

WAREHOUSING STUDY FOR RTD

METRO RAIL PROJECT

This warehousing study follows by two years an earlier approach on the same subject. The first effort was a document entitled "Systemwide Equipment Storage Space Requirements" dated November, 1985. The aforementioned document stressed a policy of scheduling equipment deliveries such that storage of material was minimized. That policy is the main thought of the current study which is made at a time when several facilities contracts are actively under way and some systemwide procurement contracts have been executed or will be before the end of 1987.

At this more advantageous time in the project, the problems regarding storage may be more clearly envisioned. Schedules have become firmer, and possible areas of scheduling conflict between facilities access and procurement deliveries are more easily seen and taken into account. The current study has been made to minimize costs to the District in both storage and possible delay claims for either not having material on hand or if delivered, having no access. X

This study suggests that District furnished track material be delivered directly to the track work contractor and that part of the yard be made available for mobilization and storage of equipment by trackwork contractor. Schedules are currently such that the District-furnished material is delivered after the trackwork contractor is on site, thus eliminating District storage, eliminating contractor delay claims and reducing material handling. The study has suggested several contract changes to meet the aim of minimizing District storage. X

As the project progresses, contract problems may arise where warehousing becomes a possibility to mitigate delay claims. This study provides a starting point to address such problems, by delineating the square feet available for storage and a procedure for material control. Details of the study may require revisions to accommodate changes in schedule or changes in space availability. X

A separate supplemental report on the Warehousing study is currently being prepared. This supplemental report will document the vendor contacts made during the course of the Warehouse study. X

SCRTD  
1984  
.W37  
M76

WAREHOUSING STUDY  
Systems and Systemwide Material and Equipment

INTRODUCTION

A Substantial amount of material and equipment on this project is supplied to the construction and installation contractors by RTd through procurement contractors rather than by direct purchase by the construction/installation contractors. The District is faced with two alternatives for handling the delivery of these materials and equipment:

1. Schedule the receipt of these materials to be compatible with the forecast need dates of the construction/installation contractors.
2. Have the procurement contractors deliver the Material and Equipment to a District-sponsored warehouse in advance of installation contractor need dates; the District would then issue the items to the construction/installation contractors. X

This study is being undertaken to determine the appropriate delivery/storage requirements for each procurement contract; identify those items which are recommended for District warehousing; and ~~to~~ define how this warehousing might best be provided. Recommendations are also included for modifications to contract specification language which would need <sup>to be</sup> ~~to be modified~~ to achieve the recommended plan. X

The procurement material not specifically mentioned to be stored will be delivered after the facilities are ready to receive the items. <sup>appropriate</sup>

CRITERIA FOR SCHEDULING EQUIPMENT DELIVERY

The following considerations were reviewed to establish the criteria for scheduling equipment deliveries:

- a. Production forecasts
- b. Realistic manufacturing dates
- c. Shop drawing review cycle
- d. Testing requirements
- e. Equipment value and vulnerability
- f. Installation need dates
- g. Spare parts requirement
- h. Warranty requirements

DOES THIS INCLUDE STORAGE AMBIENT CONDITIONS / RESTRICTIONS?

Items a. and b. Our contacts with potential suppliers have determined that, for the types of items being purchased, the manufacturers could produce the items within their normal production cycles to meet RTD needs, thus eliminating items a & b from consideration in determining scheduling criteria relative to this study. (Note: The results of our vendor contact survey are being prepared in a supplemental report.)

Items c. and d. were considerations; however, they were items that could be adjusted to meet any of the proposed options and were not a driving factor.

Item e., Equipment value and vulnerability were considerations on where material is to be stored. Items subject to pilferage or environmental damage will be stored indoors in a secure area.

Item f., Installation Need Dates, as determined from the master schedule, turned out to be the overriding consideration.

Item g. Spare Parts, where required by contract, can be accommodated by storage in a secure area keyed for use only by the District or the CM. In this manner, the District maintains control over the area at all times. Spare parts, though, are a secondary concern to the delivery of the item itself.

Item h., Warranty Requirements, are delineated in the specifications and are not compromised whether stored by RTD, the Procurement supplier, or the construction/installation contractor.

### EQUIPMENT DELIVERY AND NEED DATES

The procurement contracts are listed below:

A612	Contact Rail	
A615	Coverboard	
A616	Direct Fixation Fasteners	A620 Automatic Train Control
A630	Traction Power Equipment	
A650	Passenger Vehicle	
A671	Diesel Locomotive	
A672	Flatcar	
A675	Crane for Flat Car	
A680	Operational Graphics	} <i>ACQUANT, THIS WILL BE UNDERSERVED BY RTD'S SIGN SHOP, BUT STORAGE REQUIREMENTS WILL STILL APPLY</i>
A730	Shop Equipment (Fixed)	
A735	Shop Equip. (Free Stand)	
A740	Fans	
A745	TPSS Air Handling	
A760	Signs & Graphics	(d)
A770	Rubber Tire Vehicles	
A775	Mobile Emerg. Equip.	
A780	Furniture	
A785	Fire Suppression	
A790	First Stores & Consu.	
A795	Uninterruptible Power Supply	

Figure 1 lists the delivery dates versus the need dates of the associated Construction/Installation Contractor for each of the above contracts. These dates are based on the current Rev. 5C of the Level III MOS-1 Procurement Schedule.

FIGURE 1

SCHEDULED

DELIVERY AND NEED DATES

	LOCATIONS AND DATES														MISC. CMP.														
	A130		A136		A147		A157		A167 MPT		A167 LRT		A187		DEL	NFFD													
	DEL	NEED	DEL	NEED	DEL	NEED	DEL	NEED	DEL	NEED	DEL	NFFD	DEL	NEED	DEL	NFFD													
A612															08/24/89	08/24/89													
A615															08/24/89	12/07/89													
A616																03/01/90													
A630															04/18/90	08/06/90													
A650															08/26/91														
A671															10/23/90														
A672															10/23/90														
A675															10/23/90														
A680															04/27/90														
A735															10/23/90														
A740															09/05/89	10/05/89	11/13/89	09/28/89	03/06/90	05/10/89	11/13/89								
	RECOMMENDED DEL DATES		09/05/89		10/05/89		11/13/89		09/28/89		03/06/90		05/10/89		11/13/89		Rev 5D												
A745															08/31/89	08/31/89	06/26/89	09/05/89	11/10/89	11/19/90	09/26/89	08/28/90	02/27/89	02/06/90	12/18/89	08/30/90	12/18/89	08/30/90	Rev 5C
A760															06/27/90	08/15/90	06/27/90	11/16/90	06/27/90	01/16/91	06/27/90	02/04/91							
A770															06/27/90	12/19/90													
A775															10/23/90														
A780															05/14/91		05/14/91		05/14/91		05/14/91		05/14/91						
A785															10/22/90	11/09/90	10/22/90	11/09/90	10/22/90	11/09/90	10/22/90	11/09/90	10/22/90	11/09/90	10/22/90	11/09/90	10/22/90	11/09/90	Contract Complete
A790															10/19/90	11/09/90	10/19/90	11/09/90	10/19/90	11/09/90	10/19/90	11/09/90	10/19/90	11/09/90	10/19/90	11/09/90	Contract Complete		
A795															06/05/90	08/05/90	06/04/90	08/17/90	04/26/90	07/12/90	12/27/89	05/10/90	10/16/89	11/14/89	07/28/90	10/04/90	Rev 5C		
	UPS BATTERIES		06/05/90		08/05/90		06/04/90		08/17/90		04/26/90		07/12/90		12/27/89		05/10/90		10/16/89		11/14/89		07/28/90		10/04/90		Rev 5C		
	UPS EQUIPMENT		06/29/88		08/06/90		06/29/88		03/20/90		06/29/88		02/12/90		06/29/88		05/10/90		06/29/88		08/02/89		06/29/88		04/04/90		Rev 5C/5D have 4/9/88		
A740	DAMPERS		12/05/88		12/05/88		09/18/88		09/15/88		06/13/88		06/13/88		08/03/88		08/03/88		03/30/88		10/04/88		03/30/88		03/30/88		04/28/88	04/18/88	(Supposedly: Rev 5C

ALL THE DATES ARE BASED ON THE LEVEL III REV. 5C SCHEDULE

\* DEL INITIAL DELIVERY DATES.

\* NEED DATES THE EQUIPMENT / MATERIAL ARE NEEDED FOR INSTALLATION.

12/16/88      1/26/88      2/24/88      7/15/88      4/1/88      4/11/88      4/29/88      Rev 5D

Fig. 1

← INSERT AVAILABLE SOURCE ....

ITEMS TO BE STORED

Based on the above current schedule need dates and the projected availability dates, the following items have been determined to require storage:

A680 Operational Graphics

This item consists of track wayside fixed signs, all tunnel and crossover graphics. While contractual requirements have not yet been established for this item, experience on other rail systems indicates the graphics will require less than 500 square feet of storage. Recommended storage is in the Main Shop Building, which is due to be completed about one year before the completion of the A680 contract.

A760 Signs & Graphics

This item consists of signs and graphics for the MOS-1 station and for the LRT station at 7th Street/Flower. The graphic elements will consist of the following:

- Directional signs and arrows
- Exist signs
- System Maps
- System Information (including Destination, Fare Collection, Postal Service, Bus Transfer information)
- System Logo
- Station Name
- Station equipment identification
- Hazard and Safety identification
- Edge lighting fixtures

While contractual data has not yet been established for these items, experience on other rail systems indicates that the lighting and graphics components will require less than 2,000 square feet. Recommended storage is in the MOW building.

A785 Fire Suppression

This item consists of fire extinguishers, fire hoses, fire box nozzles for all MOS-1 station and yard facilities (MOW building and Main Shop Building). The specifications for this item have not yet been prepared; however, based on experience with other systems, the material is recommended to be stored in the Main Shop building. The storage area required will be approximately 1,000 square feet.

A795 Uninterruptible Power Supplies (UPS)

This item consists of twelve free standing metal cabinets and batteries necessary to provide emergency power to the rail Central Control, station and tunnel emergency lighting and a battery supply for electrical substitutions switch gear. ~~gear~~ Current scheduling has UPS deliveries up to a year prior to need. (See Fig. 1). Therefore, storage becomes necessary and the recommendation is that the equipment be stored in Room 139 of the Main Shop building.

ITEMS TO BE DELIVERED DIRECTLY TO SITE

A630 Traction Power Equipment

*(No filters on A630)*

An effort has been made to coordinate substation delivery with substation room availability, in order that deliveries of substation equipment, transformers, rectifiers, ~~filters~~, AC and DC ~~breakers~~ <sup>switchgear</sup> and miscellaneous hardware could be sent directly to the substation room. As a contingency, should there be problems interfering with the delivery and installation of the substation equipment, the substation equipment could be stored in the Maintenance of Way Building. The substation material would require approximately 5,000 square feet of storage for each substation. The most likely adverse scenario would leave no more than three substations in storage at one time, thus requiring only about one-third of the available storage (49,000 square feet) in the MOW Building.

USED  
ALREADY  
EARLIER

The Procurement Contract should contain language that allows the District to provide 30 days notice prior to delivery of each sub-station assembly within a reasonable window of time tied to the projected need date for a room (with the most likely room availability in the center of the window).

Unclear  
intent

*Contract document is at 100%. Use as is or propose explicit revision.*

A740 - Fans and Dampers

The Procurement Contractor should store equipment until delivery. Contacts with potential suppliers indicate storage by the supplier, sometimes up to 6 months, is normal. It is recommended that the procurement contractor store the equipment and provide delivery directly to the installation contractor.

The schedule on this Contract should be changed to reflect a delivery date nearer the need date, in order that the fan may be delivered directly to the site. The damper flange delivery dates are currently satisfactory.

A745 - TPSS Air Handling Equipment

The Procurement Contractor can also store this equipment. Deliveries should be scheduled to coincide with A630 deliveries to the A631 contractor.

A612/A615/A616 Delivered to A610

The recommendation is that these Procurement Contractors (A612, A615, and A616) make delivery directly to the A610 Trackwork Contractor to minimize handling costs. At the site, the District or the District's representative will receive and inspect all deliveries and immediately transfer custody to the A610 Contractor. Unloading the equipment at the work site will be the responsibility of the Procurement Contractors.

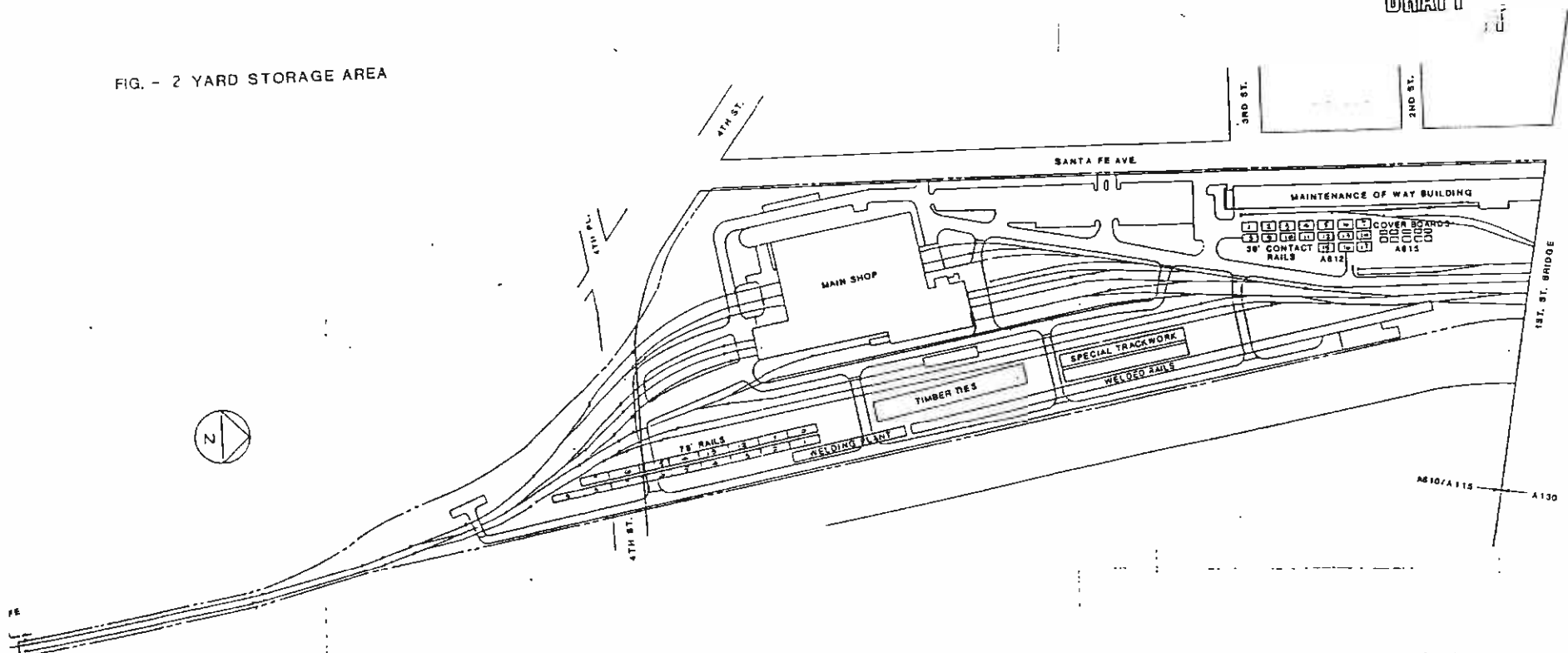
Currently, the Yard has 750,000 square feet of space that will ultimately include the yard trackwork. In this space, the A610 Contractor could store the following: (See Figure 2)

A612 - Contact Rail

The contact rail will be 39' long <sup>bimetallic</sup> composite (~~aluminum rail with stainless steel core~~) rail of sufficient quantity to cover approximately 64,000 linear feet. these can be stacked in 16 piles, 10' wide, 5' high and 39' long. *(other types allowed)*

FIG. - 2 YARD STORAGE AREA

DRAFT



Note: This is a suggested method of storage.  
The A61C/A115 Contractor should prepare  
his own plan for approval by the District.

THIS TEXT SHOULD GO AHEAD OF "ITEMS TO BE STORED"

The contact rail equipment, i.e., insulators and miscellaneous hardware can be stacked with the contact rail.

#### A615 - Protective Coverboard

The coverboard is packed in 10' lengths. These may be stocked in ten piles, each 20' wide, 10' long and 6' high. The coverboard material, bracket and miscellaneous hardware can all be stacked outside together.

#### A616 - Direct Fixation Rail Fasteners

The delivery of the MRT quantities of direct fixation rail fasteners should be to the A610 Contractor for storage in the yard after inspection and acceptance by the District or the District's representative. The fasteners are shipped 136 to the pallet. For the 29,000 fasteners required for Metro Rail, the necessary storage space will be about 2,100 sq. ft.

#### AVAILABLE STORAGE AREAS AND HANDLING REQUIREMENTS

Because of the nature of the material to be stored, the District will require both indoor and outdoor storage facilities. Some indoor facilities will need to be environmentally controlled to some extent, i.e., to prevent wide changes in temperature and/or humidity. Examples of environmentally sensitive equipment which RTD may be required to store are Traction Power Equipment (A630) and the Uninterruptible Power Supplies. *also A620 equipment*

To avoid loss due to theft and/or malicious damage, the District will need to make the storage areas secure.

*ST65*  
Currently projected to be available for indoor storage is the Maintenance of Way (MOW) building; while outdoor storage is available in the adjacent yard. The advantage of the close proximity of the two storage areas is that logistically the cost of material handling, security, and accessibility is minimized. In effect, the District will have a single material disbursement depot that ultimately becomes the rail system's maintenance facility.

The MOW building consists of 49,000 sq. ft. available for indoor storage. In the yard, as indicated earlier, the District has about 750,000 sq. ft. available for outdoor storage, located such that there is a minimum of interference with the trackwork contractor, yet has acceptable access for other contractors. Figure 2 depicts the yard and the available storage areas; identified material within the storage areas, and access and access route to the storage area. Figure 3 is the layout of the MOW Building and the recommended storage area within.

The Main Shop Building has in excess of 2,500 sq. ft. of indoor storage available. A layout with identified storage areas is depicted on Figure 4.

Contract A770 Rubber Tired Vehicles should be accelerated to allow for timely delivery of material handling equipment, i.e., forklifts, hand trucks, material carts, flatbed truck, etc.



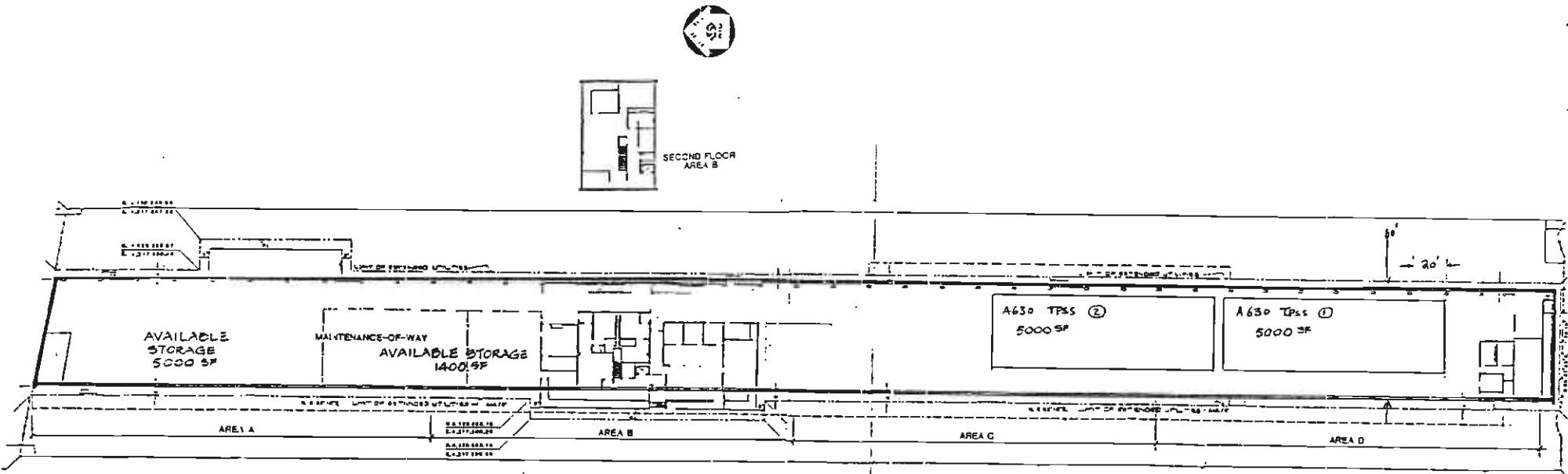
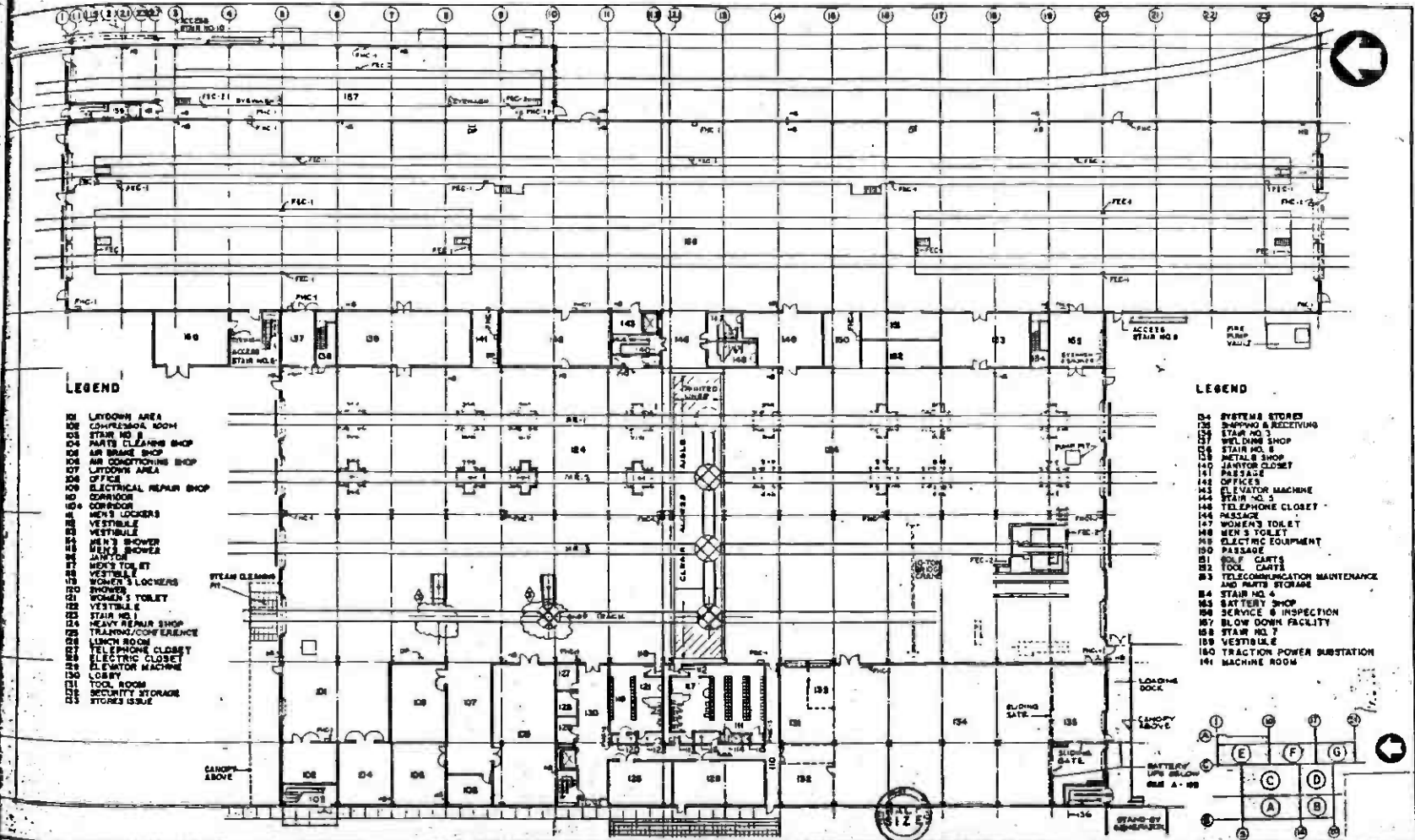


FIG. - 3 MAINTENANCE OF WAY STORAGE AREA



**LEGEND**

- 101 LAYDOWN AREA
- 102 COMPRESSOR ROOM
- 103 STAIR NO. 8
- 104 PARTS CLEANING SHOP
- 105 AIR BRAKE SHOP
- 106 AIR CONDITIONING SHOP
- 107 LAYDOWN AREA
- 108 OFFICE
- 109 ELECTRICAL REPAIR SHOP
- 110 CORRIDOR
- 111 MEN'S LOCKERS
- 112 VESTIBULE
- 113 VESTIBULE
- 114 MEN'S SHOWER
- 115 MEN'S SHOWER
- 116 MEN'S TOILET
- 117 VESTIBULE
- 118 WOMEN'S LOCKERS
- 119 WOMEN'S TOILET
- 120 VESTIBULE
- 121 STAIR NO. 1
- 122 STAIR NO. 2
- 123 STAIR NO. 3
- 124 HEAVY REPAIR SHOP
- 125 TRAINING/CONFERENCE
- 126 LUNCH ROOM
- 127 TELEPHONE CLOSET
- 128 ELECTRIC CLOSET
- 129 ELEVATOR MACHINE
- 130 LOBBY
- 131 TOOL ROOM
- 132 SECURITY STORAGE
- 133 STORES ISLE

**LEGEND**

- 134 SYSTEMS STORES
- 135 SHIPPING & RECEIVING
- 136 STAIR NO. 4
- 137 WELDING SHOP
- 138 STAIR NO. 5
- 139 METAL SHOP
- 140 JANITOR CLOSET
- 141 PASSAGE
- 142 OFFICES
- 143 ELEVATOR MACHINE
- 144 STAIR NO. 6
- 145 TELEPHONE CLOSET
- 146 PASSAGE
- 147 WOMEN'S TOILET
- 148 MEN'S TOILET
- 149 ELECTRIC EQUIPMENT
- 150 PASSAGE
- 151 SOLE CARTS
- 152 TOOL CARTS
- 153 TELECOMMUNICATION MAINTENANCE AND PARTS STORAGE
- 154 STAIR NO. 7
- 155 BATTERY SHOP
- 156 SERVICE & INSPECTION
- 157 BLOW DOWN FACILITY
- 158 STAIR NO. 7
- 159 VESTIBULE
- 160 TRACTION POWER SUBSTATION
- 161 MACHINE ROOM

NO.	DATE	DESCRIPTION	BY	CHECKED
1	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
2	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
3	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
4	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
5	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
6	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
7	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
8	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
9	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	
10	11/15/54	ISSUED FOR PERMITS	R. J. BOYCE	

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DRAWN BY: R. J. BOYCE  
 CHECKED BY: R. J. BOYCE  
 DATE: 11/15/54

**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT**  
**METRO RAIL PROJECT**

PROJECT ENGINEER: [Signature]  
 PROJECT ARCHITECT: [Signature]

**MAIN YARD AND SHOPS**  
**MAIN SHOP BUILDING**  
**COMPOSITE PLAN FIRST FLOOR**

DRAWING NO. AR2  
 SHEET NO. A102 3  
 SCALE: 1" = 20'  
 SHEET NO. 80

In analyzing and considering the available area for storage, i.e., MOW Building, the Central Maintenance Facility, and the Main Shop Building, weight was given to minimizing material handling. In this <sup>ex</sup>Contract, the yard and MOW Building and Main Shop Building were deemed sufficient for the required needs. When the Metro Rail system is opened, the MOW Building and the Main Shop Building will house the system spares and serve as a material disbursement and repair depot. Thus, all spares will be stored in their normal storage area, and material shifting will be minimized. See Figure 5, Material Disposition.

X

X

X

#### OPERATIONAL ADMINISTRATION AND WAREHOUSING SYSTEMS AND PROCEDURES

Appendix 1 of this study contains PDCD's Procedure CO-15, District Furnished Material and Equipment Control System, which is part of PDCD's QA/QC Procedures Manual and indicates the warehousing procedure for District Furnished Material. As previously noted, the storage area must be secure and the turnover of DFM should be strictly controlled by the District or the District's representative in accordance with CO-15, Rev. 1.

X

The ~~maintenance of way~~ (MOW) Building is the earliest storage area available and has sufficient square footage to store the expected Traction Power-Substation material which will be available prior to the substation room availability. Current scheduling would indicate that the last station set of TPSS equipment would be removed from the MOW storage facility prior to September 1990.

when?

X

The Main Shop Building is currently scheduled to be completed during March 1989. This facility will normally house systems stores; the shipping and receiving (including incoming inspection) area; maintenance and storage areas; and a variety of shops (welding, metals, electrical repair), thus making the Main Shop Building an excellent storage area for all items described earlier <sup>as</sup> requiring indoor storage.

X

Storage in the Central (Bus) Maintenance Facility is not recommended. The material to be stored is all related to the Metro Rail Project and will be received, inspected and disbursed by the District or the District's representative. Therefore, the equipment is better monitored in the area of the Metro Rail work and generally in the area where the material will ultimately be used.

#### COST IMPACT ANALYSIS (CONTRACTOR VS. DISTRICT WAREHOUSING)

The items recommended for RTD storage present no significant handling requirements, and the periods of time for storage of individual contract items are staggered enough (see Table 1 below), that there is no great quantity of materials on hand at any one time. It should therefore require a minimal staff to maintain the warehouse for the materials planned.

MATERIAL DISPOSITION

A620 →  
?

CONTRACTS	STORAGE			NON-STORAGE		FURNISHED/ INSTALL	DELIVER TO CONTRACTOR
	MAIN SHOP	MOW BLDG.	SUPPLIES	SCHD. DELIVERY AFTER ACCESS*	DELIVERY WINDOW COINCIDING W/ ACCESS		
A612 Contract Rail							x
A615 Coverboard							x
A616 D.F. Fastners							x
A630 Traction Power Equip.		x		x			
A671 Diesel Loco- motive				x			
A672 Flat Car				x			
A675 Crane						x	
A680 Oper. Graphics	x					x	
A710 Escalators							
A720 Elevators				x			
A730 Fixed Shop Eq.				x			
A735 Standing Shop Eq.							x
A740 Fans			x				x
A745 TPSS Air Handling			x				
A760 Signs/Graphics	x			x			
A770 Rubber Tired Vehicles				x			
A775 Mobile Emerg. Eq.				x			
A780 Furniture							
A785 Fire Suppr. Eq.	x			x			
A790 First Stores							
A795 UPS	x						

X

FIGURE 5.

\*Access To Ultimate Installation Location

TABLE I

STORAGE TIME FOR RECOMMENDED STORED MATERIAL

CONTRACT	DESCRIPTION	FIRST DEL DATE	LAST DISBURSEMENT DATE	ELAPSED TIME
A680	Operational Graphics	04/17/90	12/13/91	20 months
A760	Signs & Graphics	06/27/90	02/04/91	7 months
A785	Fire Suppression	10/22/90	11/09/90	1 month
A795	Equipment	06/24/88	08/06/90	28 months
	Batteries	10/16/89	10/14/90	26 months

It is estimated that minor incremental storage costs would be incurred over the time spans indicated in Table 1 above. The cost impact was developed based on the following premise:

- 1) Utilization of RTD-owned space and facilities, which will be available. X
- 2) Insurance costs: - It is assumed that the OCIP coverage is applicable.
- 3) Personnel, as provided by PDCD:
  - A) Warehouseman--half-time for 28 months-- as required for 16 months. X
  - B) Inventory control clerk--as required for 44 months. Utilize PC at PDCD main office.
  - C) Maintenance Labor--as required for 28 months.
  - D) Material Receiving and Inspection, including OS&D requirements, as required for 28 months.
  - E) Material handling equipment and labor as required for 28 months. X

Based on the above staffing levels, it is estimated that the incremental costs would be as follows:

Warehouseman--28 months at 1/2 time = 2,600 hours  
 16 months @2hrs/month = 32 hours  
 Total 2,632 hours

Burdened Rate \$17.43

Total Cost \$45,875.00

Inventory Control

44 months @2hrs/month 88 hours  
 Burdened Rate (incl.  
 PC rate) \$19.30

Total Cost \$ 1,700.00

Maintenance Labor	28 months @2hrs/month	56 hours	
	Burdened Rate	<u>\$17.43</u>	
	Total Cost		\$ 975.00
Material Receiving & Inspection	26 months @10hrs/month	260 hours	
	Burdened Rate	<u>\$17.43</u>	
	Total Cost		\$ 4,530.00
Material Handling - Equip. & Labor	28 months @10hrs/month	280 hours	
	Total Labor/Equip. Rate	<u>\$47.77</u>	
	Total Cost		\$13,375.00
Guard Service	30 months @2hrs/day	1,800 hours	
	Current Subcontract rate-Coleman Security	<u>\$12.75</u>	
	Total Cost		<u>\$22,950.00</u>
Total Estimated Cost			\$89,405.00

The warehouse will also provide a necessary contingency for unexpected delays, which at this point in time, with the remaining uncertainties in the A130, A135, A141 and A165 contracts, is a contingency that should be provided for. X

MODIFICATION TO CONTRACT SPECIFICATIONS

A610 Trackwork

This contract needs additional emphasis to reflect that the A610 Contractor will receive, store and be responsible for the District-furnished trackwork material. X  
(This recommendation has been forwarded separately to RTD for incorporation in Addendum No. 4.)

*THIS NEEDS TO BE RECORDED WITH LANGUAGE ON PAGE 6.*

A630 Traction Power Equipment

In order to minimize the probability of on-site storage for this equipment, the contract needs language that would require the contractor to give the District 30 days notice prior to delivery of the equipment. In addition, the contract needs to state that the contractor is responsible for transporting and unloading equipment at the District warehouse.

A740 Fans

This contract will require delivery date changes to bring the deliveries of equipment more in line with current Stage II access date.

A P P E N D I X I .

**PDCD** PROCEDURE

ISSUING DEPARTMENT Construction Operations

PROCEDURE NO. CO-15 ISSUE DATE 1/15/86  
REV NO. 1 REV DATE 4/3/87

SUBJECT District-Furnished Material and Equipment Control System

PREPARED BY FWT APPROVED BY [Signature]  
PAGE 1 OF 22

**1.0 INTRODUCTION**

**1.1 PURPOSE AND SCOPE**

This procedure has been prepared for the guidance of PDCD and Southern California Rapid Transit District (RTD) personnel assigned to the Metro Rail project. It contains procedures, policies and forms required in accounting for District-Furnished Material and Equipment (DFM/E) and is included as part of the Construction Operations Manual. X

**2.0 GENERAL**

**2.1 POLICY**

It is the policy of PDCD as Construction Manager (CM) to perform accounting procedures and maintain records for the control of DFM/E which comply with the provisions of the applicable contract plans and specifications, with Federal Acquisition Regulations, and with good commercial practice. X

**2.2 DISTRIBUTION**

Copies of this procedure will be distributed to holders of the Construction Operation Manual and other key personnel concerned with site operations and off-site operations, within both the CM organization and RTD. A copy will be issued for a particular position on a controlled basis, and each recipient will be responsible for updating the manual upon receipt of revisions.

**2.3 ADDITIONS AND REVISIONS**

Revisions to this procedure will be circulated to holders of the manual by the issuance of substitute pages on which the sequential number and date of revision will be indicated. An Index of Revisions will accompany each issue, updating the status of revised pages so that the manual can be checked for currency.

The Property Management Administrator on the CM staff is responsible for updating this procedure. All proposed changes or additions shall be directed to that person for review, coordination, approval, and distribution.

**3.0 RESPONSIBILITIES/ORGANIZATIONAL STRUCTURE**

**3.1 SYSTEMWIDE CONSTRUCTION MANAGER**

Since the great majority of DFM/E is material or equipment to be used or installed by systemwide Contractors, under supervision of the Systemwide Construction Manager (SCM), the SCM will have overall responsibility for the



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storage and handling of the DFM/E. If the workload at any time is insufficient to justify staffing the position of Property Management Administration, the work will be assumed by the SCM.

### 3.2 RESIDENT ENGINEER

It shall be the responsibility of the respective Resident Engineer (RE) for each Systemwide contract to receive, immediately inspect, store, maintain, protect and issue DFM/E. The RE may delegate the receiving function to a person on the RE's staff. If DFM/E is delivered before the RE for the relevant Systemwide contract is in place, the Property Management Administrator or SCM shall have direct receiving responsibility.

In the event any DFM/E is to be issued to a facilities Contractor, the RE for that contract will have the same responsibilities as a System RE in receiving, storing and issuing the DFM/E.

### 3.3 PROPERTY MANAGEMENT ADMINISTRATOR (PMA)

The PMA is a staff person reporting to the SCM. The PMA is responsible for the administration of the DFM/E Control System. The PMA will utilize the staff of the various systemwide REs to perform the tasks required by the system.

## 4.0 SYSTEM DESCRIPTION

The District-Furnished Material and Equipment Control System is a comprehensive control procedure for receipt, inspection, storage, maintenance, issue and accounting of DFM/E. It consists of written guidelines amplifying the staff members' responsibilities and describing the action to be taken in response to many conceivable conditions, a set of forms which will assist the various staff members in completing their responsibilities, and ~~contains~~ an organization chart outlining the hierarchy of responsibilities relative to DFM/E with the CM staff. X

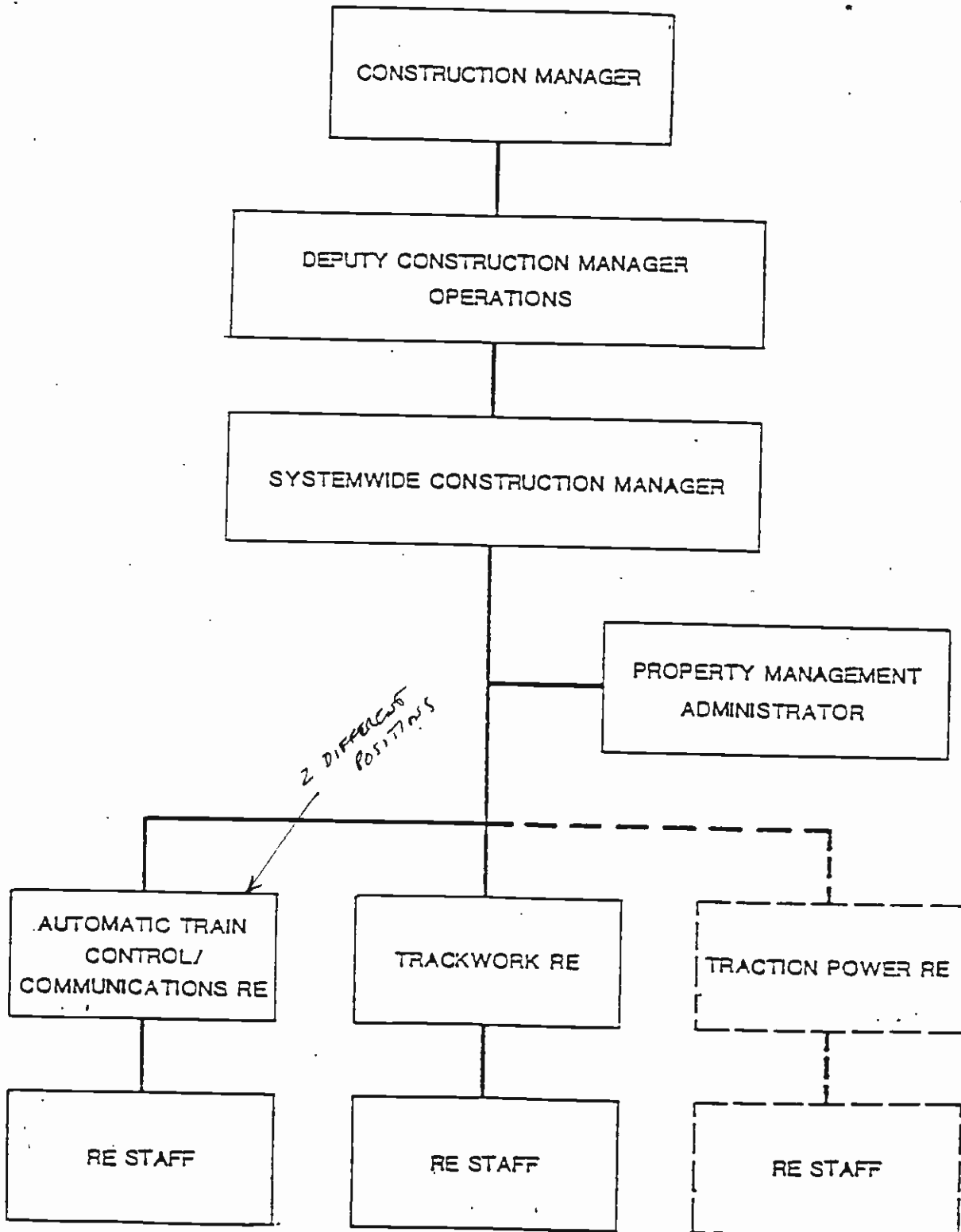
The following scenarios describe likely conditions to which the DFM/E Control System will be required to respond:

### 4.1 SYSTEMWIDE DISTRICT-FURNISHED MATERIAL & EQUIPMENT

- (A) DFM/E that is shipped from the supplier directly to the location of final use

In this case, the appropriate RE (or designee) will receive and inspect the material, complete the Material Receiving Report (MRR) and the Overage, Shortage and Damage Report (OS&D) (Section 5.1.3(A)(B)) and sign the carrier's Bills of Lading or shippings receipts as required. The installation Contractor's representative will participate in the receiving inspection. The RE will then immediately transfer the DFM/E to the Contractor by completing the Transfer Memo Form (Section 4.4.2). Both the receiving and transfer forms will be signed by the RE and cosigned by the PMA. The Contractor will sign the transfer form.

3.4 ORGANIZATION CHART



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(B) DFM/E that is shipped from the supplier to a RTD storage facility

The appropriate RE (or designee) will inspect and receive (using the relevant forms) the material into storage. A Property Record Card (Section 5.2.1) will be prepared in duplicate, one to be retained at the facility and one to be forwarded to a secure file in the PMA's office.

When the installation Contractor (or Contractor agent) requests release of certain material, a Transfer Memo Form will be completed. This form will be prepared and signed by the appropriate RE (or designee), cosigned by the PMA, and signed by the Contractor.

4.2 MATERIAL OR EQUIPMENT PROCURED BY THE CM TO BE ISSUED TO THE INSTALLATION CONTRACTOR(S) AS DFM/E.

The control of DFM/E procured by the CM is the same as if procured by RTD, therefore sections 4.1(A) or 4.1.(B) are to be used.

4.3 PROPERTY PROCURED BY AND FOR THE USE OF THE CM IN THE PERFORMANCE OF ITS SERVICES.

This property will be controlled by the CM internal property control system noted in the CM Administration Procedures Manual, General Office Services Section, Procedure GOS-4, Office Supplies and Equipment.

5.0 PROCEDURE

5.1 RECEIVING

5.1.1 Bills of Lading

These procedures are applicable to items of RTD furnished material or equipment (including fabrications) shipped under Commercial Bills of Lading.

5.1.2 Receiving Procedure

(A) Verification

Upon delivery of DFM/E, the appropriate RE or designee will count and check the items against the shipping documents and inspect for any shipping damage. The condition and serial number of any seals shall be recorded. Shipments found not conforming to the contract, or damaged to the degree that it cannot be repaired, shall not be accepted and the procedures outlined in 5.1.2 (B), 5.1.2 (C), and 5.1.2 (D) pursued. If a hazardous situation exists, making material or property unsafe for acceptance from the carrier, the person in charge of receiving the material shall take immediate action to minimize loss from the existing condition. Remedial action for damaged RTD property shall be initiated by the CM, and RTD shall be notified.

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(B) Visible Damage

- (1) General. As soon as damage is noted, the RE or designee will (1) discontinue unloading operations, (2) take photographs as necessary to identify the condition of the items and the loading as delivered by the carrier, (3) immediately request carrier inspection, (4) notify RTD immediately.
- (2) Notification of Manufacturer/Supplier. The Manufacturer/Supplier shall be immediately contacted by RTD, or designee, and informed of the findings. The Manufacturer/Supplier shall be offered the opportunity to repair and/or replace damaged/defective material at no additional cost to RTD.
- (3) Carload or Truckload Shipment. If carload or truckload quantity, the RE, or designee, shall direct the discontinuation of unloading, take photographs, seal carrier's equipment, and allow it to remain until carrier's representative has completed inspection.
- (4) Shipments Less than Carload or Truckload. If less than a truck or carload shipment, after photographs have been taken, the RE or designee will place the material in a special area of the storage facility until the carrier's representative and the Quality Assurance/Quality Control Manager (QA/QC Manager) have completed their inspections.
- (5) Annotation of Documentation. Annotate all copies of the carrier's shipping documents with a complete description of the damage, including the number of the containers in which the items are packed. Have the annotation signed by the carrier's representative. As representative of RTD, the RE will sign the annotation.
- (6) Forwarding of Documentation to RTD. As soon as possible, but no later than three (3) days after receipt of the shipment, transmit the following documents and data to RTD:
  - (a) The Bill of Lading.
  - (b) Copy of the carrier's inspection report or written waiver of inspection.
  - (c) Copy of the Material Receiving Report and Overage, Shortage and Damage Report executed by the RE or designee, cosigned by the PMA.
- (7) PDCD documentation Distribution. All receiving records, photographs, findings of facts and records of joint inspections and conclusions with the manufacturer/supplier shall be maintained at the storage site and a copy sent to the appropriate RE and RTD, by the PMA.

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(C) Concealed Damage Or Loss

- (1) General. Upon discovery of concealed damage or loss, the RE or designee will notify RTD and the PMA immediately. Proceed in accordance with instructions of RTD.
- (2) Short Shipment. If the shipment was short and if the shipment was carload or truckload, the RE or designee will note seal numbers affixed to carrier's equipment and whether or not they were intact upon arrival. If missing containers are involved, the PMA or designee will contact carrier and the supplier to allow them opportunity to check terminals or elsewhere for missing containers.
- (3) Forwarding of Documentation. The PMA or designee will transmit the same documents as shown under Visible Damage, Paragraph 5.1.2 (B), (6), and (7). The PMA will include date and name of carrier's representative notified in the latter report. If the shortage is cleared at a later date, the RE or designee will notify RTD in writing immediately, with a copy to the RE and the PMA.

(D) Non-Conforming Material Storage

If the arriving DFM/E does not pass receiving inspection, the RE or designee will tag it as unacceptable, and have it delivered to a special area of the storage facility while awaiting disposition instructions from RTD. In addition, the person receiving the non-conforming material shall complete a Non-Conforming Material Receiving Report (NCMRR) Exhibit 5.1.2(D). The original of the NCMRR will be sent to RTD within three (3) days of generation.

5.1.3 Receiving Reports

(A) Material Receiving Report

- (1) Report Data. Material and equipment shall be recorded on a Material Receiving Report (MRR) (Exhibit 5.1.3 (A)) as received. MRRs shall be consecutively numbered and shall cover only one contract or purchase order per report. The reports shall contain as a minimum the following data:
  - o File Number (parenthetical entry at top of page).
  - o Purchase Order/Contract Number, Voucher Number, or other pertinent control numbers.
  - o Supplier (normally shipper).
  - o Shipping Point.
  - o Date Received.
  - o Supplier's Shipping Number.
  - o Carrier.
  - o Pro Number or Car Number.
  - o Freight Bill amount and whether prepaid or collect.

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- o Quantity Received.
- o Exact Description of Item(s) Received.
- o Purchase Order Complete or Not.
- o Condition Received (if other than new/good).
- o OS&D Reference.
- o Name of Person Receiving Material.
- o Date Material Receiving Report prepared.
- o Material Receiving Report Number.
- o Action Required

- (2) Additional Items/Parts Received. When a contract calls for delivery of additional items/parts (other than the basic end items) from various equipment manufacturers, an additional MRR shall be prepared. These receipts shall be differentiated from standard (basic end items) receipts by typing/printing the following on the first line number of the MRR: ADDITIONAL ITEMS/PARTS RECEIVED

Examples of additional items/parts that might be required/received are ancillary equipment such as installation adapters, maintenance/instruction manuals, parts lists, assembly and/or dimensional drawings, special storage instructions, special tools/parts to aid in installation, and spare parts.

(B) Overage, Shortage or Damage Report (OS&D)

- (1) Overages and Shortages. Overages and shortages occurring with any shipment will be recorded on an OS&D Report (Part I) (Exhibit 5.1.3 (B),(1)) by the RE or designee. This report must be signed by the RE (or designee) and cosigned by the PMA and must accompany the MRR upon submittal. The MRR will be annotated to indicate the attachment of an OS&D Report. If no OS&D Report is required, type or print NONE in space provided (i.e., OS&D No. NONE).
- (2) Damages. Damaged or unsatisfactory District Property shall be reported on OS&D Report (Part II) (Damages Only) (Exhibit 5.1.3(B)(2)) by the RE or designee. This report must be signed by the RE (or designee) and must accompany the MRR for that shipment when damage is discovered on receipt. When latent damage is discovered, the OS&D Report shall be submitted at time of discovery. MRRs shall be annotated to indicate that a damage report is attached.
- (3) Closing of OS&D Report. Each OS&D Report must be closed by completing OS&D Part III (Exhibit 5.1.3(B)(3)), at the time of resolution of the OS&D.

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(C) Report Authentication. MRR and OS&D Reports covering District-Furnished Property shall be authenticated by the RE (or designee) and cosigned by the PMA.

(D) Report Distribution. Reports are not to be forwarded until completed and all items checked to assure they are acceptable.

Reports shall be distributed by the RE or designee, as follows:

(1) Originals. Property record files at the storage/receiving site.

(2) Copies. Copies will be made at receiving point for distribution as follows:

- o PMA.
- o PDCD QA/QC Manager.
- o SCM.
- o istrict.

(E) Receiving Report Log. A sequentially numbered log shall be maintained by the PMA for items of DFM/E. Nomenclature, Contract or P.O. and Item Number shall be included in the log. (Exhibit 5.1.3 (E)).

## 5.2 PROPERTY RECORDS

### 5.2.1 Property Record Cards

A Property Record Card (PRC) (Exhibit 5.2.1) shall be prepared by the PMA for each distinct item of property received regardless of category. Property Record Cards shall be maintained in ink and shall be posted daily for receipts and issues. Cards shall reflect, as a minimum, the following information:

- o Nomenclature or description of item.
- o District ID No. (from Long Lead Equipment/Material Listings, enter in upper left corner of Property Record Card).
- o Contract Number.
- o File Number.
- o Location (warehouse area, section, bay, row, tier, bin, box, etc., outside storage area, section, etc.).
- o Date Issued.
- o Posting Reference (P/O (Acq. Document), MRR, Qty. Ref., or B/O).

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- o Posting Date.
- o Quantity Ordered.
- o Quantity Received.
- o Quantity issued and to whom/where.
- o Mfg. Serial Number (if none, indicate NONE).
- o Balance on hand.
- o Unit Acquisition Cost (to include original transportation and installation costs).
- o Manufacturer's Name and Model Number.
- o Unit of Measure.

(A) General Purpose Equipment/Capital Equipment

All District-Furnished Property including High Dollar Value Capital Equipment shall be controlled on Property Record Cards.

- (1) High-Value Capital Equipment. Individual Property Record Cards will be filled out for each item of Hi-Value Equipment (\$500 or greater). The card shall contain all information necessary to properly identify the material.
- (2) Sensitive Items. Sensitive items are items which will delay system revenue operation if not available as required. Individual Property Record Cards shall be made out for each sensitive item regardless of dollar value. All sensitive items shall be properly tagged and identified before issuance. The Property Record Cards for sensitive items will contain the following information:
  - o Acquisition Document Reference.
  - o Property Tag Number.
  - o Material Receiving Report Reference.
  - o Nomenclature.
  - o Model Number.
  - o Manufacturer.
  - o Mfg. Serial No.
  - o Location (Bldg., Room, Bay, etc.).



(B) Safeguards for Property Record Cards

Property Record Cards are the responsibility of the PMA, and will be properly safeguarded against loss or damage through fire, neglect, theft, etc. As a minimum of safeguard, the records should be maintained in a securely locked container. Access to the container must be on a controlled basis, and if the container is to be unattended, it will be securely locked. Documents removed from this file will be on a "need to know" basis only.

(C) Accessory and Auxiliary Items

Accessory and auxiliary items that are attached to, part of, or acquired for use with a specific item of DFM/E must be recorded on the record of the basic items. Any accessory or auxiliary item that is not attached to, part of, or acquired for use with a specific item of Capital Equipment must be recorded separately. Useable accessory and auxiliary items that are removed from items of DFM/E must also be separately recorded and the cost of the basic item reduced proportionally.

5.3 ISSUES

5.3.1 Field Warehouse Requisition

Requests from Contractors and others for materials from storage stock shall be submitted on Transfer Memo Form (Section 5.3.2). These disbursement documents will be used in advance, when possible, to request withdrawals from stock and to alert the RE and PMA to the needs of Contractors working on or off site.

5.3.2 Transfers

Transfer of material from RTD's storage facility to a Contractor shall be documented with the Transfer Memo Form (Exhibit 5.3.2) and posted to the property records. Materials returned from repair will be picked up on a new Material Receiving Report and the property records annotated to reflect receipt.

5.3.3 Authority For Issue

Authorization to initiate and authenticate Transfer Memo Forms and the transfer of DFM/E will rest with the RE, with co-signature of the PMA.

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## 5.4 INVENTORY

### 5.4.1 General

A physical inventory will be taken in September of each year. The annual physical inventory count is to be wall-to-wall (100%). RTD will be provided with a written notice one week prior to beginning and upon completion of physical inventories. The results of the inventory will be reported to RTD by the PMA, as soon as possible, but not later than ten (10) days thereafter with a copy furnished to the affected RE's.

### 5.4.2 Physical Inventory

The inventory shall be accomplished and recorded in the following manner:

- (1) Prior to the start of inventory, columns one through six of the DFM/E Inventory Listing (Exhibit 5.4.2) are filled in from information recorded on current Property Record Cards. The information from each Property Record Card will be entered on a single line and each line will be sequentially numbered on column one.
- (2) The physical counts are taken and the results are recorded under columns seven through ten of the Inventory Listing. The person taking count then signs for the items that he or she counted.
- (3) Inventory personnel shall, as an addendum to the DFM/E Inventory Listing make a notation of equipment items obviously unserviceable, not being used or cannibalized. Items "Not being used" are items in stock/storage from one annual inventory to the following annual inventory without usage.
- (4) When the counts are completed, the Inventory Supervisor will make the price extensions in column eleven of the Inventory Listing.
- (5) Inventory personnel shall be assigned by the CM and should not be involved in Property Record Card maintenance.

### 5.4.3 Inventory Reporting

The report will include a letter reporting results of the inventory (in the format of Exhibit 5.4.3) properly authenticated by the PMA. As a minimum, the letter shall contain date of preparation, voucher number (as signed by site preparing letter), item description with part number (if available), unit of measure, unit acquisition cost, Property Record Card balance, physical count, count difference (+ or - figure) and dollar value difference. The report shall be submitted to the PDCD Property Management Administrator, with a copy furnished to the SCM, for forwarding to RTD.

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#### 5.4.4 Inventory Record Adjustment And Posting

Property Record Cards shall not be adjusted for variances resulting from inventory, until authority is granted by RTD. Upon receipt of authority to adjust records resulting from inventory, date of inventory and adjustment shall then be posted to Property Record Cards. Date of inventory shall be posted to Property Record Cards on all items inventoried.

#### 5.5 DISPOSITION OF DAMAGED MATERIAL

##### 5.5.1 Authority to Repair or Dispose

If damaged DFM/E is discovered, the PMA shall request authority from RTD to repair or dispose of DFM/E. No action will be taken until written authority is received. In instances of an emergency, verbal/telephonic authority will suffice; however, a memo-for-record to this effect will be retained until the follow-up written authority is received.

##### 5.5.2 Repair of Damaged Material

If authorization to repair is obtained, appropriate copies of the invoice/purchase order will be provided to RTD (as a schedule appended to voucher/invoice) and the PMA by the RE. Repairs will be made at no cost to RTD.

#### 6.0 REFERENCES

Project Administration Manual Section GOS-4, Office Supplies and Equipment

#### 7.0 FORMS

- PDCD Form 186 - Non-Conforming Material Receiving Report
- PDCD Form 187 - Material Receiving Report
- PDCD Form 182A, - Overage, Shortage and Damages (OS&D) Report  
B, C Part I, II, & III
- PDCD Form 188 - Receiving Report Log
- PDCD Form 189 - Property Record Card
- PDCD Form 190 - Transfer Memo
- PDCD Form 191 - DFM/E Inventory Listing
- PDCD Form 192 - Letter Reporting Results of Inventory

**PDCD**

**PROPERTY RECORD CARD**

ASSET TYPE \_\_\_\_\_

NOMENCLATURE \_\_\_\_\_ SERIAL NO. \_\_\_\_\_ A-E DWG. NO. \_\_\_\_\_  
 CONTRACT \_\_\_\_\_ MODEL NO. \_\_\_\_\_ TAG NO. \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ MANUFACTURER \_\_\_\_\_ LOCATION \_\_\_\_\_

RECEIVING

ISSUES

DATE POSTED	ACQ. DOC.	UNIT MEAS.	QTY. ORDER	QTY. RECD.	QTY B.O.	MRR	DATE	TO	DOC. NO.	QTY. ISSUE	BAL. O.H.	UNIT COST	REMARKS

PDCD

NON-CONFORMING MATERIAL RECEIVING REPORT

Note: This report supplements MRR-

NATURE OF NON-CONFORMITY:

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RECOMMENDED DISPOSITION:

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Resident Engineer \_\_\_\_\_

ACTION TAKEN:

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Resident Engineer \_\_\_\_\_ PMA \_\_\_\_\_

*D. Ac??*





PDCD

P. O. NO.	REV	CONTRACT	SUBI	REQN	RV
MATERIALS REFERENCE					

OS&O REPORT  
(PART III)  
(DAMAGES ONLY)

015101-1111

VENOOR \_\_\_\_\_  
 SHIPPING POINT \_\_\_\_\_  
 CARRIER \_\_\_\_\_

DATE \_\_\_\_\_  
 JOB LOCATION \_\_\_\_\_  
 SHIPPER \_\_\_\_\_  
 MRR NO. \_\_\_\_\_ DATE RECD \_\_\_\_\_  
 CAR NO. \_\_\_\_\_ FIB NO. \_\_\_\_\_

P. O. ITEM NO	QTY	UNIT	SIZE	DESCRIPTION OF ITEM	DAMAGE	UNIT COST	TOTAL
						\$	\$
TOTAL COST						\$	\$

How Noticeable is Damage?  Obvious <sup>(1)</sup>  Concealed <sup>(2)</sup>

Where Did Damage Occur?  At Factory  In Transit  In RMP Handling

Is Manufacturer's Guarantee Affected?  Yes  No  Don't Know

Can Damage Be Repaired?  Yes  No  Don't Know

Can Damage be Repaired by Field?  Yes  No

Is Material Required for Repair?  Yes  No

If Yes, Where Will Replacement Material be Purchased?  Field  Home Office

Must Repair be Made Immediately to Maintain Construction Schedule?  Yes  No

If Repair is Not Urgent, by What Date Must it be Completed? \_\_\_\_\_

What are Estimated Direct Costs for Repair? Material \$ \_\_\_\_\_ Labor \$ \_\_\_\_\_

Was Supplier Contacted?  Yes  No

If Yes, Identify Contact: Name \_\_\_\_\_ Title \_\_\_\_\_ Location \_\_\_\_\_

Method of Contact:  Phone  Wire  Letter

Name of Supplier \_\_\_\_\_ Date \_\_\_\_\_

Was Carrier Contacted?  Yes  No

If Yes, Identify Contact: Name \_\_\_\_\_ Title \_\_\_\_\_ Location \_\_\_\_\_

Method of Contact  Phone  Wire  Letter Date \_\_\_\_\_

Name of Carrier: \_\_\_\_\_

Other Comments \_\_\_\_\_

NOTES

- (1) If damage is obvious at time of delivery, the freight bill shall be so noted and signed by Carrier. Include the signed freight bill with this report. Arrange for carrier to perform an inspection of damaged material. A completed Carrier inspection report must be prepared immediately, signed by Carrier's agent, and attached to this report.
- (2) If damage is concealed, notify carrier immediately after unloading and arrange for carrier to perform an inspection of damaged material. A completed carrier inspection report must be prepared immediately, signed by Carrier's agent, and attached to this report.
- (3) Attach to this report photographs of damaged materials.
- (4) Do not proceed with repairs until authorized by Home Office.

PREPARED BY \_\_\_\_\_ APPROVED \_\_\_\_\_ MATERIALS MANAGER



**PDCD**

OS&D REPORT  
(Part III)

NOTE: This report supplements OS&D Report \_\_\_\_\_

RECOMMENDED DISPOSITION:

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Resident Engineer \_\_\_\_\_

ACTION TAKEN:

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Resident Engineer \_\_\_\_\_ PMA \_\_\_\_\_

PDCD

RECEIVING REPORT LOG

	MRR	DATE	SUPPLIER	DESCRIPTION	PURCHASE ORDER	REMARKS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

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**PDCD**

LETTER REPORTING RESULTS OF INVENTORY

TO:

DATE: \_\_\_\_\_

FROM:

NO: \_\_\_\_\_

SUBJECT:

A physical inventory of all Government property under the control of Parsons-Gilbane at the \_\_\_\_\_ (Name of Complex) was completed on \_\_\_\_\_ (Date)

The physical inventory count agreed with the balances shown on the property record cards except as follows:

Item Description (Part Number)	Unit	Unit Acq. Cost	Rec Bal	Phy. Count	Difference Count \$
TOTAL					\$

We believe that the adjustments are within the accepted limits of good property accountability practice and, accordingly, request authority to adjust Property Record Cards to the physical count.

Very truly yours,

Resident Construction Manager