

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			J	1	5
2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 03-Feb-2003	4. REQUISITION/PURCHASE REQ. NO. W22W9K-2326-6728		5. PROJECT NO.(If applicable)	
6. ISSUED BY MILITARY/RESERVE TEAM 600 DR. MARTIN LUTHER KING, JR. PLACE, RO LOUISVILLE KY 40202-2230	CODE DACA27	7. ADMINISTERED BY (If other than item 6) MILITARY/RESERVE TEAM 600 DR. M. L. KING, JR. PL., RM 821 ATTN: CYNTHIA E. FARMER LOUISVILLE KY 40202-2230		CODE DACA27	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			X	9A. AMENDMENT OF SOLICITATION NO. DACA27-03-B-0003	
			X	9B. DATED (SEE ITEM 11) 20-Dec-2002	
				10A. MOD. OF CONTRACT/ORDER NO.	
				10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE		11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS		
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) USARC/Unheated Storage, Ft. Ontario, Oswego, NY The subject solicitation is amended as follows: SEE THE ATTACHED SUMMARY OF CHANGES.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)		03-Feb-2003	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION SF 30 - BLOCK 14 CONTINUATION PAGE

The following have been added by full text:

AMEND 02

THE FOLLOWING IS A LIST OF AMENDED SPECIFICATIONS ITEMS:

Specifications:

Amendment Two includes the following specification changes:

1. Specification Index has been updated to show specification updates or modifications
2. Specification Section 00800 has been updated.
3. Specification Submittal Register has been updated.
4. General Wage Decision NY010041 Mod # 7 dated 01/03/2003 is deleted and General Wage Decision NY020041 Mod 8 dated 01/31/2003 is attached and substituted therefore.
5. Specification Section 02821, Fencing has been edited.
6. Specification Section 02840, Active Vehicle Barriers has been added.
7. Specification Section 05500, Miscellaneous Metals has been edited.
8. Specification Section 07413, Metal Siding has been added.
9. Specification Section 09250, Gypsum Board has been edited.
10. Specification Section 10508, Metal Wardrobe Lockers and Bench Seat has been added.
11. Specification Section 13720, Electronic Access Control Systems has been added.

Drawings:

Amendment Two includes the following drawing modifications.

1. Civil:

- Sheet C03 edited column line callouts. (Drawing Reissued)
- Sheet C07 edited drainage schedule. (Drawing Reissued)
- Sheet C16 revised fence details. (Drawing Reissued)
- Sheet C17 revised fence details. (Drawing Reissued)

2. Architectural:

- Sheet 1A1.1.3 – Edited floor plan tag notes #25 and #33. (Drawing Reissued)
- Sheet 1A1.1.4 – Edited floor plan tag note #25 and #33. (Drawing Reissued)
- Sheet 1A2.3.1 – Unistrut notes have been added. (Drawing Reissued)
- Sheet 1A3.1 – Edited Tag note #3. (Drawing Reissued)
- Sheet 1A3.2 – Edited detail 3 / 1A3.2 (Drawing Reissued)
- Sheet 1A3.3 – Edited details 1 / 1A3.3, 2 / 1A3.3, 3 / 1A3.3 and 5 / 1A3.3. (Drawing Reissued)
- Sheet 1A3.4 – Edited details 1 / 1A3.4, 2 / 1A3.4, 3 / 1A3.4, 4 / 1A3.4 and 5 / 1A3.4 (Drawing Reissued)
- Sheet 1A4.1.1 – Edited Elevation Tag note #25. (Drawing Reissued)
- Sheet 1A4.1.2 – Edited Elevation Tag note #25. (Drawing Reissued)
- Sheet 1A5.0 – Edited Wall section Tag note #3, #5, #31 and #66. (Drawing Reissued)
- Sheet 1A5.1 – Edited foundation detail on Sections 1, 2 and 3. (Drawing Reissued)
- Sheet 1A5.2 – Edited foundation detail on Sections 4 and 5. (Drawing Reissued)
- Sheet 1A5.3 – Edited foundation detail on Sections 6, 7, 8 and 9. (Drawing Reissued)
- Sheet 1A5.4 – Edited foundation detail on Sections 10, 11, 12 and 13. (Drawing Reissued)
- Sheet 1A5.5 – Edited foundation detail on Sections 14, 15, 16 and 17. (Drawing Reissued)
- Sheet 1A5.6 – Edited foundation detail on Sections 18, 19, 20 and 21. (Drawing Reissued)
- Sheet 1A5.7 – Edited foundation detail on Sections 22, 23, 24 and 25. (Drawing Reissued)
- Sheet 1A5.8 – Edited foundation detail on Sections 26, 27, 28 and 29. (Drawing Reissued)
- Sheet 1A5.9 – Edited foundation detail on Sections 30, 31, 32 and 33. (Drawing Reissued)
- Sheet 1A5.10 – Edited foundation detail on Sections 34, 35, 36 and Detail A. (Drawing Reissued)
-
- Sheet 1A6.4 – Detail 1/1A6.4 has been revised. (Drawing Reissued)

- Sheet 1A8.2.1 – Floor Plan Tag note 3 has been edited. (Drawing Reissued)
- Sheet 1A9.10 –Detail 10/1A9.10 has been added. (Drawing Reissued)

3. Structural:

- Sheet 1S2.1.1 – revise finish floor site elevation to 83.000m.
- delete 50mm sand layer under floor slab (Drawing Reissued)
- Sheet 1S2.1.2 – revise finish floor site elevation to 83.000m
- delete 50mm sand layer under floor slab (Drawing Reissued)
- Sheet 1S3.1.1 - revise column bearing elevations for all columns to 99.825
(Drawing Reissued)
- Sheet 1S3.1.2 - revise column bearing elevations for all columns to 99.825
(Drawing Reissued)
- Sheet 1S3.2 - Delete 50mm sand layer under slab in all foundation sections.
(Drawing Reissued)
- Sheet 1S3.3 - Delete 50mm sand layer under slab in all foundation sections and
slab details. (Drawing Reissued)
- Sheet 1S3.4 - Delete 50mm sand layer under slab in all foundation sections
(Drawing Reissued)
- Sheet 1S3.5 - Delete 50mm sand layer under slab in all foundation sections
- General - Interior wall foundations shall be stepped down to the indicated
elevation of the exterior wall foundations as indicated in the
“STEP FOOTING” detail on amended Sheet 1S3.5. Foundation
steps shall be no less than 900 mm from the inside edge of the
exterior foundation. As an alternative to constructing the
foundations steps, interior wall foundations may be lowered to
match the elevation of exterior foundations and interior column
foundations.
(Drawing Reissued)

4. Electrical:

- Sheet EU02 – Added verbiage to the Lighting Option note. Added verbiage to Sheet Note #4 and added Sheet Notes #10 and #11. Changed electrical and communications services to the two vehicle gates. (Drawing Reissued)
- Sheet EU2.1 – Added detail 5/EU2.1. (Drawing Reissued)
- Sheet 1E1.1.1 – Revised General Note #1. (Drawing Reissued)
- Sheet 1E1.1.2 – Revised General Note #2. (Drawing Reissued)
- Sheet 1E2.1.1 – Revised General Note #1. (Drawing Reissued)
- Sheet 1E2.1.2 – Revised General Note #1. Changed circuitry to UH-4,5, and 6. (Drawing Reissued)
- Sheet 1E3.1.1 – Revised General Note #1 and added Sheet Note #4. (Drawing Reissued)
- Sheet 1E3.1.2 – Revised General Note #1. (Drawing Reissued)
- Sheet 1E5.1 – Revised detail for fixture type ‘D’. (Drawing Reissued)
- Sheet 1E8.1 – Revised panel schedule ‘DP1’. (Drawing Reissued)
- Sheet 1E8.2 – Revised panel schedule ‘RP2’. (Drawing Reissued)
- Sheet 1E8.3 – Revised panel schedule ‘RP4’. (Drawing Reissued)

(End of Summary of Changes)

Amendment #2
PROJECT TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

01312 QUALITY CONTROL SYSTEM (QCS)
01320 PROJECT SCHEDULE Network Analysis System
01330 SUBMITTAL PROCEDURES
01356 STORM WATER POLLUTION PREVENTION MEASURES
01410 ENVIRONMENT PROTECTION
01415 METRIC MEASUREMENTS
01420 SAFETY
01451 CONTRACTOR QUALITY CONTROL
01452 TESTING FOR MECHANICAL AND ELECTRICAL SYSTEMS
01453 CONTRACTOR WARRANTY MANAGEMENT
01800 EQUIPMENT OPERATING, MAINTENANCE, AND REPAIR MANUALS

DIVISION 02 - SITE WORK

02220 DEMOLITION
02230 CLEARING AND GRUBBING
02300 EARTHWORK
02315 EXCAVATION, FILLING AND BACKFILLING FOR BUILDINGS
02316 EXCAVATION, TRENCHING, AND BACKFILLING FOR UTILITIES SYSTEMS
02510 WATER DISTRIBUTION SYSTEM
02513 BITUMINOUS PAVEMENT
02531 SANITARY SEWERS
02630 STORM-DRAINAGE SYSTEM
02714 DRAINAGE LAYER
02722 AGGREGATE BASE COURSE
02748 BITUMINOUS TACK
02763 PAVEMENT MARKINGS
02821 FENCING (Edited)
02840 ACTIVE VEHICLE BARRIERS (Added)
02921 SEEDING
02922 SODDING
02930 EXTERIOR PLANTS
02935 EXTERIOR PLANT MATERIAL MAINTENANCE

DIVISION 03 - CONCRETE

03100 STRUCTURAL CONCRETE FORMWORK
03150 EXPANSION JOINTS, CONTRACTION JOINTS, AND WATERSTOPS
03200 CONCRETE REINFORCEMENT
03300 CAST-IN-PLACE STRUCTURAL CONCRETE

DIVISION 04 - MASONRY

04200 MASONRY

DIVISION 05 - METALS

05120 STRUCTURAL STEEL
05210 STEEL JOISTS
05300 STEEL DECKING
05500 MISCELLANEOUS METAL (Edited)

DIVISION 06 - WOODS & PLASTICS

06100 ROUGH CARPENTRY
06200 FINISH CARPENTRY
06650 SOLID POLYMER (SOLID SURFACING) FABRICATIONS

DIVISION 07 - THERMAL & MOISTURE PROTECTION

07110 BITUMINOUS DAMPPROOFING
07131 ELASTOMERIC SHEET WATERPROOFING
07132 BITUMINOUS WATERPROOFING
07220 ROOF INSULATION
07412 NON-STRUCTURAL METAL ROOFING
07413 METAL SIDING (Added)
07600 SHEET METALWORK, GENERAL
07840 FIRESTOPPING
07900 JOINT SEALING

DIVISION 08 - DOORS & WINDOWS

08110 STEEL DOORS AND FRAMES
08120 ALUMINUM DOORS AND FRAMES
08210 WOOD DOORS
08330 OVERHEAD ROLLING DOORS
08520 ALUMINUM AND ENVIRONMENTAL CONTROL ALUMINUM WINDOWS
08710 DOOR HARDWARE
08810 GLASS AND GLAZING

DIVISION 09 - FINISHES

09250 GYPSUM BOARD (Edited)
09310 CERAMIC TILE
09510 ACOUSTICAL CEILINGS
09650 RESILIENT FLOORING
09680 CARPET
09697 WALK-OFF MAT
09900 PAINTS AND COATINGS
09915 COLOR SCHEDULE

DIVISION 10 - SPECIALTIES

10100 VISUAL COMMUNICATIONS SPECIALTIES
10160 TOILET PARTITIONS
10201 METAL WALL AND DOOR LOUVERS
10260 WALL AND CORNER GUARDS
10430 EXTERIOR SIGNAGE
10440 INTERIOR SIGNAGE
10508 METAL WARDROBE LOCKERS AND BENCH SEAT (Added)
10522 FIRE EXTINGUISHERS AND CABINETS
10552 METAL STORAGE SHELVING
10605 WIRE MESH PARTITIONS
10650 OPERABLE PARTITIONS
10800 TOILET ACCESSORIES

DIVISION 11 - EQUIPMENT

11020 SECURITY VAULT DOOR
11401 ELECTRIC KITCHEN EQUIPMENT (OMAR FUNDED)

DIVISION 12 - FURNISHINGS

12320 CABINETS AND COUNTERTOPS
12490 WINDOW TREATMENT

DIVISION 13 - SPECIAL CONSTRUCTION

13100 LIGHTNING PROTECTION SYSTEM
13110 CATHODIC PROTECTION SYSTEM (SACRIFICIAL ANODE)
13720 ELECTRONIC ACCESS CONTROL SYSTEM (Added)
13851 FIRE DETECTION AND ALARM SYSTEM, ADDRESSABLE
13930 WET PIPE SPRINKLER SYSTEM, FIRE PROTECTION

DIVISION 15 - MECHANICAL

15080 THERMAL INSULATION FOR MECHANICAL SYSTEMS
15181 CHILLED AND CONDENSER WATER PIPING AND ACCESSORIES
15182 REFRIGERANT PIPING
15190 GAS PIPING SYSTEMS
15400 PLUMBING, GENERAL PURPOSE
15556 FORCED HOT WATER HEATING SYSTEMS
15565 HEATING SYSTEM; GAS-FIRED HEATERS
15569 WATER AND STEAM HEATING; OIL, GAS OR BOTH; UP TO 20 MBTUH
15620 LIQUID CHILLERS
15700 UNITARY HEATING AND COOLING EQUIPMENT
15895 AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEM
15940 OVERHEAD VEHICLE TAILPIPE EXHAUST REMOVAL SYSTEM(S)
15951 DIRECT DIGITAL CONTROL FOR HVAC
15990 TESTING, ADJUSTING, AND BALANCING OF HVAC SYSTEMS
15995 COMMISSIONING OF HVAC SYSTEMS

DIVISION 16 - ELECTRICAL

16050 BASIC ELECTRICAL MATERIALS AND METHODS
16375 ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND
16403 SWITCHBOARDS AND PANELBOARDS
16415 ELECTRICAL WORK, INTERIOR
16475 TRANSIENT VOLTAGE SURGE SUPPRESSION
16528 EXTERIOR LIGHTING INCLUDING SECURITY AND CCTV APPLICATIONS
16710 PREMISES DISTRIBUTION SYSTEM

-- End of Project Table of Contents --

Amdt. #0002

SECTION 00800

SPECIAL CLAUSES

05/02

PART 1 GENERAL

1.1 REFERENCES - NOT USED

1.2 SUBMITTALS

Government approval/acceptance is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Small Tool Usage Plan;

Labor, Equipment and Material Reports; G, RE,

Quality Control Plan; G, RE,

SD-05 Design Data

Equipment-in-Place List;

Maintenance and Parts Data;

SF1413;

Progress Photographs;

Dirt and Dust Control Plan; G, RE

Construction and Demolition (C&D) Waste Management Plan; G, RE

SD-07 Certificates

Warranties;

Insurance;

DA Form 3337; G, RE

SD-11 Closeout Submittals

As-Built Drawings; G, RE

Mechanical Room Layout; G, RE

1.3 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984) FAR 52.211-10.

2 Jan 96

The Contractor shall be required to commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, prosecute said work diligently, and complete the entire work ready for use not later than 540 calendar days after date of receipt of notice to proceed. The time stated for completion shall include as-built drawings, O&M manuals, operational tests/reports/training/instructions, equipment lists, and final cleanup of the premises.

1.4 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000) FAR 52.211-12.

Oct 00

a. If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$750.00 for each calendar day of delay until the work is completed or accepted.

b. If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

c. At a time before the project is physically complete but is functionally complete to the satisfaction of the Government at its sole discretion may agree to accept transfer of the facility or project provided that the remaining work to be done ("punchlist") is completed no later than 30 days from the date of transfer. In this case the contractor shall pay liquidated damages for punchlist items not completed in the daily amount of \$200 per day commencing after 30 days of project transfer or after date required for project completion (including all extensions), whichever occurs later.

1.5 NOT USED

1.6 NOT USED

1.7 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000) DFARS 252.236-7001

19 Sept 2000

(May 2002)

a. At award, the Government will furnish the Contractor a compact disk containing all technical contract documents. This disk will include a complete set of drawing files and technical specification files which have all amendments incorporated. The disk will contain drawing files in CALS Type 4 format and technical specifications in PDF format.

The CALS files and the PDF files are being provided for the Contractor's use in printing hard copies of contract documents.

In addition, native CADD files and Specsintact files are provided in accordance with "AS-BUILT DOCUMENTS" paragraph for the Contractor's use in developing as-built plans and specifications.

b. The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors which might have been avoided by complying with paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

c. Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

d. The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

TABLE OF DRAWINGS

Drawing Code C-141-12-02

Drawing No.	Title (followed by drawing code if different from that shown above)	Latest Rev. No. & Date
GENERAL		
X1.1	COVER SHEET	
X1.2	DRAWING INDEX	
X1.4	LEGEND SHEET	
X1.5	ABBREVIATIONS	
CIVIL		
C01	DEMOLITION PLAN	
C01A	CONSTRUCTION PHASING PLAN	
C02	LAYOUT PLAN	
C03	ENLARGED LAYOUT PLAN	
C04	GRADE AND DRAIN PLAN	
C05	SEDIMENT AND EROSION CONTROL PLAN	
C06	UTILITY PLAN	
C07	DRAINAGE SCHEDULES	
C07A	ROADWAY PROFILES	
C08	PROFILES	

C09	SEDIMENT AND EROSION CONTROL NOTES
C10	SEDIMENT AND EROSION CONTROL DETAILS
C11	SEDIMENT AND EROSION CONTROL DETAILS
C12	PAVEMENT DETAILS
C13	MISCELLANEOUS DETAILS
C14	MISCELLANEOUS DETAILS
C15	MISCELLANEOUS DETAILS
C16	FENCE DETAILS
C17	FENCE DETAILS
C18	SANITARY SEWER DETAILS
C19	WATER DETAILS
C20	DRAINAGE DETAILS
C21	DRAINAGE DETAILS

SITE UTILITIES

EU01	EXISTING SITE PLAN - ELECTRICAL
EU02	SITE PLAN - ELECTRICAL
EU2.1	ELECTRICAL SITE DETAILS
EU2.2	ELECTRICAL SITE DETAILS
EU2.3	ELECTRICAL SITE DETAILS

LANDSCAPING

L01	COMPOSITE LANDSCAPE LAYOUT PLAN
L02	ENLARGED LANDSCAPE LAYOUT PLAN
L03	ENLARGED LANDSCAPE LAYOUT PLANS
L04	LANDSCAPE PLANTING DETAILS
L05	LANDSCAPE PLANT SCHEDULE

ARCHITECTURAL

A1.1.0	COMPOSITE FLOOR PLAN
A1.1.1	DIMENSIONED FLOOR PLAN
A1.1.2	DIMENSIONED FLOOR PLAN
A1.1.3	TAG NOTED FLOOR PLAN
A1.1.4	TAG NOTED FLOOR PLAN
A2.0	COMPOSITE REFLECTED CEILING PLAN
A2.1.1	REFLECTED CEILING PLAN
A2.1.2	REFLECTED CEILING PLAN
A2.2	CEILING DETAILS
A2.3	COMPOSITE UNISTRUT CEILING PLAN
A2.3.1	UNISTRUT CEILING GRID DETAILS
A3.1	ROOF PLAN
A3.2	ROOF DETAILS
A3.3	ROOF DETAILS
A3.4	ROOF DETAILS
A4.1.0	ELEVATIONS
A4.1.1	ENLARGED ELEVATIONS
A4.1.2	ENLARGED ELEVATIONS
A4.2.1	ENLARGED BUILDING SECTIONS
A4.2.2	ENLARGED BUILDING SECTIONS
A4.2.3	BUILDING SECTIONS
A5.0	WALL SECTION TAG NOTES
A5.1	WALL SECTIONS
A5.2	WALL SECTIONS
A5.3	WALL SECTIONS

A5.4	WALL SECTIONS
A5.5	WALL SECTIONS
A5.6	WALL SECTIONS
A5.7	WALL SECTIONS
A5.8	WALL SECTIONS
A5.9	WALL SECTIONS
A5.10	WALL SECTIONS
A6.1	DOOR SCHEDULE
A6.2	DOOR DETAILS
A6.3	DOOR DETAILS
A6.4	DOOR DETAILS
A6.5	DOOR DETAILS
A7.1	WINDOW TYPES
A7.2	WINDOW DETAILS
A7.3	LOUVER ELEVATIONS AND WINDOW DETAILS
A7.4	LOUVER TYPES AND DETAILS
A8.1.1	ENLARGED RESTROOM PLAN
A8.1.2	RESTROOM ELEVATIONS
A8.1.3	RESTROOM ELEVATIONS
A8.1.4	RESTROOM ELEVATIONS
A8.1.5	RESTROOM ELEVATIONS
A8.1.6	RESTROOM PLAN AND ELEVATION
A8.2.1	ENLARGED FLOOR PLAN
A8.2.2	ELEVATIONS
A9.1	WALL TYPES
A9.2	COLUMN DETAILS
A9.3	COLUMN DETAILS
A9.4	COLUMN DETAILS
A9.5	COLUMN DETAILS
A9.6	COLUMN DETAILS
A9.7	CASEWORK DETAILS
A9.8	MAILROOM DETAILS
A9.9	NOT USED
A9.10	WALL AND MISCELLANEOUS DETAILS
A9.11	BRICK WORK DETAILS
A11.1	UNIT STORAGE CAGE DETAILS
A11.2	UNIT STORAGE CAGE DETAILS
A11.3	UNIT STORAGE CAGE DETAILS
A11.4	UNIT STORAGE CAGE DETAILS
A11.5	ENLARGED VAULT PLAN AND DETAILS
A12.1	FINISH SCHEDULE
A12.2	ENLARGED FLOOR FINISH PLAN
A12.3	ENLARGED FLOOR FINISH PLAN
A13.0	SIGNAGE SCHEDULE
A13.0.1	SIGNAGE DETAILS
A13.1	SIGNAGE PLAN
A13.2	SIGNAGE PLAN

INTERIOR

1I1.1	COMPOSITE FURNITURE FLOOR PLAN
1I1.1.1	ENLARGED FURNITURE FLOOR PLAN
1I1.1.2	ENLARGED FURNITURE FLOOR PLAN
1I1.2	COMPOSITE COMPONENT FLOOR PLAN
1I1.2.1	ENLARGED COMPONENT FLOOR PLAN
1I1.3	COMPOSITE PANEL PLAN
1I1.3.1	ENLARGED PANEL PLAN

1I1.3.2 PANEL TYPICALS

STRUCTURAL

1S1.1	GENERAL NOTES
1S2.1.1	PARTIAL FOUNDATION AND SLAB PLAN
1S2.1.2	PARTIAL FOUNDATION AND SLAB PLAN
1S2.2.1	PARTIAL ROOF FRAMING PLAN
1S2.2.2	PARTIAL ROOF FRAMING PLAN
1S3.1.1	COLUMN SCHEDULE
1S3.1.2	COLUMN SCHEDULE
1S3.2	FOUNDATION SECTIONS
1S3.3	FOUNDATION SECTIONS
1S3.4	FOUNDATION SECTIONS
1S3.5	FOUNDATION SECTIONS
1S4.1	FRAMING SECTIONS
1S4.2	FRAMING SECTIONS
1S4.3	FRAMING SECTIONS
1S4.4	FRAMING SECTIONS
1S4.5	FRAMING SECTIONS
1S5.1	VAULT FRAMING PLAN
1S5.2	VAULT FRAMING SECTIONS
1S6.1	TYPICAL MASONRY DETAILS
1S6.2	MASONRY WALL LAYOUT PLAN
1S6.3	MASONRY ELEVATIONS
1S6.4	MASONRY ELEVATIONS
1S6.5	MASONRY ELEVATIONS
1S6.6	MASONRY ELEVATIONS

MECHANICAL

1ML01	MECHANICAL LEGEND
1H1.1.1	PARTIAL FLOOR PLAN - HVAC
1H1.1.2	PARTIAL FLOOR PLAN - HVAC
1H1.2.1	PARTIAL FLOOR PLAN - HVAC PIPING
1H1.2.2	PARTIAL FLOOR PLAN - HVAC PIPING
1H3.1	HVAC - ENLARGED MECHANICAL ROOM PLAN
1H4.1	HVAC DETAILS
1H4.2	HVAC DETAILS
1H4.3	HVAC DETAILS
1H4.4	HVAC DETAILS
1H4.5	HVAC DETAILS
1H4.6	HVAC DETAILS
1H5.1	HVAC SCHEDULES
1H5.2	HVAC SCHEDULES
1H5.2	HVAC SCHEDULES
1H6.1.1	CONTROLS - VAV SYSTEM, AHU-1
1H6.1.2	CONTROLS - VAV SYSTEM, AHU-1
1H6.1.3	CONTROLS - HV & IRH
1H6.1.4	CONTROLS - AHU-2
1H6.1.5	CONTROLS - HOT WATER SYSTEM
1H6.1.6	CONTROLS - CHILLED WATER SYSTEM
1H6.1.7	CONTROLS

PLUMBING

1P1.1.1	PARTIAL FLOOR PLAN - PLUMBING
---------	-------------------------------

1P1.1.2	PARTIAL FLOOR PLAN - PLUMBING
1P2.1	ROOF PLAN - PLUMBING
1P3.1	ENLARGED FLOOR PLAN - PLUMBING
1P3.2	ENLARGED FLOOR PLAN - PLUMBING
1P4.1	SANITARY WASTE AND VENT RISER
1P4.2	DOMESTIC WATER RISER
1P5.1	PLUMBING DETAILS
1P5.2	PLUMBING DETAILS
1P6.1	PLUMBING SCHEDULES

LIFE SAFETY

LS0.0	LIFE SAFETY - CODE REVIEW
LS1.0	COMPOSITE LIFE SAFETY FLOOR PLAN
LS1.1	ENLARGED LIFE SAFETY FLOOR PLAN
LS1.2	ENLARGED LIFE SAFETY FLOOR PLAN

FIRE PROTECTION

1FP1.1	FLOOR PLAN - FIRE SUPPRESSION
--------	-------------------------------

ELECTRICAL

E0.1	ELECTRICAL LEGEND
1E1.1.1	PARTIAL FIRST FLOOR PLAN - LIGHTING
1E1.1.2	PARTIAL FIRST FLOOR PLAN - LIGHTING
1E2.1.1	PARTIAL FIRST FLOOR PLAN - POWER
1E2.1.2	PARTIAL FIRST FLOOR PLAN - POWER
1E2.1.3	ENLARGED FIRST FLOOR PLAN - POWER
1E3.1.1	PARTIAL FIRST FLOOR PLAN - SIGNAL
1E3.1.2	PARTIAL FIRST FLOOR PLAN - SIGNAL
1E3.1.3	ENLARGED FIRST FLOOR PLAN - SIGNAL
1E4.1	LIGHTNING PROTECTION PLAN
1E5.1	ELECTRICAL DETAILS
1E5.2	ELECTRICAL DETAILS
1E5.3	ELECTRICAL DETAILS
1E5.4	ELECTRICAL DETAILS
1E6.1	ELECTRICAL DETAILS
1E6.2	ELECTRICAL DETAILS
1E6.3	ELECTRICAL DETAILS
1E6.4	ELECTRICAL DETAILS
1E7.1	ELECTRICAL ONE-LINE
1E7.2	COMMUNICATION RISER
1E7.3	FIRE ALARM RISER
1E7.4	COMMUNICATION RISER
1E8.1	ELECTRICAL DETAILS
1E8.2	ELECTRICAL DETAILS
1E8.3	ELECTRICAL DETAILS

1.8 AS-BUILT DOCUMENTS

3 November 1998 (Version 1)

1.8.1 General.

This section covers the completion of **as-built drawings** and as-built specifications, as a requirement of the contract. The Contractor will maintain as-built drawings during the construction period and will submit final record drawings at the completion of individual facilities. The

Government will provide to the Contractor the CAD (Computer-Aided Drafting) files consisting of compact (computer) disks of the drawing files in the appropriate CAD format (i.e. "Microstation",) for the project. The Contractor is required to make prints or mylars from the CAD files and continuously maintain drawings to show current as-built conditions for the duration of the construction. Except for updates as indicated below, the Contractor may maintain as-built drawings by marking up drawings by hand or by CAD methods. Scanned drawings will not be acceptable.

1.8.1.1 As-Built Drawings

An as-built drawing is a construction drawing revised to reflect the final as-built conditions of the project because of modifications, changes, corrections to the project design required during construction, submittals and extensions of design. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings that are revised to be used for the "RECORD DRAWING AS-BUILTS".

1.8.1.2 As-Built Specifications:

As-built specifications are the construction specifications as modified by changes (contract mods, ACO approved variations from the construction specifications which did not result in contract mods).

1.8.2 Maintenance of Working As-Built Drawings

The Contractor shall revise 2 sets of paper prints by red-line process to show the as-built conditions during the prosecution of the project. These as-built marked prints shall be kept current on a weekly basis and available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. Changes must be reflected on all sheets affected by the change. The working as-built marked prints will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor before submission of each monthly pay estimate. The working as-built drawings shall show the following information, but not be limited thereto:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Additional as-built information that exceeds the detail shown on the Contract Drawings. These as-built conditions include those that reflect structural details, fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations and layouts, equipment, sizes, mechanical room layouts and other extensions of design, that were not shown in the original contract documents because the exact details were not known until after the time of approved shop drawings. It is recognized that these shop drawing submittals (revised showing as-built conditions) will serve as the as-built record without actual incorporation into the contract drawings. All such shop drawing submittals must include, along with the hard copy of the drawings, CADD files of the shop drawings in a commercially available digital format, compatible with the Using Agency System (see paragraph "Computer Aided Design and Drafting (CADD) Drawings"). All shop drawings which require submittal of CADD files are indicated in the submittal register located at the end of this section.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.

i. If fire protection and fire detection related systems are included in this project, the as-built drawings will include detailed information for all aspects of the systems including wiring, piping, and equipment drawings.

1.8.3 Retainage

The Contractor shall include in his schedule of values, the cost of as-built document preparation. This value shall include all requirements of this clause:

- Maintenance of working as-built drawings
- Maintenance of working as-built specifications
- Conversion of submittals and other miscellaneous documents into electronic files
- Creation of "Record As-Built Drawings & Specifications" (either by CADD dwgs and Specsintact specifications or by manually prepared documents as specified herein.)
- Creation of a CD containing all required files.
- Submittal of as-built documents in the required media forms and numbers of copies

If the Contractor fails to maintain the working as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of bringing the as-built documents up to date. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of working as-built documents.

1.8.4 50% As-Built Update

At the 50% point in construction of this project (as determined by progress payments) the Contractor will update the CAD files of the project drawings in the appropriate CAD program to show as-built conditions as above, and submit an updated computer disk and one set of prints to the Contracting Officer for approval. If mylars only are provided to the Contractor, they shall be updated at this stage using hand-drafting as specified herein, and the Contractor shall submit one set of prints to the Contracting Officer for approval. Any required corrections will be made by the Contractor before payment will be approved for this item. The Contractor must use the updated CAD record or mylar drawings to produce required prints.

1.8.5 Preliminary Record Drawing Submittal

At least thirty calendar (30) days before the anticipated date of final acceptance inspection the Contractor shall deliver two copies of progress prints showing final as-built conditions to the Contracting Officer for review and approval. These prints shall correctly show all the features of the project as it has been constructed, adding such additional drawings as may be necessary. They shall be printed from the CAD files updated in the appropriate CAD program, or from updated mylars if mylars only were provided to the Contractor. Within ten days, the Government will provide the Contractor one set of prints indicating required corrections to the preliminary submittal. Contractor will correct and resubmit within 5 days. Any required subsequent review and resubmission periods will each be accomplished within 5 days. Upon Government approval of the preliminary submittal, the Contractor will prepare final record drawings.

1.8.6 Markings and Indicators

Changes shall be annotated with a triangle and sequential number at the following locations:

- a. bottom of the revised detail
- b. right hand and bottom border aligned with the revised detail
- c. the revision block of the title block.

Separate markings shall be made for each modification negotiated into the contract.

1.8.7 Preparation of Final As-Built Specifications

Final as-built specifications shall be prepared in Specsintact and the electronic files shall be placed on the same CD-ROM that contains the as-built CADD files, if applicable. The front sheet of the specifications shall contain an identification which clearly labels the specifications as representing as-built conditions and shall be dated with the date of the submittal.

1.8.8 Preparation of Other As-Built Documents

All other non-electronic documents which may include design analysis, catalog cuts, certification documents that are not available in native electronic format shall be scanned and provided in an organized manner in Adobe .pdf format.

1.8.9 Submittal of Final As-Built Documents

At the time of Beneficial Occupancy of the project, Final As-Built documents shall be provided to the Contracting Officer in the formats described in paragraph "Computer Aided Design and Drafting (CADD)". In the appropriate CAD program each drawing shall be marked with the words "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in font which will print at least 3/16" high. All revisions to the original contract drawings will be dated in the revision block. All prints and mylars must be reproduced from the updated CAD files. If mylars only were provided to the Contractor, they shall be hand-lettered or stamped as indicated above, and revisions shown in revision block. A minimum of 5 calendar days before the anticipated date of final acceptance inspection of the project the Contractor shall deliver to the Contracting Officer.

Three (3) CD's (ROM) of CAD files of Record Drawings.
One (1) set of Mylar Record Drawings
One (1) copy of prints of Record Drawings

Failure to make an acceptable submission of Record Drawings will delay the Final Acceptance Inspection for the project and shall be cause for withholding any payment due the Contractor under this contract.

1.8.10 Partial Occupancy

For projects where portions of construction are to be occupied or activated before overall project completion, including portions of utility systems, as-built drawings for those portions of the facility being occupied or activated shall be supplied at the time the facility is occupied or activated. This same as-built information previously furnished must also be shown on the final set of as-built drawings at project completion.

1.8.11 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality to that of the originals. Line work, line weights, lettering, layering conventions, and symbols shall be the same as the original line work, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same guidance specified for original drawings. Three dimensional (3D) elements shall be placed in files in their proper locations when using 3D files with spatially correct elements. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD media files supplied by the Government. All work by the Contractor shall be done on files in the format in which they are provided. Translation of files to a different format, for the purpose of As-Built production, and then retranslating back to the format originally provided, will not be acceptable. These contract drawings will already be compatible with the Using Agency's system when received by the Contractor. The Using Agency uses Microstation J CADD software system. The media files will be supplied by the Contractor to the COR on ISO 9660 Format CD-ROM. The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final

as-built drawings for accuracy and the Contractor shall make all required corrections, changes, additions, and deletions.

a. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 5 mm high. All other contract drawings shall be marked either "AS-BUILT" drawing denoting no revisions on the sheet or "REVISED AS-BUILT" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

(1) at the detail, placed in the design file where the revised graphics are located and the revision was placed

(2) right hand and bottom border in the drawing sheet file
revision block of the title block in the drawing sheet file.

c. After receipt by the Contractor of the approved working as-built prints and the original contract drawings files the Contractor shall, within 60 calendar days, make the final as-built submittal. This submittal shall consist of 2 sets of completed final as-built drawings on separate media consisting of both CADD files (compatible with the Using Agency's system on electronic storage media identical to that supplied by the Government) and Mylars; 2 blue line prints of these drawings and the return of the approved marked working as-built prints. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with its CADD system. All paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final as-built drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.8.12 Property

All paper prints, reproducible drawings and CAD files will become property of the Government upon final approval. Approval and acceptance of the final record drawings shall be accomplished before final payment is made to the Contractor

1.8.13 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs in conjunction therewith, shall be considered a subsidiary obligation of the Contractor.

1.9 NOT USED

1.10 EQUIPMENT DATA

15 June 1990

Real Property Equipment.

Contractor shall be required to make an **Equipment-in-Place list** of all installed equipment furnished under this contract. This list shall include all information usually listed on manufacturer's name plate. The form is part of SPECIAL CLAUSES and is included following the SPECIAL CLAUSES, so to positively identify the piece of property. The list shall also include the cost of each piece of installed property F.O.B. construction site. For each of the items which is specified herein to be guaranteed for a specified period from the date of acceptance thereof, the following information shall be given: The name, serial and model number address of equipment supplier, or manufacturer originating the guaranteed item. The Contractor's guarantee to the Government of these items will not be limited by the terms of any manufacturer's guarantee to the Contractor. Furnish the list as one (1) reproducible and three (3) copies to the Contracting Officer thirty (30) calendar days before completion of any segment of the contract work which has an incremental completion date.

Maintenance and Parts Data.

The Contractor will be required to furnish a brochure, catalog cut, parts list, manufacturer's data sheet or other publication which will show detailed parts data on all other equipment subject to repair and maintenance procedures not otherwise required in Operations and Maintenance Manuals specified elsewhere in this contract. Distribution of directives shall follow the same requirements as listed in paragraph above.

1.11 PHYSICAL DATA (APR 1984) FAR 52.236-4.

2 January 1996

Data and information furnished or referred to below is furnished for the Contractor's information. The Government will not be responsible for any interpretation or conclusion drawn from the data or information by the Contractor.

Physical Conditions indicated on the drawings and in the specifications are the result of site investigations by surveys, borings, test pits and probings.

Weather Conditions. The Contractor shall make his own investigations as to weather conditions at the site. Data may be obtained from various National Weather Service offices located generally at airports of principal cities, the nearest to this project being: Syracuse, New York

Historical data for all areas may be obtained from:

U. S. Department of Commerce
National Climatic Center
Federal Building
Asheville, N. C. 28801

Transportation Facilities. Roads and railroads in the general area are shown on the drawings. Access ways shall be investigated by the Contractor to satisfy himself as to their existence and allowable use.

1.12 UTILITIES (APR 1984) FAR 52.236-14 (PARA. 1.12.A.(1) & 1.12.A.(2) ONLY).

15 June 1990

a. Availability and Use of Utility Services

(1) The Government will make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(2) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

b. Alterations to Utilities

Where changes and relocations of utility lines are noted to be performed by others, the Contractor shall give the Contracting Officer at least thirty (30) days written notice in advance of the time that the change or relocation is required. In the event that, after the expiration of thirty (30) days after the receipt of such notice by the Contracting Officer, such utility lines have not been changed or relocated and delay is occasioned to the completion of the work under contract, the Contractor will be entitled to a time extension equal to the period of time lost by the Contractor after the expiration of said thirty (30) day period. Any modification to existing or relocated lines required as a result of the Contractor's method of operation shall be made wholly at the Contractor's expense and no additional time will be allowed for delays incurred by such modifications.

1.13 NOT USED

1.14 LAYOUT OF WORK (APR 1984) FAR 52.236-17
15 June 1990 (Version 1)

The Contractor shall lay out its work from Government-established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

1.15 NOT USED

20 Feb 2002

1.16 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984) FAR 52.236-1

15 June 1990

Version 1

The Contractor shall perform on the site, and with its own organization, work equivalent to at least 20 percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

a. For purposes of this paragraph "WORK BY THE CONTRACTOR" is defined as prime Contractor direct contract labor (including testing and layout personnel), exclusive of other general condition or field overhead personnel, material, equipment, or subcontractors. The "TOTAL AMOUNT OF WORK" is defined as total direct contract labor (including testing and layout personnel), exclusive of other general condition or field overhead personnel, material, or equipment.

b. Within 7 days after the award of any subcontract, either by himself or a subcontractor, the Contractor shall deliver to the Contracting Officer a completed SF 1413, "Statement and Acknowledgment." The form shall include the subcontractor's acknowledgement of the inclusion in his subcontract of the clauses of this contract entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act-Overtime Compensation," "Apprentices and Trainees," "Compliance with Copeland Regulations," "Withholding of Funds," "Subcontracts," "Contract Termination-Debarment," and "Payrolls and Basic Records." Nothing contained in this contract shall create any contractual relation between the subcontractor and the Government.

1.17 NOT USED**1.18 IDENTIFICATION OF EMPLOYEES.**

15 June 1990

a. The Contractor shall be responsible for furnishing an identification badge/card to each employee prior to the employees work on-site, and for requiring each employee engaged on the work to display identification as may be approved and directed by the Contracting Officer. All prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of the employee. When required by the Contracting Officer, the Contractor shall obtain and submit fingerprints of all persons employed or to be employed on the project.

1.19 NOT USED**1.20 WARRANTY OF CONSTRUCTION (MAR 1994) ALTERNATE 1 (APR 1984) FAR 52.246-21I.**

15 January 1998

a. General Requirements

(1) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph 1.20.a.(9) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(2) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(a) As a part of the one year warranty inspection, the Contracting Officer will conduct an infrared roof survey on any project involving a membrane roofing system. This survey will be conducted in accordance with ASTM C1153-90, "Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging". In accordance with paragraph 1.20.a.(3) and 1.20.a.(4) below, the Contractor shall be required to replace all damaged materials and to locate and repair sources of moisture penetration.

(3) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(a) The Contractor's failure to conform to contract requirements; or

(b) Any defect of equipment, material, workmanship, or design furnished.

(4) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(5) The Contracting Officer shall notify the Contractor, in writing, (see para. 1.20.b.(3) and 1.20.e) within a reasonable time after the discovery of any failure, defect, or damage.

(6) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, (see para. 1.20.5) the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(7) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(a) Obtain all warranties that would be given in normal commercial practice;

(b) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(c) Provide names, addresses, and telephone numbers of all subcontractors, equipment suppliers, or manufacturers with specific designation of their area of responsibilities if they are to be contacted directly on warranty corrections; and

(d) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(8) In the event the Contractor's warranty under paragraph of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(9) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(10) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(11) Defects in design or manufacture of equipment specified by the Government on a "brand name and model" basis, shall not be included in this warranty. In this event, the Contractor shall require any subcontractors, manufacturers, or suppliers thereof to execute their warranties, in writing, directly to the Government.

b. Performance Bond

(1) The Contractor's Performance Bond will remain effective throughout the construction warranty period and warranty extensions.

(2) In the event the Contractor or his designated representative(s) fails to commence and diligently pursue any work required under this clause, and in a manner pursuant to the requirements thereof, the Contracting Officer shall have a right to demand that said work be performed under the Performance Bond by making written notice on the surety. If the surety fails or refuses to perform the obligation it assumed under the Performance Bond, the Contracting Officer shall have the work performed by others, and after completion of the work, may make demand for reimbursement of any or all expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

(3) Following oral or written notification of required warranty repair work, the Contractor will respond as dictated by para. 1.20.e. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor as outlined in the paragraph 1.20.b.(2) above.

c. Pre-Warranty Conference

Prior to contract completion and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this clause. Communication procedures for Contractor notification of warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor will furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue warranty work action on behalf of the Contractor. This point of contact

will be located within the local service area of the warranted construction, will be continuously available, and will be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of his responsibilities in connection with other portions of this provision.

d. Equipment Warranty Identification Tags

(1) The Contractor shall provide warranty identification tags on all Contractor and Government furnished equipment which he has installed.

(a) The tags shall be similar in format and size to the exhibits provided by this specification, they shall be suitable for interior and exterior locations, resistant to solvents, abrasion, and to fading caused by sunlight, precipitation, etc. These tags shall have a permanent pressure-sensitive adhesive back, and they shall be installed in a position that is easily (or most easily) noticeable. Contractor furnished equipment that has differing warranties on its components will have each component tagged.

(b) Sample tags shall be submitted for Government review and approval. These tags shall be filled out representative of how the Contractor will complete all other tags.

(c) Tags for Warranted Equipment: The tag for this equipment shall be similar to the following. Exact format and size will be as approved.

EQUIPMENT WARRANTY CONTRACTOR FURNISHED EQUIPMENT	
MFG	MODEL NO.
SERIAL NO.	
CONTRACT NO.	
CONTRACTOR NAME	
CONTRACTOR WARRANTY EXPIRES	
MFG WARRANTY(IES) EXPIRE	

EQUIPMENT WARRANTY GOVERNMENT FURNISHED EQUIPMENT	
MFG	MODEL NO.
SERIAL NO.	
CONTRACT NO.	
DATE EQUIP PLACED IN SERVICE	

MFG WARRANTY(IES) EXPIRE

(d) If the manufacturer's name (MFG), model number and serial number are on the manufacturer's equipment data plate and this data plate is easily found and fully legible, this information need not be duplicated on the equipment warranty tag. The Contractor warranty expires (warranty expiration date) and the final manufacturer's warranty expiration date will be determined as specified by para. 1.20.1.

(2) Execution. The Contractor will complete the required information on each tag and install these tags on the equipment by the time of and as a condition of final acceptance of the equipment.

(3) Payment. The work outlined above is a subsidiary portion of the contract work, and has a value to the Government approximating 5% of the value of the Contractor furnished equipment. The Contractor will assign a value of that amount in the breakdown for progress payments mentioned in the Contract Clause: PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS.

(4) Equipment Warranty Tag Replacement. As stated in para. 1.20.1.4, the Contractor's warranty with respect to work repaired or replaced shall run for one year from the date of repair or replacement. Such activity shall include an updated warranty identification tag on the repaired or replaced equipment. The tag shall be furnished and installed by the Contractor, and shall be identical to the original tag, except that the Contractor's warranty expiration date will be one year from the date of acceptance of the repair or replacement.

e. Contractor's Response to Warranty Service Requirements. Following oral or written notification by the Contracting Officer or an authorized representative of the installation designated in writing by the Contracting Officer, the Contractor shall respond to warranty service requirements in accordance with the "Warranty Service Priority List" and the three categories of priorities listed below.

First Priority Code 1 Perform on site inspection to evaluate situation, determine course of action, initiate work within 24 hours and work continuously to completion or relief.

Second Priority Code 2 Perform on site inspection to evaluate situation, determine course of action, initiate work within 48 hours and work continuously to completion or relief.

Third Priority Code 3 All other work to be initiated within 5 work days and work continuously to completion or relief.

The "Warranty Service Priority List" is as follows:

Code 1 Air Conditioning System
 a. Buildings with computer equipment.

Code 2 Air Conditioning Systems
 a. Air conditioning leak in part of building, if causing damage.
 b. Admin buildings with ADP equipment not on priority list.

- Code 1 Doors
 - a. Overhead doors not operational.

- Code 1 Electrical
 - a. Power failure (entire area or any building operational after 1600 hours).
 - b. Security lights.

- Code 2 Electrical
 - a. Power failure (no power to a room or part of building).
 - b. Receptacle and lights.
 - c. Fire alarm systems.

- Code 1 Gas
 - a. Leaks and breaks.

- Code 1 Heat
 - a. Area power failure affecting heat.

- Code 2 Intrusion Detection Systems
 - Systems other than those listed under Code 1.

- Code 2 Plumbing
 - a. Flush valves.
 - b. Fixture drain, supply line commode, or water pipe leaking.
 - c. Commode leaking at base.

- Code 1 Roof Leaks
 - Temporary repairs will be made where major damage to property is occurring.

- Code 2 Roof Leaks
 - Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

- Code 2 Water (Exterior)
 - No water to facility.

- Code 2 Water, Hot
 - No hot water in portion of building listed under Code 1 (items a through c).

- Code 1 Sprinkler System
 - All sprinkler systems, valves, manholes, deluge systems, and air systems to sprinklers.

(1) Should parts be required to complete the work and the parts are not immediately available, the Contractor shall have a maximum of 12 hours after arrival at the job site to provide the Contracting Officer or an authorized representative of the installation designated in writing by the Contracting Officer, with firm written proposals for emergency alternatives and temporary repairs for Government participation with the Contractor to provide emergency relief until the required parts are available on site for the Contractor to perform permanent warranty repair. The Contractors

proposals shall include a firm date and time that the required parts shall be available on site to complete the permanent warranty repair. The Contracting Officer or an authorized representative of the installation designated in writing by the Contracting Officer, will evaluate the proposed alternatives and negotiate the alternative considered to be in the best interest of the Government to reduce the impact of the emergency condition. Alternatives considered by the Contracting Officer or an authorized representative of the installation designated in writing by the Contracting Officer will include the alternative for the Contractor to "Do Nothing" while waiting until the required parts are available to perform permanent warranty repair. Negotiating a proposal which will require Government participation and the expenditure of Government funds shall constitute a separate procurement action by the using service.

f. Posting of Instructions:

In addition to any posting of operating procedures as may be required elsewhere in this contract, any equipment or system for which proper operation or maintenance is critical in order to preserve warranties, prevent damage, or for reasons of safety shall have proper operating procedures and a Summarized Schedule of Maintenance Instructions posted near the equipment, system or near the operating point. The summarized schedule of Maintenance Instructions shall be inclusive and specific regarding all system components, indicate frequency of maintenance of each maintenance for each maintenance item, and briefly describe each maintenance procedure and cross-reference the volume and page number of the O&M Manual that details the maintenance procedure. Training shall include review of the Summarized Schedule of Maintenance Instructions and O & M Manual cross-references. Instructions shall be protected by 1/16 inch thick plastic sheet. As a minimum such equipment or system shall include:

- Electrical Substations
- Transformers
- Electrical Generators
- Major HVAC System components including chillers, air-handlers, fans, etc.
- HVAC Control Panel
- Boilers
- Air Compressors

g. Warranty Plan:

At least 30 days before the planned warranty meeting, the contractor shall submit a warranty plan for Government approval per section "Submittals". The Warranty Plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The plan shall be signed by a principal of the contractor. Upon acceptance it shall be signed by a Government Representative. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. As a minimum, the plan shall indicate:

- (1) Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers

within the organizations of the contractor's, subcontractors or suppliers involved.

(2) Listing and status of O&M manuals and As-Built drawings, and expected delivery dates.

(3) Listing and status of all training to be provided to Government personnel, whether specified by contract or required by manufacturers.

(4) Listing and status of delivery of all Certificates or Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

(5) A list for each warranted equipment, item, feature of construction or system indicating:

Name of item

Model and serial numbers.

Location where installed.

Names of manufacturers or, suppliers and phone numbers

Names, addresses, and telephone numbers of sources of spare parts

Warranties and terms of warranty. This shall include one-year overall warranty of construction as required by ref. 1.a. Clearly indicate which items have extended warranties.

Cross-reference to warranty certificates as applicable.

Starting point and duration of warranty period.

Summary of maintenance procedures required to continue the warranty in force.

Cross-reference to specific pertinent Operation and Maintenance Manuals.

Organization, names and phone numbers of persons to call for warranty service.

Typical response time and repair time expected for various warranted equipment.

(6) The contractor's plans for attendance at the Four and Nine month post-construction warranty inspections conducted by the Government.

(7) Procedures and status of tagging of all equipment covered by extended warranties.

(8) Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.21 NOT USED

1.22 NOT USED

1.23 NOT USED

1.24 IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY (APR 1984) FAR 52.245-3.
2 January 1991

a. The Government will furnish to the Contractor the property identified in the Schedule to be incorporated or installed into the work or used in performing the contract. The listed property will be furnished at the place specified below. When the property is delivered, the Contractor shall verify its quantity and condition and acknowledge receipt in writing to the Contracting Officer. The Contractor shall also report in writing to the Contracting Officer within 24 hours of delivery any damage to or shortage of the property as received. All such property shall be installed or incorporated into the work at the expense of the Contractor, unless otherwise indicated in this contract.

Location of GFP:

f.o.b. truck at the project site.

b. The Contractor is required to accept delivery, pay any demurrage or detention charges, and unload and transport the property to the jobsite at its own expense.

c. Each item of property to be furnished under this clause shall be identified in the Schedule by quantity, item, and description.

Quantity	Item	Description
1	Plaque	Minute Man

1.25 NOT USED

1.26 PROJECT SIGN
1 August 1996

Version 2 General. The Contractor shall furnish and erect at the location directed one project sign.

Exact placement location will be designated by the Contracting Officer. The panel sizes and graphic formats have been standardized for visual consistency throughout all Corps operations.

Panels are fabricated using HDO plywood with dimensional lumber uprights and bracing.

All legends are to be painted in the sizes and styles as specified by the graphic formats shown at the end of this section. The signs (including back and edges), posts and braces shall be given two coats of Benjamin Moore No. 120-60 poly-silicone enamel or approved equal before lettering. The 4' x 4' right section of the project sign shall be white with black lettering. The upper 2' x 2' left section of the project sign shall be communication red (CR) with white lettering. The lower 2' x 2' left section of the project sign shall be red with white lettering (matching local sponsor's colors). Paint colors shall be as follow:

Black - Federal Standard 595a Color Number 27038
White - Federal Standard 595a Color Number 27875
Red - PANTONE 032

An example of the sign including mounting and fabrication details are also provided at the end of this section.

Name of the project shall be as follows:

USARC/OMS/Unheated Storage
Fort Ontario, Oswego, NY

Name of the designer shall be as follows:

The Mason & Hanger Group Inc
300 West Vine Street, Suite 1300
Lexington, KY 40507

Name of local sponsor shall be as follows:

CO. B, 479th EN BN 77th RSC

Erection and Maintenance.

a. The signs shall be erected at the designated location(s). Signs shall be plumb and backfill of post holes shall be well tamped to properly support the signs in position throughout the life of the contract. The signs shall be maintained in good condition until completion of the contract, shall remain the property of the Contractor, and shall be removed from the site upon completion of work under the contract.

b. The Corps of Engineers logo and the local sponsor's logo will be provided by the Contracting Officer.

Payment. No separate payment will be made for furnishing and erecting the project signs as specified and costs thereof shall be considered a subsidiary obligation of the Contractor.

1.27 NOT USED

1.28 WAGE RATES

1 February 1995

The decision of the Secretary of Labor, covering rates of wages, including fringe benefits to be paid laborers and mechanics performing work under this contract, is attached hereto. The payment for all classes of laborers and mechanics actually employed to perform work under the contract will be specified in the following contract clauses: DAVIS-BACON ACT, CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, and THE COPELAND ACT.

***2 Wage decision included is: NY020041**

The building wage rates apply to construction of an Army Reserve Training Center (ARC), an Organizational Maintenance Shop (OMS), and an unheated storage building for an Engineering Battalion Company. The Heavy/Highway wage rates apply to any work located outside the exterior wall of the buildings. *2

1.29 NOT USED

1.30 INTERFERENCE WITH TRAFFIC AND PUBLIC AND PRIVATE PROPERTY.

15 June 1990

a. The Contractor at all times shall dispose his plant and conduct the work in such manner as to cause as little interference as possible with private and public travel. Damage (other than that resulting from normal wear and tear) to roads, shall be repaired to as good a condition as they were prior to the beginning of work and to the satisfaction of the Contracting Officer.

b. The Contractor shall provide and maintain as may be required by the State of New York, Department of Transportation, proper barricades, fences, danger signals and lights, provide a sufficient number of watchmen, and take such other precautions as may be necessary to protect life, property and structures, and shall be liable for and hold the Government free and harmless from all damages occasioned in any way by his act or neglect, or that of his agents, employees, or workmen.

1.31 SEQUENCE OF WORK.

15 September 1995

Existing Reserve Center Building and access to such must be maintained during construction of new facility.

1.32 FIELD OFFICE

a. The Contractor shall furnish at the job site, prior to the start of work, a 20 feet by 15 feet field office for the use by Government representatives for the duration of the contract. Field offices and contents remain the property of the contractor. The exact location will be designated by the Contracting Officer. The building shall be well constructed and properly ventilated and shall contain a closet and door and windows which shall be capable of being locked, four (4) new ergonomically designed chairs, one

(1) plan rack and drawing board, two (2) desks, and one (1) two-drawer filing cabinet. The Contractor shall also provide adequate electric lighting, minimum 6 duplex electrical receptacles, drinking water, heat, plumbed toilet facilities, air conditioning, janitorial services and maintenance services. In addition the contractor shall make arrangements and pay connection fees and monthly usage for electrical and 3-line telephone service (fax, modem and voice). The field office shall be removed from the project site when and as directed by the Contracting Officer. In addition to the above, the Contractor shall provide the following computer and office equipment, and other items for use by the Government during the contract:

1.32.1 Hardware

a. Personal Computer

Pentium IV processor running at 1.8 GHz or better

High speed cache memory controller with at least 512 KB L2 PIPELINE BURST CACHE

400 MHz System Bus

(1) 3/5" 1.44 MB diskette drives with hard drive controller

Hard drive controller with 40 GB hard drive with access time of 9 ms

Sound card WI SPEAKERS

Enhanced 101 keyboard

6 outlet surge protector

17" flat panel SVGA high resolution COLOR monitor or better with refresh rate 75 Hz or better and 8 Mb Color Graphics

3 Button ergonomic mouse and mouse pad

Modem V.90 or V.92 56 KB Baud (U.S. Robotics or equal)

Internal DVD ROM 16X and CD-RW (Read/Write) Drive 24X

Microsoft Windows 2000 Professional Operating System

Microsoft Office 2000 Professional Suite

Lotus Smart Suite and Adobe Acrobat Reader

Part #050-0300 Description: Argus 300 (card reader and PCI adapter package) for CEFMS: phone # (256) 722-8585 (Mr. Wayne Wright)

Norton Antivirus Software 2002 and periodic updates.

1.32.2 Printer

Hewlett Packard Laserjet 4100 Series Printer or equivalent Laserjet Printer.

1.32.3 Copier

Plain paper, desktop, autofeed, monochrome, minimum 10 copies per minute.

1.32.4 Fax Machine

Monochrome, minimum feed (3) - 8 1/2 x 11 inch pages per minute. Capable of receiving on plain white bond paper.

1.32.5 Telephone

2-line phone compatible with phone service.

1.32.6 Telephone Answering Machine

Standard, compatible with standard telephone line and local service.

1.32.7 First Aid Kit

As a minimum, the kit will include antiseptic kit, eyewash solution, bandages, insect sting medication, aspirin and acetaminophen, and coldpack.

1.32.8 Fire Extinguisher

Type as required for a trailer the same size as office.

- a. The Contractor, at its option, may furnish a trailer not less than 20 feet long. The trailer shall be approved by the Contracting Officer and shall have the facilities and be serviced as specified above for the field office.
- b. No separate payment will be made for providing the above items and all costs in connection therewith will be considered the obligation of the Contractor.

1.32.9 Computer Security Requirements

The Contractor will agree to accept responsibilities and comply with procedures indicated below in connection with the furnishing of Contractor-owned computers for use by Government personnel in accordance with contract requirements.

- a. The computers must be dedicated exclusively for Government use. Contractor will not use any computer it supplies which is designated for use by the Government. Contractor will assure that the Central Processing Unit (CPU) is electronically isolated from the contractor's and not interconnected via Local Area Network (LAN).
- b. Normal access to the computer shall be restricted to Corps of Engineers personnel. Contractor shall set up computers in a secure area and give the keys to the Government. Contractors must

immediately notify Government personnel when emergency access to the computer location was exercised by non-Government individuals, and what the circumstances were.

- c. If the CPU hard drive fails, the Government will furnish an equivalent hard drive to the owner of the computer, and the old hard-drive will be returned to the Government.
- d. Contractor shall not remove any hard drive nor proceed with any repair of the computer unless an authorized Government employee witnesses and approves of the repair.
- e. At the time of the return of the computer, the Contractor will allow the Government to first remove all information from the hard-drive.
- f. Contractor agrees to provide a written certification signed by an authorized officer of the company agreeing to the above policy.

1.33 NOT USED

1.34 EQUIPMENT AND OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)

EFAR 52.231-5000.

20 March 1997

a. This does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

b. Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region II. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the Contracting Officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time of negotiations shall apply.

c. Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

d. When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the Contracting Officer shall request the Contractor to submit either certified cost or

pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Cover Sheet.

e. Whenever a modification or equitable adjustment of contract price is required, the contractor's cost proposals for equipment ownership and operating expenses shall be determined in accordance with the requirements of SPECIAL CONTRACT REQUIREMENT: EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE. A copy of EP 1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule" is available for review at the office of the District Engineer, Room 821, 600 Dr. Martin Luther King, Jr. Place, Louisville, Kentucky, or a copy may be ordered from the Government Printing Office at a cost of \$11.00 by calling telephone no. (301) 953-7974.

Address to Order: U.S. Government Printing Office
 Document Warehouse
 8160 Cherry Lane
 Laurel, MD 20707

Vol No.	Stock No.
1	008-022-00254-5
2	008-022-00255-3
3	008-022-00256-1
4	008-022-00257-0
5	008-022-00258-8
6	008-022-00259-6
7	008-022-00260-0
8	008-022-00261-8
9	008-022-00262-6
10	008-022-00263-4
11	008-022-00264-2
12	008-022-00265-1

1.35 LABOR, EQUIPMENT, AND MATERIAL REPORTS
 15 June 1990

Daily Equipment Report. The Contractor shall submit a daily report of all Contractor-owned or rented equipment at the jobsite. A similar report is required for all subcontractor equipment. The subcontractor's report may be separate or included with the Contractor's report provided the equipment is adequately identified as to ownership. The required equipment report shall include each item of equipment (hand-operated small tools or equipment excluded) on the job and shall specifically identify each item as to whether it is Contractor-owned or rented, shifts, hours of usage, down time for repairs, and standby time. Identification of the equipment shall include make, model and plant number of all items. Separate identification by a key sheet providing these data may be utilized with the daily report indicating the type of equipment and the equipment plant numbers. The format of the Daily Equipment Report will be as approved by the Government in the field.

Labor, Equipment & Material Reports for Extra Work/Cost. A Report shall also be submitted by the Contractor listing any labor, equipment and materials expended on and/or impacted by any change order directed by the Government and for which total price/time agreement has not been reached. These requirements also apply to subcontractors at any tier. The same Report is required at any time the Contractor claims or intends to claim for extra costs whether or not there is Government recognition (constructive

changes). This requirement is in addition to any Contractor "Notice" or "Reservation of Rights". Submittal of such a report will not be construed as satisfying the "Notice" required under the "Changes" clause or any other clause. But, absence of such Reports submitted to the Government contemporaneously with the alleged extra work/cost will be considered as evidence that no such extra work/cost occurred that are chargeable to the Government.

The Report shall be detailed to the degree required by the Government in the field and shall contain the following as a minimum:

- a. The cause of the extra labor, equipment or materials costs.
- b. For extra labor - Indicate crew, craft, hours, location and cost. Describe nature or type of extra costs, i.e, extra work, overtime, acceleration, interference, reassignment, mobilizations and demobilizations, supervision, overhead, type of inefficiency, etc.
- c. For extra equipment - Indicate type and description, hours, location, cost; whether working, idle, standby, under repair, extra work involved, etc.
- d. For extra materials - Indicate type and description, where used, whether consumed, installed or multi-use, quantity, cost, extra work involved, etc.
- e. Affected activities - Relate to Contract Schedule (Network Analysis); demonstrate whether delay or suspension is involved.
- f. Segregate all entries by prime and each subcontractor.
- g. Summarize costs daily and by cumulative subtotal or with frequency required by the Government.

This report will not be considered as evidence that any of the alleged extra costs actually occurred. The report will be used to check against over obligation of funds for change orders directed prior to price/time agreement and to track alleged extra costs the Contractor considers otherwise chargeable against the Government. The Government may respond at any interval to either challenge, amend or confirm the report. Absence of a Government response is not to be considered acquiescence or denial. The Government may order work stoppage if deemed necessary to avoid overobligation of funds. The frequency of the report shall be daily or as otherwise approved by the Government representative in writing.

1.36 NOT USED

1.37 NOT USED

1.38 NOT USED

1.39 PROGRESS PHOTOGRAPHS

18 Nov 1999)

Version 1 The Contractor shall, during the progress of the work, furnish the Contracting Officer photographs, slides, digital photos (furnished on CD-ROM) and negatives depicting construction progress. The photographic work

furnished shall be commercial quality as determined by the Contracting Officer. The photography shall be performed between the first and fifth of each month and the photographs, slides and negatives delivered to the Contracting Officer not later than the 15th of each month taken. A maximum of six views from different positions shall be taken as directed to show, inasmuch as possible, work accomplished during the previous month. At least, one set of photographs, slides and negatives will be made at completion of the contract, after final inspection by the Contracting Officer. The photographs shall be 8"x10" color prints and the slides 35 mm color. Each photograph and slide shall be identified on the face of the picture or the border of the slide giving date made, contract title and number, location of work, as well as a brief description of work depicted. Each negative will be identified with the same information on a sheet of paper by cross-referencing to the number on the negative. Two copies of photographs and slides, along with the original negatives of each view taken, shall be furnished to the Contracting Officer by the time stipulated above. No separate payment will be made for these services and all costs in connection thereto shall be considered a subsidiary obligation of the Contractor.

1.40 NOT USED

1.41 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (SEP 1989) FAR 52.228-5.
17 July 1992

The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(1) Coverage complying with State laws governing insurance requirements, such as those requirements pertaining to Workman's Compensation and Occupational Disease Insurance. Employer's Liability Insurance shall be furnished in limits of not less than \$100,000.00 except in states with exclusive or monopolistic funds.

(2) Comprehensive General Liability Insurance for bodily injury coverage shall be furnished in limits of not less than \$500,000 per occurrence.

(3) Comprehensive Automobile Liability Insurance for both bodily injury and property damage, shall be furnished in limits of not less than \$200,000.00 per person, \$500,000.00 per accident for bodily injury, and \$20,000.00 per accident for property damage. When the Financial Responsibility or Compulsory Insurance Law of the State, requires higher limits, the policy shall provide for coverage of at least those higher limits.

Before commencing work under this contract, the Contractor shall submit to the Contracting Officer in writing that the required insurance certification has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

The Contractor shall insert the substance of this clause, including this paragraph, in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

1.42 NOT USED

1.43 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER. ER 415-1-15

(31 OCT 89)

2 January 1991

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: Fixed Price Construction". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
16	16	8	4	2	1	1	2	3	4	4	8

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated listed above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)".

1.44 NOT USED

1.45 AVAILABILITY OF SAFETY AND HEALTH REQUIREMENTS MANUAL (EM 385-1-1).

17 May 2000

As covered by CONTRACT CLAUSE "ACCIDENT PREVENTION", compliance with EM 385-1-1 is a requirement for this contract. Copies may be purchased for \$31.00 each at the following address:

United States Government Bookstore
Room 118, Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4003
Telephone: (412) 395-5021 FAX: (412) 395-4547

Or downloaded from the following website:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm>

1.46 FIRE PROTECTION DURING CONSTRUCTION (MIL-HDBK-1008C PARA. 1.6)

15 April 1991

The Contractor is alerted to the requirements of Contract Clause "CLEANING UP" and more specifically to the requirements for fire protection during construction spelled out in EM 385-1-1 and NFPA No. 241 Building Construction and Demolition Operations. This item must be covered in the submittal required under Contract Clause "ACCIDENT PREVENTION".

1.47 NOT USED

1.48 NOT USED

1.49 NOT USED

1.50 CONSTRUCTION HAZARD COMMUNICATION

1 November 1991

The Contractor is required to comply with the requirements of the OSHA Hazard Communication Standard (29 CFR 1926.59). This standard is designed to inform workers of safe and appropriate methods of working with hazardous substances in the workplace. The standard has five requirements, and every hazardous or potentially hazardous substance used or stored in the work area is subject to all five. They are:

(1) Hazard Evaluation. Any company which produces or imports a chemical or compound must conduct a hazard evaluation of the substance to determine its potential health or physical hazard. The hazard evaluation consists of an investigation of all the available scientific evidence about the substance. The Contractor is required to assure that all producers (manufacturer/distributors) have performed these evaluations and transmit the required information with any hazardous materials being used or stored on the project site. From the hazard evaluation, a substance may be classified as a health hazard, or a physical hazard. These classifications are then further broken down according to type:

Health Hazards

Physical Hazards

Carcinogens	Combustible liquids
Irritants	Compressed gases
Sensitizers	Explosives
Corrosives	Flammables
Toxic substances	Organic peroxides
Highly toxic substances	Unstable substances
Substances harmful to specific organs or parts of the body	Water-reactive substances

(2) Warning Labels. If a chemical is hazardous or potentially hazardous, the producer or importer must affix a warning label to every container of that chemical before it leaves his facility. The Contractor must assure these labels are attached and legible. The label must identify the chemical, state the hazard, and give the name and address of the producer or importer. If the hazardous substance is transferred to another container, that container must then be labeled, tagged, or marked with the name of the chemical and the appropriate hazard warning. Warning labels should be replaced immediately if they are defaced or removed.

(3) Material Safety Data Sheets. The producer or importer must also supply a material safety data sheet (MSDS). The Contractor must keep these available in the work area where the substance is used, so that the people using the substance can easily review important safety and health information, such as:

- The hazard possible from misuse of the substance
- Precautions necessary for use, handling, and storage
- Emergency procedures for leaks, spills, fire and first aid
- Useful facts about the substance's physical or chemical properties

(4) Work Area Specific Training. Because of hazardous substance may react differently depending on how it is used or the environment of the work area, the Contractor must conduct work area specific training; special training which takes the Contractor's operations, environment, and work policies into consideration. Work area training presents:

The hazardous substances which are present in the work place and the hazards they pose

Ways to protect against those hazards, such as protective equipment, emergency procedures, and safe handling

- Where the MSDS's are kept, and an explanation of the labeling system
- Where the Contractor's written Hazard Communication Program is located

(5) The Written Hazard Communication Program. In accordance with OSHA requirements, the Contractor must prepare a written Hazard Communication Program. This document will be included in the Contractor's Accident Prevention Plan. This document states how the Contractor plans to ensure that hazardous materials are appropriately labeled, how and where MSDS's will be maintained, and how employees will be provided with specific information and training.

1.51 NOT USED

1.52 MECHANICAL AND ELECTRICAL ROOM LAYOUT (ORL).

24 FEBRUARY 1992

Detailed mechanical and electrical room layout drawings shall be submitted for approval in accordance with SD-04 Section 01330. Layout drawings shall show location and maintenance clearances for all mechanical and electrical room equipment, and all utility runs/chases for mechanical, electrical, telephone and other similar systems. Drawings shall be submitted at the same time as the submittals for the equipment to be located within the mechanical room.

1.53 RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS (NOV 1995)

252.227-7013 (JUN 1995).

20 March 1997

(a) Definitions. As used in this clause:

(1) "Computer data base" means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.

(2) "Computer program" means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.

(3) "Computer software" means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.

(4) "Computer software documentation" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

(5) "Detailed manufacturing or process data" means technical data that describe the steps, sequences, and conditions of manufacturing, processing or assembly used by the manufacturer to produce an item or component or to perform a process.

(6) "Developed" means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

(7) "Developed exclusively at private expense" means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.

(i) Private expense determinations should be made at the lowest practicable level.

(ii) Under fixed-priced contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.

(8) "Developed exclusively with government funds" means development was not accomplished exclusively or partially at private expense.

(9) "Developed with mixed funding" means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.

(10) "Form, fit, and function data" means technical data that describes the required overall physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.

(11) "Government purpose" means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

(12) "Government purpose rights" means the right to--

(i) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restrictions; and

(ii) Release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes.

(13) "Limited rights" means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the technical data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another part, except that the Government may reproduce, release or disclose such data or authorize the use or reproduction of the data by persons outside the Government if reproduction, release, disclosure, or use is--

(i) Necessary for emergency repair and overhaul; or

(ii) A release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the Government and is required for evaluational or informational purposes;

(iii) Subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and

(iv) The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

(14) "Technical data" means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such a financial and/or management information.

(15) "Unlimited rights" means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in technical data.

The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in technical data other than computer software documentation (see Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract for rights in computer software documentations):

(1) Unlimited rights.

The Government shall have unlimited rights in technical data that are-

(i) Data pertaining to an item, component, or process which has been or will be developed exclusively with Government funds;

(ii) Studies, analyses, test data, or similar data produced for this contract, when the study, analysis, test, or similar work was specified as an element of performance;

(iii) Created exclusively with Government funds in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes;

(iv) Form, fit, and function data;

(v) Necessary for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data);

(vi) Corrections or changes to technical data furnished to the Contractor by the Government;

(vii) Otherwise publicly available or have been released or disclosed by the Contractor or subcontractor without restrictions on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(viii) Data in which the Government has obtained unlimited rights under another Government contract or as a result of negotiations; or

(ix) Data furnished to the Government, under this or any other Government contract or subcontract thereunder, with--

(A) Government purpose license rights or limited rights and the restrictive condition(s) has/have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such data for commercial purposes has expired.

(2) Government purpose rights.

(i) The Government shall have government purpose rights for a five-year period, or such other period as may be negotiated, in technical data--

(A) That pertain to items, components, or processes developed with mixed funding except when the Government is entitled to unlimited rights in such data as provided in paragraphs (b)(ii) and (b)(iv) through (b)(ix) of this clause; or

(B) Created with mixed funding in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The five-year period, or such other period as may have been negotiated, shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the items, components, or processes or creation of the data described in paragraph (b)(2)(i)(B) of this clause. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the technical data.

(iii) The Government shall not release or disclose technical data in which it has government purpose rights unless--

(A) Prior to release or disclosure, the intended recipient is subject to the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS); or

(B) The recipient is a Government contractor receiving access to the data for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Market with Restrictive Legends.

(iv) The Contractor has the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this contract for any commercial

purpose during the time period specified in the government purpose rights legend prescribed in paragraph (f)(2) of this clause.

(3) Limited rights.

(i) Except as provided in paragraphs (b)(1)(ii) and (b)(1)(iv) through (b)(1)(ix) of this clause, the Government shall have limited rights in technical data--

(A) Pertaining to items, components, or processes developed exclusively at private expense and marked with the limited rights legend prescribed in paragraph (f) of this clause; or

(B) Created exclusively at private expense in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The Government shall require a recipient of limited rights data for emergency repair or overhaul to destroy the data and all copies in its possession promptly following completion of the emergency repair/overhaul and to notify the Contractor that the data have been destroyed.

(iii) The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical furnished to the Government with limited rights. However, if the Government desires to obtain additional rights in technical data in which it has limited rights, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract. The license shall enumerate the additional rights granted the Government in such data.

(4) Specifically negotiated license rights.

The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in technical data, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights than are enumerated in paragraph (a)(13) of this clause. Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights.

Technical data that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless--

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability.

The Contractor agrees to release the Government from liability for any release or disclosure of technical data made in accordance with paragraph (a)(13) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the data and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor data marked with restrictive legends.

(c) Contractor rights in technical data.

All rights not granted to the Government are retained by the Contractor.

(d) Third party copyrighted data.

The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted data in the technical data to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable data of the appropriate scope set forth in paragraph (b) of this clause, and has affixed a statement of the license or licenses obtained on behalf of the Government and other persons to the data transmittal document.

(e) Identification and delivery of data to be furnished with restrictions on use, release, or disclosure.

(1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of the clause, technical data that the Contractor assets should be furnished to the Government with restrictions on use, release, or disclosure are identified in an attachment to this contract (see Attachment). The Contractor shall not deliver any data with restrictive markings unless the data are listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the data, in the following format, and signed by an official authorized to contractually obligate the Contractor:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data.

The Contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data should be restricted--

Technical Data to be Furnished	Asserted Basis for	Name of Person Rights	Name of Person Asserting
-----------------------------------	-----------------------	--------------------------	-----------------------------

With Restrictions*	Assertion**	Category***	Restrictions****
(LIST)	(LIST)	(LIST)	(LIST)

*If the assertion is applicable to items, components, or processes developed at private expense, identify both the data and each such item, component, or process.

**Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data pertaining to such terms, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's right should be restricted.

***Enter asserted rights category (e.g. government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses).

****Corporation, individual, or other person, as appropriate.

Date _____

Printed Name and Title _____

Signature _____

(End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Restrictive Markings on Technical Data clause of this contract.

(f) Marking requirements.

The Contractor, and its subcontractor or suppliers, may only assert restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data to be delivered under this contract by marking the deliverable data subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract: the government purpose rights legend at paragraph (f)(2) of this clause: the limited rights legend at paragraph (f)(3) of this clause: or the special license rights legend at paragraph (f)(4) of this clause, and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions.

The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all technical data that qualify for such markings. The authorized legends shall be placed on the transmittal document or storage container and, for printed material, each page of the printed material containing technical data for which restrictions are asserted. When only portions of a page of printed material are subject to the asserted restrictions, such portions shall be identified by circling, underscoring, with a note, or other appropriate identifier. Technical data transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. Reproductions of technical data or any portions thereof subject to asserted restrictions shall also reproduce the asserted restrictions.

(2) Government purpose rights markings.

Data delivered or otherwise furnished to the Government with government purpose rights shall be marked as follows:

GOVERNMENT PURPOSE RIGHTS

Contract No. _____

Contractor Name _____

Contractor Address _____

Expiration Date _____

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(2) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Limited rights markings.

Data delivered or otherwise furnished to the Government with limited rights shall be marked with the following legend:

LIMITED RIGHTS

Contract No. _____

Contractor Name _____

Contractor Address _____

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(3)

of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above name Contractor.

(End of legend)

(4) Special license rights markings.

(I) Data in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

SPECIAL LICENSE RIGHTS

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these data are restricted by Contract No. _____)Insert contract number) _____, License No. _____ (Insert license identifier) _____. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause)_.

(5) Pre-existing data markings.

If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, reproduce, release perform, display, or disclose technical data deliverable under this contract, and those restrictions are still applicable, the Contractor may mark such data with the appropriate restrictive legend for which the data qualified under the prior contract or license. The marking procedures in paragraph (f)(1) of this clause shall be followed.

(g) Contractor procedures and records.

Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver technical data with other than unlimited rights, shall--

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause, and

(2) Maintain records sufficient to justify the validity of any restrictive markings on technical data delivered under this contract.

(h) Removal of unjustified and nonconforming markings.

(1) Unjustified technical data markings.

The rights and obligations of the parties regarding the validation of restrictive markings or technical data furnished or to be furnished under this contract are contained in the Validation of Restrictive Markings on Technical Data clause of this contract. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures in the Validation of Restrictive Markings on Technical Data clause of this contract, a restrictive marking is determined to be unjustified.

(2) Nonconforming technical data markings.

A nonconforming marking is a marking placed on technical data delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the Validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the Contractor of a nonconforming marking and the Contractor fails to remove or correct such marking within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming marking.

(I) Relation to patents.

Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other with otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in technical data.

(1) The Contractor shall not charge to this contract any cost, including, but not limited to, license fees, royalties, or similar charges, for rights in technical data to be delivered under this contract when--

(I) The Government has acquired, by any means, the same or greater rights in the data; or

(ii) The data are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause--

(I) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier technical data, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and

(ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the technical data will be delivered.

(k) Applicability to subcontractors or suppliers.

(1) The Contractor shall ensure that the rights afforded its subcontractors and suppliers under 10 U.S.C. 2320, 10 U.S.C. 2321, and the identification, assertion, and delivery processes of paragraph (e) of this clause are recognized and protected.

(2) Whenever any technical data for noncommercial items is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in the subcontract or other contractual instrument, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher-tier subcontractor's or supplier's rights in a subcontractor's or supplier's technical data.

(3) Technical data required to be delivered by a subcontractor or supplier shall normally be delivered to the next higher-tier contractor, subcontractor, or supplier. However, when there is a requirement in the prime contract for data which may be submitted with other than unlimited rights by a subcontractor or supplier, then said subcontractor or supplier may fulfill its requirement by submitting such data directly to the Government, rather than through a higher-tier contractor, subcontractor, or supplier.

(4) The Contractor and higher-tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in technical data from their subcontractors or suppliers.

(5) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in technical data as an excuse for failing to satisfy its contractual obligation to the Government.

1.54 LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGEND DFARS 252.227-7025 (JUN 1995)

2 January 1996

(a)(1) For contracts requiring the delivery of technical data, the terms, "limited rights" and "Government purpose rights" are defined in the Rights in Technical Data--Noncommercial Items clause of this contract.

(2) For contracts that do not require the delivery of technical data, the terms "government purpose rights" and "restricted rights" are defined in the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract.

(3) For Small Business Innovative Research program contracts, the terms "limited rights" and "restricted rights" are defined in the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause of this contract.

(b) Technical data or computer software provided to the Contractor as Government furnished information (GFI) under this contract may be subject to restrictions on use, modification, reproduction, release, performance, display, or further disclosure.

(1) GFI marked with limited or restricted rights legends.

The Contractor shall use, modify, reproduce, perform, or display technical data received from the Government with limited rights legends or computer software received with restricted rights legends only in the performance of this contract. The Contractor shall not, without the express

written permission of the party whose name appears in the legend, release or disclose such data or software to any person.

(2) GFI marked with government purpose rights legends.

The Contractor shall use technical data or computer software received from the Government with government purpose rights legends for government purposes only. The Contractor shall not, without the express written permission of the party whose name appears in the restrictive legend, use, modify, reproduce, release, perform, or display such data or software for any commercial purpose or disclose such data or software to a person other than its subcontractors, suppliers, or prospective subcontractors or suppliers, who require the data or software to submit offers for, or perform, contracts under this contract. Prior to disclosing the data or software, the Contractor shall require the persons to whom disclosure will be made to complete and sign the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS).

(3) GFI marked with specially negotiated license rights legends.

The Contractor shall use, modify, reproduce, release, perform, or display technical data or computer software received from the Government with specially negotiated license legends only as permitted in the license. Such data or software may not be release or disclosed to other persons unless permitted by the license and, prior to release or disclosure, the intended recipient has completed the non-disclosure agreement at DFARS 227.7103-7. The Contractor shall modify paragraph (1)(c) of the non-disclosure agreement to reflect the recipient's obligations regarding use, modification, reproduction, release, performance, display, and disclosure of the data of software.

(c) Indemnification and creation of third party beneficiary rights.

The Contractor agrees--

(1) To indemnify and hold harmless the Government, its agents, and employees from every claim or liability, including attorneys fees, court costs, and expenses, arising out of, or in any way related to, the misuse or unauthorized modification, reproduction, release, performance, display, or disclosure of technical data or computer software received from the Government with restrictive legends by the Contractor or any person to whom the Contractor has released or disclosed such data or software; and

(2) That the party whose name appears on the restrictive legend, in addition to any other rights it may have, is a third party beneficiary who has the right of direct action against the Contractor, or any person to whom the Contractor has released or disclosed such data or software, for the unauthorized duplication, release, or disclosure of technical data or computer software subject to restrictive legends.

1.55 NOT USED

1.56 NOT USED

1.57 PARTNERING

August 1996

In order to most effectively accomplish this contract, the Government proposes to form a partnership with the Contractor to develop a cohesive building team. It is anticipated that this partnership would involve the Corps of Engineers, the 77th RSC, the Contractor, primary subcontractors and the designers. This partnership would strive to develop a cooperative management team drawing on the strengths of each team member in an effort to achieve a quality project within budget and on schedule. This partnership would be bilateral in membership and participation will be totally voluntary. All costs, excluding labor and travel expenses, shall be shared equally between the Government and the Contractor. The Contractor and Government shall be responsible for their own labor and travel costs.

1.58 NOT USED

1.59 CONSTRUCTION AND DEMOLITION (C&D) WASTE MANAGEMENT PLAN

16 July 1999

a. The Contractor is required to submit for government approval a detailed C&D Waste Management Plan within 30 days after contract award and prior to initiating any site clearance or C&D work.

b. Specific elements to be addressed in the plan are as follows: Designated individuals on the contractor's staff who are responsible for C&D waste prevention and management.

(1) Actions that will be taken to reduce solid waste generation (including use of more efficient facility design and construction processes, reduced packaging and packing materials, supplier take-back programs, etc.). Description of the specific approaches to be used in recycling/reuse of the various materials generated, including, as appropriate, the specification of areas and equipment to be used for processing, sorting, and temporary storage of C&D wastes.

(2) Characterization of the waste to be generated during the C&D project, to include types and quantities of waste materials. The characterization should address site waste materials, building materials, packaging, packing, wastes generated by construction equipment, wastes generated by site offices, and wastes generated by the workforce on-site.

(3) Landfill and/or incinerator name, tipping fee amounts, projected cost of disposing of all trash and waste materials in the landfill/incinerator, as if there would be no salvage or recycling on the project.

(4) Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and public arts programs that accept used materials (e.g., Habitat For Humanity, national materials exchange networks).

(5) A list of specific waste materials that will be salvaged for resale, salvaged and reused, and recycled; the recycling facilities that will be utilized; and copies of their permits and/or registrations.

(6) Identification of materials that cannot be recycled/reused with a written justification. All disposed materials including anticipated hazardous wastes must include names of haulers and disposal sites, and copies of their permits and/or registrations.

(7) Anticipated net cost savings determined by subtracting contractor program management costs and the cost of salvage (deconstruction), separating, and recycling from the following:

- (1) revenue from the sale of salvaged products and materials;
- (2) revenue from the sale of recycled products and materials;
- (3) revenue from the return of materials; and
- (4) incineration and/or landfill tipping fees saved due to diversion of materials.

(8) The plan must cover the following materials if the material is applicable to the specific project.

Asphalt	Gypsum
Concrete	Plastic
Soil	Polystyrene
Metal	Porcelain
Wood	Corrugated cardboard
Brick	Carpet

c. Firms and facilities used by the contractor for recycling, reuse, and disposal shall be appropriately permitted for the contractor's intended use, to the extent required by federal, state, and local regulations. The contractor shall maintain records of disposition of the materials, including all copies of manifests, origin, and disposal forms, and bills of lading. All facility, landfill, and hauler permits showing USEPA and state registration numbers shall be maintained and shall be available to the contracting officer when requested.

d. The Contracting Officer shall review the C&D waste management plan in coordination with the environmental office within 7 calendar days of submittal. Where the contracting officer determines that the contractor has diligently explored all feasible methods to reduce C&D waste, the plan shall be approved, or approved with comment. Where it is determined that the contractor has not diligently explored all feasible methods, the contracting officer shall request a resubmittal.

e. All revenues generated by reusing, returning, salvaging, or recycling materials, as well as costs avoided by reduced tipping and incineration fees as compared to conventional disposal shall accrue to the contractor's benefit and be reported to the Contracting Officer. Where an on-site Army C&D landfill is the only available disposal facility, the Contractor will be charged the prevailing commercial rate.

1.60 NOT USED

1.61 NOT USED

1.62 NOT USED

1.63 NOT USED

1.64 NOT USED

1.65 NOT USED

1.66 NOT USED

1.67 NOT USED

1.68 NOT USED

1.69 NOT USED

1.70 NOT USED

1.71 NOT USED

1.72 NOT USED

1.73 NOT USED

1.74 GOVERNMENT RESIDENT MANAGEMENT SYSTEM AND CONTRACTOR QUALITY CONTROL SYSTEM (QCS) MODULE

The Government will utilize an in-house Contract Administration Program entitled "Resident Management System" (RMS). The Contractor shall utilize a Government furnished Quality Control System (QCS) Programming Module. See Section 01312 "Quality Control System (QCS)" for requirements.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

GENERAL DECISION NY020041 01/31/03 NY41
 General Decision Number NY020041

Superseded General Decision No. NY010041

State: New York

Construction Type:
 BUILDING
 HEAVY
 HIGHWAY

County(ies):
 OSWEGO

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories), AND HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/01/2002
1	04/05/2002
2	05/03/2002
3	06/07/2002
4	07/12/2002
5	09/13/2002
6	10/04/2002
7	01/03/2003
8	01/31/2003

COUNTY(ies):
 OSWEGO

BOILERMAKER	Rates	Fringes
BOIL0175A 01/01/2001	23.68	11.56

OSWEGO CHAPTER	Rates	Fringes
BRNY0002G 07/01/2002		
BRICKLAYERS, CEMENT MASONS AND PLASTERERS	23.55	8.89
TILE SETTERS	19.88	7.56
TILE FINISHERS	17.38	7.46

HEAVY & HIGHWAY CONSTRUCTION	Rates	Fringes
BRNY0002Q 09/01/2002		
CEMENT MASONS	21.31	8.84+a

FOOTNOTE:
 a. Paid Holidays: Memorial Day, July the 4th, Labor Day, Thanksgiving Day (provided the employee is employed one day before and one day after the holiday).

BUILDING CONSTRUCTION	Rates	Fringes
CARP0747A 07/01/2002		
CARPENTER (Including Drywall Hanging)	20.00	10.13
PILEDRIVER	20.00	10.13
MILLWRIGHT	19.55	9.68
DIVERS	38.75	8.705

HEAVY AND HIGHWAY CONSTRUCTION

DIVERS	38.125	8.705
CARPENTERS	20.23	10.135
PILEDRIVERS	20.23	10.135

ELEC0043P 06/01/2002

Rates Fringes

TOWNSHIPS OF CONSTANTIA, HASTINGS, SCHROEPEL, AND WEST
MONROE

CABLE SP LICING	26.75	8.77+3%
ELECTRICIANS	24.25	8.77+3%

REMAINDER OF COUNTY

ELECTRICIANS	24.25	8.77+3%
--------------	-------	---------

ELEC1249C 05/05/2002

Rates Fringes

LINE CONSTRUCTION (LINEMAN)

LIGHTING AND TRAFFIC SIGNAL
Including any and all Fiber Optic
Cable necessary for Traffic Signal Systems,
Traffic Monitoring systems and Road Weather
information systems

Lineman & Technician	27.14	8.00+6.5%+a
Groundman Digging Machine Operator	24.43	8.00+6.5%+a
Mechanic	21.71	8.00+6.5%+a
Groundman Truck Driver (tractor trailer unit)	23.07	8.00+6.5%+a
Groundman Truck Driver	21.71	8.00+6.5%+a
Flagman	16.28	8.00+6.5%+a

FOOTNOTE:

- a. New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, plus President's Day, Good Friday, Decoration Day, Election Day for the President of the United States and Election Day for the Governor of the State of New York, provided the employee works the day before or the day after the holiday.

ELEC1249D 05/05/2002

Rates Fringes

LINE CONSTRUCTION:

Substation:

Lineman & Technician	30.01	8.00+7%+a
Cable Splicer	33.01	8.00+7%+a
Groundman digging machine Operator	27.01	8.00+7%+a
Mechanic	24.01	8.00+7%+a
Groundman truck driver (tractor trailer unit)	25.51	8.00+7%+a
Ground man truck driver	24.01	8.00+7%+a
Flagman	18.01	8.00+7%+a

Switching structures; railroad
catenary installation and
maintenance, third rail type

underground fluid or gas filled
transmission conduit and cable
installations (including any and
all fiber optic ground product
by any other name manufactured
for the dual purpose of ground
fault protection and fiber optic
capabilities), pipetype cable

installation and maintenance jobs
or projects, and maintenance
bonding of rails; Pipetype cable
installation

Lineman & Technician	31.30	8.00+7%+a
Cable Splicer	34.43	8.00+7%+a
Groundman Digging Machine Operator	28.17	8.00+7%+a
Mechanic	25.04	8.00+7%+a
Groundman Truck Driver (Tractor-trailer unit)	26.61	8.00+7%+a
Groundman Truck Driver	25.04	8.00+7%+a
Flagman	18.78	8.00+7%+a

Overhead and underground distribution and maintenance work and all overhead and underground transmission line work including any and all fiber optic ground wire, fiber optic shield wire or any other like product by any other name manufactured for the dual purpose of ground fault protection and fiber optic capabilities (where no other trades are or have been involved):

Lineman and Technician	30.01	8.00+7%+a
Cable Splicer	30.01	8.00+7%+a
Groundman digging machine operator	27.01	8.00+7%+a
Mechanic	24.01	8.00+7%+a
Groundman truck driver (tractor trailer unit)	25.51	8.00+7%+a
Groundman Truck driver	24.01	8.00+7%+a
Flagman	18.01	8.00+7%+a
Overhead transmission line work (where other trades are or have been involved):		
Lineman and Technician	32.51	8.00+7%+a
Cable Splicer	32.51	8.00+7%+a
Groundman digging machine operator	29.26	8.00+7%+a
Mechanic	26.01	8.00+7%+a
Groundman truck driver (tractor trailer unit)	27.63	8.00+7%+a
Groundman truck driver	26.01	8.00+7%+a
Flagman	19.51	8.00+7%+a

TELEPHONE, CATV FIBEROPTICS
CABLE AND EQUIPMENT

Cable splicer/Central Office Person	22.29	2.80+3%
Installer Repairman-Teledata Lineman/Tecnician-Equipment Operator	21.17	2.80+3%
Groundman	11.22	2.80+3%
TREE TRIMMER	16.84	3.85+3%+b

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Good Friday, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, and election Day for the President of the United States and Election Day for the Governor of New York State, provided the employee works two days before or two days after the holiday.

b. New Years Day, Washington's Birthday, Good Friday, Decoration Day, Independence Day, Labor Day, Veteran's Thanksgiving Day, Day after Thanksgiving Day and Christmas Day

	Rates	Fringes
ELEVATOR CONSTRUCTORS:		
Mechanics	26.91	7.455

FOOTNOTES:

- a. Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving; Christmas Day and the Friday after Thanksgiving Day.
- b. Employer contributes 8% basic hourly rate for 5 years or more service or 6% basic hourly rate for 6 months to 5 years of service as vacation pay credit.

 ENGI0545A 06/01/2000

	Rates	Fringes
POWER EQUIPMENT OPERATORS (BUILDING):		
GROUP 1	21.50	10.85+a
GROUP 2	20.03	10.85+a
GROUP 3	17.21	10.85+a
GROUP 4	22.94	10.85+a

POWER EQUIPMENT OPERATOR CLASSIFICATIONS (BUILDING)

GROUP 1: Air plako, asphalt and blacktop roller, automated

concrete spreader (CMI or equivalent), automated fine grade machine (CMI), backhoe, elt palcer, blacktop spreader (such as Barber Green & Blaw Knox), blacktop plant (automated), blast or rotary drill (truck or cat mounted), boom truck, cableway, caisson auger, central mix plant (automated), cherry picker (15 tons), concrete pump, crane, crusher (rock), derrick, diesel power unit, dragline, dredge, dual drum paver, elevating grader (self-propelled), elevator hoist (2 cage), excavator (all purpose-hydraulically operated), fork lift (loed and lull and other rough terrain type), front end loader (4 c.y. and over), gradall, grader (power), head tower (Saurman or equal), host (2 or 3 drum), hydroblaster (laser pump), work boat operator (LCM), light plants (compressors and generators), locomotive, maintenance engineer, maintenance welder, mine hoist, mucking machine or mole, overhead crane -fixed permanent, pile driver, quarry master or equivalent, refrigeration equipment (for soil stabilization), scraper sea mule, shovel, side boom, slip form paver, straddle buggy (ross carrier, lumber carrier), tractor drawn belt type loader (Euclid loader), tranching machine (digging capacity of over 4 ft depth), truck crane (operator), truck of trailer mounted log chipper (self feeder), tug operator (manned, rented equipment excluded), tunnel shovel, vibro or sonic hammer controls (when not mounted in proximity to the rig operator

GROUP 2: "A" frame truck, blacktop plant (non automatic), All Back Dumps, Boring machine, bulldozer, cagehoist, central mix plant (non automated), cherry picker 15 tons and under), than 5), concrete paver (single drum over 16S), core boring machine, drill rigs (tractor mounted), elevator (as a material hoist), fork lift (all others), front end loader (under 4 c.y.), gunite machine, high pressure boiler 915 lbs & over), hoist (one drum), hydraulic breaking hammer (drop hammer), Kolman plant loader (screening gravel), maintenance grease man, mizer for stabilized base (self propelled Seaman mixer), monrail machine, parapet concrete or pavement grinder, parts man, post hole digger (truck or tractor mounted), power sweeper (wayne or similar), grout pump, pump-crete or squeeze-crete, road widener (front end of grader or self prop.), roller, self contained hydraulic bench drill, shell winder (motorized), snorkel (overhead arms), snowblower control man, trenching machine (digging capacity of 4 ft or less), tugger hoist, vibrotamp, well drill, well point system, winch (motor driven), winch cat, winch truck

GROUP 3: Compressor (up to 500 C.F.), concrete paver or mixer (under 16S), concrete pavement spreaders and finishers (not automated), conveyor (over 12 ft), electric submersible pump (4" and over), farm tractor with or without accessories, fine grade

machine (not automated), fireman, form tamper, generator (2,500 Watts and over), hydraulic pump, mechanical heaters (more than 2 whosw combined output exceeds 640,000 BTU per hour (manufacturer's rating) plus one self contained heating unit (sundog, air heat type, new Holland hay dryer type excluded), power heaterman (hay dryer), pumps (water and trash), revinus widener (road widener), single light plant, steam cleaner or jenny, tractor with or without towed accessories

GROUP 4: Master mechanic

PREMIUMS:

Hazmat Work 2.50
 Quad 9 Bulldozer or Multibowl Scraper .50

CRANE PREMIUMS (add to Group 1 Rate):

All Lattice Boom Cranes
 (65 ton (capacity) and over Class A Rate Plus 1.00
 All Hydraulic Cranes
 (100 ton capacity) and over Class A Rate Plus 1.00
 All Hydraulic Cranes
 (80 ton capacity to 99 ton capacity) Class A Rate Plus .50
 All Hydraulic Cranes
 (65 ton capacity to 79 ton capacity) Class A Rate Plus .35

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day provided the employee has worked five consecutive working days before and the working day after the holiday.

 ENGI0545B 07/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS (HEAVY & HIGHWAY)		
GROUP 1	23.90	14.05+a
GROUP 2	23.02	14.05+a
GROUP 3	19.74	14.05+a
GROUP 4	25.25	14.05+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS (HEAVY & HIGHWAY)

GROUP 1: Automated Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (Except Tractor Mounted, Rubber Tired); Belt Placer (CMI Type); Blacktop Plant (Automated); Boom Truck 100' & over (jib and Boom); Cableway; Caisson Auger; Central Mix Concrete Plant (Automated); Cherry Picker (over 5 tons capacity); Concrete Curb Machine, Self-propelled, Slipform; Concrete Pump 8" and over; Crane; Derricks; Dragline; Dredge; Dual Drum Paver; Excavator (All Purpose-Hydraulically operated) (Gradall or Similar); Front End Loader (4cu. yd. and over); Head Tower (Sauerman or equal); Hoist (Two or Three Drum); Holland Loader; Hydrodemolition equipment (self contained); Maintenance Engineer; Mine Hoist; Mucking Machine or Mole; Overhead Crane (Straddle Type); Pavement Profiler (over 300 horsepower); Pile Driver; Power Grader; Quad 9; Quarry Master (or equivalent); Scraper; Shovel; Side Boom; Slipform Paver (If a second man needed, he shall be an oiler); Tractor Drawn Belt-Type Loader; Truck Crane; Truck or Trailer Mounted Log Chipper (self Feeder); Tug Operator (Manned Rented Equipment Excluded); Tunnel shovel;

GROUP 2: Bituminous Spreader and Mixer; Blacktop Plant (Non-Automated); Blast or Rotary Drill (Truck or Tractor Mounted);

Boring machine; Cage Hoist; Central Mix Plant (Non Automated) and all Concrete Batching Plants; Cherry Picker (5 Tons capacity and under); Compressors (4 or less) exceeding 2,000 C.F.M. combined capacity; Concrete Paver (over 16s); Concrete Pump (under 8"); Crawler Drill (self-contained); Crusher; Diesel Power Unit; Drill Rigs, Tractor Mounted; Front End Loader (under 4 cu. yd.); Greaser man, Hi-Pressure Boiler (15 lbs. and over); Hoist (One Drum); Kolman Plant Loader & Similar Type Loaders; L.C.M. Work Boat Operator; Locomotive; Mixer (for stabilizad base self-propelled); Monorail Machine; Plant Engineer; Pump Crete; Ready

Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Seamule; Tractor with Dozer and/or Pusher; Trecher; Tugger Hoist; Welder; Winch; Winch Cat

GROUP 3: A Frame Truck; Ballast Regulator, Ride on; Compressors (4 not to exceed 2,000 c.f.m. combined capacity; or 3 or less with more than 1,200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors, Dust Collectors, Generators Pumps, Welding Machines, Light Plants (4 of any type or combination); Concrete Pavement Spreader and Finishers; Conveyer; Drill (core); Electric Pump used in conjunction with well-point system; Farm Tractor with accessories; Fine grade machine; Fork lift (under 15 ft.); Grout Pump; Guniting Machine; Hammers (Hydraulic self-propelled); Hydra Spiker, ride on; Hydro-blaster (water); Post Hole Digger and Post Driver; Power Sweeper; Roller (Grader and fill); Scarifier, ride on; Span-Saw, ride on; Submersible Electric Pump (when used in lieu of well point system); Tamper, ride on; Tie extractor, ride on; Tie Handler; Tie Insertter, ride on; Tie Spacer, ride on; Track Liner, ride on; Tractor with towed accessories; Vibatory Compactor; Well Point; Vibro Tamp

GROUP 4: Master Mechanic

PREMIUMS:

Hazmat Work 2.50

CRANE PREMIUMS (Add to Group 1 Rate)

Tower Crane .50
 Boom length incl. jib over 100 ft 1.00
 Boom length incl. jib over 150 ft 2.00

FOOTNOTE:

a. New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day provided the employee has worked the working day before and the working day after the holiday.

IRON0060Q 05/01/2002		
	Rates	Fringes
IRONWORKERS		
Structural, Ornamental, Reinforcing, Pre-cast		
Concrete Erector, Machinery Mover & Rigger, Fence Erector, Stone Derrickman Welder, Sheeter, Sheeter Bucker-up	21.00	12.59

LABO0214A 07/01/2002		
	Rates	Fringes
LABORERS (HEAVY & HIGHWAY):		
GROUP 1	19.84	7.70+a
GROUP 2	20.04	7.70+a
GROUP 3	20.24	7.70+a
GROUP 4	20.44	7.70+a

LABORERS CLASSIFICATIONS (HEAVY & HIGHWAY)

GROUP 1: Laborers; flaggers; outboard and hand boats.

GROUP 2: Bull float; chain saw; concrete aggregate bin; concrete bootman; gin buggy; hand or machine vibrator; jackhammer; mason tender; mortar mixer; pavement breaker; handlers of all steel mesh; small generators for laborers' tools; installation of bridge drainage pipe; pipelayers; vibrator type rollers; tamper; drill doctor; tail or screw operator on asphalt paver; water pump (1-1/2" and single diaphragm); nozzle (asphalt, gunnite, seeding and sandblasting); laborers on chain link fence erection; rock splitter and power unit; pusher type concrete saw and all other gas, electric, oil and air tool operators; wrecking laborers.

GROUP 3: All rock or drill machine operator (except quarry master and similar type); acetylene torch operator; asphalt raker; powderman.

GROUP 4: Blaster; form setters; stone or grante curb setters.

FOOTNOTE:

- a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has worked the working day before and the working day after the holiday.

LABO0214B 06/01/2002		
	Rates	Fringes
LABORERS (BUILDING):		
Basic rate, Nuclear site or Related Work	19.53	7.70
Blaster, Laborers working in Radiation area, Hazardous Waste Removal	19.93	7.70
Residential and Commercial Under \$750,000	12.49	6.66
Commercial projects up to \$20 million	15.41	7.70

PAIN0004X 05/01/2002		
	Rates	Fringes
TOWNSHIPS OF AMBOY, CONSTANTIA, ONEIDA LAKE AND WILLIAMSTOWN		
PAINTERS		
Brush & Roll, Drywall Taping/Finishing	19.46	8.30
Spray/Sandblasting/Structural Steel	21.87	8.30
HEAVY & HIGHWAY CONSTRUCTION		
Bridges	25.15	8.35

PAIN0677B 06/01/2000		
	Rates	Fringes
GLAZIER	18.31	5.41

PAIN9999B 05/01/2001		
	Rates	Fringes
EXCLUDING the TOWNSHIPS of AMBOY, CONSTANTIA, ONEIDA LAKE and WILLIAMSTOWN		
PAINTERS		
Brush & Roll	19.46	9.10
Paperhanging, Vinyl & Tapers	19.46	9.10
Metalizing	20.03	9.10
Over \$100,000 Contracts	21.87	9.10
Under \$100,000 Contracts	21.68	9.10

PLUM0073A 05/01/2001		
	Rates	Fringes
PIPEFITTERS, PLUMBERS AND STEAMFITTERS		
COMMERCIAL:		
On all commercial, heating, plumbing, air conditioning, refrigeration and pipefitting	24.43	7.83

HVAC and REFRIGERATION SERVICE:

On all HVAC and refrigeration service work; all heating, plumbing, air conditioning, refrigeration; all servicing and Pipefitting work in all schools, hospitals, health related facilities and extended care facilities, including nursing homes

AND

All commercial work where the total plumbing contract does not exceed 100,000.00, the heating contract does not exceed 100,000.00, and the refrigeration contract does not exceed 100,000.00 and the total Plumbing, Heating and Refrigeration does not exceed 300,000.00

21.27 7.83

 ROOF0195A 06/01/2001
 Rates Fringes
 ROOFERS 20.00 8.12

SFNY0669A 01/01/2003
 Rates Fringes
 SPRINKLER FITTER 27.15 6.10

* SHEE0058P 05/01/2002
 Rates Fringes
 SHEET METAL WORKERS:
 SHEET METAL WORKERS (Incl. HVAC Duct):
 Projects with sheetmetal work
 contracts totaling \$5 million or
 less 22.60 11.51
 Projects over \$5 million 23.60 11.51

SUNY1005A 01/12/1996
 Rates Fringes
 SOFT FLOOR LAYERS 15.22 2.09

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
 =====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		00800	SD-01 Preconstruction Submittals														
			Small Tool Usage Plan		FIO												
			Labor, Equipment and Material Reports	1.35	G RE												
			Quality Control Plan		G RE												
			SD-05 Design Data														
			Equipment-in-Place List	1.10	FIO												
			Maintenance and Parts Data	1.10	FIO												
			SF1413	1.16	FIO												
			Progress Photographs	1.39	FIO												
			Dirt and Dust Control Plan		G RE												
			Construction and Demolition (C&D)	1.59	G RE												
			Waste Management Plan														
			SD-07 Certificates														
			Warranties	1.20	FIO												
			Insurance	1.41	FIO												
			DA Form 3337		G RE												
			SD-11 Closeout Submittals														
			As-Built Drawings	1.8.1	G RE												
			Mechanical Room Layout		G RE												
			Initial Project Schedule; G		FIO												
			Preliminary Project Schedule; G														
			Periodic Project Schedule; G														
			Qualifications; FIO		FIO												
		01356	SD-07 Certificates														
			Mill Certificate or Affidavit	2.1.3	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01410	SD-01 Preconstruction Submittals														
			Environmental Protection Program; G RE.		FIO												
			Preconstruction Survey		FIO												
			Waste Disposal Scheme		FIO												
		02220	SD-03 Product Data														
			Work Plan		G RE												
		02230	SD-03 Product Data														
			Materials Other Than Salable	3.4.2	FIO												
			Timber														
		02300	SD-03 Product Data														
			Earthwork		G RE												
			SD-06 Test Reports														
			Testing	3.10	G RE												
			SD-07 Certificates														
			Testing	3.10	FIO												
		02315	SD-06 Test Reports														
			Testing	3.10	G RE												
		02316	SD-06 Test Reports														
			Field Density Tests	3.4.3	G RE												
			Testing of Backfill Materials	3.4.2	G RE												
		02510	SD-03 Product Data														
			Installation	3.1	FIO												
			Waste Water Disposal Method		FIO												
			Satisfactory Installation		FIO												
			SD-06 Test Reports														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK					CONTRACTOR												
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02510	Bacteriological Disinfection SD-07 Certificates	3.3.1	G RE												
			Manufacturer's Representative Installation Meters	1.4 3.1 2.7.8	FIO FIO FIO												
		02513	SD-03 Product Data Job Mix Formula (JMF) G.RE Aggregates Bituminous Material SD-06 Test Reports Test		FIO FIO G RE G RE FIO												
		02531	SD-07 Certificates Portland Cement	2.7.1	FIO												
		02630	SD-03 Product Data Placing Pipe SD-07 Certificates Resin Certification Resin Certification Pipeline Testing Hydrostatic Test on Watertight Joints Determination of Density Frame and Cover for Gratings	3.3 2.1.8 2.1.9 3.8	FIO FIO FIO FIO												
		02714	SD-06 Test Reports Sampling and Testing	1.8	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02714	Approval of Materials	1.8.6	G RE												
		02722	SD-03 Product Data														
			Plant, Equipment, and Tools	1.7	FIO												
			SD-06 Test Reports														
			Sampling and testing	1.5	G RE												
			Field Density Tests	1.5.2.4	G RE												
		02748	SD-06 Test Reports														
			Sampling and Testing	3.7	FIO												
		02763	SD-03 Product Data														
			Equipment	1.5	FIO												
			Composition Requirements		G RE												
			Qualifications		FIO												
			SD-06 Test Reports														
			Sampling and Testing		FIO												
			SD-07 Certificates														
			Volatile Organic Compound (VOC)		FIO												
		02840	SD-02 Shop Drawings														
			Installation	3.1	G RE												
			Equipment		G RE												
			SD-03 Product Data														
			Vehicle Barriers		G RE												
			Spare Parts	1.6	G RE												
			SD-06 Test Reports														
			Field Testing	3.4	G RE												
			SD-10 Operation and Maintenance														
			Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02840	Vehicle Barriers		G RE												
			Operating and Maintenance Instructions	3.5	G RE												
		02921	SD-03 Product Data														
			Equipment		FIO												
			Surface Erosion Control Material	2.8	FIO												
			Chemical Treatment Material	1.4.3	FIO												
			Delivery	1.4.1	FIO												
			Finished Grade and Topsoil	3.2.1	FIO												
			Topsoil	2.2	FIO												
			Quantity Check	3.5	FIO												
			Seed Establishment Period	3.9	G RE												
			Maintenance Record	3.9.3.5	G RE												
			SD-06 Test Reports														
			Equipment Calibration	3.1.3	FIO												
			Soil Test	3.1.4	G RE												
			SD-07 Certificates														
			Seed	2.1	G RE												
			Topsoil	2.2	G RE												
			pH Adjuster	2.3.1	FIO												
			Fertilizer	2.3.2	FIO												
			Organic Material	2.3.4	FIO												
			Soil Conditioner		FIO												
			Mulch	2.4	FIO												
		02922	SD-03 Product Data														
			Equipment	3.1.3	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02922	Chemical Treatment Material	1.4.3.2	FIO												
			Delivery	1.4.1	FIO												
			Finished Grade and Topsoil	3.2.1	FIO												
			Topsoil	2.2	FIO												
			Quantity Check	3.5	FIO												
			Sod Establishment Period	3.9	FIO												
			Maintenance Record	3.9.3.5	FIO												
			SD-06 Test Reports														
			Equipment Calibration	3.1.3	FIO												
			Soil Test	3.1.4	G RE												
			SD-07 Certificates														
			Sod	2.1	FIO												
			Topsoil	2.2	FIO												
			pH Adjuster	2.3.1	FIO												
			Fertilizer	2.3.2	FIO												
			Organic Material	2.3.4	FIO												
			Soil Conditioner		FIO												
			Pesticide		FIO												
		02930	SD-03 Product Data														
			Organic mulch	2.10.2	FIO												
			Fertilizer	1.5.1.2	FIO												
			Weed control fabric	1.5.2.4	FIO												
			Root control barrier	1.5.2.4	FIO												
			Metal edging	2.13.2	FIO												
			Metal anchors	2.12.7	FIO												
			ANTIDESICCANTS	2.14	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02930	SD-06 Test Reports														
			Topsoil composition tests	2.2.4	FIO												
			SD-07 Certificates														
			Nursery certifications	2.1.1	FIO												
			SD-08 Manufacturer's Instructions														
			Metal edging	2.13.2	FIO												
			Erosion control materials	2.15	FIO												
			Metal anchors	2.12.7	FIO												
			Root control barrier	1.5.2.4	FIO												
		02935	SD-03 Product Data														
			Chemical Treatment Material	1.3.3	G RE												
			Work Plan and Schedule		G RE												
			Delivery Schedule	1.3.1	G RE												
			Maintenance Record	3.6.4	G RE												
			Application of Pesticide	3.5	G RE												
			SD-06 Test Reports														
			Soil Tests	3.1	G RE												
			Percolation Test		G RE												
			SD-07 Certificates														
			Fertilizer		G RE												
			Mulch	2.2	G RE												
			Pesticide	2.4	G RE												
		03150	SD-03 Product Data														
			Preformed Expansion Joint Filler	2.2	FIO												
			Sealant	2.3	FIO												
			Waterstops	2.4	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		03150	SD-07 Certificates														
			Performed Expansion Joint Filler	2.2	FIO												
			Sealant	2.3	FIO												
			Waterstops	2.4	FIO												
		03200	SD-02 Shop Drawings														
			Reinforcement	3.1	G RE												
			SD-07 Certificates														
			Reinforcing Steel	2.3	FIO												
		03300	SD-06 Test Reports														
			Testing and Inspection for Contractor Quality Control	3.15	G RE												
			SD-07 Certificates														
			Qualifications	1.5	FIO												
		04200	SD-02 Shop Drawings														
			Masonry Work		G RE												
			SD-03 Product Data														
			Clay or Shale Brick		G RE												
			Insulation		G RE												
			Cold Weather Installation	3.1.2	G RE												
			SD-04 Samples														
			Clay or Shale Brick		G RE												
			Anchors, Ties, and Bar Positioners	2.6	G RE												
			Expansion-Joint Material		G RE												
			Joint Reinforcement	2.7	G RE												
			Insulation		G RE												
			Portable Panel		G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		04200	SD-06 Test Reports														
			Efflorescence Test		G RE												
			Field Testing of Mortar	3.24.1	G RE												
			Field Testing of Grout	3.24.2	G RE												
			Prism tests		G RE												
			Masonry Cement		G RE												
			Fire-rated CMU		G RE												
			SD-07 Certificates														
			Clay or Shale Brick		G RE												
			Concrete Masonry Units (CMU)		G RE												
			Control Joint Keys	2.9	G RE												
			Anchors, Ties, and Bar Positioners	2.6	G RE												
			Expansion-Joint Materials	2.10	G RE												
			Joint Reinforcement	2.7	G RE												
			Reinforcing Steel Bars and Rods	2.8	G RE												
			Masonry Cement		G RE												
			Mortar Coloring		G RE												
			Insulation		G RE												
			Mortar Admixtures		G RE												
			Grout Admixtures		G RE												
		05120	SD-02 Shop Drawings														
			Structural Steel System		G AE												
			Structural Connections	3.2.1	G AE												
			SD-03 Product Data														
			Erection	3.2	G AE												
			SD-07 Certificates														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		05120	Mill Test Reports		G AE												
			Welder Qualifications		G AE												
			Welding Inspector	1.5	G AE												
			Fabrication	3.1	G AE												
		05210	SD-02 Shop Drawings														
			Steel Joists	1.3	G AE												
			SD-07 Certificates														
			Steel Joists	1.3	G AE												
		05300	SD-02 Shop Drawings														
			Deck Units	2.1	G AE												
			Accessories	2.5	G AE												
			Attachments	3.3	G AE												
			Holes and Openings	3.4	G AE												
			SD-03 Product Data														
			Deck Units	2.1	G AE												
			Attachments	3.3	G RE												
			SD-07 Certificates														
			Deck Units	2.1	G RE												
		05500	SD-02 Shop Drawings														
			Miscellaneous Metal Items	1.6	G RE												
			SD-04 Samples														
			Miscellaneous Metal Items	1.6	G RE												
		06100	SD-02 Shop Drawings														
			Structural Wood Members		G RE												
			Installation of Framing	3.1	G RE												
			Nailers and Nailing Strips	3.2.4	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		06100	SD-07 Certificates														
			Grading and Marking	2.1.1	G RE												
		06200	SD-02 Shop Drawings														
			Finish Carpentry		G RE												
			SD-03 Product Data														
			Siding		FIO												
			Wood Items, Siding, and Trim	2.1	FIO												
			SD-04 Samples														
			Fascias and Trim		FIO												
		06650	SD-02 Shop Drawings														
			Shop Drawings		G RE												
			Installation	3.2	G RE												
			SD-03 Product Data														
			Solid polymer material	2.1	G RE												
			Qualifications	1.6	FIO												
			Fabrications	2.3	FIO												
			SD-04 Samples														
			Material	2.1	G RE												
			Counter and Vanity Tops		G RE												
			SD-06 Test Reports														
			Solid polymer material	2.1	G RE												
			SD-07 Certificates														
			Fabrications	2.3	FIO												
			Qualifications	1.6	FIO												
			SD-10 Operation and Maintenance														
			Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK					CONTRACTOR												
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		06650	Solid polymer material	2.1	FIO												
			Clean-up		FIO												
		07110	SD-07 Certificates														
			Materials		G RE												
		07131	SD-03 Product Data														
			Elastomeric waterproofing sheet material	2.1	G RE												
			Protection board	2.5	FIO												
			Primers, adhesives, and mastics	2.1	FIO												
			SD-06 Test Reports														
			Elastomeric waterproofing sheet material	2.1	FIO												
		07132	SD-03 Product Data														
			Reinforcing Fabric		G RE												
			Protection Board		G RE												
			Applications		G RE												
			SD-07 Certificates														
			Materials	1.4	FIO												
		07220	SD-03 Product Data														
			Application of Insulation	3.7	G RE												
			Inspection	3.8	G RE												
			SD-07 Certificates														
			Insulation	2.2	G RE												
			Organic Roofing Felt	2.6	G RE												
		07412	SD-02 Shop Drawings														
			Metal Roofing	1.7.1	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		07412	SD-04 Samples														
			Accessories	2.2	G RE												
			Roof Panels	2.1	G RE												
			Fasteners	2.3	G RE												
			Gaskets and Insulating Compounds	2.9	G RE												
			Sealant	2.8	G RE												
			SD-07 Certificates														
			Roof Panels	2.1	FIO												
			Installation	3.1	FIO												
			Accessories	2.2	FIO												
			Insulation	2.6	FIO												
			FIO		FIO												
			Installer	1.3.3	FIO												
			Warranties	1.7	FIO												
		07413	SD-02 Shop Drawings														
			Siding	2.1	G RE												
			SD-04 Samples														
			Accessories	2.3	G RE												
			Siding	2.1	G RE												
			Fasteners	2.4	G RE												
			Insulation	2.5	G RE												
			Gaskets and Insulating Compounds	2.9	G RE												
			Sealant	2.8	G RE												
			Wall Liners		G RE												
			SD-07 Certificates														
			Siding	2.1	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		07413	FIO		FIO												
			Installation	3.1	FIO												
			Accessories	2.3	FIO												
			Insulation	2.5	FIO												
		07600	SD-02 Shop Drawings														
			Materials	2.1	FIO												
		07840	SD-02 Shop Drawings														
			Firestopping Materials	2.1	FIO												
			SD-07 Certificates														
			Firestopping Materials	2.1	G RE												
			Installer Qualifications	1.5	FIO												
			Inspection	3.3	G RE												
		07900	SD-03 Product Data														
			Backing	2.1	G RE												
			Bond-Breaker	2.2	G RE												
			Sealant	2.5	G RE												
			SD-07 Certificates														
			Sealant	2.5	FIO												
		08110	SD-02 Shop Drawings														
			Doors	2.1	G RE												
			Frames	2.7	G RE												
			Accessories	2.5	FIO												
			Weatherstripping	2.9	FIO												
			SD-03 Product Data														
			Doors	2.1	G RE												
			Frames	2.7	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		08110	Accessories	2.5	FIO												
			Weatherstripping	2.9	FIO												
		08120	SD-02 Shop Drawings														
			Doors and frames	2.1	G RE												
			SD-08 Manufacturer's Instructions														
			Doors and frames	2.1	FIO												
		08210	SD-02 Shop Drawings														
			Doors	2.1	G RE												
			SD-03 Product Data														
			Doors	2.1	G RE												
			Accessories	2.2	FIO												
			Water-resistant sealer	2.3.7	FIO												
			warranty	1.4	FIO												
			Sound transmission class rating		G RE												
			Fire resistance rating	2.1.7	G RE												
			SD-04 Samples														
			Doors	2.1	FIO												
			Door finish colors	2.3.6.4	G RE												
			SD-06 Test Reports														
			Split resistance	2.4	FIO												
			Cycle-slam	2.4	FIO												
			Hinge loading resistance	2.4	FIO												
		08330	SD-02 Shop Drawings														
			Overhead Rolling Door Unit		G RE												
			SD-03 Product Data														
			Overhead Rolling Door Unit		G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		08330	SD-04 Samples														
			Overhead Rolling Door Unit		G RE												
			SD-07 Certificates														
			Fire Doors		FIO												
			SD-10 Operation and Maintenance Data														
			Operation Manual		FIO												
			Maintenance and Repair Manual		FIO												
		08520	SD-02 Shop Drawings														
			Aluminum Windows		G RE												
			SD-03 Product Data														
			Aluminum Windows		G RE												
			SD-04 Samples														
			Aluminum Windows		G RE												
			SD-06 Test Reports														
			Aluminum Windows		FIO												
			SD-07 Certificates														
			Aluminum Windows		FIO												
		08710	SD-02 Shop Drawings														
			Hardware schedule	1.3	G RE												
			Keying system	2.3.8	FIO												
			SD-03 Product Data														
			Hardware items	2.3	G RE												
			SD-08 Manufacturer's Instructions														
			Installation	3.1	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		08710	SD-10 Operation and Maintenance Data														
			Hardware Schedule	1.3	G RE												
			SD-11 Closeout Submittals														
			Key bitting	1.4	FIO												
		08810	SD-02 Shop Drawings														
			Installation	3.2	G RE												
			SD-03 Product Data														
			Glass		G RE												
			Glazing Accessories	2.9	G RE												
			SD-04 Samples														
			Glass		G RE												
			SD-07 Certificates														
			Glass		FIO												
		09250	SD-03 Product Data														
			Cementitious backer units	2.1.8	FIO												
			Glass Mat Water-Resistant	2.1.4	FIO												
			Gypsum Tile Backing Board														
			Water-Resistant Gypsum Backing Board	2.1.3	FIO												
			Glass Mat Covered or Reinforced	2.1.5	FIO												
			Gypsum Sheathing														
			Glass Mat Covered or Reinforced	2.1.5.1	FIO												
			Gypsum Sheathing Sealant														
			Impact Resistant Gypsum Board		FIO												
			Accessories	2.1.14	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		09250	SD-04 Samples														
			Predecorated gypsum board		G RE												
			SD-07 Certificates														
			Asbestos Free Materials	2.1	G RE												
		09310	SD-03 Product Data														
			Tile	2.1	G RE												
			Setting-Bed	2.2	G RE												
			Mortar, Grout, and Adhesive	2.4	G RE												
			SD-04 Samples														
			Tile	2.1	G RE												
			Accessories		G RE												
			Marble Thresholds		G RE												
			SD-07 Certificates														
			Tile	2.1	FIO												
			Mortar, Grout, and Adhesive	2.4	FIO												
		09510	SD-02 Shop Drawings														
			Approved Detail Drawings	1.3	G RE												
			SD-03 Product Data														
			Acoustical Ceiling Systems		G RE												
			SD-04 Samples														
			Acoustical Units	2.1	G RE												
			SD-06 Test Reports														
			Ceiling Attenuation Class and Test	1.3.2	G RE												
			SD-07 Certificates														
			Acoustical Units	2.1	G RE												
		09650	SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		09650	Resilient Flooring and Accessories		G RE												
			SD-04 Samples														
			Flooring	3.2	G RE												
			SD-06 Test Reports														
			Moisture Test	3.3	G RE												
		09680	SD-02 Shop Drawings														
			Installation		G RE												
			Molding	2.3	G RE												
			SD-03 Product Data														
			Carpet		G RE												
			Surface Preparation		G RE												
			Installation		G RE												
			Regulatory Requirements		G RE												
			SD-04 Samples														
			Carpet		G RE												
			Molding	2.3	G RE												
			SD-06 Test Reports														
			Moisture and Alkalinity Tests		G RE												
			SD-07 Certificates														
			Carpet		G RE												
			Regulatory Requirements		G RE												
			SD-10 Operation and Maintenance														
			Data														
			Carpet		G RE												
			Cleaning and Protection		G RE												
		09697	SD-04 Samples														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		09697	Walk-Off Mat		G RE												
			Walk-Off Mat		FIO												
		09900	SD-02 Shop Drawings														
			Piping identification stencil	3.12	FIO												
			SD-03 Product Data														
			Coating	2.1	G RE												
			Manufacturer's Technical Data Sheets	2.1	FIO												
			Sealant	3.3.5	FIO												
			SD-04 Samples														
			Color	1.9	G RE												
			SD-07 Certificates														
			Applicator's qualifications	1.3	FIO												
			Qualification Testing	1.4.1.2	G RE												
			SD-08 Manufacturer's Instructions														
			Application instructions		FIO												
			Mixing	3.8.2	FIO												
			Manufacturer's Material Safety Data Sheets	1.7.2	FIO												
			SD-10 Operation and Maintenance														
			Data														
			Coatings:	2.1	G RE												
		09915	SD-04 Samples														
			Color Schedule	2.2	FIO												
		10100	SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		10100	Visual Display Boards		G RE												
			SD-04 Samples														
			Aluminum	2.2.6	G RE												
			Porcelain Enamel	2.2.1	G RE												
			Materials	2.2	G RE												
			07 Certificates		FIO												
			Visual Display Boards		G RE												
		10160	SD-02 Shop Drawings														
			Toilet Partition System		G RE												
			SD-03 Product Data														
			Toilet Partition System		FIO												
			SD-04 Samples														
			Toilet Partition System		G RE												
		10201	SD-02 Shop Drawings														
			Wall louvers	2.2	G RE												
			SD-04 Samples														
			Wall louvers	2.2	G RE												
		10260	SD-02 Shop Drawings														
			Corner Guards	2.2	G RE												
			SD-03 Product Data														
			Corner Guards	2.2	G RE												
			SD-04 Samples														
			Finish	2.7	G RE												
			SD-06 Test Reports														
			Corner Guards	2.2	G RE												
			SD-07 Certificates														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		10260	Corner Guards	2.2	G RE												
		10430	SD-02 Shop Drawings														
			Approved Detail Drawings	3.1	G RE												
			SD-03 Product Data														
			Modular Exterior Signage System	2.1	G RE												
			Installation	3.1	G RE												
			Exterior Signs		G RE												
			Wind Load Requirements	1.3	G RE												
			SD-04 Samples														
			Exterior Signs		G RE												
			SD-10 Operation and Maintenance														
			Data														
			Protection and Cleaning	3.1.2	FIO												
		10440	SD-02 Shop Drawings														
			Detail Drawings	3.1	G RE												
			SD-03 Product Data														
			Installation	3.1	G RE												
			SD-04 Samples														
			Interior Signage	1.3	G RE												
			SD-10 Operation and Maintenance														
			Data														
			Approved Manufacturer's	3.1	FIO												
			Instructions														
			Protection and Cleaning	3.1.2	FIO												
		10508	SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		10508	Lockers: See Section 09915 COLOR SCHEDULE.		G RE												
			Locker Manuf. Product submitted as an 'or equal'		G RE												
			Bench Seat: See Section COLOR SCHEDULE		FIO												
			Bench Seat Manuf. Product submitted as an 'or equal'		G RE												
			SD-02 Shop Drawings Shop Drawings.		G RE												
			SD-04 Samples Samples		FIO												
			FIO		FIO												
		10522	SD-02 Shop Drawings Shop Drawings		G RE												
			SD-03 Product Data Fire Extinguisher Cabinet Product Data		G RE												
			Maintenance Data		FIO												
			Acceptable Manufacturer Products		FIO												
			FEC: J. L. Industries		FIO												
			FEC: Larsen's Manufacturing Company		FIO												
			FEC: Potler-Roemer		FIO												
			FEC: Manuf. Product submitted as an 'or equal'; G, RE.		FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		10552	SD-02 Shop Drawings														
			Shop Drawings		G RE												
			SD-03 Product Data														
			Acceptable Manufacturer Products		FIO												
			Shelving: Penco Products Inc.		FIO												
			Shelving: Republic Storage		FIO												
			Systems Co., Inc.														
			Shelving: Manuf. Product submitted as an 'or equal'		G RE												
			SD-04 Samples														
			Metal Shelving		G RE												
		10605	SD-02 Shop Drawings														
			Wire mesh partitions	1.4	FIO												
			SD-03 Product Data														
			Wire mesh partitions	1.4	FIO												
		10650	SD-02 Shop Drawings														
			Operable Partitions	2.2	G RE												
			SD-03 Product Data														
			Operable Partitions	2.2	G RE												
			SD-04 Samples														
			Operable Partitions	2.2	G RE												
			SD-07 Certificates														
			Materials	2.1	FIO												
			Operable Partitions	2.2	FIO												
			SD-10 Operation and Maintenance														
			Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		10650	Operable Partitions	2.2	FIO												
		10800	SD-03 Product Data														
			Finishes	2.1.2	G RE												
			Accessory Items	2.2	G RE												
			SD-04 Samples														
			Finishes	2.1.2	FIO												
			Accessory Items	2.2	FIO												
			SD-07 Certificates														
			Accessory Items	2.2	FIO												
		11020	SD-02 Shop Drawings														
			Security vault doors		G RE												
			Day gate		FIO												
			SD-03 Product Data														
			Vault Door and Frame	2.1	G RE												
			SD-07 Certificates														
			Vault Door and Frame	2.1	G RE												
			SD-08 Manufacturer's Instructions														
			Installation		FIO												
		11401	SD-03 Product Data														
			Kitchen equipment	2.1	G RE												
			SD-08 Manufacturer's Instructions														
			Kitchen equipment	2.1	FIO												
			SD-10 Operation and Maintenance														
			Data														
			Kitchen equipment	2.1	G RE												
		12320	SD-02 Shop Drawings														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK					CONTRACTOR												
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		12320	Installation	3.1	G RE												
			SD-03 Product Data														
			Cabinets	2.1	FIO												
			Countertops and Backsplash	2.2	FIO												
			SD-04 Samples														
			Cabinets	2.1	G RE												
			Countertops and Backsplash	2.2	G RE												
			SD-06 Test Reports														
			Cabinets and Countertops		FIO												
		12490	SD-02 Shop Drawings														
			Approved Detail Drawings	3.2	G RE												
			SD-03 Product Data														
			Window Treatments	3.2	G RE												
			Hardware	1.3	G RE												
			SD-04 Samples														
			Window Treatments	3.2	G RE												
		13100	SD-02 Shop Drawings														
			Drawings		G RE												
			SD-07 Certificates														
			Materials	2.1	G RE												
		13110	SD-02 Shop Drawings														
			Drawings	1.3.5	G RE												
			Drawings	1.3.7	G RE												
			Drawings	1.3.9	G RE												
			SD-03 Product Data														
			Equipment	2.2.12.2	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		13110	Equipment	3.5.5.5	G RE												
			Spare Parts	3.9	G RE												
			SD-06 Test Reports														
			Tests and Measurements	3.5	G RE												
			SD-07 Certificates														
			Cathodic Protection System	1.3.8	G RE												
			Cathodic Protection System	2.2.8	G RE												
			Services of 'Corrosion Expert'	1.3.1	G RE												
			SD-10 Operation and Maintenance Data														
			Cathodic Protection System	1.3.8	G RE												
			Cathodic Protection System	2.2.8	G RE												
			Training Course	3.6	G RE												
		13720	SD-03 Product Data														
			Manufacturer's Data		G RE												
			Software Data		FIO												
			SD-10 Operation and Maintenance Data														
			Operation and Maintenance Data		G RE												
			Hardware Manual		G RE												
			Software Manual		G RE												
			Operator's Manual		G RE												
			Maintenance Manual		G RE												
		13851	SD-02 Shop Drawings														
			Fire Alarm Reporting System	1.4.1	G AE												
			SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		13851	Storage Batteries	2.2	G AE												
			Voltage Drop		G AE												
			Special Tools and Spare Parts	2.7.4	G AE												
			Technical Data and Computer Software	1.5	G AE												
			Training	3.6	G AE												
			Testing	3.5	G AE												
			SD-06 Test Reports														
			Testing	3.5	G AE												
			SD-07 Certificates														
			Equipment		G AE												
			Qualifications	1.3.7	G AE												
			SD-10 Operation and Maintenance Data														
			Technical Data and Computer Software	1.5	G AE												
		13930	SD-02 Shop Drawings														
			Sprinkler System Shop Drawings		G RE												
			As-Built Shop Drawings		FIO												
			SD-03 Product Data														
			Fire Protection Related Submittals	3.1	FIO												
			Load Calculations for Sizing Sway Bracing		G RE												
			Components and Equipment Data		G RE												
			Hydraulic Calculations	1.7	G RE												
			Spare Parts		FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		13930	Preliminary Tests Procedures		G RE												
			Final Acceptance Test Procedures		G RE												
			On-site Training Schedule		G RE												
			Preliminary Tests	3.10	FIO												
			Final Acceptance Test		G RE												
			Fire Protection Specialist Qualifications		G RE												
			Sprinkler System Installer Qualifications	1.9	G RE												
			SD-06 Test Reports														
			Preliminary Tests Report		FIO												
			Final Acceptance Test Report		FIO												
			SD-07 Certificates														
			Fire Protection Specialist Inspection		FIO												
			SD-10 Operation and Maintenance Data														
			Wet Pipe Sprinkler System		FIO												
		15080	SD-04 Samples														
			Thermal Insulation Materials		FIO												
		15181	SD-02 Shop Drawings														
			Piping System	2.4	FIO												
			SD-03 Product Data														
			Piping System	2.4	G RE												
			Water Treatment Systems	2.12	FIO												
			Spare Parts		FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15181	Qualifications	1.3	FIO												
			Field Tests	3.3	G RE												
			Demonstrations	3.4	G RE												
			Verification of Dimensions	1.6.1	FIO												
			SD-06 Test Reports														
			Field Tests	3.3	FIO												
			One-Year Inspection		FIO												
			SD-07 Certificates														
			Service Organization	2.1	FIO												
			SD-10 Operation and Maintenance Data														
			Operation Manuals		FIO												
			Maintenance Manuals	3.4	FIO												
			Water Treatment Systems	2.12	FIO												
		15182	SD-02 Shop Drawings														
			Refrigerant Piping System	2.3	FIO												
			SD-03 Product Data														
			Refrigerant Piping System	2.3	G RE												
			Spare Parts		FIO												
			Qualifications	1.3	FIO												
			Refrigerant Piping Tests		FIO												
			Demonstrations		G RE												
			Verification of Dimensions	1.6.1	FIO												
			SD-06 Test Reports														
			Refrigerant Piping Tests		FIO												
			SD-07 Certificates														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15182	Service Organization	2.1	FIO												
			SD-10 Operation and Maintenance Data														
			Operation Manuals		FIO												
			Maintenance Manuals		FIO												
		15190	SD-02 Shop Drawings														
			Gas Piping System	3.2	FIO												
			SD-03 Product Data														
			Qualifications		FIO												
			SD-06 Test Reports														
			Testing		FIO												
			Pressure Tests	3.16.1	FIO												
			Pressure Tests for Liquified Petroleum Gas		FIO												
			Test With Gas	3.16.3	FIO												
		15400	SD-02 Shop Drawings														
			Plumbing System		FIO												
			Electrical Schematics		FIO												
			SD-03 Product Data														
			Welding		FIO												
			Plumbing Fixture Schedule	3.8	G RE												
			Vibration-Absorbing Features		FIO												
			Plumbing System		FIO												
			SD-06 Test Reports														
			Tests, Flushing and Disinfection	3.7	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15400	Backflow Prevention Assembly Tests		FIO												
			SD-07 Certificates														
			Materials and Equipment		FIO												
			Bolts	2.1.1	FIO												
			SD-10 Operation and Maintenance Data														
			Plumbing System		FIO												
		15556	SD-02 Shop Drawings														
			Heating System	2.18	G RE												
			Framed Instructions	3.19	FIO												
			SD-06 Test Reports														
			Testing and Cleaning	3.16	FIO												
			SD-10 Operation and Maintenance Data														
			Heating System	2.18	FIO												
		15565	SD-02 Shop Drawings														
			Heating System		FIO												
			Installation	3.1	FIO												
			SD-03 Product Data														
			Heating System		G RE												
			SD-06 Test Reports														
			Testing, Adjusting, and Balancing	3.2	FIO												
			SD-10 Operation and Maintenance Data														
			Instructions	3.3	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15569	SD-02 Shop Drawings														
			Heating System		FIO												
			Piping Installation	3.2	FIO												
			Installation		FIO												
			SD-03 Product Data														
			Manufacturer's Catalog Data		G RE												
			Spare Parts Data		FIO												
			Water Treatment Plan		FIO												
			Boiler Water Treatment	2.15	FIO												
			Heating System Tests	3.8	FIO												
			Fuel System Tests	3.10	FIO												
			Welding	1.3.6	FIO												
			Qualification		FIO												
			Field Instructions	3.11	FIO												
			Tests	3.3	FIO												
			SD-06 Test Reports														
			Heating System Tests	3.8	FIO												
			Fuel System Tests	3.10	FIO												
			Water Treatment Tests		FIO												
			SD-07 Certificates														
			Bolts	2.10.12.3	FIO												
			Continuous Emissions Monitoring		FIO												
			SD-10 Operation and Maintenance														
			Data														
			Heating System		FIO												
			Water Treatment System	2.15	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15620	SD-02 Shop Drawings														
			Drawings		FIO												
			Installation	3.1	FIO												
			SD-03 Product Data														
			Refrigeration System	3.1.1	G RE												
			Spare Parts		FIO												
			Posted Instructions	3.5	FIO												
			Verification of Dimensions	1.5.1	FIO												
			Manufacturer's Multi-Year Compressor Warranty	1.6	FIO												
			Factory Tests	2.10	FIO												
			System Performance Tests	3.1.1.2	FIO												
			Demonstrations	3.5	G RE												
			SD-06 Test Reports														
			Factory Tests	2.10	FIO												
			System Performance Tests	3.1.1.2	FIO												
			SD-07 Certificates														
			Refrigeration System	3.1.1	FIO												
			Service Organization	2.1	FIO												
			SD-10 Operation and Maintenance Data														
			Operation Manuals		FIO												
			Maintenance Manuals	3.5	FIO												
		15700	SD-02 Shop Drawings														
			Drawings		FIO												
			SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15700	Unitary Equipment	2.4	G RE												
			Unitary Equipment	2.6	G RE												
			Spare Parts Data		FIO												
			Posted Instructions		FIO												
			Verification of Dimensions	1.5.1	FIO												
			System Performance Tests	3.4	FIO												
			Demonstrations		G RE												
			SD-06 Test Reports														
			Refrigerant Tests, Charging, and Start-Up	3.3	FIO												
			System Performance Tests	3.4	FIO												
			SD-07 Certificates														
			Unitary Equipment	2.4	FIO												
			Unitary Equipment	2.6	FIO												
			Service Organization	2.1	FIO												
			SD-10 Operation and Maintenance Data														
			Operation Manuals		FIO												
			Maintenance Manuals		FIO												
		15895	SD-02 Shop Drawings														
			Drawings	3.1.9	FIO												
			Installation	3.1	FIO												
			SD-03 Product Data														
			Components and Equipment	2.1	G RE												
			Test Procedures		FIO												
			Welding Procedures	3.1.1.1	FIO												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15895	System Diagrams		G												
			Similar Services		FIO												
			Welding Joints		FIO												
			Testing, Adjusting and Balancing	3.6	FIO												
			Field Training	3.8	G RE												
			SD-06 Test Reports														
			Performance Tests	3.7	FIO												
			SD-07 Certificates														
			Bolts	2.5.2.2	FIO												
			SD-10 Operation and Maintenance Data														
			Operating and Maintenance Instructions	3.8	G RE												
		15940	SD-02 Shop Drawings														
			Exhaust System Drawings		FIO												
			Exhaust System Installation	3.4	FIO												
			SD-03 Product Data														
			Exhaust System Related Submittals	3.1	G RE												
			Ductwork Components	2.6	G RE												
			Materials and Equipment	2.9	G RE												
			Spare Parts		FIO												
			Field Instructions	3.7	FIO												
			Final Acceptance Tests	3.6	FIO												
			On-site Training	3.7	G RE												
			Exhaust System Specialist	1.7	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15940	SD-06 Test Reports														
			Final Acceptance Tests	3.6	FIO												
			SD-07 Certificates														
			Inspection by Exhaust System Specialist	3.3	FIO												
			SD-10 Operation and Maintenance Data														
			Exhaust System Operation and Maintenance Manuals														
		15951	SD-02 Shop Drawings														
			HVAC Control System	3.1.1	G RE												
			SD-03 Product Data														
			Service Organizations		FIO												
			Equipment Compliance Booklet	1.6	FIO												
			Commissioning Procedures	3.4	FIO												
			Performance Verification Test Procedures	1.6	FIO												
			Training	3.6	FIO												
			SD-06 Test Reports														
			Commissioning Report	3.6.2	FIO												
			Performance Verification Test	3.5.3	FIO												
			SD-07 Certificates														
			Air Storage Tank		FIO												
			SD-10 Operation and Maintenance Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15951	Operation Manual	1.5	FIO												
			Maintenance and Repair Manual	1.6	FIO												
		15990	SD-02 Shop Drawings														
			TAB Schematic Drawings and Report Forms	3.3	FIO												
			SD-03 Product Data														
			TAB Related HVAC Submittals	3.2	FIO												
			TAB Procedures	3.5.1	FIO												
			Calibration	1.4	FIO												
			Systems Readiness Check	3.5.2	FIO												
			TAB Execution	3.5.1	G RE												
			TAB Verification	3.5.4	G RE												
			SD-06 Test Reports														
			Design Review Report	3.1	G RE												
			Systems Readiness Check	3.5.2	G RE												
			TAB Report	3.5.3	G RE												
			TAB Verification Report	3.5.4	G RE												
			SD-07 Certificates														
			Ductwork Leak Testing	3.4	FIO												
			TAB Firm	1.5.1	G RE												
			TAB Specialist	1.5.2	G RE												
		15995	SD-03 Product Data														
			Commissioning Team	3.1	G RE												
			Test Procedures		FIO												
			Test Schedule		G RE												
			SD-06 Test Reports														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK					CONTRACTOR												
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		15995	Test Reports		G RE												
		16375	SD-02 Shop Drawings														
			Electrical Distribution System	3.11.3	G RE												
			As-Built Drawings		G RE												
			SD-03 Product Data														
			Material and Equipment	2.1	G RE												
			SD-06 Test Reports														
			Factory Tests		G RE												
			Field Testing	3.11	G RE												
			Operating Tests	3.11.13	G RE												
			Cable Installation	3.2.1.4	G RE												
			SD-07 Certificates														
			Material and Equipment	2.1	G RE												
			SD-10 Operation and Maintenance Data														
			Electrical Distribution System	3.11.3	G RE												
		16403	SD-02 Shop Drawings														
			Drawings	2.4.2	G RE												
			Shop Drawings	2.2.1	G RE												
			Switchboards	2.7	G RE												
			Panelboards	2.8	G RE												
			SD-03 Product Data														
			Equipment		G RE												
			Factory Tests	2.10	G RE												
			SD-06 Test Reports														
			Factory Tests	2.10	G RE												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		16415	SD-02 Shop Drawings														
			Interior Electrical Equipment		G RE												
			SD-03 Product Data														
			Fault Current Study		G RE												
			Manufacturer's Catalog		G RE												
			Material, Equipment, and Fixture Lists		G RE												
			Installation Procedures		G RE												
			As-Built Drawings	1.2.6	G RE												
			Onsite Tests	3.24.2	G RE												
			SD-06 Test Reports														
			Factory Test Reports		G RE												
			Field Test Plan		G RE												
			Field Test Reports	3.22	G RE												
			SD-07 Certificates														
			Materials and Equipment	1.4	G RE												
		16528	SD-02 Shop Drawings														
			Lighting System	1.3.1	G RE												
			Detail Drawings		G RE												
			As-Built Drawings	3.16.3	G RE												
			SD-03 Product Data														
			Equipment and Materials		G RE												
			Operating Test	3.16.2	G RE												
			Ground Resistance Measurements	3.16.3	G RE												
			SD-10 Operation and Maintenance														
			Data														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION FORT ONTARIO - OSWEGO, NEW YORK						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		16528	Lighting System	1.3.1	G RE												
		16710	SD-02 Shop Drawings														
			Premises Distribution System	1.7	G RE												
			Record Drawings		G RE												
			SD-03 Product Data														
			Record Keeping and Documentation	1.8	G RE												
			Spare Parts		G RE												
			Manufacturer's Recommendations	3.1.2	G RE												
			Test Plan		G RE												
			Qualifications	1.4	G RE												
			SD-06 Test Reports														
			Test Reports		G RE												
			SD-07 Certificates														
			Premises Distribution System	1.7	G RE												
			Materials and Equipment	2.1	G RE												
			Installers		G RE												

Amendment #2
SECTION 02821

FENCING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 780	(2000) Repair of Damaged and Uncoated Areas of Hot-Dipped Galvanized Coatings
ASTM C 94/C 94M	(2000) Ready-Mixed Concrete
ASTM F 883	(1997) Padlocks
ASTM F 900	(1994) Industrial and Commercial Swing Gates
ASTM F 1043	(2000) Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework
ASTM F 1083	(1997) Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F 1184	(1994) Industrial and Commercial Horizontal Slide Gates

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

PART 2 PRODUCTS

2.1 FENCE FABRIC

Fence fabric shall conform to the following:

2.2 GATES

ASTM F 900 and/or ASTM F 1184. Gate shall be the type and swing shown. Gate frames shall conform to strength and coating requirements of ASTM F 1083 for Group IA, steel pipe, with external coating Type A, nominal pipe size (NPS) 1-1/2. Gate frames shall conform to strength and coating

requirements of ASTM F 1043, for Group IC, steel pipe with external coating Type A or Type B, nominal pipe size (NPS) 1-1/2. Gate fabric shall be as specified for chain link fabric. Gate leaves more than 2.44 m wide shall have either intermediate members and diagonal truss rods or shall have tubular members as necessary to provide rigid construction, free from sag or twist. Gate leaves less than 2.44 m wide shall have truss rods or intermediate braces. Intermediate braces shall be provided on all gate frames with an electro-mechanical lock. Gate fabric shall be attached to the gate frame by method standard with the manufacturer except that welding will not be permitted. Latches, hinges, stops, keepers, rollers, and other hardware items shall be furnished as required for the operation of the gate. Latches shall be arranged for padlocking so that the padlock will be accessible from both sides of the gate. Stops shall be provided for holding the gates in the open position. For high security applications, each end member of gate frames shall be extended sufficiently above the top member to carry three strands of barbed wire in horizontal alignment with barbed wire strands on the fence.

2.3 POSTS

2.3.1 Metal Posts for Chain Link Fence

ASTM F 1083, zinc-coated. Group IA, with external coating Type A steel pipe. Group III, ASTM F 1043 steel H-section may be used for line posts in lieu of line post shapes specified for the other classes. Sizes shall be as shown on the drawings. Line posts and terminal (corner, gate, and pull) posts selected shall be of the same designation throughout the fence. Gate post shall be for the gate type specified subject to the limitation specified in ASTM F 900 and/or ASTM F 1184.

2.3.2 NOT USED

2.3.3 NOT USED

2.4 BRACES AND RAILS

ASTM F 1083, zinc-coated, Group IA, steel pipe, size NPS 1-1/4.

2.5 WIRE

2.6 CONCRETE

ASTM C 94/C 94M, using 19 mm maximum size aggregate, and having minimum compressive strength of 21 MPa at 28 days. Grout shall consist of one part portland cement to three parts clean, well-graded sand and the minimum amount of water to produce a workable mix.

2.7 PADLOCKS

Padlocks shall conform to ASTM F 883, Type Size 44 mm (1-3/4 inch). All padlocks shall be keyed into master key system as specified in Section 08710 DOOR HARDWARE.

PART 3 EXECUTION

3.1 INSTALLATION

Fence shall be installed to the lines and grades indicated. The area on either side of the fence line shall be cleared to the extent indicated.

Line posts shall be spaced equidistant at intervals not exceeding 3 m (10 feet). Terminal (corner, gate, and pull) posts shall be set at abrupt changes in vertical and horizontal alignment. Fabric shall be continuous between terminal posts; however, runs between terminal posts shall not exceed 152.4 m (500 feet). Any damage to galvanized surfaces, including welding, shall be repaired with paint containing zinc dust in accordance with ASTM A 780.

3.2 EXCAVATION

Post holes shall be cleared of loose material. Waste material shall be spread where directed. The ground surface irregularities along the fence line shall be eliminated to the extent necessary to maintain a 50 mm clearance between the bottom of the fabric and finish grade.

3.3 POST INSTALLATION

3.3.1 Posts for Chain Link Fence

Posts shall be set plumb and in alignment. Except where solid rock is encountered, posts shall be set in concrete to the depth indicated on the drawings. Where solid rock is encountered with no overburden, posts shall be set to a minimum depth of 457 mm (18 inches) in rock. Where solid rock is covered with an overburden of soil or loose rock, posts shall be set to the minimum depth indicated on the drawing unless a penetration of 457 mm (18 inches) in solid rock is achieved before reaching the indicated depth, in which case depth of penetration shall terminate. All portions of posts set in rock shall be grouted. Portions of posts not set in rock shall be set in concrete from the rock to ground level. Posts set in concrete shall be set in holes not less than the diameter shown on the drawings. Diameters of holes in solid rock shall be at least 25 mm (1 inch) greater than the largest cross section of the post. Concrete and grout shall be thoroughly consolidated around each post, shall be free of voids and finished to form a dome. Concrete and grout shall be allowed to cure for 72 hours prior to attachment of any item to the posts. Group II line posts may be mechanically driven, for temporary fence construction only, if rock is not encountered. Driven posts shall be set to a minimum depth of 914 mm (3 feet) and shall be protected with drive caps when being set. For high security fences, fence post rigidity shall be tested by applying a 222.4 newtons (50 pound) force on the post, perpendicular to the fabric, at 1.52 m (5 feet) above ground; post movement measured at the point where the force is applied shall be less than or equal to 19 mm (3/4 inch) from the relaxed position; every tenth post shall be tested for rigidity; when a post fails this test, further tests on the next four posts on either side of the failed post shall be made; all failed posts shall be removed, replaced, and retested at the Contractor's expense.

3.3.2 RAILS

3.3.2.1 Top Rail

Top rail shall be supported at each post to form a continuous brace between terminal posts. Where required, sections of top rail shall be joined using sleeves or couplings that will allow expansion or contraction of the rail. Top rail, if required for high security fence, shall be installed as indicated on the drawings.

3.3.3 BRACES AND TRUSS RODS

Braces and truss rods shall be installed as indicated and in conformance with the standard practice for the fence furnished. Horizontal (compression) braces and diagonal truss (tension) rods shall be installed on fences over 1.83 m (6 feet) in height. Braces and truss rods shall extend from terminal posts to line posts. Diagonal braces shall form an angle of approximately 40 to 50 degrees with the horizontal. No bracing is required on fences 1.83 m (6 feet) high or less if a top rail is installed.

3.3.4 TENSION WIRES

Tension wires shall be installed along the top and bottom of the fence line and attached to the terminal posts of each stretch of the fence. Top tension wires shall be installed within the top 102 mm of the installed fabric. Bottom tension wire shall be installed within the bottom 152 mm (6 inches) of the installed fabric. Tension wire shall be pulled taut and shall be free of sag.

3.3.5 CHAIN LINK FABRIC

Chain link fabric shall be installed on the side of the post indicated. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 381 mm (15 inch) intervals. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Fabric shall be fastened to line posts at approximately 381 mm (15 inch) intervals and fastened to all rails and tension wires at approximately 610 mm intervals. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined. The bottom of the installed fabric shall be 25 mm plus or minus 13 mm above the ground. For high security fence, after the fabric installation is complete, the fabric shall be exercised by applying a 222 newtons (50 pound) push-pull force at the center of the fabric between posts; the use of a 133 newtons (30 pound) pull at the center of the panel shall cause fabric deflection of not more than 63.5 mm (2-1/2 inches) when pulling fabric from the post side of the fence; every second fence panel shall meet this requirement; all failed panels shall be resecured and retested at the Contractor's expense.

3.3.6 BARBED WIRE SUPPORTING ARMS AND BARBED WIRE

3.3.6.1 General Requirements

Barbed wire supporting arms and barbed wire shall be installed as indicated and as recommended by the manufacturer. Supporting arms shall be anchored to the posts in a manner to prevent easy removal with hand tools. Barbed wire shall be pulled taut and attached to the arms with clips or other means that will prevent easy removal.

3.3.7 GATE INSTALLATION

Gates shall be installed at the locations shown. Hinged gates shall be mounted to swing as indicated. Latches, stops, and keepers shall be installed as required. Slide gates shall be installed as recommended by the manufacturer. Padlocks shall be attached to gates or gate posts with chains. Hinge pins, and hardware shall be welded or otherwise secured to prevent removal. For farm style fencing, standard metal gate assemblies with frame and fittings necessary for complete installation or wood gates shall be furnished as shown.

3.3.8 NOT USED**3.4 GROUNDING**

Fences shall be grounded as specified herein. Electrical equipment attached to the fence shall be grounded as specified in Section 16375 ELECTRICAL DISTRIBUTION SYSTEM, AERIAL. Except as indicated below, metal fences that are electrically continuous with metal posts extending at least 600 mm into the ground require no additional grounding. Other fences shall be grounded on each side of every gate. Fences shall be grounded by means of ground rods every 300 to 450 m of length when fences are located in isolated places, and every 150 to 225 m when in proximity (30 m or less) to public roads, highways, and buildings. Where the fence consists of wooden posts and horizontal metal strands only, down conductors consisting of No. 8 copper wire or equivalent shall be run from the ground rod the full height of the fence and fastened to each wire, so as to be electrically continuous. The connection to ground shall be made from the post where it is of metal and is electrically continuous with the fencing. "

-- End of Section --

Amendment #2
SECTION 02840

ACTIVE VEHICLE BARRIERS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (2000) Structural Welding Code - Steel

UNDERWRITERS LABORATORIES (UL)

UL 486A (1997; Rev thru Dec 1998) Wire Connectors and Soldering Lugs for Use with Copper Conductors

1.2 NOT USED

1.3 NAMEPLATES

Nameplate data shall be permanently attached to each vehicle barrier. The data shall be legibly marked on corrosion-resistant metal plates and shall consist of at least the following:

- a. Manufacturer's name.
- b. Model number.
- c. Serial number.
- d. Date of manufacture.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Installation; G, RE
Equipment; G, RE

Detail drawings containing complete wiring and schematic

diagrams, and any other details required to demonstrate that the system has been coordinated and will properly function as a unit. Drawings shall show proposed layout and anchorage of equipment and appurtenances, and equipment relationship to other parts of the work including foundation and clearances for maintenance and operation.

SD-03 Product Data

Vehicle Barriers; G, RE
Spare Parts; G, RE

A complete list of equipment, materials, including industrial standards used and how they apply to the applicable component and manufacturer's descriptive data and technical literature, catalog cuts, and installation instructions. Spare parts data for each different item of material and equipment used, after approval of the detail drawings. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.

Information necessary to document a minimum 1-year successful field operation performance history for each type of vehicle barrier installed.

SD-06 Test Reports

Field Testing; G, RE

Test reports in booklet form showing all field tests, including component adjustments and demonstration of compliance with the specified performance criteria, upon completion and testing of the installed system. Each test report shall indicate the final position of controls.

SD-10 Operation and Maintenance Data

Vehicle Barriers; G, RE
Operating and Maintenance Instructions; G, RE

Six copies of operation and maintenance manuals, a minimum of 2 weeks prior to field training. One complete set prior to performance testing and the remainder upon acceptance. Manuals shall be approved prior to acceptance. Operation manuals shall outline the step-by-step procedures required for system startup, operation, and shutdown. The manuals shall include the manufacturer's name, model number, service manual, parts list, and brief description of all equipment and their basic operating features. Maintenance manuals shall include routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guide. The manuals shall include piping layout, equipment layout, and simplified wiring and control diagrams of the system as installed. The manuals shall also include hydraulic oil types to be used for ambient temperature ranges of minus 34 degrees C (minus 30 degrees F) to plus 66 degrees C (150 degrees F) to cover winter operation, summer operation, and ambient temperature ranges in between.

1.5 DELIVERY AND STORAGE

Components placed in storage shall be protected from the weather, humidity, and temperature variation, dirt and dust, or other contaminants. Structural materials shall be stored on sleepers or pallets and shall be protected from rust and objectionable materials such as dirt, grease, or oil.

1.6 SPARE PARTS

A manufacturer's standard recommended spare parts package, with current unit prices and source of supply complete with detailed manuals on parts replacement, shall be provided with each barrier to facilitate 1 year of normal operation. Particular consideration shall be given to system components which are not readily available from local or commercial sources and which are critical to the operation of the system.

PART 2 PRODUCTS

2.1 NOT USED

2.2 NOT USED

2.3 NOT USED

2.4 NOT USED

2.5 NOT USED

2.6 NOT USED

2.7 ELECTRICAL WORK

Motors, manual or automatic motor control equipment except where installed in motor control centers and protective or signal devices required for the operation specified herein shall be provided in accordance with Section 16415 ELECTRICAL WORK, INTERIOR. All field wiring for loop detectors, communication lines, and power circuits shall have surge protection. Any wiring required for the operation specified herein, but not shown on the electrical plans, shall be provided under this section in accordance with Sections 16415 ELECTRICAL WORK, INTERIOR and 16375 ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND.

2.8 CONTROL PANEL

A control panel and control circuit shall be provided to interface between all barrier control stations and the power unit. The control station is defined as the main control panel and the remote control panel as shown. The control circuit shall contain all relays, timers, and other devices or an industrial programmable controller programmed as necessary for the barrier operation. The control panel shall allow direct interface with auxiliary equipment such as card readers, remote switches, loop detectors, infrared sensors, and sliding gate limit switches. The enclosure shall be as indicated on the drawings. All device interconnect lines shall be run to terminal strips.

2.8.1 Voltage

The control circuit shall operate from a 120 volt 60 Hz supply. The control circuit voltage shall be 12 or 24 dc for all external control panels.

2.9 MISCELLANEOUS EQUIPMENT

2.9.1 NOT USED

2.9.2 Heater

A waterproof heater with a thermostat control and NEMA 4 junction box connection point shall be provided for de-icing and snow melting. The heater shall provide barrier operation to an ambient temperature of minus 40 degrees C (minus 40 degrees F).

2.9.3 NOT USED

2.9.4 Vertical Arm Gates (Traffic Arms)

Vertical arm gates shall have an opening and closing time of less than or equal to 15 seconds. The gates shall be capable of 15 duty cycles per hour as a minimum. Gate shall operate the arm through 90 degrees. Gate operators shall be supplied with single phase 120 volt motors. Each gate shall be capable of being operated from a remote open-close push button station. Gates shall have a hand-crank mechanism which will allow manual operation during power failures. Each gate shall be supplied with a handcrank. Gate arms shall be constructed out of wood, steel, fiberglass, or aluminum, as specified by the manufacturer for the given lengths as shown on the drawings. Gate arms shall be covered with 406 mm (16 inch) wide reflectorized red and white sheeting. Each gate shall be furnished with a spare gate arm. Gate operator cabinets shall be constructed of galvanized steel, or aluminum and shall be painted manufacturers standard color as approved. Each gate operator shall be provided with an obstruction detector that will automatically reverse the gate motor when an obstruction is detected. The obstruction detector shall be any of the following 3 types: An electronic loop vehicle detector buried in the road, a photocell electric eye mounted on the gate operator, or a safety strip mounted on the lower edge of the arm. The detector system shall be automatically deactivated when the arm reaches the fully lowered position. Slab size and anchorage for gate operator shall be per manufacturer requirements.

2.10 FINISH

Surfaces shall be painted in accordance with requirements of Section 09900 PAINTING, GENERAL except for materials supplied with manufacturer's standard finish. The barrier front shall have 100 mm wide reflective yellow stripes 100 mm apart.

2.11 CONCRETE

The concrete shall conform to Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE.

2.12 WELDING

Welding shall be in accordance with AWS D1.1.

2.13 PAVEMENT

After placement of the vehicle barrier, the pavement sections shall be replaced to match the section and depth of the surrounding pavement.

Pavement shall be warped to match the elevations of existing pavement. Positive surface drainage, away from the vehicle barrier, shall be provided by pavement slope.

PART 3 EXECUTION

3.1 INSTALLATION

Installation shall be in accordance with manufacturers instructions and in the presence of a representative of the manufacturer. Manufacturer's representative shall be experienced in the installation, adjustment, and operation of the equipment provided. The representative shall also be present during adjustment and testing of the equipment.

3.2 HYDRAULIC LINES

Buried hydraulic lines shall be placed in polyvinyl chloride (PVC) sleeves. Positive drainage shall be provided from the hydraulic power unit to the barrier for drainage of condensation within the PVC sleeve.

3.3 ELECTRICAL

All control power wiring requiring compression terminals shall use ring-style terminals. Terminals and compression tools shall conform to UL 486A. Roundhead screws and lockwashers shall be used to provide vibration-resistant connections. Connections between any printed circuit cards and the chassis shall be made with screw connections or other locking means to prevent shock or vibration separation of the card from its chassis. The electrical power supply breaker for the hydraulic power unit shall be capable of being locked in the power on and power off positions.

3.4 FIELD TESTING

Upon completion of construction, a field test shall be performed for each vehicle barrier. The test shall include raising and lowering the barrier, both electrically and manually, through its complete range of operation. Each vehicle barrier shall then be continuously cycled for not less than 30 minutes to test for heat build-up in the hydraulic system. The Contracting Officer shall be notified at least 7 days prior to the beginning of the field test. The Contractor shall furnish all equipment and make all necessary corrections and adjustments prior to tests witnessed by the Contracting Officer. Any conditions that interfere with the proper operation of the barrier disclosed by the test shall be corrected at no additional cost to the Government. Adjustments and repairs shall be done by the Contractor under the direction of the Contracting Officer. After adjustments are made to assure correct functioning of components, applicable tests shall be completed.

3.5 FIELD TRAINING

A field training course shall be provided for designated operating staff members. Training shall be provided for a total period of not less than 1 hour of normal working time and shall start after the system is functionally complete but prior to final acceptance tests. Field training shall cover all of the items contained in the operating and maintenance instructions.

-- End of Section --

Amendment #2
SECTION 05500A

MISCELLANEOUS METAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ALUMINUM ASSOCIATION (AA)

AA DAF-45 (1997) Designation System for Aluminum Finishes

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A14.3 (1992) Ladders - Fixed - Safety Requirements

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 123/A 123M (2001) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

ASTM A 53/A 53M (2001) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

ASTM A 653/A 653M (2000) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

ASTM A 924/A 924M (1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (2000) Structural Welding Code - Steel

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM MBG 531 (1994) Metal Bar Grating Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (1998; Errata 10-98-1) Portable Fire Extinguishers

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-344 (Rev B) Lacquer, Clear Gloss, Exterior, Interior

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Miscellaneous Metal Items; G, RE.

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive data and installation instructions, and templates. Detail drawings for the following items: Floor grating, ships ladder, diamond mesh partitions, trench covers.

SD-04 Samples

Miscellaneous Metal Items; G, RE.

Samples of the following items: Aluminum and steel floor grating, diamond mesh partitions. Samples shall be full size, taken from manufacturer's stock, and shall be complete as required for installation in the structure. Samples may be installed in the work, provided each sample is clearly identified and its location recorded.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall provide strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

1.4 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint or asphalt varnish.

1.5 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the

entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

1.6 ANCHORAGE

Anchorage shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified or indicated shall include slotted inserts made to engage with the anchors, expansion shields, and power-driven fasteners when approved for concrete; toggle bolts and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

1.7 ALUMINUM FINISHES

Unless otherwise specified, aluminum items shall have anodized finish. The thickness of the coating shall be not less than that specified for protective and decorative type finishes for items used in interior locations or architectural Class I type finish for items used in exterior locations in AA DAF-45. Items to be anodized shall receive a polished satin finish. Aluminum surfaces to be in contact with plaster or concrete during construction shall be protected with a field coat conforming to CID A-A-344.

1.8 SHOP PAINTING

Surfaces of ferrous metal except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating unless otherwise specified. Surfaces of items to be embedded in concrete shall not be painted. Items to be finish painted shall be prepared according to manufacturer's recommendations or as specified.

PART 2 PRODUCTS

2.1 ACCESS DOORS AND PANELS

Doors and panels shall be flush type unless otherwise indicated. Frames for access doors shall be fabricated of not lighter than 1.52 mm (16 gauge) steel with welded joints and finished with anchorage for securing into construction. Access doors shall be a minimum of 610 by 610 mm and of not lighter than 1.9 mm (14 gauge) steel, with stiffened edges, complete with attachments. Access doors shall be hinged to frame and provided with a flush face, screw driver operated latch. Exposed metal surfaces shall have a shop applied prime coat.

2.2 NOT USED

2.3 NOT USED

2.4 NOT USED

2.5 NOT USED

2.6 NOT USED

2.7 PIPE GUARDS

Pipe guards shall be heavy duty steel pipe conforming to ASTM A 53/A 53M, Type E or S, weight STD, black finish.

2.8 **Not Used**

2.9 NOT USED

2.10 NOT USED

2.11 FLOOR GRATINGS AND FRAMES

Aluminum grating shall be designed in accordance with NAAMM MBG 531 to meet the indicated load requirements. Edges shall be banded with bars 6 mm less in height than bearing bars for grating sizes above 19 mm. Banding bars shall be flush with the top of bearing grating. Frames shall be of welded steel construction finished to match the grating.

2.12 NOT USED

2.13 NOT USED

2.14 NOT USED

2.14.1 NOT USED

2.14.2 NOT USED

2.15 NOT USED

2.16 LADDERS

Ladders shall be painted steel or aluminum, fixed rail type in accordance with ANSI A14.3.

2.17 NOT USED

2.18 MIRROR FRAMES

Frames for plate glass mirrors larger than 450 by 750 mm shall be fabricated from extruded aluminum with anodized finish. Frames shall be provided with concealed fittings and tamperproof mountings.

2.19 MISCELLANEOUS

Miscellaneous plates and shapes for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work.

2.20 PARTITIONS, DIAMOND MESH TYPE

Partitions shall be constructed of metal fabric attached to structural steel framing members. Fabric shall be 10 gauge steel wires woven into 38 mm diamond mesh with wire secured through weaving channels. Framing members shall be channels 38 by 3 mm minimum size. Channel frames shall be

mortised and tenoned at intersections. Steel frames, posts, and intermediate members shall be of the sizes and shapes indicated. Cast-iron floor shoes and caps shall have setscrew adjustment. Doors and grilles shall be provided as indicated, complete with hardware and accessories including sliding mechanisms, locks, guard plates, sill shelves and brackets, and fixed pin butts. Doors and grilles shall have cover plates as indicated. Dutch doors shall have a lock for each leaf. A continuous rubber bumper shall be provided at bottom of grille frame. Locks shall be bronze, cylinder, mortise type. Keying shall be coordinated with Section 08710 DOOR HARDWARE. Ferrous metal portions of partitions and accessories shall be shop primed and field painted.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown and according to the manufacturer's recommendations. Items listed below require additional procedures as specified.

3.2 REMOVABLE ACCESS PANELS

A removable access panel not less than 600 by 600 mm shall be installed directly below each VAV box, valve, flow indicator, damper, or air splitter that is located above the ceiling, other than an acoustical ceiling, and that would otherwise not be accessible.

3.3 NOT USED

3.4 NOT USED

3.5 INSTALLATION OF PIPE GUARDS

Pipe guards shall be set vertically in concrete piers. Piers shall be constructed of, and the hollow cores of the pipe filled with, concrete specified in Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE.

3.6 INSTALLATION OF DOWNSPOUT BOOTS

Downspouts shall be secured to building through integral lips with appropriate fasteners.

3.7 NOT USED

3.8 NOT USED

3.9 NOT USED

3.10 PARTITION POSTS AND OPENINGS

Posts shall be set in shoes bolted to the floor and in caps tap-screwed to clip angles in overhead construction, as indicated. Openings shall be formed using channels similar to the partition frames at ducts, pipes, and other obstructions.

3.11 RECESSED FLOOR MATS

Contractor shall verify field measurements prior to releasing materials for fabrication by the manufacturer. A mat frame shall be used to ensure

recess accuracy in size, shape and depth. Drain pit shall be formed by blocking out concrete when frames are installed. Pit shall be dampproofed after concrete has set. Frames shall be assembled onsite and installed so that upper edge will be level with finished floor surface. A cement base shall be screeded inside the mat recess frame area using the edge provided by the frame as a guide. The frame shall be anchored into the cement with anchor pins a minimum of 610 mm on centers.

3.12 NOT USED

3.13 NOT USED

3.14 NOT USED

3.15 TRENCH FRAMES AND COVERS

Trench frames and covers shall finish flush with the floor.

3.16 NOT USED

3.17 NOT USED

3.18 NOT USED

3.19 INSTALLATION OF WINDOW WELLS

Window wells shall be placed as shown with the walls securely anchored to foundation surface. The area within the well shall be excavated to the bottom of the well and covered with a 100 mm thick layer of coarse gravel or crushed rock.

3.20 INSTALLATION OF FIRE EXTINGUISHER CABINETS

Metal fire extinguisher cabinets shall be furnished and installed in accordance with NFPA 10 where shown on the drawings or specified.

-- End of Section --

Amendment #2

SECTION 07413A

METAL SIDING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ALUMINUM ASSOCIATION (AA)

AA Design Manual (2000) Aluminum Design Manual:
Specification & Guidelines for Aluminum
Structures

AMERICAN IRON AND STEEL INSTITUTE (AISI)

AISI Cold-Formed Mnl (1996) Cold-Formed Steel Design Manual

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 463/A 463M (2000) Steel Sheet, Aluminum-Coated, by the
Hot-Dip Process

ASTM A 653/A 653M (2000) Steel Sheet, Zinc-Coated
(Galvanized) or Zinc-Iron Alloy-Coated
(Galvannealed) by the Hot-Dip Process

ASTM A 792/A 792M (1999) Steel Sheet, 55% Aluminum-Zinc
Alloy-Coated by the Hot-Dip Process

ASTM C 518 (1998) Steady-State Heat Flux Measurements
and Thermal Transmission Properties by
Means of the Heat Flow Meter Apparatus

ASTM D 522 (1993a) Mandrel Bend Test of Attached
Organic Coatings

ASTM D 610 (1995) Evaluating Degree of Rusting on
Painted Steel Surfaces

ASTM D 714 (1987; R 1994e1) Evaluating Degree of
Blistering of Paints

ASTM D 968 (1993) Abrasion Resistance of Organic
Coatings by Falling Abrasive

ASTM D 1654 (1992) Evaluation of Painted or Coated
Specimens Subjected to Corrosive
Environments

- ASTM D 2244 (1995) Calculation of Color Differences from Instrumentally Measured Color Coordinates
- ASTM D 2247 (1999) Testing Water Resistance of Coatings in 100% Relative Humidity
- ASTM D 2794 (1993; R 1999e1) Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- ASTM D 3359 (1997) Measuring Adhesion by Tape Test
- ASTM D 4214 (1998) Evaluating Degree of Chalking of Exterior Paint Films
- ASTM D 5894 (1996) Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal, (Alternating Exposures in a Fog/Dry Cabinet and a UV/Condensation Cabinet)
- ASTM E 84 (2000a) Surface Burning Characteristics of Building Materials
- ASTM G 154 (2000ae1) Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

- ASCE 7 (1998) Minimum Design Loads for Buildings and Other Structures

1.2 GENERAL REQUIREMENTS

1.2.1 Design

Criteria, loading combinations, and definitions shall be in accordance with ASCE 7. Maximum calculated fiber stress shall not exceed the allowable value in the AISI or AA manuals; a one third overstress for wind is allowed. Midspan deflection under maximum design loads shall be limited to L/180. Contract drawings show the design wind loads and the extent and general assembly details of the metal siding. Members and connections not shown on the drawings shall be designed by the Contractor. Siding panels and accessories shall be the products of the same manufacturer. Steel siding design shall be in accordance with AISI Cold-Formed Mnl. Aluminum siding design shall be in accordance with AA Design Manual.

1.2.2 Architectural Considerations

Panels profile shall be as shown on the drawings.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When

used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Siding; G, RE

Drawings consisting of catalog cuts, design and erection drawings, shop coating and finishing specifications, and other data as necessary to clearly describe design, materials, sizes, layouts, construction details, fasteners, and erection. Drawings shall be accompanied by engineering design calculations for the siding panels.

SD-04 Samples

Accessories; G, RE

One sample of each type of flashing, trim, closure, cap and similar items. Size shall be sufficient to show construction and configuration.

Siding; G, RE

One piece of each type and finish (exterior and interior) to be used, 225 mm long, full width.

Fasteners; G, RE

Two samples of each type to be used with statement regarding intended use. If so requested, random samples of bolts, nuts, and washers as delivered to the jobsite shall be taken in the presence of the Contracting Officer and provided to the Contracting Officer for testing to establish compliance with specified requirements.

Insulation; G, RE

One piece of each type to be used, and descriptive data covering installation.

Gaskets and Insulating Compounds; G, RE

Two samples of each type to be used and descriptive data.

Sealant; G, RE

One sample, approximately 0.5 kg, and descriptive data.

Wall Liners; G, RE

One piece, 225 mm long, full width.

SD-07 Certificates

Siding; FIO
Installation; FIO
Accessories; FIO

Certificates attesting that the panels and accessories conform to the requirements specified. Certified laboratory test reports showing that the sheets to be furnished are produced under a continuing quality control program and that a representative sample consisting of not less than 5 pieces has been tested and has met the quality standards specified for factory color finish. Mill certification for structural bolts, siding, and wall liner panels.

Insulation; FIO

Certificate attesting that the insulation furnished for the project contains recovered material, and showing an estimated percent of such recovered material.

1.4 DELIVERY AND STORAGE

Materials shall be delivered to the site in a dry and undamaged condition and stored out of contact with the ground. Materials shall be covered with weathertight coverings and kept dry. Storage accommodations for metal siding shall provide good air circulation and protection from surface staining.

1.5 WARRANTIES

The Contractor shall provide a weather tight warranty for the metal siding for a period of 20 years to include siding panel assembly, 10 years against the wear of color finish, and 10 years against the corrosion of fasteners caused by ordinary wear and tear by the elements. The warranties shall start upon final acceptance of the work or the date the Government takes possession, whichever is earlier.

PART 2 PRODUCTS

2.1 SIDING

Panels shall be steel and shall have a factory color finish. Length of sheets shall be sufficient to cover the entire height of any unbroken wall surface when length of run is 9 m or less. When length of run exceeds 9 m, each sheet in the run shall extend over two or more spans. Sheets longer than 9 m may be furnished if approved by the Contracting Officer. Width of sheets with interlocking ribs shall provide not less than 900 mm of coverage in place.

2.1.1 Wall Panels

Wall panels shall have interlocking ribs for securing adjacent sheets. Wall panels shall be fastened to framework using concealed fasteners.

2.1.2 Steel Panels

Zinc-coated steel conforming to ASTM A 653/A 653M; aluminum-zinc alloy coated steel conforming to ASTM A 792/A 792M, or aluminum-coated steel conforming to ASTM A 463/A 463M, Type 2, coating designation T2 65. Uncoated wall panels shall be 0.6 mm thick minimum. Prior to shipment, mill finish panels shall be treated with a passivating chemical and oiled to inhibit the formation of oxide corrosion products. Panels that have become wet during shipment but have not started to oxidize shall be dried, retreated, and re-oiled.

2.1.3 NOT USED

2.1.4 Factory Insulated Panels

Insulated wall panels shall be factory-fabricated units with insulating core between metal face sheets, securely fastened together and uniformly separated with rigid spacers; facing of steel of composition and gauge specified for siding; and constructed to eliminate condensation on interior of the panel. Panels shall have a factory color finish. Insulation shall be compatible with adjoining materials; nonrunning and nonsettling; capable of retaining its R-value for the life of the metal facing sheets; and unaffected by extremes of temperature and humidity. The assembly shall have a flame spread rating not higher than 25, and smoke developed rating not higher than 100 when tested in accordance with ASTM E 84. The insulation shall remain odorless, free from mold, and not become a source of food and shelter for insects. Panels shall be not less than 200 mm wide and shall be in one piece for unbroken wall heights. Insulated panel to have an R-value of 15.

2.2 FACTORY COLOR FINISH

Panels shall have a factory applied polyvinylidene fluoride finish on the exposed side. The exterior finish shall consist of a baked-on topcoat with an appropriate prime coat. Color shall match the color indicated on the drawings. The exterior coating shall be a nominal 0.025 mm thickness consisting of a topcoat of not less than 0.018 mm dry film thickness and the paint manufacturer's recommended primer of not less than 0.005 mm thickness. The interior color finish shall consist of the same coating and dry film thickness as the exterior. The exterior color finish shall meet the test requirements specified below.

2.2.1 Salt Spray Test

A sample of the sheets shall withstand a cyclic corrosion test for a minimum of 2016 hours in accordance with ASTM D 5894, including the scribe requirement in the test. Immediately upon removal of the panel from the test, the coating shall receive a rating of not less than 10, no blistering, as determined by ASTM D 714; 10, no rusting, as determined by ASTM D 610; and a rating of 6, 2.0 to 3.0 mm failure at scribe, as determined by ASTM D 1654.

2.2.2 Formability Test

When subjected to testing in accordance with ASTM D 522 Method B, 3 mm diameter mandrel, the coating film shall show no evidence of fracturing to the naked eye.

2.2.3 Accelerated Weathering, Chalking Resistance and Color Change

A sample of the sheets shall be tested in accordance with ASTM G 154. The coating shall withstand the weathering test without cracking, peeling, blistering, loss of adhesion of the protective coating, or corrosion of the base metal. Protective coating with an adhesion rating of less than 4B when tested in accordance with ASTM D 3359, Test Method B, shall be considered as an area indicating loss of adhesion. Following the accelerated weathering test, the coating shall have a chalk rating not less than No. 8 in accordance with ASTM D 4214 test procedures, and the color change shall not exceed 5 CIE or Hunter Lab color difference (ΔE) units in accordance with ASTM D 2244. For sheets required to have a low

gloss finish, the chalk rating shall be not less than No. 6 and the color difference shall be not greater than 7 units.

2.2.4 Humidity Test

When subjected to a humidity cabinet test in accordance with ASTM D 2247 for 1000 hours, a scored panel shall show no signs of blistering, cracking, creepage or corrosion.

2.2.5 Impact Resistance

Factory-painted sheet shall withstand direct and reverse impact in accordance with ASTM D 2794 13 mm diameter hemispherical head indenter, equal to 6.7 times the metal thickness in mm, expressed in Newton-meters, with no loss of adhesion.

2.2.6 Abrasion Resistance Test

When subjected to the falling sand test in accordance with ASTM D 968, Method A, the coating system shall withstand a minimum of 50 liters of sand before the appearance of the base metal. The term "appearance of base metal" refers to the metallic coating on steel or the aluminum base metal.

2.3 ACCESSORIES

Flashing, trim, metal closure strips, caps, and similar metal accessories shall be the manufacturer's standard products. Exposed metal accessories shall be finished to match the panels furnished. Molded closure strips shall be bituminous-saturated fiber, closed-cell or solid-cell synthetic rubber or neoprene, or polyvinyl chlorided premolded to match configuration of the panels and shall not absorb or retain water.

2.4 FASTENERS

Fasteners for steel panels shall be zinc-coated steel, aluminum, corrosion resisting steel, or nylon capped steel, type and size specified below or as otherwise approved for the applicable requirements. Fasteners for aluminum panels shall be aluminum or corrosion resisting steel. Fasteners for attaching wall panels to supports shall provide both tensile and shear strength of not less than 3340 N per fastener. Fasteners for accessories shall be the manufacturer's standard. Exposed wall fasteners shall be color finished or provided with plastic color caps to match the panels. Nonpenetrating fastener system for wall panels using concealed clips shall be manufacturer's standard for the system provided.

2.4.1 Screws

Screws shall be as recommended by the manufacturer.

2.4.2 End-Welded Studs

Automatic end-welded studs shall be shouldered type with a shank diameter of not less than 5 mm and cap or nut for holding panels against the shoulder.

2.4.3 Explosive Actuated Fasteners

Fasteners for use with explosive actuated tools shall have a shank of not less than 3.68 mm with a shank length of not less than 13 mm for

fastening panels to steel and not less than 25 mm for fastening panels to concrete.

2.4.4 Blind Rivets

Blind rivets shall be aluminum with 5 mm nominal diameter shank or stainless steel with 3 mm nominal diameter shank. Rivets shall be threaded stem type if used for other than the fastening of trim. Rivets with hollow stems shall have closed ends.

2.4.5 Bolts

Bolts shall be not less than 6 mm diameter, shouldered or plain shank as required, with proper nuts.

2.5 INSULATION

Thermal resistance of insulation shall be not less than the R-value of 15. R-values shall be determined at a mean temperature of 24 degrees C in accordance with ASTM C 518. Insulation shall be a standard product with the insulation manufacturer, factory-marked or identified with insulation manufacturer's name or trademark and R-value. Identification shall be on individual pieces or individual packages. Insulation, including facings, shall have a flame spread not in excess of 25 and a smoke developed rating not in excess of 100 when tested in accordance with ASTM E 84. The stated R-value of the insulation shall be certified by an independent Registered Professional Engineer if tests are conducted in the insulation manufacturer's laboratory.

2.6 NOT USED

2.7 NOT USED

2.8 SEALANT

Sealant shall be an elastomeric type containing no oil or asphalt. Exposed sealant shall be colored to match the applicable building color and shall cure to a rubberlike consistency.

2.9 GASKETS AND INSULATING COMPOUNDS

Gaskets and insulating compounds shall be nonabsorptive and suitable for insulating contact points of incompatible materials. Insulating compounds shall be nonrunning after drying.

PART 3 EXECUTION

3.1 INSTALLATION

Installation shall be in accordance with the manufacturer's erection instructions and drawings. Dissimilar materials which are not compatible when contacting each other shall be insulated from each other by means of gaskets or insulating compounds. Improper or mislocated drill holes shall be plugged with an oversize screw fastener and gasketed washer; however, panels with an excess of such holes or with such holes in critical locations shall not be used. Exposed surfaces and edges shall be kept clean and free from sealant, metal cuttings, hazardous burrs, and other foreign material. Stained, discolored, or damaged sheets shall be removed from the site.

3.1.1 Siding and Accessories

Siding shall be applied with the longitudinal configurations in the vertical position. Accessories shall be fastened into framing members, except as otherwise approved. Closure strips shall be provided as indicated and where necessary to provide weathertight construction.

3.1.1.1 Lap Type Panels with Exposed Fasteners

End laps shall be made over framing members with fasteners into framing members approximately 50 mm from the end of the overlapping sheet. Side laps shall be laid away from the prevailing winds. Spacing of fasteners shall present an orderly appearance and shall not exceed: 200 mm on center at end laps of siding, 200 mm on center at connection of siding to intermediate supports, and 450 mm on center at side laps of siding except when otherwise approved. Side and end laps of siding and joints at accessories shall be sealed. Fasteners shall be installed in straight lines within a tolerance of 13 mm in the length of a bay. Fasteners shall be driven normal to the surface and to a uniform depth to seat the gasketed washers properly.

3.1.1.2 Concealed Fastener Wall Panels

Panels shall be fastened to framing members with concealed fastening clips or other concealed devices standard with the manufacturer. Spacing of fastening clips and fasteners shall be in accordance with the manufacturer's written instructions. Spacing of fasteners and anchor clips along the panel interlocking ribs shall not exceed 300 mm on center except when otherwise approved. Fasteners shall not puncture metal sheets except as approved for flashing, closures, and trim; exposed fasteners shall be installed in straight lines. Interlocking ribs shall be sealed with factory-applied sealant. Joints at accessories shall be sealed.

-- End of Section --

Amendment #2
SECTION 09250

GYPSUM BOARD

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ANSI A108.11 (1992) Interior Installation of
Cementitious Backer Units
- ANSI A118.9 (1992) Cementitious Backer Units

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM C 36/C 36M (1999) Gypsum Wallboard
- ASTM C 79/C 79M (2001) Standard Specification for Treated
Core and Nontreated Core Gypsum Sheathing
Board
- ASTM C 442/C 442M (1999; Rev. A) Gypsum Backing Board and
Coreboard
- ASTM C 475 (1994) Joint Compound and Joint Tape for
Finishing Gypsum Board
- ASTM C 514 (1996) Nails for the Application of Gypsum
Board
- ASTM C 630/C 630M (2001) Water-Resistant Gypsum Backing Board
- ASTM C 840 (2001) Application and Finishing of Gypsum
Board
- ASTM C 954 (2000) Steel Drill Screws for the
Application of Gypsum Board or Metal
Plaster Bases to Steel Studs from 0.033 in.
(0.84 mm) to 0.112 in. (2.84 mm) in
Thickness
- ASTM C 1002 (2000) Steel Drill Screws for the
Application of Gypsum Panel Products or
Metal Plaster Bases
- ASTM C 1047 (1999) Accessories for Gypsum Wallboard and
Gypsum Veneer Base
- ASTM C 1177/C 1177M (1999) Standard Specification for Glass Mat
Gypsum Substrate for use as Sheathing

ASTM C 1178/C 1178M	(1999) Glass Mat Water-Resistant Gypsum Backing Board
ASTM C 1396/C 1396M	(2000) Standard Specification for Gypsum Board
ASTM D 226	(1997) Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
ASTM D 412	(1998) Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
ASTM D 624	(2000) Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
ASTM D 1149	(1999) Standard Test Method for Rubber Deterioration-Surface Ozone Cracking in a Chamber

GYPSUM ASSOCIATION (GA)

GA 214	(1996) Recommended Levels of Gypsum Board Finish
GA 216	(2000) Application and Finishing of Gypsum Board
GA 253	(1999) Application of Gypsum Sheathing

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-03 Product Data

Cementitious backer units

Glass Mat Water-Resistant Gypsum Tile Backing Board

Water-Resistant Gypsum Backing Board

Glass Mat Covered or Reinforced Gypsum Sheathing

Glass Mat Covered or Reinforced Gypsum Sheathing Sealant

Impact Resistant Gypsum Board

Accessories

Submit for each type of gypsum board and for cementitious backer units.

SD-04 Samples

Predecorated gypsum board; G, RE

Submit for each color and pattern of predecorated gypsum board. Where colors are not indicated, submit color selection samples of not less than eight of the manufacturer's standard colors.

SD-07 Certificates

Asbestos Free Materials; G, RE

Certify that gypsum board types, gypsum backing board types, cementitious backer units, and joint treating materials do not contain asbestos.

1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery

Deliver materials in the original packages, containers, or bundles with each bearing the brand name, applicable standard designation, and name of manufacturer, or supplier.

1.3.2 Storage

Keep materials dry by storing inside a sheltered building. Where necessary to store gypsum board and cementitious backer units outside, store off the ground, properly supported on a level platform, and protected from direct exposure to rain, snow, sunlight, and other extreme weather conditions. Provide adequate ventilation to prevent condensation.

1.3.3 Handling

Neatly stack gypsum board and cementitious backer units flat to prevent sagging or damage to the edges, ends, and surfaces.

1.4 ENVIRONMENTAL CONDITIONS

1.4.1 Temperature

Maintain a uniform temperature of not less than 10 degrees C in the structure for at least 48 hours prior to, during, and following the application of gypsum board, cementitious backer units, and joint treatment materials, or the bonding of adhesives.

1.4.2 Exposure to Weather

Protect gypsum board and cementitious backer unit products from direct exposure to rain, snow, sunlight, and other extreme weather conditions.

1.5 QUALIFICATIONS

Manufacturer shall specialize in manufacturing the types of material specified and shall have a minimum of 5 years of documented successful experience. Installer shall specialize in the type of gypsum board work required and shall have a minimum of 3 years of documented successful experience.

PART 2 PRODUCTS

2.1 MATERIALS

Conform to specifications, standards and requirements specified herein. Provide gypsum board types, gypsum backing board types, cementitious backing units, and joint treating materials manufactured from asbestos free materials only.

2.1.1 Gypsum Board

ASTM C 36/C 36M and ASTM C 1396/C 1396M.

2.1.1.1 Regular

1200 mm wide, 15.9 mm thick, tapered and featured edges.

2.1.1.2 NOT USED

2.1.1.2 Type X (Special Fire-Resistant)

1200 mm wide, 15.9 mm thick, tapered and featured edges.

2.1.2 NOT USED

2.1.3 Regular Water-Resistant Gypsum Backing Board

ASTM C 630/C 630M

2.1.3.1 Regular

1200 mm wide, 15.9 mm thick, tapered edges.

2.1.4 Glass Mat Water-Resistant Gypsum Tile Backing Board

ASTM C 1178/C 1178M

2.1.4.1 Regular

1200 mm wide, 15.9 mm thick, square edges.

2.1.5 Glass Mat Covered or Reinforced Gypsum Sheathing

Exceeds physical properties of ASTM C 79/C 79M and ASTM C 1177/C 1177M. Provide 15.9, mm, gypsum sheathing. Gypsum board shall consist of a noncombustible water-resistant core, with a glass mat surfaces embedded to the gypsum core or reinforcing embedded throughout the gypsum core. Gypsum sheathing board shall be warranted for at least 6 months against delamination due to direct weather exposure. Provide continuous, asphalt impregnated, building felt to cover exterior face of sheathing. All joints, seams and penetrations shall be sealed with compatible sealant.

2.1.5.1 Glass Mat Covered or Reinforced Gypsum Sheathing Sealant

Sealant shall be compatible with gypsum sheathing, rubber washers for masonry veneer anchors, and other associated cavity wall components such as anchors and through wall flashing. Sealants for gypsum sheathing board edge seams and veneer anchor penetrations shall be the type recommended by the gypsum sheathing manufacturer and have the following performance requirements:

- a. ASTM D 412: Tensile Strength - 551 kilopascals
- b. ASTM D 412: Ultimate Tensile Strength (maximum elongation) - 1172 kilopascals
- c. ASTM D 624: Tear Strength, dieB, - 4.7 kN/m
- d. ASTM D 1149: Joint Movement Capability after 14 Days cure - percent
± 50

2.1.6 NOT USED

2.1.7 NOT USED

2.1.8 Cementitious Backer Units

ANSI A118.9.

2.1.8.1 Regular

1200 mm wide, 15.9 mm thick.

2.1.9 Joint Treatment Materials

ASTM C 475.

2.1.9.1 Embedding Compound

Specifically formulated and manufactured for use in embedding tape at gypsum board joints and compatible with tape, substrate and fasteners.

2.1.9.2 Finishing or Topping Compound

Specifically formulated and manufactured for use as a finishing compound.

2.1.9.3 All-Purpose Compound

Specifically formulated and manufactured to serve as both a taping and a finishing compound and compatible with tape, substrate and fasteners.

2.1.9.4 Setting or Hardening Type Compound

Specifically formulated and manufactured for use with fiber glass mesh tape.

2.1.9.5 Joint Tape

Cross-laminated, tapered edge, reinforced paper, or fiber glass mesh tape recommended by the manufacturer.

2.1.10 Fasteners

2.1.10.1 Nails

ASTM C 514.

2.1.10.2 Screws

ASTM C 1002, Type "G", Type "S" or Type "W" steel drill screws for fastening gypsum board to gypsum board, wood framing members and steel framing members less than 0.84 mm thick. ASTM C 954 steel drill screws for fastening gypsum board to steel framing members 0.84 to 2.84 mm thick.

Provide cementitious backer unit screws with a polymer coating.

2.1.11 NOT USED

2.1.12 NOT USED

2.1.13 Shaftwall Liner Panel

ASTM C 442/C 442M. Shaftwall liner panel shall conform to UL Fire Resist Dir for the Design Number(s) indicated. Liner Panel shall be specifically manufactured for cavity shaftwall system, with water-resistant paper faces, bevel edges, single lengths to fit required conditions, 19.05 mm thick, by 610 mm wide.

2.1.14 Accessories

ASTM C 1047. Fabricate from corrosion protected steel or plastic designed for intended use. Accessories manufactured with paper flanges are not acceptable. Flanges shall be free of dirt, grease, and other materials that may adversely affect bond of joint treatment. Provide prefinished or job decorated materials.

2.1.15 Asphalt Impregnated Building Felt

The moisture barrier over gypsum sheathing shall be 6.7 kg asphalt impregnated felt conforming to ASTM D 226 Type I (No. 15).

2.1.16 Water

Clean, fresh, and potable.

PART 3 EXECUTION

3.1 EXAMINATION

3.1.1 Framing and Furring

Verify that framing and furring are securely attached and of sizes and spacing to provide a suitable substrate to receive gypsum board and cementitious backer units. Verify that all blocking, headers and supports are in place to support plumbing fixtures and to receive soap dishes, grab bars, towel racks, and similar items. Do not proceed with work until framing and furring are acceptable for application of gypsum board and cementitious backer units.

3.2 APPLICATION OF GYPSUM BOARD

Apply gypsum board to framing and furring members in accordance with ASTM C 840 or GA 216 and the requirements specified herein. Apply gypsum board with separate panels in moderate contact; do not force in place. Stagger end joints of adjoining panels. Neatly fit abutting end and edge joints. Use gypsum board of maximum practical length. Cut out gypsum board as required to make neat close joints around openings. In vertical application of gypsum board, provide panels in lengths required to reach full height of vertical surfaces in one continuous piece. Surfaces of gypsum board and substrate members may be bonded together with an adhesive, except where prohibited by fire rating(s). Treat edges of cutouts for plumbing pipes, screwheads, and joints with water-resistant compound as recommended by the gypsum board manufacturer. Provide type of gypsum board

for use in each system specified herein as indicated.

3.2.1 NOT USED

3.2.2 NOT USED

3.2.3 NOT USED

3.2.4 Semi-Solid Gypsum Board Partitions

Provide in accordance with ASTM C 840, System IV or GA 216 .

3.2.5 Solid Gypsum Board Partitions

Provide in accordance with ASTM C 840, System V or GA 216.

3.2.6 NOT USED

3.2.7 Application of Gypsum Board to Steel Framing and Furring

Apply in accordance with ASTM C 840, System VIII or GA 216.

3.2.8 NOT USED

3.2.9 Gypsum Board for Wall Tile or Tile Base Applied with Adhesive

In dry areas (areas other than tubs, shower enclosures, saunas, steam rooms, gang shower rooms), apply glass matt water-resistant gypsum tile backing board or water-resistant gypsum backing board in accordance with ASTM C 840, System X or GA 216.

3.2.10 Exterior Application

Apply exterior gypsum board (such as at soffits) in accordance with ASTM C 840, System XI or GA 216.

3.2.11 Glass Mat Covered or Fiber Reinforced Gypsum Sheathing

Apply gypsum sheathing in accordance to gypsum association publication GA 253. Design details for joints and fasteners shall follow gypsum sheathing manufacturer's requirements and be properly installed to protect the substrate from moisture intrusion. Exposed surfaces of the gypsum sheathing shall not be left exposed beyond the manufacture's recommendation without a weather barrier cladding. Provide continuous asphalt impregnated building felt over sheathing surface in shingle fashion with edges and ends lapped a minimum of 150 mm. Openings shall be properly flashed. All joints, seams and penetrations shall be sealed with compatible silicone sealant.

3.2.12 Floating Interior Angles

Locate the attachment fasteners adjacent to ceiling and wall intersections in accordance with ASTM C 840, System XII or GA 216, for single-ply applications of gypsum board to steel framing.

3.2.13 Control Joints

Install expansion and contraction joints in ceilings and walls in accordance with ASTM C 840, System XIII or GA 216, unless indicated otherwise.

3.3 APPLICATION OF CEMENTITIOUS BACKER UNITS

3.3.1 Application

In wet areas (tubs, shower enclosures, saunas, steam rooms, gang shower rooms), apply cementitious backer units in accordance with ANSI A108.11. A 7.6 kg asphalt impregnated, continuous felt paper membrane shall be placed behind cementitious backer units, between backer units and studs or base layer of gypsum board. Membrane shall be placed with a minimum 150 mm overlap of sheets laid shingle style.

3.3.2 Joint Treatment

ANSI A108.11.

3.4 FINISHING OF GYPSUM BOARD

Tape and finish gypsum board in accordance with ASTM C 840, GA 214 and GA 216. Plenum areas above ceilings shall be finished to Level 1 in accordance with GA 214. Water resistant gypsum backing board, ASTM C 630/C 630M, to receive ceramic tile shall be finished to Level 2 in accordance with GA 214. Walls and ceilings to receive a heavy-grade wall covering or heavy textured finish before painting shall be finished to Level 3 in accordance with GA 214. Walls and ceilings without critical lighting to receive flat paints, light textures, or wall coverings shall be finished to Level 4 in accordance with GA 214. Unless otherwise specified, all gypsum board walls, partitions and ceilings shall be finished to Level 5 in accordance with GA 214. Provide joint, fastener depression, and corner treatment. Do not use fiber glass mesh tape with conventional drying type joint compounds; use setting or hardening type compounds only. Provide treatment for water-resistant gypsum board as recommended by the gypsum board manufacturer.

3.4.1 Uniform Surface

Wherever gypsum board is to receive eggshell, semigloss or gloss paint finish, or where severe, up or down lighting conditions occur, finish gypsum wall surface in accordance to GA 214 Level 5. In accordance with GA 214 Level 5, apply a thin skim coat of joint compound to the entire gypsum board surface, after the two-coat joint and fastener treatment is complete and dry.

3.4.2 NOT USED

3.5 SEALING

Seal openings around pipes, fixtures, and other items projecting through gypsum board and cementitious backer units as specified in Section 07900A "Joint Sealing." Apply material with exposed surface flush with gypsum board or cementitious backer units.

3.5.1 Sealing for Glass Mat or Reinforced Gypsum Board Sheathing

Apply silicone sealant in a 9.5 mm bead to all joints and trowel flat. Apply enough of the same sealant to all fasteners penetrating through the glass mat gypsum board surface to completely cover the penetration when troweled flat. Construction and materials shall not be placed behind sheathing until a visual inspection of sealed joints during daylight hours

has been completed by Contracting Officer.

3.6 PATCHING

Patch surface defects in gypsum board to a smooth, uniform appearance, ready to receive finish as specified.

3.7 SHAFT WALL FRAMING

The shaft wall system shall be installed in accordance with the system manufacturer's published instructions. Bucks, anchors, blocking and other items placed in or behind shaft wall framing shall be coordinated with electrical and mechanical work. Fireproofing materials which are damaged or removed during shaft wall construction shall be patched or replaced.

-- End of Section --

Amendment #2
SECTION 10508

METAL WARDROBE LOCKERS AND BENCH SEAT

PART 1 GENERAL

1.1 REFERENCES

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A653	Standar Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc Iron Alloy Coated (Galvanized) by the Hot-Dip Process.
-----------	--

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Provide data on locker types, sizes and accessories.

Lockers: See Section 09915 COLOR SCHEDULE.; G, RE

Locker Manuf. Product submitted as an "or equal"; G, RE

Bench Seat: See Section 09915 COLOR SCHEDULE; G, RE

Bench Seat Manuf. Product submitted as an "or equal"; G, RE

SD-02 Shop Drawings

Shop Drawings.; G, RE

Indicate locker plan layout, numbering plan and key codes.

SD-04 Samples

Samples; FIO

Submit two samples 75 x 150 mm in size, of each color selected; applied to specified base metal.

1.3 DELIVERY, STORAGE, AND PROTECTION

Transport, handle, store, and protect products.

Protect locker finish and adjacent surfaces from damage.

PART 2 PRODUCTS

2.1 MATERIALS

Designer to determine what type of lockers are required and edit this list as needed.

2.1 Sheet Steel

ASTM A653 Grade D, Coating Designation G90, stretcher leveled; to the following minimum thicknesses:

1. Body and Shelf: 24 gage
2. Door Outer Face: 16 gage
3. Door Inner Face: 20 gage
4. Door Frame: 16 gage
5. Hinges: 14 gage
6. Base: 18 gage
7. Sloping Top: 18 gage
8. Trim: 20 gage

2.1.2 Single Tiered Locker

Size 300 mm wide, 375 mm deep, 1800 mm high (Dust covers around the entire perimeter of the base will increase height by 150 mm to 1950 mm.) Provide dust covers with sloped tops and end covers to preclude dust accumulation. End panels as required per drawing configuration. Maximum size of grouping units is three lockers per unit. Latch hook to have bevel on front upper edge to allow latch clip to ride up slope as door closes. Steel door frames of minimum 16 gauge metal with three hinges of minimum 14 gauge steel. Vertical members shall have an additional flange to form continuous door strike. Minimum gauge for top, bottom, shelves, sides, back and row ends of 20 gauge steel. Eyelet for padlock must accept a 7.9 mm padlock shank, providing a secured locking three point latching mechanism. Lockers will be sequentially numbered with a plate beginning with #1. Locker will contain a single shelf at top with three single-prong hooks and one double-prong ceiling hook. Ventilation is by airflow slots in the top and bottom flange of door. Lockers are to be installed in the room with dust covers installed.

2.2 ACCESSORIES

2.2.1 Lockers

Each All Metal, Quiet Type Wardrobe Locker: Two double prong wall hooks, coat hanger bar, rubber bumper.

2.2.2 Locker Benches

Stationary free standing type; bench top of laminated maple species wood, stained, sealed and varnished; pedestals of chrome steel 444.5 mm.

2.3 FABRICATION

2.3.1 Locker Unit

Locker Units: Configuration and size as previously indicated.

Mounting: Surface mounted.
Base: Metal base.
Base Height: 100 mm.
Top: Sloped metal with closures.
Ventilation Method: Air flow slots in the top and bottom flange of door.
Class: Quiet

2.3.2 Locker Body

Formed and flanged; with steel stiffener ribs; electric spot welded.

2.3.3 Frames

Formed channel shape, welded and ground flush, welded to body, resilient gaskets and latching for quiet operation.

2.3.4 Doors

Hollow channel construction, 30 mm thick; welded construction, channel reinforced top and bottom with intermediate stiffener ribs, grind and finish edges smooth. Provide ventilation openings at top and bottom of each locker. Form recess for operating handle and locking device.

2.3.5 Hinges

Two for doors under 1050 mm high; three for doors over 1050mm high; weld securely to locker body and door.

2.3.6 NOT USED

2.3.7 Number Plates

Provide oval shaped aluminum plates. Form numbers 12.7 mm high of block font style, in contrasting color.

2.3.8 Ends and Closure

Fabricate ends and closure pieces as required to create locker units in configuration as indicated on the drawings.

2.3.9 Base

Fabricate 100 mm high steel bases with end closures.

2.3.10 Door Handle and Latching

Handles shall be recessed in the door and be finger lift control. The 20 gauge drawn pocket shall be brushed stainless steel securely fastened to the door with two tabs plus a positive tamper resistant decorative fastener. The pocket shall be of sufficient depth to prevent a combination padlock from protruding beyond the face of the door. A lock hole cover plate shall be provided for use with padlocks.

The lifting piece shall be 14 gauge formed steel, attached to the latching channel with one concealed retaining lug and one rivet assuring a positive two point connection. Handle finger lift shall have a padlock eye for use with a 9/32" diameter padlock shackle. It shall have a sound deadening molded comfortable finger lift attached.

Doors to have latch clip engaging the door frame at three points on 60" & 72" high and two points on 20" through 36" high doors. One rubber silencer at each heavy gauge latch hook. Latch clips shall be glass filled nylon for long life and low friction and shall hold doors shut by engaging the latch hooks. The latch channel assembly shall be quieted by the use of unique nylon glides to reduce noise.

2.3.11 Interior Equipment

Single tier lockers 1500 mm or higher shall have a hat shelf located approximately 225 mm below the top of locker; if less than 450 mm deep, locker shall have three single-prong hooks and one double-prong ceiling hook. Single tier lockers 450 mm or more in depth shall have a coat rod instead of a ceiling hook. 900 mm high lockers shall have three single-prong wall hooks and one double-prong ceiling hook. Hooks to be steel, ball tip zinc plated, attached with two bolts per hook.

2.4 FINISHES

Lockers to be factory finished with two coats of baked enamel. Color shall be in accordance with Section 09915 COLOR SCHEDULE.

PART 3 EXECUTION

3.1 EXAMINATION

Verify that prepared bases and embedded anchors are properly sized and are in the correct position and configuration.

3.2 INSTALLATION

3.2.1 Lockers

Install in accordance with manufacturer's instructions. Install lockers plumb and square. Secure lockers with anchor devices to suit substrate materials at floor and/or wall with a minimum Pullout Force of 445N. Bolt adjoining locker units together to provide rigid installation. Install end panels, filler panels, sloped tops, bases and accessories. Replace components that do not operate smoothly or have been damaged or dented. Touch up any scratches.

3.2.2 Bench Seat

Install benches with anchor devices to suit substrate material with minimum pullout force of 445N.

3.3 CLEANING

Cleaning installed work. Clean locker interiors and exterior surfaces.

Amendment #2
SECTION 13720

ELECTRONIC ACCESS CONTROL SYSTEM

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI X3.154 (1988; R 1994) Office Machines and Supplies
- Alphanumeric Machines-Keyboards Arrangement

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

47 CFR 15 Radio Frequency Devices

47 CFR 68 Connection of Terminal Equipment to the
Telephone Network

ELECTRONIC INDUSTRIES ALLIANCE (EIA)

EIA ANSI/EIA/TIA-232-F (1997) Interface Between Data Terminal
Equipment and Data Circuit-Terminating
Equipment Employing Serial Binary Data
Interchange

EIA ANSI/TIA/EIA-568-A (1995; Addendum 3 1998) Commercial Building
Telecommunications Cabling Standard

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C2 (1997) National Electrical Safety Code

IEEE C62.41 (1991; R 1995) Surge Voltages in
Low-Voltage AC Power Circuits

IEEE Std 142 (1991) IEEE Recommended Practice for
Grounding of Industrial and Commercial
Power Systems

INTERNATIONAL TELECOMMUNICATION UNION (ITU)

ITU V.34 (1994) Data Communication Over the
Telephone Network A Modem Operating at Data
Signaling Rates of up to 28,800 bits for
use on the General Switched Telephone
Network and on Leased Point-to-Point
Two-Wire Telephone Type Circuits

ITU V.42 (1993) Data Communications Over the
Telephone Network Error-Correcting

Procedures for DCEs Using
Asynchronous-to-Synchronous Conversion

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

- NEMA 250 (1997) Enclosures for Electrical Equipment
(1000 Volts Maximum)
- NEMA ICS 1 (1993) Industrial Control and Systems

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- NFPA 70 (1999) National Electrical Code

UNDERWRITERS LABORATORIES (UL)

- UL 294 (1999) Access Control System Units
- UL 639 (1997; Rev thru Mar 1999) Intrusion
Detection Units
- UL 681 (1999) Installation and Classification of
Burglar and Holdup Alarm Systems
- UL 796 (1999) Printed-Wiring Boards
- UL 1037 (1999) Antitheft Alarms and Devices
- UL 1076 (1995; Rev thru Feb 1999) Proprietary
Burglar Alarm Units and Systems

1.2 SYSTEM DESCRIPTION

The Contractor shall provide an Electronic Security System (ESS) as described and shown. All computing devices, as defined in 47 CFR 15, shall be certified to comply with the requirements for Class A computing devices and labeled as set forth in 47 CFR 15. Electronic equipment shall comply with 47 CFR 15.

1.2.1 Central Station (Access Control Panel)

The central station shall be configured to provide operator interface, interaction, dynamic and real time monitoring, display, and control. The central station shall control system networks to interconnect all system components including subordinate or separate control stations, enrollment stations and field equipment.

1.2.2 NOT USED

1.2.3 Field Equipment

Field equipment shall include local processors, sensors and controls. Local processors shall serve as an interface between the central station and sensors and controls. Data exchange between the central station and the local processors shall include down-line transmission of commands, software and databases to local processors. The up line data exchange from the local processor to the central station shall include status data such as intrusion alarms, status reports and entry control records. Local processors are categorized as alarm annunciation or entry control.

1.2.4 NOT USED

1.2.5 NOT USED

1.2.6 NOT USED

1.2.7 System Definitions

1.2.7.1 NOT USED

1.2.7.2 NOT USED

1.2.7.3 NOT USED

1.2.7.4 NOT USED

1.2.7.5 NOT USED

1.2.7.6 NOT USED

1.2.7.7 NOT USED

1.2.7.8 Power Loss Alarm

An alarm resulting from a loss of primary power.

1.2.7.9 Entry Control Alarm

An alarm resulting from improper use of entry control procedures or equipment.

1.2.7.10 Identifier

A card credential, keypad personal identification number or code, biometric characteristic or any other unique identification entered as data into the entry control database for the purpose of identifying an individual. Identifiers shall be used by the electronic security system for the purpose of validating passage requests for areas equipped with entry control equipment.

1.2.7.11 Entry Control Devices

Any equipment which gives a user the means to input identifier data into the entry control system for verification.

1.2.8 NOT USED

1.2.9 NOT USED

1.2.10 NOT USED

1.2.11 NOT USED

1.2.12 NOT USED

1.2.13 NOT USED

1.2.14 NOT USED

1.2.15 NOT USED

1.2.16 Power Line Surge Protection

Equipment connected to alternating current circuits shall be protected from power line surges. Equipment protection shall withstand surge test waveforms described in IEEE C62.41. Fuses shall not be used for surge protection.

1.2.17 Sensor and Device Wiring and Communication Circuit Surge Protection

Inputs shall be protected against surges induced on device wiring. Outputs shall be protected against surges induced on control and device wiring installed outdoors and as shown. Communications equipment shall be protected against surges induced on any communications circuit. Cables and conductors, except fiber optics, which serve as communications circuits from console to field equipment, and between field equipment, shall have surge protection circuits installed at each end. Protection shall be furnished at equipment, and additional triple electrode gas surge protectors rated for the application on each wireline circuit shall be installed within 1 m of the building cable entrance. Fuses shall not be used for surge protection. The inputs and outputs shall be tested in both normal mode and common mode using the following two waveforms:

a. A 10 microsecond rise time by 1000 microsecond pulse width waveform with a peak voltage of 1500 Volts and a peak current of 60 amperes.

b. An 8 microsecond rise time by 20 microsecond pulse width waveform with a peak voltage of 1000 Volts and a peak current of 500 amperes.

1.2.18 NOT USED

1.2.19 System Reaction

1.2.19.1 System Response

The field device network shall provide a system end-to-end response time of 1 second or less for every device connected to the system. Alarms shall be annunciated at the central station within 1 second of the alarm occurring at a local processor or device controlled by a local processor, and within 100 milliseconds if the alarm occurs at the central station. Alarm and status changes shall be displayed within 100 milliseconds after receipt of data by the central station. All graphics shall be displayed, including graphics generated map displays, on the console monitor within 5 seconds of alarm receipt at the security console. This response time shall be maintained during system heavy load.

1.2.20 Environmental Conditions

1.2.20.1 Interior, Controlled Environment

System components, except the console equipment installed in interior locations, having controlled environments shall be rated for continuous operation under ambient environmental conditions of 2 to 50 degrees C dry bulb and 20 to 90 percent relative humidity, non-condensing.

1.2.20.2 Interior, Uncontrolled Environment

System components installed in interior locations having uncontrolled environments shall be rated for continuous operation under ambient environmental conditions of minus 18 to plus 50 degrees C dry bulb and 10 to 95 percent relative humidity, non-condensing.

1.2.20.3 Exterior Environment

System components that are installed in locations exposed to weather shall be rated for continuous operation under ambient environmental conditions of minus 34 degrees C to 50 degrees C dry bulb and 10 to 95 percent relative humidity, condensing. In addition, the system components shall be rated for continuous operation when exposed to performance conditions as specified in UL 294 and UL 639 for outdoor use equipment. Components shall be rated for continuous operation when exposed to rain as specified in NEMA 250, winds up to 137 km per hr and snow cover up to 610 mm thick, measured vertically.

1.2.20.4 NOT USED

1.2.20.5 Console

Console equipment, unless designated otherwise, shall be rated for continuous operation under ambient environmental conditions of 16 to 29 degrees C and a relative humidity of 20 to 80 percent.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01300 Submittal Procedures:

SD-03 Product Data

Manufacturer's Data; G, RE

Printed copies of the manufacturer's recommendations for installation procedures of the material being placed, prior to installation.

The data package shall include system descriptions, analyses, and calculations used in sizing equipment specified. Descriptions and calculations shall show how the equipment will operate as a system to meet the performance of this specification. The data package shall include the following:

- a. Central processor memory size.
- b. Communication speeds and protocol descriptions.
- c. Hard disk size and configuration.
- d. Floppy disk size and configuration.
- e. Start-up operations.
- f. Expansion capability and method of implementation.

- g. Sample copy of each report specified.
- h. Color photographs representative of typical graphics.

Software Data

The software data package shall consist of descriptions of the operation and capability of system, and application software as specified.

SD-10 Operation and Maintenance Data

Operation and Maintenance Data; G, RE

A draft copy of the operation and maintenance manuals, as specified for the Group V technical data package, shall be delivered to the Government prior to beginning the performance verification test for use during site testing.

Hardware Manual; G, RE

A manual describing all equipment furnished including:

- a. General description and specifications.
- b. Installation and checkout procedures.
- c. Alignment and calibration procedures.

Software Manual; G, RE

The software manual shall describe the functions of all software and shall include all other information necessary to enable proper loading, testing, and operation. The manual shall include:

- a. Definition of terms and functions.
- b. Use of system and applications software.
- c. Procedures for system initialization, start-up and shutdown.
- d. Alarm reports.
- e. Directory of all disk files.
- f. Description of all communication protocols, including data formats, command characters, and a sample of each type of data transfer.

Operator's Manual; G, RE

The operator's manual shall fully explain all procedures and instructions for the operation of the system, including:

- a. Computers and peripherals.
- b. System start-up and shutdown procedures.
- c. Use of system, and applications software.

- d. Recovery and restart procedures.
- e. Data entry.
- f. Operator commands.
- g. Alarm and system messages and printing formats.
- h. System entry requirements.

Maintenance Manual; G, RE

The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventive maintenance, fault diagnosis, and repair or replacement of defective components.

1.4 TESTING

1.4.1 General

The Contractor shall perform pre-delivery testing, site testing, and adjustment of the completed ESS. The Contractor shall provide personnel, equipment, instrumentation, and supplies necessary to perform testing. Written notification of planned testing shall be given to the Government at least 14 days prior to the test; notice shall not be given until after the Contractor has received written approval of the specific test procedures.

1.4.2 Test Procedures and Reports

Test procedures shall explain in detail, step-by-step actions and expected results, demonstrating compliance with the requirements specified. Test reports shall be used to document results of the tests. Reports shall be delivered to the Government within 7 days after completion of each test.

PART 2 PRODUCTS

2.1 MATERIALS REQUIREMENTS

2.1.1 Materials and Equipment

Units of the same type of equipment shall be products of a single manufacturer. All material and equipment shall be new and currently in production. Each major component of equipment shall have the manufacturer's model and serial number in a conspicuous place. System equipment shall conform to UL 294 and UL 1076.

2.1.2 Field Enclosures

2.1.2.1 NOT USED

2.1.2.2 NOT USED

2.1.2.3 Interior Electronics

System electronics to be used in an interior environment shall be housed in enclosures which meet the requirements of NEMA 250 Type 12.

2.1.2.4 Exterior Electronics

System electronics to be used in an exterior environment shall be housed in enclosures which meet the requirements of NEMA 250 Type 4X.

2.1.2.5 Corrosion Resistant

System electronics to be used in a corrosive environment as defined in NEMA 250 shall be housed in metallic enclosures which meet the requirements of NEMA 250 Type 4X.

2.1.3 Nameplates

Laminated plastic nameplates shall be provided for local processors. Each nameplate shall identify the local processor and its location within the system. Laminated plastic shall be 3 mm thick, white with black center core. Nameplates shall be a minimum of 25 x 75 mm, with minimum 6 mm high engraved block lettering. Nameplates shall be attached to the inside of the enclosure housing the local processor. Other major components of the system shall have the manufacturer's name, address, type or style, model or serial number, and catalog number on a corrosion resistant plate secured to the item of equipment. Nameplates will not be required for devices smaller than 25 x 75 mm.

2.1.4 NOT USED

2.1.5 NOT USED

2.1.6 Locks and Key-Lock Switches

2.1.6.1 Locks

Locks shall be provided on system enclosures for maintenance purposes. Locks shall be UL listed, round-key type with 3 dual, 1 mushroom, 3 plain pin tumblers or conventional key type lock having a combination of 5 cylinder pin and 5-point 3 position side bar. Keys shall be stamped "U.S. GOVT. DO NOT DUP." The locks shall be arranged so that the key can only be withdrawn when in the locked position. Maintenance locks shall be keyed alike and only 2 keys shall be furnished for all of these locks. These keys shall be controlled in accordance with the key control plan as specified in paragraph Key Control Plan.

2.1.7 System Components

System components shall be designed for continuous operation. Electronic components shall be solid state type, mounted on printed circuit boards conforming to UL 796. Printed circuit board connectors shall be plug-in, quick-disconnect type. Power dissipating components shall incorporate safety margins of not less than 25 percent with respect to dissipation ratings, maximum voltages, and current carrying capacity. Control relays and similar switching devices shall be solid state type or sealed electro-mechanical.

2.1.7.1 Modularity

Equipment shall be designed for increase of system capability by installation of modular components. System components shall be designed to facilitate maintenance through replacement of modular subassemblies and parts.

2.1.7.2 Maintainability

Components shall be designed to be maintained using commercially available tools and equipment. Components shall be arranged and assembled so they are accessible to maintenance personnel. There shall be no degradation in tamper protection, structural integrity, EMI/RFI attenuation, or line supervision after maintenance when it is performed in accordance with manufacturer's instructions. The system shall be configured and installed to yield a mean time to repair (MTTR) of not more than 8 hours. Repair time is the clock time from when maintenance personnel gain entrance to the system and begin work, until the system is fully functional.

2.1.7.3 Interchangeability

The system shall be constructed with off-the-shelf components which are physically, electrically and functionally interchangeable with equivalent components as complete items. Replacement of equivalent components shall not require modification of either the new component or of other components with which the replacement items are used. Custom designed or one-of-a-kind items shall not be used. Interchangeable components or modules shall not require trial and error matching in order to meet integrated system requirements, system accuracy, or restore complete system functionality.

2.1.7.4 Product Safety

System components shall conform to applicable rules and requirements of NFPA 70 and UL 294. System components shall be equipped with instruction plates including warnings and cautions describing physical safety, and special or important procedures to be followed in operating and servicing system equipment.

2.1.8 Controls and Designations

Controls and designations shall be as specified in NEMA ICS 1.

2.1.9 Special Test Equipment

The Contractor shall provide all special test equipment, special hardware, software, tools, and programming or initialization equipment needed to start or maintain any part of the system and its components. Special test equipment is defined as any test equipment not normally used in an electronics maintenance facility.

2.1.10 Alarm Output

The alarm output of each sensor shall be a single pole double throw (SPDT) contact rated for a minimum of 0.25 A at 24 Volts dc.

2.2 CENTRAL STATION HARDWARE

The central station computer shall be a standard unmodified digital computer of modular design. The CPU word size shall be 64 bits or larger. The operating speed of the processor shall be at least 150 MHZ.

2.2.1 Memory

The computer shall contain at least 32 megabytes of usable installed

memory, expandable to a minimum of 256 megabytes without additional chassis or power supplies.

2.2.2 Power Supply

The power supply shall have a minimum capacity of 250 Watts.

2.2.3 Real Time Clock (RTC)

A RTC shall be provided. Accuracy shall be within plus or minus 1 minute per month. The RTC shall maintain time in a 24-hour format including seconds, minutes, hours, date, and month and shall be resettable by software. The clock shall continue to function for a period of 1 year without power.

2.2.4 Serial Ports

a. Two EIA ANSI/EIA/TIA-232-F serial ports shall be provided for general use.

b. Adjustable data transmission rates from 9600 to 57.6 Kbps shall be selectable under program control.

c. Sixteen additional EIA ANSI/EIA/TIA-232-F serial ports shall be provided as part of a communications coprocessor. The coprocessor word size shall be 32 bytes or larger and the operating speed of the coprocessor shall be at least 66 MHz. Communications with the field equipment shall be managed by this device. Multiplexed serial ports shall be expandable to 48 ports with 8 character transmit and receive buffers to each port. Total buffer size shall be a minimum of 1 megabyte.

2.2.5 Parallel Port

An enhanced parallel port shall be provided.

2.2.6 Color Monitor

The monitor shall be no less than 430 mm, with a minimum resolution of 1280 by 1024 pixels, noninterlaced, and a maximum dot pitch of 0.28 millimeters. The video card shall support at least 256 colors at a resolution of 1280 by 1024 at a minimum refresh rate of 70 Hz.

2.2.7 Keyboard A101

A keyboard having a minimum 64 character, standard ASCII character, based on ANSI X3.154 shall be furnished.

2.2.8 NOT USED

2.2.9 NOT USED

2.2.10 Floppy Disk Drives

A high density floppy disk drive and controller in 90 mm size shall be provided.

2.2.11 NOT USED

2.2.12 Modem

A modem shall be provided and operate at 28,800 bps, full duplex on circuits using asynchronous communications. Modem shall have error detection, auto answer/autodial, and call-in-progress detection. The modem shall meet the requirements of ITU V.34, ITU V.42 for error correction and ITU V.42 for data compression standards, and shall be suitable for operating on unconditioned voice grade telephone lines in conformance with 47 CFR 68.

2.2.13 Audible Alarm

The manufacturer's standard audible alarm shall be provided.

2.2.14 Mouse

A mouse with a minimum resolution of 400 dots per inch shall be provided.

2.2.15 CD-ROM Drive

A CD-ROM drive having a nominal storage capacity of 650 megabytes shall be provided. The CD-ROM drive shall have the following minimum characteristics:

- a. Data Transfer Rate: 1.2 Mbps.
- b. Average Access Time: 150 milliseconds.
- c. Cache memory: 256 Kbytes.
- d. Data throughput: 1 Mbyte/second, minimum.

2.2.16 Dot Matrix Alarm Printer

A dot matrix alarm printer shall be provided and interconnected to the central station equipment. The dot matrix alarm printer shall have a minimum 96 character, standard ASCII character set, based on ANSI X3.154 and with graphics capability. The printer shall be able to print in both red and black without ribbon change. The printers shall have adjustable sprockets for paper width up to 11 inches, print at least 80 columns per line and have a minimum speed of 200 characters per second. Character spacing shall be selectable at 10, 12 or 17 characters per inch. The printers shall utilize sprocket-fed fan fold paper. The units shall have programmable control of top-of-form. Twenty-five thousand sheets of printer paper and 12 ribbons shall be provided after successful completion of the endurance test.

2.2.17 NOT USED

2.2.18 NOT USED

2.2.19 NOT USED

2.2.20 NOT USED

2.2.21 Uninterruptible Power Supply (UPS)

A self contained UPS, suitable for installation and operation at the central station, shall be provided. The UPS shall be sized to provide a minimum of 6 hours of operation of the central station equipment.

Equipment connected to the UPS shall not be affected by a power outage of a duration less than the rated capacity of the UPS. UPS shall be complete with necessary power supplies, transformers, batteries, and accessories and shall include visual indication of normal power operation, UPS operation, abnormal operation and visual and audible indication of low battery power. The UPS condition shall be monitored by the ESS and displayed at the Central Station.

2.3 NOT USED

2.4 NOT USED

2.5 NOT USED

2.6 INTERIOR SENSORS AND CONTROL DEVICES

2.6.1 Balanced Magnetic Switch (BMS)

The BMS shall detect a 6 mm of separating relative movement between the magnet and the switch housing. Upon detecting such movement, the BMS shall transmit an alarm signal to the alarm annunciation system.

2.6.1.1 BMS Subassemblies

The BMS shall consist of a switch assembly and an actuating magnet assembly. The switch mechanism shall be of the balanced magnetic type. Each switch shall be provided with an overcurrent protective device, rated to limit current to 80 percent of the switch capacity. Switches shall be rated for a minimum lifetime of 1,000,000 operations. The magnet assembly shall house the actuating magnet.

2.6.1.2 Housing

The housings of surface mounted switches and magnets shall be made of nonferrous metal and shall be weatherproof. The housings of recess mounted switches and magnets shall be made of nonferrous metal or plastic.

2.7 NOT USED

2.8 ENTRY CONTROL DEVICES

2.8.1 Card Readers and Credential Cards

Entry control card readers shall use unique coded data stored in or on a compatible credential card as an identifier. The card readers shall be proximity type, and shall incorporate built-in heaters or other cold weather equipment to extend the operating temperature range as needed for operation at the site. Communications protocol shall be compatible with the local processor. The Contractor shall furnish card readers to read proximity detection entry cards, and the matching credential cards. The cards shall contain coded data arranged as a unique identification code stored on or within the card, and of the type readable by the card readers.

The Contractor shall include within the card's encoded data, a non-duplicated unique facility identification code common to all credential cards provided at the site. Enrollment equipment to support local encoding of badges including cryptographic and other internal security checks shall be supplied.

2.8.1.1 NOT USED

2.8.1.2 NOT USED

2.8.1.3 Proximity

Proximity card readers shall use active proximity detection and shall not require contact with the proximity credential card for proper operation. Active detection proximity card readers shall provide power to compatible credential cards through magnetic induction and receive and decode a unique identification code number transmitted from the credential card. The card reader shall read proximity cards in a range from 0 mm to at least 150 mm from the reader. The credential card design shall allow for a minimum of 32,000 unique identification codes per facility.

2.8.1.4 Card Reader Display

The card readers shall include an LED or other visual indicator display. The display shall indicate power on/off, and whether user passage requests have been accepted or rejected.

2.8.1.5 Card Reader Response Time

The card reader shall respond to passage requests by generating a signal to the local processor. The response time shall be 800 milliseconds or less, from the time the card reader finishes reading the credential card until a response signal is generated.

2.8.1.6 Card Reader Power

The card reader shall be powered from the source as shown and shall not dissipate more than 5 Watts.

2.8.1.7 Card Reader Mounting Method

Card readers shall be suitable for surface, semi-flush, pedestal, or weatherproof mounting as required.

2.8.1.8 Credential Card Modification

Entry control cards shall be able to be modified by lamination or direct print process during the enrollment process for use as a picture and identification badge as needed for the site without reduction of readability. The design of the credential cards shall allow for the addition of at least one slot or hole to accommodate the attachment of a clip for affixing the credential card to the type badge holder used at the site.

2.8.1.9 Card Size and Dimensional Stability

Credential cards shall be 54 x 85 mm (2-1/8 x 3-3/8 inches) mm. The credential card material shall be dimensionally stable so that an undamaged card with deformations resulting from normal use shall be readable by the card reader.

2.8.1.10 Card Materials and Physical Characteristics

The credential card shall be abrasion resistant, non-flammable, and present no toxic hazard to humans when used in accordance with manufacturer's instructions. The credential card shall be impervious to solar radiation

and the effects of ultra-violet light.

2.8.1.11 Card Construction

The credential card shall be of core and laminate or monolithic construction. Lettering, logos and other markings shall be hot stamped into the credential material or direct printed.

2.8.1.12 Card Durability and Maintainability

The credential cards shall be designed and constructed to yield a useful lifetime of at least 5000 insertions or swipes or 5 years whichever results in a longer period of time. The credential card shall be able to be cleaned by wiping the credential card with a sponge or cloth wet with a soap and water solution.

2.8.2 NOT USED

2.8.3 NOT USED

2.8.4 NOT USED

2.8.5 Portal Control Devices

2.8.5.1 Push-button Switches

The Contractor shall provide momentary contact, back lighted push buttons and stainless steel switch enclosures for each push button as shown. Switch enclosures shall be suitable for flush, or surface mounting as required. Push buttons shall be suitable for flush mount in the switch enclosures. The push button switches shall meet the requirements of NEMA 250 for the area in which they are to be installed. Where multiple push buttons are housed within a single switch enclosure they shall be stacked vertically with each push button switch labeled with 7 mm high text and symbols as required. The push button switches shall be connected to the local processor associated with the portal to which they are applied and shall operate the appropriate electric strike, electric bolt or other facility release device.

2.8.5.2 NOT USED

2.8.5.3 NOT USED

2.8.5.4 Electromagnetic Lock

Electromagnetic locks shall contain no moving parts and shall depend solely upon electromagnetism to secure a portal by generating at least 5.3 kN of holding force. The electromagnetic lock shall release automatically in case of power failure and shall require manual reset to resume normal function. The lock shall interface with the local processors without external, internal or functional alteration of the local processor. The electromagnetic lock shall incorporate an end of line resistor to facilitate line supervision by the system.

a. Armature: The electromagnetic lock shall contain internal circuitry to eliminate residual magnetism and inductive kickback. The actuating armature shall operate on 12 or 24 Volts dc and shall not dissipate more than 12 Watts. The holding current shall be not greater than 500 milliamperes. The actuating armature shall take not more than 300

milliseconds to change the status of the lock from fully secure to fully open or fully open to fully secure.

b. Tamper Resistance: The electromagnetic lock mechanism shall be encased in hardened guard barriers to deter forced entry.

c. Mounting Method: The door electromagnetic lock shall be suitable for use with single and double door with mortise or rim type hardware as shown, and shall be compatible with right or left hand mounting.

2.8.5.5 NOT USED

2.8.5.6 NOT USED

2.8.5.7 NOT USED

2.8.5.8 Vehicle Gate Opener

The vehicle gate shall include housing, mounting hardware, electrical wiring, and appurtenances as required. The vehicle gate openers shall be suitable for connection to, and monitoring and control by the system local processors. A hand crank for manual operation of the vehicle gate opener and a solenoid actuated brake to prevent gate coasting shall be provided. The vehicle gate opener shall provide an auto reverse time delay of at least 1 second and not more than 3 seconds to minimize shock loads on vehicle gate opener drive components. The vehicle gate opener shall include a contactor type motor starter which meets or exceeds NEMA size "O" specifications.

a. Input Power: The vehicle gate opener shall operate from the voltage source shown. The vehicle gate opener shall include manual reset type thermal and electrical overload devices.

b. Audible Warning: The vehicle gate opener shall have an audible warning system to signal personnel in the vicinity of the vehicle gate opener that an opening or closing is about to commence. The audible shall sound at least 2 seconds and no more than 5 seconds before movement begins.

c. Maximum Run Timer: The vehicle gate opener shall incorporate an internal maximum run timer which limits the motor run time. The maximum run time shall be operator adjustable for at least the maximum amount of time gate opening or closing takes during normal operation.

d. Adjustable Load Monitor for Obstruction Sensing: The vehicle gate opener shall have an operator adjustable load monitor that shall sense obstructions in the path of the gate and automatically reverse the vehicle gate opener drive motor.

e. Operator Override Controls: The vehicle gate opener shall interface to a 3 push-button control station located within an entry controlled area. The 3 push-button switches shall be labeled and function as open, close, and stop controls, and shall meet the requirements of paragraph Push-button Switches.

f. Limit Switches: The vehicle gate opener shall have adjustable limit switches and shall provide a means to securely lock the switches in place after adjustment. The range of gate travel shall be defined by the location of the limit switches.

g. Type of Gate: The vehicle gate openers provided shall be compatible with cantilever, roller, v-track, overhead, slide, and swing gates.

2.9 NOT USED

2.10 ENTRY CONTROL SOFTWARE

2.10.1 Interface Device

The entry control software shall control passage. The decision to grant or deny passage shall be based upon identifier data to be input at a specific location. If all conditions are met, a signal shall be sent to the input device location to activate the appropriate electric strike, bolt, electromagnetic lock or other type of portal release or facility interface device.

2.10.2 Operator Interface

Entry control operation shall be entirely automatic under control of the central station and local processors except for simple operations required for map display, alarm acknowledgment, zone and portal status change operations, audible or visual alarm silencing and audio annunciation. The system shall immediately annunciate changes in zone and portal status. The alarm printer shall print a permanent record of each alarm and status change. The map displays or graphics screens shall display the current status of system zones and portals. The central station shall immediately display the current status of any zone or portal upon command. While the system is annunciating an unacknowledged zone or portal alarm, keyboard operations at the central station, other than alarm acknowledgment, shall not be possible. The system shall provide the capability to change zone and portal status from alarm (after alarm acknowledgment) or access to secure; from alarm (after alarm acknowledgment) or secure to access, or from access to secure by simple control operations. If the operator attempts to change zone status to secure while there is an alarm output for that zone or portal, the system shall immediately annunciate an alarm for that zone or portal.

2.10.3 Entry Control Functions

2.10.3.1 Multiple Security Levels

The system shall have multiple security levels. Each of the security levels shall be delineated by facility barriers. Access to each security level shall be through portals in the facility barriers using designated entry control procedures. The system shall provide at least 8 security levels. Any attempt to access an area beyond an individual's security level shall initiate an access denial alarm.

2.10.3.2 Two person rule

The system shall provide a 2 person rule feature. When a portal is designated as a 2 person rule portal, it shall not allow passage unless 2 valid identifiers are presented in the proper sequence. The scheme shall be designed so that only the first 2 valid identifiers and the last 2 valid identifiers pass together.

2.10.3.3 NOT USED

2.10.3.4 Immediate Access Change

The system shall provide functions to disenroll and deny access to any identifier or combination of identifiers without consent of the individual or recovery of a credential. The design of the system shall provide entry change capability to system operators and managers with appropriate passwords at the system operator or enrollment consoles.

2.10.3.5 Multiple Time Zones

The system shall provide multiple time zone entry control. Personnel enrolled in the system shall only be allowed access to a facility during the time of day they are authorized to access the facility. Time zone access control shall also include the ability to specify beginning and ending dates that an individual will be authorized to access a facility. The system shall provide automatic activation and deactivation of entry authorization. The design of the system shall provide at least 2 time zones with overlapping time zones. The system shall provide a means for system operators with proper password clearance, to define custom names for each time zone, and to change the time zone's beginning and ending times through the system operator and enrollment interfaces. The system shall automatically disenroll individuals at the end of their predefined facility access duration. Any attempt during a 24 hour period by an individual or an identifier to gain facility entry outside of the authorized time zone shall initiate an entry denial alarm.

2.10.4 Electronic Entry Control System Capacities

The system shall be designed and configured to provide the following capacities.

2.10.4.1 NOT USED

2.10.4.2 Transaction History File Size

The system capacity shall be at least the amount of transactions for the system during 1 year without any loss of transaction data.

2.10.5 Entry Control System Alarms

The system shall annunciate an alarm when the following conditions occur. Alarms shall be annunciated at the console both audibly and visually. An alarm report shall also be printed on the system printer. The alarm annunciation shall continue until acknowledged by the system operator. Only 1 control key shall be needed to acknowledge an alarm. The system shall control, monitor, differentiate, rank, annunciate, and allow operators to acknowledge, in real time, alarm signals generated by system equipment. The system shall also provide a means to define and customize the annunciation of each alarm type. The system shall use audio and visual information to differentiate the various types of alarms. Each alarm type shall be assigned an audio and a unique visual identifier.

2.10.5.1 NOT USED

2.10.5.2 NOT USED

2.10.5.3 Entry Denial

The system shall annunciate an alarm when an attempt has been made to pass

through a controlled portal and entry has been denied.

2.10.5.4 Portal Open

The system shall annunciate an alarm when an entry controlled portal has been open longer than a predefined time delay. The time delay shall be adjustable, under operator control, over a range of at least 1 second to 1 minute with a maximum resolution of 1 second.

2.10.5.5 Bolt Not Engaged

The system shall annunciate an alarm when the bolt at an entry controlled portal has been open longer than a predefined time delay and generate an entry control alarm. The time delay shall be adjustable, under operator control, over a range of at least 1 second to 1 minute with a maximum resolution of 1 second.

2.10.5.6 Strike Not Secured

The system shall annunciate an alarm when the strike at an entry controlled portal has been left unsecured longer than a predefined time delay and generate an entry control alarm. The time delay shall be adjustable, under operator control, over a range of at least 1 second to 1 minute with a maximum resolution of 1 second.

2.10.5.7 Alarm Shunting/System Bypass

The system shall provide a means to ignore operator selected alarm types at operator selected portals in order to allow standard entry control procedures to be bypassed (shunted). Predefined alarm shunting shall only be available to system operators with the proper password. The system shall also provide for predefined alarm shunting based upon time zones. This capability shall only apply to the entry control alarm type.

2.11 WIRE AND CABLE

The Contractor shall provide all wire and cable. Wiring shall meet NFPA 70 standards.

2.11.1 NOT USED

2.11.2 NOT USED

2.11.3 Local Area Network (LAN) Cabling

LAN cabling shall be in accordance with EIA ANSI/TIA/EIA-568-A, category 6.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor shall install all system components, and appurtenances in accordance with the manufacturer's instructions, IEEE C2 and as shown. The contractor shall furnish necessary interconnections, services, and adjustments required for a complete and operable system as specified and shown. Control signal, communications, and data transmission line grounding shall be installed as necessary to preclude ground loops, noise, and surges from adversely affecting system operation.

3.1.1 Installation

The contractor shall install the system in accordance with the standards for safety, NFPA 70, UL 681, UL 1037 and UL 1076, and the appropriate installation manual for each equipment type. Components within the system shall be configured with appropriate service points to pinpoint system trouble in less than 20 minutes. Minimum size of conduit shall be 15 mm. DTS shall not be pulled into conduits or placed in raceways, compartments, outlet boxes, junction boxes, or similar fittings with other building wiring. Flexible cords or cord connections shall not be used to supply power to any components of the system, except where specifically noted.

3.1.2 Enclosure Penetrations

Enclosure penetrations shall be from the bottom unless the system design requires penetrations from other directions. Penetrations of interior enclosures involving transitions of conduit from interior to exterior, and penetrations on exterior enclosures shall be sealed with rubber silicone sealant to preclude the entry of water. The conduit riser shall terminate in a hot-dipped galvanized metal cable terminator. The terminator shall be filled with an approved sealant as recommended by the cable manufacturer, and in a manner that does not damage the cable.

3.1.3 Cold Galvanizing

Field welds and/or brazing on factory galvanized boxes, enclosures, conduits, etc., shall be coated with a cold galvanized paint containing at least 95 percent zinc by weight.

3.1.4 NOT USED

3.1.5 NOT USED

3.1.6 Installation Software

The Contractor shall load software as specified and required for an operational system, including data bases and specified programs. Upon successful completion of the endurance test, the Contractor shall provide original and backup copies on CD-ROM of all accepted software, including diagnostics.

3.2 SYSTEM STARTUP

Satisfaction of the requirements below does not relieve the Contractor of responsibility for incorrect installations, defective equipment items, or collateral damage as a result of Contractor work/equipment. The Contractor shall not apply power to the system until after:

a. System equipment items and DTS have been set up in accordance with manufacturer's instructions.

b. A visual inspection of the system has been conducted to ensure that defective equipment items have not been installed and that there are no loose connections.

c. System wiring has been tested and verified as correctly connected.

d. System grounding and transient protection systems have been verified as properly installed.

e. Power supplies to be connected to the system have been verified as the correct voltage, phasing, and frequency.

3.3 SUPPLEMENTAL CONTRACTOR QUALITY CONTROL

The Contractor shall provide the services of technical representatives who are familiar with all components and installation procedures of the installed system; and are approved by the Contracting Officer. These representatives shall be present on the job site during the preparatory and initial phases of quality control to provide technical assistance. These representatives shall also be available on an as needed basis to provide assistance with follow-up phases of quality control. These technical representatives shall participate in the testing and validation of the system and shall provide certification that their respective system portions meet the contractual requirements.

3.4 TESTING

3.4.1 General Requirements for Testing

The Contractor shall provide personnel, equipment, instrumentation, and supplies necessary to perform site testing. The Government will witness all performance verification and endurance testing. Written permission shall be obtained from the Government before proceeding with the next phase of testing. Original copies of all data produced during predelivery, performance verification and endurance testing, shall be turned over to the Government at the conclusion of each phase of testing, prior to Government approval of the test.

3.4.2 Predelivery Testing

The Contractor shall assemble the test system as specified, and perform tests to demonstrate that performance of the system complies with specified requirements in accordance with the approved predelivery test procedures. The tests shall take place during regular daytime working hours on weekdays. Model numbers of equipment tested shall be identical to those to be delivered to the site. Original copies of all data produced during predelivery testing, including results of each test procedure, shall be delivered to the Government at the conclusion of predelivery testing, prior to Government approval of the test. The test report shall be arranged so that all commands, stimuli, and responses are correlated to allow logical interpretation.

3.4.3 Test Setup

The predelivery test setup shall include the following:

- a. All central station equipment.
- b. At least 1 of each type DTS link, but not less than 2 links, and associated equipment to provide a fully integrated system.
- c. The number of local processors shall equal the amount required by the site design.
- d. At least 1 of each type sensor used.
- e. Enough sensor simulators to provide alarm signal inputs to the

system equal to the number of sensors required by the design. The alarm signals shall be manually or software generated.

f. At least 1 of each type of terminal device used.

g. At least 1 of each type of portal configuration with all facility interface devices as specified or shown.

h. The Contractor shall prepare test procedures and reports for the predelivery test, and shall deliver the predelivery test procedures to the Government for approval. The final predelivery test report shall be delivered after completion of the predelivery test.

3.4.4 Contractor's Field Testing

The Contractor shall calibrate and test all equipment, verify DTS operation, place the integrated system in service, and test the integrated system. Ground rods installed by the Contractor shall be tested as specified in IEEE Std 142. The Contractor shall deliver a report describing results of functional tests, diagnostics, and calibrations, including written certification to the Government that the installed complete system has been calibrated, tested, and is ready to begin performance verification testing. The report shall also include a copy of the approved performance verification test procedure.

3.4.5 Performance Verification Test

The Contractor shall demonstrate that the completed system complies with the contract requirements. Using approved test procedures, all physical and functional requirements of the project shall be demonstrated and shown.

The performance verification test, as specified, shall not be started until after receipt by the Contractor of written permission from the Government, based on the Contractor's written report. The report shall include certification of successful completion of testing as specified in paragraph Contractor's Field Testing, and upon successful completion of training as specified. The Government may terminate testing at any time when the system fails to perform as specified. Upon termination of testing by the Government or by the Contractor, the Contractor shall commence an assessment period as described for Endurance Testing Phase II. Upon successful completion of the performance verification test, the Contractor shall deliver test reports and other documentation as specified to the Government prior to commencing the endurance test.

3.4.6 Endurance Test

a. General: The Contractor shall demonstrate system reliability and operability at the specified throughput rates for each portal, and the Type I and Type II error rates specified for the completed system. The contractor shall calculate false alarm rates and the system shall yield false alarm rates within the specified maximums at the specified probability of detection. The endurance test shall be conducted in phases as specified. The endurance test shall not be started until the Government notifies the Contractor, in writing, that the performance verification test is satisfactorily completed, training as specified has been completed, and correction of all outstanding deficiencies has been satisfactorily completed. The Contractor shall provide 1 operator to operate the system 24 hours per day, including weekends and holidays, during Phase I and Phase III endurance testing, in addition to any Government personnel that may be made available. The Government may terminate testing at any time the

system fails to perform as specified. Upon termination of testing by the Government or by the Contractor, the Contractor shall commence an assessment period as described for Phase II. The Contractor shall verify the operation of each terminal device during the last day of the test. Upon successful completion of the endurance test, the Contractor shall deliver test reports and other documentation as specified to the Government prior to acceptance of the system.

b. Phase I Testing: The test shall be conducted 24 hours per day for 15 consecutive calendar days, including holidays, and the system shall operate as specified. The Contractor shall make no repairs during this phase of testing unless authorized by the Government in writing. If the system experiences no failures during Phase I testing, the Contractor may proceed directly to Phase III testing after receipt by the Contractor of written permission from the Government.

c. Phase II Assessment: After the conclusion of Phase I, the Contractor shall identify all failures, determine causes of all failures, repair all failures, and deliver a written report to the Government. The report shall explain in detail the nature of each failure, corrective action taken, results of tests performed, and shall recommend the point at which testing should be resumed. After delivering the written report, the Contractor shall convene a test review meeting at the jobsite to present the results and recommendations to the Government. The meeting shall not be scheduled earlier than 5 business days after receipt of the report by the Government. As a part of this test review meeting, the Contractor shall demonstrate that all failures have been corrected by performing appropriate portions of the performance verification test. Based on the Contractor's report and the test review meeting, the Government will determine the restart date, or may require that Phase I be repeated. If the retest is completed without any failures, the Contractor may proceed directly to Phase III testing after receipt by the Contractor of written permission from the Government.

d. Phase III Testing: The test shall be conducted 24 hours per day for 15 consecutive calendar days, including holidays, and the system shall operate as specified. The Contractor shall make no repairs during this phase of testing unless authorized by the Government in writing.

e. Phase IV Assessment: After the conclusion of Phase III, the Contractor shall identify all failures, determine causes of failures, repair failures, and deliver a written report to the Government. The report shall explain in detail the nature of each failure, corrective action taken, results of tests performed, and shall recommend the point at which testing should be resumed. After delivering the written report, the Contractor shall convene a test review meeting at the jobsite to present the results and recommendations to the Government. The meeting shall not be scheduled earlier than 5 business days after receipt of the report by the Government. As a part of this test review meeting, the Contractor shall demonstrate that all failures have been corrected by repeating appropriate portions of the performance verification test. Based on the Contractor's report and the test review meeting, the Government will determine the restart date, and may require that Phase III be repeated. The Contractor shall not commence any required retesting until after receipt of written notification by Government. After the conclusion of any retesting which the Government may require, the Phase IV assessment shall be repeated as if Phase III had just been completed.

f. Exclusions: The Contractor will not be held responsible for

failures in system performance resulting from the following:

- (1) An outage of the main power in excess of the capability of any backup power source, provided that the automatic initiation of all backup sources was accomplished and that automatic shutdown and restart of the ESS performed as specified.
- (2) Failure of a Government furnished communications circuit, provided that the failure was not due to Contractor furnished equipment, installation, or software.
- (3) The occurrence of specified nuisance alarms.
- (4) The occurrence of specified environmental alarms.

3.5 RELIABILITY CALCULATION

This exponential calculation depends on the test duration and assumes that the Mean Time Between Failures (MTBF) does not change after each repair; and that the probability of failure is constant throughout the useful life of the component regardless of how many failures the system has experienced. This calculation does not account for effects of aging.

3.5.1 Definition of Reliability

System reliability is calculated in terms of overall MTBF where the component reliability furnished by vendors is already expressed as MTBF. The mathematical combination of the component MTBF values is defined as the system reliability, $R(t)$; the probability that the system will perform its function during a given time period under specified conditions. In this calculation, each component reliability is determined; the component reliabilities are combined as dictated by the system configuration; and the overall MTBF is computed as follows:

$R(t) = e^{-t/MTBF}$; where:

MTBF = mean time between failure

t = duration of test period

e = base of natural logarithms

When $t/MTBF$ is less than 0.1, the reliability can be approximated as follows:

$R(t) = 1 - (t/MTBF)$: A specific reliability value can be interpreted by noting that a value of $R(t)$ greater than $1/e$ (which equals 0.37) indicates that the MTBF value is greater than the test duration.

3.5.2 Series and Parallel Components

Components are in series if failure of 1 component causes a system failure. Reliability of components in series is a product of the individual reliabilities:

$R = 1 - (r_1)(r_2)(r_3)...(r_n)$. If components in a system are redundant (parallel), reliability is computed as follows:

$R = 1 - \{(1-r_1)(1-r_2)...(1-r_n)\}$. If a system has parallel components, an

equivalent series reliability is computed for each set of parallel components. The reliability of the system is then computed as the product of series and equivalent series reliabilities.

3.5.3 Calculation Procedure

The Contractor shall prepare a table showing the following data:

- a. Name and quantity of each component.
- b. Each component identified as series or parallel. (For example, if there are 2 printers, the failure of 1 will not cause a system failure).
- c. MTBF for each component.
- d. Single unit reliability: $R = e(-t/MTBF)$, where $t = 1,000$ hour test period.
- e. Total Component Reliability (TCR) where $TCR = R^n$, and $n =$ number of components. For parallel components, $TCR = 1 - (1-R)^n$, where $n =$ number of components.
- f. Cumulative Reliability (CUMR) is the product of total component reliability; for example: $CUMR_4 = (TCR_1) (TCR_2) (TCR_3) (TCR_4) = (CUMR_3) (TCR_4)$
- g. Cumulative MTBF = $-1,000/LN (CUMR)$; where $LN (CUMR)$ is the natural logarithm of (CUMR). As an example: $CUM.MTBF = -1,000/LN (CUMR_4)$

3.5.4 Sample Calculations

MTBF is not calculated for sensors and controls. Input/Output functions are part of the local processor. Any Input/Output failure not attributable to sensors and controls constitutes a local processor failure and is thus reflected in the local processor MTBF. MTBF for other components are based on the lowest values provided by vendors. The calculation shall be based on the following configuration:

- a. All central station equipment.
- b. Data Transmission System (DTS) equipment associated with one DTS circuit, but excluding the circuit itself.
- c. Sixteen local processors with all the functions as specified in paragraph Local Processor.
- d. Four representative types of devices, per local processor.

-- End of Section --