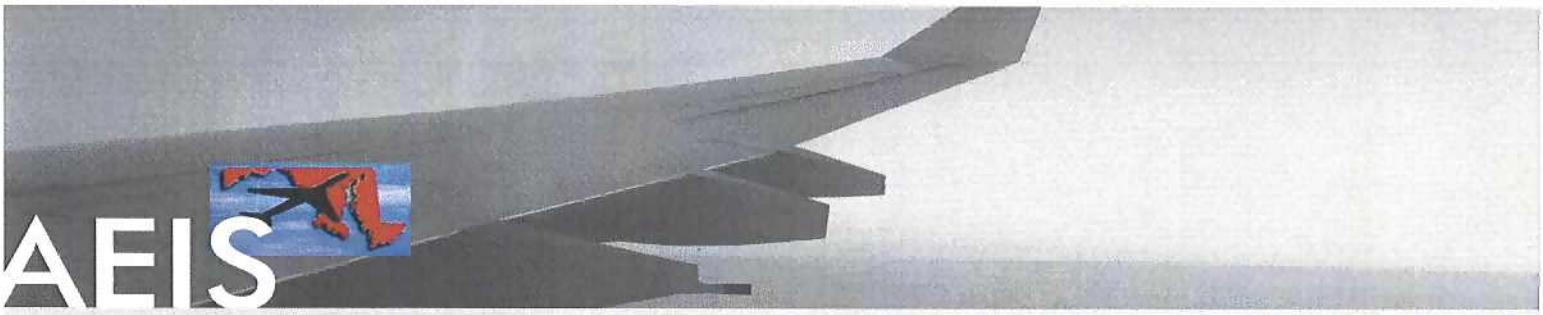
34. Perimeter Vehicle Gate – Maintenance access to Shoreline – Locked W/Best Lock.

35. Personnel Gate access to Military Pavilion – Locked W/Best Lock.

36. Vehicle Gate access to Military Pavilion – Locked W/Best Lock.

37. Vehicle access gate to Boat Ramp – Locked W/Best Lock.

38. Personnel Gate – Maintenance outfall access – Locked W/Best Lock.



Maryland Aviation Administration

Office of Engineering and Construction Management

Airport Engineering Information System

DATA QUALITY STANDARD

Version 1.1
July 2007

Airport Engineering Information System
Data Quality Standard
For the Maryland Aviation Administration
Version 1.1, July 2007

Table of Contents

1. INTRODUCTION

1.1. Purpose

The purpose of this standard is to define the term *data quality* and delineate methods for establishing, measuring and recording the level of quality of Maryland Aviation Administration (MAA) Airport Engineering Information System (AEIS) data sets.

1.2. Scope

This standard applies to all data created for, stored within, or provided by the AEIS. This includes data in a geographic information system (GIS) format (e.g,. ESRI shape files and geodatabases), computer automated design and drafting files (e.g,. Autodesk DWGs), orthophotography (e.g., aerial images of MAA property in a tagged image file format), and survey data (e.g., point coordinates in comma delimited ASCII files).

All data development procedures should reference this document or portions of it, describing how the quality objectives defined herein are satisfied. Furthermore, all data deliverables should come with metadata that describes whether the data being provided adhere to this standard or not.

1.3. Audience

This standard is intended for individuals who create, check, or accept data for the MAA AEIS. It is technical in nature and assumes that readers have a working knowledge of the data types and methods of creating the data contained in the MAA AEIS. These data types are further defined in the MAA GIS and CADD Standards documents.

System developers should also review this document so that any databases, business logic, or user interfaces developed for AEIS are capable of storing, maintaining, and disseminating data of the quality levels defined herein as well as the associated metadata.

1.4. Related Material

The following documents are related to this Data Quality Standard and are referenced herein. These resources are informative (versus normative) in nature: compliance with the requirements of the following documents is not required in order to be in compliance with this standard. Readers of this standard may wish to review the related reading material listed below for further details on a specific topic. The URL for each is provided. In some cases, the document can be downloaded for free from the Web sites. In other cases, as indicated with an asterisk, instructions on how to purchase a copy are provided.

- Quality Systems Terminology (ANSI/ASQ A3-1987), American Society of Quality Control, 1987, http://e-standards.asq.org/perl/catalog.cgi?item=T2110 *

- Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy, FGDC-STD-007.3-1998, Federal Geographic Data Committee, http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/chapter3

- Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management, FGDC-STD-007.4-2002, http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part4/FGDC-endorsed-standard

- Document #405, Standards for Aeronautical Surveys and Related Products, Fourth Editions, September 1996, Federal Aviation Administration, U.S. Department of Transportation, http://www.ngs.noaa.gov/AERO/aerospecs.htm#FAA405

- Sampling Procedures and Tables for Inspection by Attributes (ANSI/ASQ Z1.4-2003), American Society for Quality, http://qualitypress.asq.org/perl/catalog.cgi?item=T004 *

- AEIS GIS Data Standard, Maryland Aviation Administration, Version 1.1, July 2007

- AEIS Data Maintenance and Update Procedures, Maryland Aviation Administration, Version 1.0, June 2006

1.5. Change Control

Following is a chronological list of changes made to this document since it was first released. A version number and the date of release are indicated for each revision.

Version Number	Date of Release	Changes Addressed
1.0	5/1/2006	Original release
1.1	7/9/2007	IndividualName and OrganizationName added to the list of metadata elements that are relevant to data quality in Figure 4 of Section 5.1. Section 1.5 added for change control. Reference to appendix removed and included in references. Hyperlinks in Section 1.4 updated.

Readers are encouraged to suggest additional changes to this document. Comments and suggestions should be recorded using the form on the following page and submitted to the AEIS Program Manager for MAA's consideration. Accepted changes will be reflected in a subsequent version of this document.

AEIS Data Quality Standard
Document Revision Form

Date: _____

To:

Marcus Zadi Rouhani MSc. (Eng.)
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From:

Name: _____
Title: _____
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Address: _____
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Change Tracking # _____

Date Received: _____

Assigned To: _____

Date Addressed: _____

Change in Version: _____

Comments:

#	Reference*	Comment or Suggested Change	MAA Resolution

** Reference must provide a clear indication of where the change is recommended (e.g. section, page, paragraph and sentence or figure number).*

Additional pages can be used if required.

2. DEFINING QUALITY

2.1. What is Quality?

"Quality" as defined by the American Society of Quality Control is "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". "Quality" as applied to the data stored within AEIS is the degree to which a given data element helps the system's users make the types of decisions for which the data are intended. For example, survey data in AEIS is intended to help engineers and other technicians locate or measure features such as runways, water valves or airfield lights with a high degree of precision. Survey data accurate to only +/- 20 feet would not allow them to adequately perform these tasks and would therefore be considered poor quality. Conversely, parcel boundaries or future building locations accurate to +/- 20 feet may adequately help planners make decisions and therefore could be considered quality data.

This example above illustrates the following two important aspects of data quality. First, data quality varies based on the user and the way the data are intended to be used. Second, the level of quality that can be considered acceptable varies among the feature types included in the AEIS database.

2.2. Range of Data Quality

Airports typically possess large amounts of engineering information[1] because of the regulations they operate within and the complexity of their operations. This data can be found in the form of an Federal Aviation Administration (FAA) required Airport Layout Plan (ALP), design and as-built construction drawings, lease exhibits, obstruction charts, runway approach plates, etc. As a result, it is impossible for an airport to possess no data.

On the opposite end of the spectrum, airports are very dynamic places. They are constantly undergoing construction and space allocation changes to meet travel and tenant demand. Furthermore, major airports are typically owned by government agencies and they rely on private sector contractors for much of the information they require. Such outsourcing can cause delays in transmitting data to airport personnel once a physical change has been made. Therefore, an airport cannot have "perfect" data, meaning that all of the information required to make all decisions is current and within the specification required by the users.

For all airports, the range of data quality falls between the impossibilities of no data and perfect data. The objective of this standard is to help MAA assess the quality of its data at any given time and to ensure that all AEIS related data collection, cleaning, and conversion processes improve the quality of data as defined in this standard.

[1] Engineering information is defined herein as spatial data including survey data, vector data stored in GIS and CADD formats, imagery as well as related technical documents and images.

2.3. User Expectations of Data Quality

Given that the goal of achieving data perfection is unrealistic, a system's users must understand the quality of the data with which they are working. Users can then make informed judgments about where, when, and how to use the data they are offered. Information about the quality of data is conveyed in metadata, which is information about the data. Metadata elements describe the time and method of data collection, the data collector, and other factors that convey information about the data quality. Each AEIS data standard features a section that describes specific metadata elements required for the type of data defined in that standard.

2.4. Measures of Data Quality

Often geospatial data, which forms a large part of the engineering information in AEIS, is judged based on its accuracy. Typically, this refers to the position indicated by the data as compared with the feature's true position on the face of the earth. More specifically, this is referred to as horizontal, absolute positional accuracy and is only one measure of the quality of a data set. The measures of data quality that will be considered for AEIS include:

- Horizontal accuracy
- Vertical accuracy
- Temporal accuracy
- Conformity
- Completeness
- Uniqueness
- Consistency
- Intuitiveness
- Presence of Metadata

These measures of data quality are discussed in the following section.

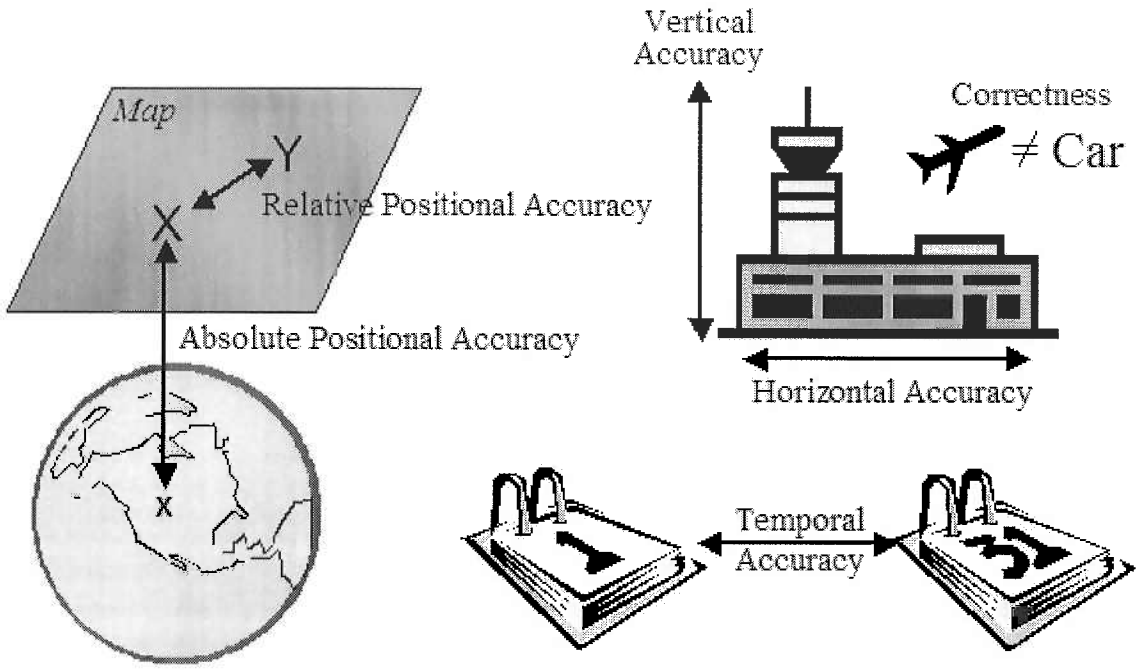
3. HOW TO ASSES DATA QUALITY

This section describes each of the measures of data quality that are relevant to AEIS. Each term is defined, along with the methods that should be used to assess its contribution to a data set's overall quality. Steps taken to enhance this element of quality are also described in general and references are provided to other AEIS documents that define these steps in detail.

3.1. Accuracy

Accuracy refers to a data element's likeness to the real world feature it is intended to represent. This definition is vague, so the specific aspects of accuracy that are relevant to data within AEIS must be more succinctly defined. These include positional accuracy, correctness, and temporal accuracy as depicted in Figure 1 below and described in the following sections.

Figure 1
Diagram Showing the Different Types of Accuracies



Positional Accuracy

Positional accuracy refers to how closely the data depict a feature's indicated position in relation to its true position. This applies to any form of spatial data, including coordinates expressed in plain text, vector data, and raster data. Positional accuracy also applies to both horizontal and vertical data. A further distinction is made between absolute accuracy, which compares the indicated position with the feature's actual location on the face of the Earth, and relative accuracy, which compares the indicated position of a feature in relation to the location of other features. In AEIS, accuracy with regard to spatial data refers to absolute horizontal and vertical positional accuracy unless otherwise stated.

The positional accuracy of AEIS data should be accessed based on procedures outlined in the Federal Geographic Data Committee (FGDC's) Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy (NSSDA). In short, this procedure requires that the location of a minimum of 20 points be tested. These points should be dispersed throughout the area covered by the data set being tested. Horizontal accuracy is assessed by comparing the coordinates of each point tested with those of the same point as indicated by an independent source of higher accuracy. Similarly, vertical accuracy is assessed by measuring the elevation of the point being tested with the elevation of the same point as indicated by an independent source of higher accuracy. If 20 points are tested, only one is allowed to fall outside the required accuracy tolerance to achieve the 95% confidence level[2] required of all AEIS data.

The level of absolute horizontal positional accuracy required of AEIS features at the 95% confidence level is listed in Figure 2 on the following page. The accuracies listed have been derived in part from the FGDC's Geospatial Positioning Accuracy Standards, Part 4: Standards for Architecture, Engineering, Construction (A/E/C) and Facility Management and FAA Document #405, Standards for Aeronautical Surveys and Related Products. The feature classes correspond to those in the AEIS GIS Data Standard. The units expressed are U.S. Survey Foot.

[2] The 95% confidence level is a statistical indication that 95% or more of the features in a given data set fall within the required specifications. The 95% confidence level was selected for AEIS as this is the most widely accepted level of confidence accepted for data within the aviation industry. It is also the level required by the International Civil Aviation Organization (ICAO) for most aviation related spatial data.

Figure 2
List of Horizontal Accuracies Required of AEIS GIS Feature Types
(expressed as number of U.S. Survey Feet +/- of actual location at 95% confidence level)

Airfield	
AircraftDeicingArea	5
AircraftGateStand	5
AircraftNonMovementArea	5
AirfieldLight	5
AirfieldLinearFeatureSafetyLine	5
AirOperationsArea	5
AirportBoundary	1
AirportSign	10
Apron	5
Clearway	5
DisplacedThreshold	5
FrequencyArea	20
Helipad	5
HelipadFATO	5
HelipadThreshold	5
HelipadTLOF	5
MarkingArea	2
MarkingLine	2
PassengerLoadingBridge	10
PavementSection	5
RestrictedAccessBoundary	5
Runway	5
RunwayArrestingArea	5
RunwayBlastPad	5
RunwayCenterline	2
RunwayEnd	1
RunwayHelipadDesignSurface	5
RunwayIntersection	2
RunwayLabel	1
RunwayLAHSO	5
RunwaySafetyAreaBoundary	5
RunwaySegment	5
Shoulder	5
Stopway	5
TaxiwayHoldingPosition	2
TaxiwayIntersection	5
TaxiwaySegment	5

Airspace	
LandmarkSegment	10
Obstacle	
ObstructionArea	20
ObstructionIdentificationSurface	20
AirwayLine	100
FlightTrackLine	20
FlightTrackPoint	20
RegulatedAirspaceArea	40

Cadastral	
AirportParcel	1
ArcheologicalSite	5
County	50
EasementsAndRightofWays	0.5
FAARegionArea	40
LandUse	50
LeaseZone	0.5
Municipality	50
Parcel	1
State	50
Zoning	50

Environmental	
EnvironmentalContaminationArea	10
FaunaHazardArea	10
FloodZone	10
FloraSpeciesSite	20
ForestStandArea	10
HazMatStorageSite	10
NoiseContour	1
NoiseIncident	10
NoiseMonitoringPoint	10
SampleCollectionPoint	10
Shoreline	10
ShorelineBufferCriticalArea	40
SoilArea	40
WatershedArea	40
Wetland	10

Geotechnical	
AirportControlPoint	0.07
CoordinateGridArea	1
ElevationContour	1
ImageArea	20
Interior	
Door	0.5
Elevator	0.5
Floor	0.5
Room	0.5
Space	0.5
Stairs	0.5
Walls	0.5
Windows	0.5
Manmade Structures	
Building	5
ConstructionArea	10
Fence	10
Gate	10
Tower	5
Navigational Aids	
NAVAIDCriticalArea	5
NAVAIDEquipment	5
NAVAIDSite	20
NAVAIDSystem	5
Seaplane	
FloatingDockSite	10
NavigationBuoy	5
SeaplaneLandingArea	5
SeaplaneRampCenterline	5
SeaplaneRampSite	5

Security	
SecurityArea	5
SecurityIdentificationDisplayArea	5
SecurityPerimeterLine	10
SterileArea	5
Surface Transportation	
Bridge	5
DrivewayArea	10
DrivewayCenterline	10
ParkingLot	5
RailroadCenterline	5
RailroadYard	5
RoadCenterline	5
RoadPoint	10
RoadSegment	5
Sidewalk	10
Tunnel	5
TankSite	3
Utilities	5
Other	
OtherLine	10
OtherPoint	10
OtherPolygon	10

Correctness

With regard to attribute data and metadata, accuracy refers to how closely the data match the true value. For most types of attribute data, this is simply a matter of whether the data value is correct or not. In these cases, accuracy is also referred to as correctness. For numeric attributes that fall within a range (e.g., outside air temperature or wind speed) values can have varying degrees of accuracy; however, since AEIS will not be measuring the numeric values directly, the values will still be assessed based on whether or not they match the original source for the data and correctness can be used as the measure of accuracy.

The correctness of attribute data and metadata within AEIS will be assessed by comparing the data value against the original source for the data. The correctness of a data set will be assessed by comparing values of a statistically valid number of randomly sampled values (a method similar to the one used for positional accuracy). The American Society for Quality Sampling Procedures and Tables for Inspection by Attributes (ANSI/ASQ Z1.4-2003) defines the procedure by which AEIS attribute data and metadata will be assessed. In short, this procedure requires that a statistically valid number of randomly sampled values be taken from the data set being tested (referred to as the *lot*) and compared with the corresponding value indicated in the original source for that data. As with spatial data, attribute data and metadata will be tested at a 95% confidence level.

Figure 3
Lot and Sample Sizes and # of Allowable Errors at 95% Confidence Level
(Derived from ANSI/ASQC Z1.4-2003)

Lot Size			# Allowable Errors	
Minimum	Maximum	Sample Size	Normal	Tightened
2	15	2	1	0
16	25	7	1	0
26	90	7	1	0
91	150	7	1	0
151	280	7	1	0
281	500	17	2	1
501	1200	28	3	2
1201	3200	53	5	3
3201	10000	81	7	5
10001	35000	125	10	8
35001	150000	187	14	12
150001	500000	300	21	18
500001	999999999	300	21	18

During data production, logical groups of data should be tested as they are completed and not at the end when all data in a given set have been completed. This method identifies any problems in the data development process in an early stage. If any interim lot being tested fails (meaning that the number of allowable errors is surpassed), then subsequent lots of the same data must be tested with a tightened number of allowable errors. After five consecutive lots tested under the

tightened criteria pass (an indicator that any systematic problems in the data production process have been resolved) then the normal number of allowable errors can be re-instigated.

Temporal Accuracy

The final type of accuracy to be considered for AEIS data is temporal accuracy. Temporal accuracy refers to how closely the data describe a feature's current state. For example, if a building has been digitized using aerial photography taken in 2002 but is subsequently demolished, then any data sets that show that building would be temporally inaccurate, or simply put, out of date.

Temporal accuracy is most often assessed by merely reviewing the metadata to determine how old a data set is. This method is only useful when comparing the quality of two data sets that depict the same features, such as two maps showing water utility infrastructure in the vicinity of Terminal A. Using such a comparison to evaluate two *different* data sets can be misleading. For example, a 10-year-old drawing that shows water utilities in an area around Terminal C that has not been altered for over 20 years is more temporally accurate than a 2-year old drawing showing water utilities in an area of Terminal A where construction occurred within the past year.

Temporal accuracy can also be assessed by comparing the number of outdated features as a percentage of the total features in a data set with the number of outdated features in other data sets. The problem with assessing temporal accuracy in this manner is that it assumes all features in a data set are equally relevant to end users. This assumption is clearly not valid. Consider, for example, two data sets that depict buildings. The first data set contains an outdated version of BWI's main terminal. The other data set features the updated main terminal but contains an outdated version of an off-airfield maintenance shed. The first data set is still less useful (and therefore of poorer quality) than the second because the main terminal is more important to more AEIS users than the maintenance shed.

Because of the difficulties described above in measuring temporal accuracy, efforts will be made to update data rather than to measure temporal accuracy. Requirements for updating data will be established based on the relative benefit of each data set, the costs of obtaining new data, and the budgets available for data maintenance. Some of the measures that will be taken to improve the temporal accuracy of AEIS data include the following, which are described in more detail in the AEIS Data Maintenance and Update Procedures:

- Exterior basemaps will be updated annually from aerial or satellite imagery (alternating between the two each year).
- Interior floor plans will be updated on an on-going basis through a change notification process prompted by the approval of construction permits.
- The allocation of space to airport tenants will be updated based on prompts from new lease agreements made with tenants.
- Utilities data will be updated when construction projects or other activities make measuring the location of existing utility assets more convenient.

3.2. Conformity

Conformity refers to how well a data set conforms to the specifications established for that data set. For example, the MAA GIS standard requires that runways be depicted as polygons on a layer called 'Runway'. A runway depicted as a line on a GIS layer called 'RWY' would have a low degree of conformity. The specifications for AEIS data can be found in AEIS data standards and in project scope documents that may define more specific requirements.

Conformity with AEIS data standards should be monitored by the individuals who are working on the data while the data are being developed, and as documented in quality control procedures. Contractors should also check for conformity with standards as a part of their quality auditing process. This audit should be carried out immediately before the data is delivered to MAA. Once data are delivered, MAA may use discretion to perform acceptance testing as a check for conformity. Quality control, quality auditing, and acceptance testing procedures are described in more detail in Section 4 of this document.

3.3. Completeness

Completeness refers to how many of the total number of existing features a data set represents. For example, a GIS data layer for runways at BWI that contains two of the four existing runways would be considered incomplete. Sometimes, completeness is limited by a project's scope or the intent of the data being submitted. For instance, a construction project intended to extend the 15L end of Runway 15L/33R would only be expected to provide as-built drawings of that runway. In such cases, the extent of the data should be described in the metadata so that the level of completeness can be assessed.

Perhaps the simplest way to check for completeness is to count all features provided and compare the total with the total number of features known to exist. If there are less features in the data set than are known to exist, then the data are incomplete. In cases where the total number of features is not as obvious as in the runway example given above, other data sources such as aerial imagery or equipments lists will be used. For example, features that are visible in up-to-date imagery but not in the submitted data set indicate a lack of completeness. If it is impossible or not cost-justified to determine the number of total features in a given area, steps should be taken so that a comprehensive data discovery process is performed so that all possible source documents related to the area of interest are uncovered.

With regard to required attributes and metadata elements, completeness can be checked by the AEIS system by making sure that required fields have been populated with valid values All AEIS modules should perform such validation steps before the data are saved in the AEIS database.

3.4. Uniqueness

Uniqueness refers to the degree to which a data element is not redundant with another data element. For example, if a GIS data layer for runways at BWI contains two Runways 15L-33R, then the data set has a low degree of uniqueness. In some cases is it acceptable to have two instances of a given feature. For example, one might be the current depiction of a runway and a second might be a depiction of the same runway after a proposed lengthening. This is

acceptable, since the two instances of the runway are intended to convey different information. In such cases, it is critical to have metadata that sufficiently describes the status of the information and any other unique differences.

Data developers should assess the uniqueness of a feature by comparing it with other features in the same data set. For example, if the feature being entered adds quality by enhancing another aspect of quality such as temporal accuracy, then it should be entered and the existing feature should be flagged for removal. If the feature being worked on provides no additional value, it should be skipped. Data developers should also ascertain that graphic components of a given feature are not repeated. To depict a runway for instance, a CADD technician may create the polygon using multiple line segments. The technician should avoid duplicating any of those line segments in the drawing provided to MAA.

Data can be checked for uniqueness in a variety of ways. Perhaps the simplest method is to count all features provided and compare the total with the total number of features known to exist. If there are more features in the data set than are known to exist, then there may be a lack of uniqueness in the data. When checking for uniqueness, it is important to compare all aspects of a feature, including geometry, attributes, and metadata.

3.5. Consistency

Consistency refers to the degree to which all instances of features in a data set are depicted (spatially, as well as with attributes and metadata) in a similar manner. For example, if three of four runways at BWI are populated with attributes describing their width and length, but one is not, then there is a low degree of consistency within the data set.

In some cases, consistency may be limited by the scope of a project. For example, a project may require that all runways at BWI be depicted graphically, but that attributes only be provided for the runway that will be affected by proposed modifications. In these cases, metadata must be provided to describe why only some attributes are submitted.

Spatial data can be checked for consistency by visual examination. Attribute and metadata can also be checked by visual examination, although queries and sorting can be applied to allow patterns and inconsistencies to become more apparent. For example, if the road_name attribute of a layer containing road segments is consistently populated with the value Main Street, but one segment is populated with the value Main St. or Main Blvd., than this inconsistency will be apparent when sorting the data by this attribute.

3.6. Intuitiveness

Intuitiveness refers to the ease with which a user can interpret the data provided. For example, data about a runway provided in an XML format intended for a system is less intuitive than data provided in a tabular format intended for a human to read.

Intuitiveness is difficult to assess because it is subjective. The best way to evaluate the intuitiveness of a given display of data is to ask the individuals who use the data. Generally, users will be able to compare the relative intuitiveness of several representations of similar data. Wherever possible, AEIS text entries that are not bound by AEIS data standards (e.g., comment

fields) should use standard industry terms (e.g., "marking" versus "paint stripe") and, if necessary, acronyms (e.g., VOR for Very High Frequency Omni-Directional Range). In addition, the AEIS Committee has recommended the use of a Usability Consultant to assess the intuitiveness of and recommend changes to the AEIS graphical user interface. Following their recommendations, measures to enhance the intuitiveness of all AEIS data displays will include frequent interaction with users, the development of screen and report mock-ups, and the use of AEIS design guides.

3.7. Presence of Metadata

The final measure of data quality considered for AEIS is the presence of metadata. As described in Section 2, metadata is essential for conveying information to users regarding the adequacy if a data set for decision-making purposes. Without metadata, users have no information to base decisions on relative to using the data provided. Therefore, data that are provided with appropriate metadata are of higher quality than data provided without metadata. The presence of metadata should be checked by manually inspecting data files submitted or by performing queries if the data have been entered into a database.

4. WHEN TO ASSESS DATA QUALITY

The quality of AEIS data should be assessed during development, prior to submission to MAA, prior to acceptance by MAA, prior to storage within the AEIS database, and as periodically as warranted to keep it up-to-date. The following sections describe the steps that should be taken during each of these phases of the data set lifecycle.

4.1. Quality Control During AEIS Data Development

Quality control (QC) is defined by the American Society of Quality Control as the "operational techniques and the activities used to fulfill the requirements of quality". Relative to AEIS data, QC includes the steps that are taken during the data development process to ensure that each of the elements of data quality defined in Section 3 are satisfied per the specifications for the data as defined by the appropriate AEIS data standard, or further specified by individual project requirements.

QC of spatial data is performed by GIS and CADD technicians while digitizing, converting, and cleaning the graphic entities used to depict features on a map or drawing. QC should be built into the data development processes from the beginning and should be performed throughout the data development process. QC processes might include using object snapping to determine that there are no overshoots, undershoots, or gaps, etc. in vector data. Periodically, data developers may also wish to check their own work. Such QC checks might include adding the area of individual rooms or leased area to determine that they add up to the total area on that floor of a building. The specific QC measures that are applied will vary by data set, project, and contractor. *All* QC processes should be documented so that they are performed consistently.

4.2. Quality Audit Prior to Submittal of AEIS Data Sets

A Quality Audit (QA^3) is defined by the American Society of Quality Control as "a systematic and independent examination and evaluation to determine whether quality activities and results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives." A QA should be performed on all data before the data are submitted to MAA. The assessments performed as a part of a QA should follow the guidelines recommended in Section 3 for each aspect of data quality described. The accuracy and correctness tests required to ensure that data meet specifications at a 95% confidence level are the most stringent.

A QA should be performed by individuals who are familiar with the requirements of the data but who were not directly involved in the data development process. This independence minimizes any biases that may exist because of misunderstood requirements, time pressures, inadequate training, or any other circumstances that may prevent a data technician from recognizing mistakes.

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[3] Note QA is often used to refer to the term Quality Assurance. Quality assurance is defined by the American Society for Quality Control as "all those planned or systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality". Based on this definition, quality assurance refers to all the actions described in this document. The acronym QA will therefore be used to refer more specifically to the quality audit.

Far large data sets or production processes that span several months, it is highly recommended that QAs be performed at periodic intervals once a subset of the data has been completed. This helps to identify systematic problems in the data development process before they become costly to resolve.

4.3. MAA Acceptance of Data Delivered by Contractors

MAA (either MAA staff or a designated contractor that did not submit the data being tested) will perform acceptance tests on all AEIS data. The extent and timing of these tests may vary based on the relative importance of the data being submitted, availability of staff, and other factors. It is recommended that acceptance testing be carried out on *all* data delivered to MAA before final payment is made to the submitter.

Acceptance testing will follow the assessment methods described in Section 3, although specifics will vary between data sets and projects. If any data set fails an acceptance test, it will be returned to the contractor with a description of the reasons for failure. When correcting data, data providers should not just correct the specific errors found but should review the entire data set for similar errors that may be present but not individually caught, given the random sampling procedures used. Corrected data sets should be re-examined (i.e., QA) and resubmitted to MAA for a second round of acceptance testing. After three rounds of failed acceptance tests, MAA may decide to engage a third party to correct the situation. Extreme cases may warrant re-creating the data set. In these circumstances, the cost of correcting the data may be subtracted from the original submitter's payment.

4.4. Automated Checking Before Loading into Production Database

A data set that has passed acceptance testing will be provided to AEIS database administrators for loading into the production (i.e., accessible to end users) instance of the database. Before or as data are loaded, the data will undergo a series of automated tests to ensure conformity with certain specifications. Spatial data will be checked for proper geometry (e.g,. closed polygons) and in some cases proper location. Attribute and metadata values bound by domains will be checked for valid values. The specific details of these tests and how they are carried out are defined in the AEIS Database Administrator Procedures.

4.5. Ongoing Checking and Updates of AEIS Data

After a data set is loaded into the AEIS database, it will be subject to constant scrutiny by end users and periodic evaluations performed as part of the AEIS Data Quality Program. As data errors are identified or periodic updates are performed, data in the AEIS database will be replaced as appropriate. The specific details of these actions are described in the AEIS Data Maintenance and Update Procedures.

5. RECORDING QUALITY

Since data quality (as explained in Section 2) is a relative term, it is important for data providers to convey information about data quality to MAA. Likewise, it is important for the AEIS system to convey information about the quality of the data delivered to end users. Information about data quality is part of metadata (information about the data). The following sections provide additional detail on the types of information that is to be conveyed in metadata.

5.1. Data Quality Metadata Elements

In general, the quality of data submitted to the AEIS program and provided by the AEIS database can be assumed to be compliant with AEIS data standards. Statements to this effect, as well as statements explaining any areas where data fail to meet or where data exceed AEIS specifications, should be included in the metadata that accompanies the data. AEIS metadata can be applied to an entire collection of data (e.g., an updated Airport Layout Plan) to individual feature types submitted (e.g,. the Runways layer of a CADD drawing) or to a specific feature instance (e.g., Runway 15L/33R). Following are the AEIS metadata elements that can be used to convey quality.

Figure 4
Metadata Elements Related to Data Quality
(excerpt from AEIS GIS Data Standard)

Metadata Elements Used to Convey Positional Accuracy
- horizontalAccuracy
- verticalAcuracy
- evaluationMethodName
- evalutionMethodDescription
- pass
- groundSampleDistance

Metadata Elements Used to Convey Temporal Accuracy
- BegusageDateTime
- EndUsageDateTime

Metadata Elements Used to Convey Completeness
- status
- geometricObjectCount

Metadata Elements Used to Identify the Source
- individualName
- organizationName

Metadata Elements to Convey Other Statements Concerning Data Quality
- abstract
- statement

5.2. Statements of Positional Accuracy

The Federal Geographic Data Committee (FGDC's) Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy (NSSDA), requires that statements about horizontal and vertical positional accuracy be made as shown in Figure 5.

Figure 5
Statements of Positional Accuracy

For data that has been tested in order to determine its accuracy:
Tested X feet horizontal accuracy at 95% confidence level

For data that has bee compiled to obtain a certain level of accuracy:
Compiled to meet X feet vertical accuracy at 95% confidence level

5.3. Quality of Data Collected in the Field

When data are collected in the field (either on the ground, in the air, or by satellite) relevant information often exists about the way the data were collected that directly relates to quality. For example, dilution of precision statistics contain information about the relative absolute positional accuracy of the coordinates provided by Global Positioning System (GPS) receivers. The location, accuracy, and class of photo control points used to orthorectify images contain information about the quality of orthophotos. The degrees off-nadir and sun-angle can convey information about the quality of data derived from satellite imagery.

This type of information is typically provided and should be required as a part of all data deliverables of this type. While much of this information will not be included in the metadata fields in the AEIS database, it should be retained and offered to anyone using the raw data.

5.4. Quality Audit and Acceptance Testing Results

The output of all quality audits (QA) performed on AEIS data (as described in Section 4.2) should be recorded and provided to MAA. This information should describe the type of test performed and the data tested, provide an indication of lot and sample size if random sampling is used, and include a count of all failed data items and specific details that will allow data developers to identify and correct failed items. Typically, a spreadsheet is the best way to convey such information, as it is numeric and list-oriented. As circumstances warrant, Microsoft Word documents can also be submitted. Adobe Portable Document Format (PDF) versions of the files can be submitted as a substitute.