

MEMORANDUM

TO: Distribution

FROM: Ali Logmanni, Manager
Division of Engineering
Office of Design and Construction 

DATE: November 14, 2014

SUBJECT: Design Standard DST 2014-05: Maintenance, Repair and Operating Items
(MROI) Standards & Specifications

Effective immediately, the following modifications shall be made to the MAA Design Standards Manual, dated January 2014:

1. DST Section 4.17: Maintenance, Repair, and Operating Items (MROI)
Remove in its entirety and replace with the attached.
2. Appendix B, MROI Approval Form
Remove and replace with the attached.
3. Appendix D, Specification X-3, Maintenance, Repair, and Operating Items
Remove in its entirety and replace with the attached.

Consultants listed herein are required to distribute this design standard to their respective staff and subconsultants.

If you believe the above specifications conflict with any other codes or regulations, or if you should have any questions regarding this matter, please contact the Manager, Division of Engineering at 410-859-7768.

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**MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND AVIATION ADMINISTRATION**

Supplement to the MAA Design Standards Manual 2014

Design Standard #DST 2014-05

DST Section 4.17, MAINTENANCE, REPAIR AND OPERATING ITEMS (MROI)

4.17 MAINTENANCE, REPAIR AND OPERATING ITEMS (MROI)

Maintenance, Repair and Operating Items (MROI) were formerly known as “attic supplies” or “attic stock.” During the design phase of a project, Designers shall coordinate with MAA to determine if MROI is required, and if so, the type and quantity items needed. Designers shall not specify MROI unless requested in writing by the MAA. MROI shall be included as an agenda item for discussion in the project’s design review meetings. All projects requiring MROI shall include in the construction documents standard specification Item X-3, Maintenance Repair and Operating Items. Item X-3 is included in Appendix D.

4.17.1 MROI Approval Form

Designers are required to fill out the “MROI Approval” form in Appendix B if the project includes MROI to be turned over to MAA. Items that are anticipated to be salvaged must be listed on the form and noted that it is a salvaged item. This list shall include:

- Applicable specification section of the item – this is not the Section X-3 that specifies MROI.
- Material/Product description – similar materials shall be listed together, e.g., carpet, ceiling tiles, ceramic tiles.
- Quantity – a specific quantity and measurable unit is required. A percentage of materials is not acceptable.
- Unit – SY, CY, Each, etc.
- Person Requesting – MAA employee or representative who requested the item.

All equipment turned over to MAA shall be accompanied by any and all operating/service/maintenance manuals, equipment specifications, and vendor information such as where obtained, spare part sources, etc.

The designer shall obtain necessary signatures on the “MROI Approval” form prior to advertisement. This form shall be included in the project’s final design report. If no Design Report is prepared for the project, a scanned copy of the signed “MROI Approval” form shall be emailed to the MAA Task Manager for inclusion in the task file.

4.17.2 Signature Requirements for MROI

A signature from the following MAA Offices shall be obtained for all “MROI Approval” forms:

- Office of Design and Construction – signed by MAA Task Manager
- Office of Capital Programs – signed by Director
- Office of Procurement – signed by Procurement Officer

If the MROI specified includes items requested by the Office of Maintenance & Utilities (OMU), then a signature from the Director/Deputy Director of OMU is required. If there are no items requested by OMU, then the Designer shall write “N/A” and initial the signature line for OMU confirming that the MROI listed on the form are not applicable to OMU.

If the MROI specified includes items requested by the Office of Airport Technology (OAT), then a signature from a Director of OAT is required. If there are no items requested by OAT, then the Designer shall write “N/A” and initial the signature line for OAT confirming that the MROI listed on the form are not applicable to OAT.

4.17.2 MROI List Form

After all parties have agreed to the type and quantity of MROI required for the project and signatures on the “MROI Approval” form are obtained, the Designer shall fill out the “MROI List” form in Appendix B to include in the contract specifications. The items included in the “MROI List” form shall be identical to the items listed in the “MROI Approval” Form. If during the approval process, items were not approved, the Designer shall not include those items on the “MROI List” form for bid.

The purpose of the “MROI List” is to clearly identify in one place items to be turned over to MAA as required throughout the contract specifications. The completed “MROI List” form shall be placed in the contract specifications directly behind specification X-3. Blank lines shall be provided to allow for any MROI generated during construction. A blank “MROI Record of Delivery” form shall be placed behind the “MROI List” in the specifications. The “MROI Record of Delivery” is to be filled out by the contractor for each item delivered to the MAA as MROI, and includes information such as product description, contract requirement, quantity, price, and date delivered. The completed “MROI Record of Delivery” forms will be submitted to the MAA Division of Construction Manager on the date of MROI delivery. See specification X-3 for additional details.

**MARYLAND DEPARTMENT OF TRANSPORTATION
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Maintenance, Repair and Operating Items Approval					
Construction Contract Number					
Construction Task Number (If Applicable)					
Construction Contract Title					
Design Task Number					
Design Task/Subtask Title					
Airport					
MROI LIST	Specification Section	Material/Product and Description	Quantity	Units	MAA Person Requesting Item
MAA REPRESENTATIVES	OFFICE		SIGNATURE		DATE
	Design and Construction				
	Capital Programs				
	Procurement				
	Maintenance & Utilities (If applicable)				
	Information Technology (If applicable)				

Notes:

1. This form shall be completed by the consultant and included in the Final Design Report. If no design report is prepared, a scanned copy of this form shall be emailed to the MAA Task Manager for inclusion in the task file.
2. Once MAA signatures have been obtained for the approved MROI, designer shall transfer this list to the "MROI List" form, which is to be included in the Technical Specifications behind Item X-3.

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Supplement to the MAA Design Standards Manual 2014

Design Standard #DST 2014-05

Specifications Item X-3, MAINTENANCE, REPAIR AND OPERATING ITEMS (MROI)

ITEM X-3 –MAINTENANCE, REPAIR AND OPERATING ITEMS (MROI)

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General Provisions, Special Provisions of the Contract, including Interim Standard Provisions Addendum and Technical Specification sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing Maintenance, Repair and Operating Items (MROI).

1.3 DEFINITIONS

- A. MROI is an amount, incorporated in the Contract as excess construction materials or equipment, held to allow for future maintenance, repairs and operations. MROI may also be referred to as “attic supplies” or “attic stock.”

1.4 PROCEDURES

- A. List of MROI: A schedule of the required MROI for this contract, entitled “MROI List,” is included at end of this Section. Specification sections or plan notes referenced in the schedule contain requirements for materials described that must be purchased or salvaged for MROI. If during construction the Contractor generates additional surplus materials to be turned over to the MAA, the Contractor shall add those materials to the “MROI List.”

The designer is required to fill out the Table entitled “MROI List” and include it at the end of this Section. The designer shall include blank lines at the bottom of the list for additional MROI generated during construction. The designer shall complete the columns for the specification section, material/product/description, quantity and units. A specific quantity and measurable unit is required which corresponds to the justification provided in the Design Report. A percentage of materials is not acceptable.

- B. MROI Record of Delivery: The Contractor shall complete one "MROI Record of Delivery" form for each MROI to be delivered to MAA. A blank "MROI Record of Delivery" form can be found at the end of this Section. Completed "MROI Record of Delivery" forms shall be submitted to the Resident Engineer. The Contractor may attach internal delivery tickets, transmittals, etc. to the forms.
- C. The Resident Engineer shall contact the MAA staff member who will be responsible for installing the MROI to its final location, and obtain their signature in the "MAA Location Contact for Installation" section of the "MROI Record of Delivery" form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DELIVERY

- A. The Resident Engineer shall fax or email the completed "MROI Record of Delivery" forms to the MAA Office of Procurement, Purchasing and Materials Management (PMM) Chief. The Resident Engineer shall request a delivery date from the PMM Chief at the time of "MROI Record of Delivery" form submittal. If a portion of the form is incomplete or unclear, PMM may decline to set a delivery date until additional information is provided.
- B. When a delivery date is set, the Resident Engineer will direct the Contractor to deliver the materials. All materials shall be delivered to the MAA Warehouse in the MAC Building, located at 7005 Aviation Blvd., Glen Burnie, MD 21061, unless specified otherwise.
- C. The Resident Engineer must be present when the materials are delivered. If everything is found to be in order, the Resident Engineer and PMM Chief or designated representative will sign and date each "MROI Record of Delivery" form. If anything is found to not be in order, the Resident Engineer will not sign the form for that material. The Resident Engineer will make a copy of each signed and dated form, place a copy in the contract files, and email a copy to the MAA Division of Construction, Manager.

3.2 EXAMINATION

- A. The Contractor shall examine products purchased under an MROI promptly on delivery for damage or defects. Replace damaged or defective products.

PART 4 –MEASUREMENT

4.1 METHOD OF MEASUREMENT

- A. No separate measurement will be made for work under this Section.

PART 5 –PAYMENT

5.1 BASIS OF PAYMENT

- A. No separate payment will be made for work under this Section. The cost of the work described in this section shall be included in the individual referenced Specification sections.

5.2 RELEASE OF FINAL PAYMENT

- A. Release of Final Payment and Contract Close-Out will not occur until Contractor completes administrative and procedural requirements outlined in this Section.

END OF ITEM X-3

**MARYLAND DEPARTMENT OF TRANSPORTATION
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Maintenance, Repair and Operating Items List					
Construction Contract Number					
Construction Task Number (If Applicable)					
Construction Contract Title					
Design Task Number					
Design Task/Subtask Title					
Airport					
Date					
MROI LIST	Serial Number	Specification Section	Material/Product and Description	Quantity	Units

Notes:

1. This form is to be completed by the consultant as an identical list to the items approved on the "MROI Approval" form. The completed form is to be inserted in the contract Technical Specifications, Item X-3.

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MARYLAND AVIATION ADMINISTRATION**

Maintenance, Repair and Operating Items Record of Delivery			
Construction Contract Number			
Construction Contract Title			
Contractor Name			
Airport			
Date			
MROI Information	Description of material (if known, include the name of product, manufacturer, product line, part number, model, color or other detailed description)		
	Type of material (for example: spare part, surplus material, salvaged material, supply, or other)		
	Required by (for example: specification section, note on plans, DCL, RFI, AWO, or other contract reference)		
	Quantity Delivered (for example: number of items, number of boxes and number of items per box, linear feet, square feet, gallons)	Delivered: Specified: Explanation of difference:	
	Price (for example: invoice, vendor's quote, manufacturer's suggested retail, or other price)	Unit price: Total Value:	
	Location where materials would be installed (for example: airfield, passenger boarding bridge, restroom, Daily Garage, etc.)		
MAA Representatives (For MAA use only)	OFFICE	SIGNATURE	DATE
	MAA Contact for Installation	Signature:	
		Printed Name:	
	Received by the Resident Engineer	Signature:	
		Printed Name:	
	Received by MAA	Signature:	
Printed Name:			

Notes:

- One form to be completed by the Contractor for each material to be delivered to the MAA. Completed forms will be submitted to the Resident Engineer.