

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			J	1	11
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 05-Aug-2004	4. REQUISITION/PURCHASE REQ. NO. W22W9K-4181-4008		5. PROJECT NO.(If applicable)	
6. ISSUED BY U. S. ARMY ENGINEER DISTRICT, LOUISVILLE 600 DR. MARTIN LUTHER KING, JR. PLACE ROOM 821 LOUISVILLE KY 40202-2230	CODE W912QR	7. ADMINISTERED BY (If other than item 6) MILITARY/RESERVE TEAM 600 DR. M. L. KING, JR. PL., RM 821 ATTN: SHARON K. EVANS 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. W912QR-04-B-0004	
			X	9B. DATED (SEE ITEM 11) 15-Jul-2004	
				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 _____ 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.) Solicitation W912QR-04-B-0004 for PTR additions for Pierce, Kingsolver and Mudge Schools, Ft, Knox, KY is hereby amended as follows: a. The following specifications have been revised: 1. Section 00800: Revised to clarify utilities would be furnished to contractor by FKCS without charge. 2. Section 02360: Revised informing contractor use of installation entomologist is acceptable. 3. Section 05500a: Corrected model number for Hilti screen anchor, and added adjustable double VCR mount on TV brackets in 4. Section 07840 - FIRESTOPPING: Added section 5. Section 08110: Revised to provide contact switch boxes and cutouts for contact switches in the door frames. 6. Section 10800: Corrected model number for Hilti screen anchor in 7. Section 15950: Revised indicating installers of the Building Energy Management System shall be certified and approved by the manufacturer, and all controls shall match the existing Johnson Controls products. Also, added a note about the humidistats communication with the Johnson Metasys front 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 _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 04-Aug-2004

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:

AMDT 0001

- b. The following drawings are revised as follows:
 - 1. MPE3101
 - a. Added existing transformer to site utility plan
 - 2. A-102
 - a. Revised details A2 & B2 around Mechanical Room 105 & 106 to indicate fire stopping
 - b. Added a reference to Sheet F-101 under the Reflected Ceiling Plan Legend.
 - 3. F-101
 - a. Added 1-hr. fire walls around Mechanical room 105 & 106.
 - 4. P-101
 - a. Added gas shut off valves and water meter cut off valves.
 - 5. P-501
 - a. Added note to route relief valve and hose bib off the water heater to hub drain.
 - 6. E-104
 - a. Reduced the number of LAN drops in classroom 104 & 111
 - b. Added LAN drops in Mechanical Rooms 109 and 110
 - c. Eliminated Note #2 under the Communications Floor Plan
 - d. Added note on the Electrical Riser Diagram indicating the Ft. Knox school will furnish the contractor with the security devices.
- c. Due date remains unchanged. This amendment shall be acknowledged as indicated in item 11.
- d. Wage Decision KY030007 dated 18 June 2004 is hereby replaced with the following wage decision KY030007 dated 23 July 2004.

General Decision Number: KY030007 07/23/2004 KY7

Superseded General Decision Number: KY020007

State: Kentucky

Construction Types: Building

Counties: Hardin, Jefferson and Meade Counties in Kentucky.

BUILDING CONSTRUCTION PROJECTS (Does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	06/13/2003
1	10/31/2003
2	12/12/2003
3	03/05/2004
4	03/19/2004
5	05/14/2004
6	06/18/2004
7	07/23/2004

ASBE0051-001 10/01/2003

	Rates	Fringes
Asbestos/Insulator Worker (Includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	\$ 21.68	8.24

ASBE0207-014 06/01/2002

	Rates	Fringes
Hazardous Material Handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems)	\$ 14.80	5.70

BOIL0040-001 01/01/2004

	Rates	Fringes
Boilermaker	\$ 29.40	14.42

BRKY0001-001 06/01/2004

	Rates	Fringes
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Bricklayer

BRICKLAYERS; CAULKERS; CLEANERS; POINTERS & STONE		
MASONS.....	\$ 21.53	7.20
LAYOUT MAN & SAW MAN.....	\$ 21.78	7.20
REFRACTORY & ACID BRICK.....	\$ 22.03	7.20
REFRACTORY; & ACID BRICK.....	\$ 21.43	6.70

BRKY0001-003 06/01/2003

	Rates	Fringes
Marble Setter, Terrazzo Worker & Tile Setter.....	\$ 19.94	4.60
Marble, terrazzo and tile finisher.....	\$ 13.64	3.95

CARP0064-002 06/01/2004

	Rates	Fringes
Carpenters:.....	\$ 20.00	8.17
Piledriverman.....	\$ 20.25	8.17

CARP1031-003 06/01/2004

	Rates	Fringes
Millwright.....	\$ 22.90	11.65

ELEC0369-001 06/02/2004

	Rates	Fringes
Electricians:.....	\$ 26.25	8.89

ELEC0369-002 05/28/2003

	Rates	Fringes
Line Construction		
Backhoes.....	\$ 16.76	4.70
Cable Splicer.....	\$ 25.75	15.5%+2.75
Equipment Operator A: John Henry Rock Drill, D6 (or equivalent) and above, Trackhoe Digger, Cranes (greater than 25 tons and less than 45 tons).....	\$ 22.73	15.5%+2.75
Equipment Operator B: Cranes (6-25 tons), Backhoes, Road Tractor, Dozer up to D5, Pressure Digger-Wheeled or Tracked, all Tension Wire Stringing		

Equipment.....	\$ 20.20	15.5%+2.75
Equipment Operator C: Trencher, Vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton or below), Skid Steer Loaders.....	\$ 16.41	15.5%+2.75
Groundman.....	\$ 18.94	15.5%+2.75
Groundmen.....	\$ 13.00	4.19
Lineman & Technician.....	\$ 25.25	15.5%+2.75
Linemen; Equipment Operators; & Line Truck Operators.....	\$ 20.94	5.28
Trenchers.....	\$ 15.72	4.66
Truck Drivers.....	\$ 14.67	4.41

Cranes 45 tons or larger to be paid 100% of journeyman
lineman's rate.

ELEV0020-001 10/01/2001

JEFFERSON COUNTY:

	Rates	Fringes
Elevator Mechanic.....	\$ 25.755	7.455+a+b

FOOTNOTES:

a. Seven Paid Holidays: New Year's Day; Memorial Day;
Independence Day; Labor Day; Thanksgiving Day; Day after
Thanksgiving; & Christmas Day

b. Employer contributes 8% of regular hourly rate to vacation
pay credit for employee who has worked in business more
than 5 years; 6% for less than 5 years.

ENGI0181-020 06/01/2004

	Rates	Fringes
Power Equipment Operator GROUP 1.....	\$ 21.25	9.65
GROUP 2.....	\$ 18.01	9.65
GROUP 3.....	\$ 16.74	9.65

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - Auto Patrol; Batch Plant; Bituminous Paver;
Cableway; Central Compressor Plant; Clamshell; Concrete
Mixer 1 cu. ft. or over); Concrete Pump; Crane; Crusher
Plant; Derrick; Derrick Boat; Ditching & Trenching
Machine; Dragline; Dredge Operator; Dredge Engineer;
Elevating Grader & Loader; Hoe Type Machine; Hoist (1 Drum
when used for stack or chimney construction or repair);
Hoisting Engine (2 or more Drums); Locomotive; Motor

Scrapper; Carry-All Scoop; Bulldozer; Mechanic; Orangepeel Bucket; Piledriver; Power Blade; Motor Grader; Roller (Bituminous); Scarifier; Shovel; Tractor Shovel; Truck Crane; Winch Truck; Push Dozer; Highlift; Boom Cat; Core Drill; Hopto; Tow or Push Boat; A-Frame Winch Truck; Concrete Paver; Gradeall; Hoist; Hyster; Pumpcrete; Ross Carrier; Boom; Tail Boom; Rotary Drill; Hydro Hammer; Mucking Machine; Rock Spreader (Attached to Equipment); Scoopmobile; Kecal Loader; Tower Crane (French, German & Other Types); Hydrocrane; Backfiller; Gurry; Subgrader; Tunnel Mining Machine, including Moles; Shield or similar types of Tunnel Mining Equipment; & Forklift (Regardless of Lift Height)

GROUP 2 - Air Compressor (Over 900 CFM); Bituminous Mixer; Joint Sealing Machine; Concrete Mixer (Under 21 cu. ft.); Form Grader; Roller (Rock); Tractor (50 H.P. & Over); Bull Float; Finish Machine; Outboard Motor Boat; Flexplane; Fire person; Boom Type Tamping Machine; Greaser on Grease Facilities Servicing Heavy Equipment; Switchman or Brakeman; Whirley Oiler; Self-Propelled Compactor; Tractair & Road Widening Trencher & Farm Tractor with attachments (Except Backhoe, Highlift & End Loader); Elevator; Hoisting Engineer (1 Drum or Buck Hoist, Firebrick Masonry Excluded); Well Point; Grout Pump; Throttle Valve Person; Tugger; & Electric Vibrator Compactor

GROUP 3 - Bituminous Distributor; Cement Gun; Conveyor; Mud Jack; Paving Joint Machine; Roller (Earth); Tamping Machine; Tractor (Under 50 H.P.); Vibrator; Oiler; Concrete Saw; Burlap & Curing Machine; Truck Crane Oiler; Hydro Seeder; Power Form Handling Equipment; Deckhand Steersman; & Hydraulic Post Driver

CRANE WITH BOOM 150 FEET & OVER, INCLUDING JIB SHALL RECEIVE \$.50 ABOVE GROUP 1

IRON0070-001 10/01/2003

	Rates	Fringes
Ironworkers:		
Structural; Ornamental;		
Reinforcing; & Precast		
Concrete Erectors.....	\$ 23.39	11.75

* LABO0576-001 07/01/2004

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 15.12	6.68
GROUP 2.....	\$ 15.32	6.68
GROUP 3.....	\$ 15.52	6.68
GROUP 4.....	\$ 16.12	6.68
GROUP 5.....	\$ 16.62	6.68

GROUP 1 - General; Carpenter Tender; Cement Finisher Tender; Placing of Concrete; Wrecking of Buildings; Hand Digging & Hand Backfilling of Ditches; Clearing of Rights-of-Way & Building Sites; Curing of Concrete; Application Hardener; Handling of Chemically Treated Lumber; Installing of Wood Sheeting & Shoring; Signal Laborer; Concrete Bucket & Masonry Work; Cleaning & Moving of General Purpose Materials; General Cleanup of Scrap & Debris

GROUP 2 - Mason Tender; Side Rail Setter (Metal); Stackman; Fork Lift Operator (Masonry & Plastering Contractors only); Power Driven Georgia Buggy; Chain Saw; Vibrator Operator; Mesh Handler; Power Tools (Air, Diesel, Electric, Gasoline); Wagon Drill; Pipe Layer; Wall Man; Treatment of Exposed Concrete (Chip, Bush Hammer & Rub); Concrete Saw; Gasoline Tamper Machine; Walk Behind Trenching Machine; Burner Man; Joint Maker; Asphalt Raker; & Mobile Sweeper

GROUP 3 - Air Track Driller; Introflax Burning Rod; Gunnite Nozzle Man Operator; Sewer, Tunnel Laborer (Free Air); & Sand Hog or Mucker (Free Air)

GROUP 4 - Holeman Drilled Piers; Augered Caissons; Sand Miner (Tunnel Free Air); Caisson Worker; & Powderman

GROUP 5 - Tunnel Person & Tunnel Miner (Pressure & Free Air); Environmental Worker; Toxic & Hazardous Waste; & Asbestos Removal Free Hanging Scaffold Above 30' receives \$.25 Premium

PAIN0118-001 05/01/2004

	Rates	Fringes
Painters:		
Abrasive Blaster;		
Fireproofing; Lead		
Abatement; Spray; &		
Waterblasting 4000 PSI and		
Above.....	\$ 18.27	7.02
Brush; Drywall Finisher-		
Vinyl Hanger.....	\$ 17.77	7.02

PAIN0639-002 05/01/2003

	Rates	Fringes
Sign Painter & Erector.....	\$ 17.57	4.55+a+b+c

FOOTNOTES: a. 7 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; Christmas Day & 1 Floating Day

b. Vacation Pay: After 1 year's service - 5 days' paid vacation; After 2, but less than 10 years' service - 10

days' paid vacation; After 10, but less than 20 years' service - 15 days' paid vacation; After 20 years' service - 20 days' paid vacation

c. Funeral leave up to 3 days maximum paid leave for death of mother, father, brother, sister, spouse, child, mother-in-law, father-in-law, grandparent & inlaw provided employee attends funeral

PAIN1165-004 04/01/2004

	Rates	Fringes
Glazier.....	\$ 22.05	7.30

PLAS0692-028 06/01/2003

	Rates	Fringes
Cement Mason.....	\$ 18.15	7.50

PLUM0107-001 02/01/2004

	Rates	Fringes
Plumber/Pipefitter.....	\$ 27.60	8.52

PLUM0522-001 08/01/2003

	Rates	Fringes
Pipefitter/steamfitter.....	\$ 27.60	8.52

* ROOF0147-001 07/01/2004

	Rates	Fringes
Roofers:.....	\$ 18.90	6.41

*SFKY0669-001 04/01/2004

	Rates	Fringes
Sprinkler Fitter.....	\$ 25.05	10.95

SHEE0110-003 12/01/2003

HARDIN & JEFFERSON COUNTIES:

	Rates	Fringes
Sheet metal worker.....	\$ 25.55	10.42

SHEE0110-004 12/01/2003

MEADE COUNTY:

	Rates	Fringes
Sheet metal worker.....	\$ 27.30	10.42

TEAM0089-001 06/01/2003

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 17.52	a&b
GROUP 2.....	\$ 17.63	a&b
GROUP 3.....	\$ 17.70	a&b
GROUP 4.....	\$ 17.80	a&b

WORK ON HAZARDOUS OR TOXIC WASTE SITES - \$4.00 PREMIUM

FOOTNOTES:

a. Employer contribution of \$321.70 per employee per week whose name appears on the payroll and has been employed a minimum of 20 work days within any 90 consecutive day period.

b. Paid vacation of 40 hours to any employee who has been regularly employed on a project for 1 year and who has worked a minimum of 1,200 hours during the year, and 2 weeks' paid vacation to any employee who has completed 3 years' employment on a project and who has worked 1,200 hours since their 2nd anniversary date.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - 3 Tons & Under; Greaser; Tire Changer; & Mechanic Tender

GROUP 2 - Over 3 Tons; Semi-Trailer or Pole Trailer; Dump Tandem Axles; Farm Tractor (When used to pull building material & equipment)

GROUP 3 - Concrete Mixer (Hauling on jobsites); & Truck Mechanic

GROUP 4 - Euclids & Other Heavy Moving Equipment; Lowboy; Winch, A-Frame & Monorail Truck (To transport building materials)

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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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 (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the 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, DC 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, DC 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, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

(End of Summary of Changes)

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3 PRT Additions
Amendment 1

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- 1.57 NOT USED
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- 1.59 NOT USED
- 1.60 NOT USED
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- 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 NOT USED
- 1.75 NOT USED
- 1.76 NOT USED
- 1.77 NOT USED
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3 PRT Additions
Amendment 1

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SECTION 00800L

SPECIAL CLAUSES

10/03
Amendment 1

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; G RE

Labor, Equipment and Material Reports; G RE,

Pollution Prevention Plan; G RE

Updated Network Analysis; G RE]

Quality Control Plan; G RE,

SD-05 Design Data

Equipment-in-Place List; G RE

Maintenance and Parts Data; G RE

SF1413; G RE

Aggregate Sources; G RE

Site Plan; G RE

Dirt and Dust Control Plan; G RE

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

SD-07 Certificates

Warranties; G RE

Insurance; G RE

3 PRT Additions
Amendment 1

Updated Network Analysis; G RE

DA Form 3337; G RE

SD-11 Closeout Submittals

As-Built Drawings; G RE

Mechanical Room Layout; G RE

Preliminary Network Analysis; G RE

Complete Network Analysis; G RE

Updated Network Analysis; 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 300 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 \$455.00 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.

1.5 NOT USED
Oct 00

1.6 NOT USED

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

Version 2 (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.

3 PRT Additions
Amendment 1

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 _____

Drawing No.	Title (followed by drawing code if different from that shown above)	Latest Rev. No. & Date
X-000	COVER SHEET	
X-001	INDEX OF DRAWINGS	
X-002	PROJECT LOCATION	
X-003	ABBREVIATIONS AND LEGEND	
X-004	ADA STANDARDS	

CIVIL
KINGSOLVER ELEMENTARY SCHOOL

C1-101	EXISTING TOPOGRAPHY PLAN
C1-102	REMOVAL/DEMOLITION PLAN

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C1-103 SITE LAYOUT PLANS
C1-104 GRADING, PAVING AND STORM DRAINAGE PLAN
C1-105 EROSION CONTROL PLAN
MPE1101 KINGSOLVER SITE UTILITY PLAN

MUDGE ELEMENTARY SCHOOL

C2-101 EXISTING TOPOGRAPHY PLAN
C2-102 REMOVAL/DEMOLITION PLAN
C2-103 SITE LAYOUT PLANS
C2-104 SURCHARGE GRADING PLAN
C2-105 GRADING, PAVING AND STORM DRAINAGE PLAN
C2-106 EROSION CONTROL PLAN
MPE2101 MUDGE SITE UTILITY PLAN

PIERCE ELEMENTARY SCHOOL

C3-101 EXISTING TOPOGRAPHY PLAN
C3-102 REMOVAL/DEMOLITION PLAN
C3-103 SITE LAYOUT PLANS
C3-104 GRADING, PAVING AND STORM DRAINAGE PLAN
C3-105 EROSION CONTROL PLAN
MPE3101 PIERCE SITE UTILITY PLAN

C-501 EROSION CONTROL DETAILS
C-502 SITE DETAILS
C-503 BORING LOGS & SITE DETAILS
C-504 BORING LOGS & SITE DETAILS

ARCHITECTURAL

A-101 ANNOTATED AND DIMENSIONED FLOOR PLANS
A-102 REFLECTED CEILING PLAN AND SCHEDULES
A-201 ROOF PLAN AND ELEVATIONS
A-301 WALL SECTIONS AND DETAILS
A-401 INTERIOR ELEVATIONS
A-402 MILLWORK SECTIONS AND DETAILS
A-403 MILLWORK SECTIONS AND DETAILS
A-501 DOOR DETAILS
I-101 INTERIOR FINISH FLOOR ACCENT PLAN
F-101 FIRE PROTECTION PLAN

STRUCTURAL

S-001 GENERAL NOTES
S-101 FOUNDATION PLAN
S-201 ROOF FRAMING PLAN
S-301 DETAILS
S-401 DETAILS
S-501 DETAILS

MECHANICAL

M-101 KINGSOLVER, MUDGE AND PIERCE MECHANICAL PLAN
M-501 KINGSOLVER, MUDGE AND PIERCE MECHANICAL DETAIL PLAN
M-502 KINGSOLVER, MUDGE AND PIERCE DETAILS AND SCHEDULES

PLUMBING

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P-101 KINGSOLVER, MUDGE AND PLUMBING PLAN
P-501 KINGSOLVER, MUDGE AND PLUMBING DETAIL PLAN

ELECTRICAL

E-101 ELECTRICAL LEGEND AND FIXTURE SCHEDULES
E-102 KINGSOLVER, MUDGE AND PIERCE LIGHTING PLAN
E-103 KINGSOLVER, MUDGE AND PIERCE POWER PLAN
E-104 KINGSOLVER, MUDGE AND PIERCE COMMUNICATIONS PLAN

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.

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.

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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 Specs intact 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

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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 Preliminary Submittal

Six (6) weeks before occupancy of this facility by the Government, the Contractor shall submit one (1) set of the original working as-built drawings to the Contracting Officer for review and approval. These working as-built marked drawings shall be neat, legible and accurate. The review by Government personnel will be expedited to the maximum extent possible. Upon approval, the working as-built marked drawings will be returned to the Contractor for use in preparation of final as-built drawings. If upon review, the working as-built marked drawings are found to contain errors and/or omissions, they will be returned to the Contractor for corrections. The Contractor shall complete the corrections and return the working as-built marked drawings to the Contracting Officer within 10 calendar days.

1.8.5 Preparation of Final As-Built Drawings

Upon approval of the working as-built prints submittal, the Contractor will be furnished, by the Government, one set of contract drawings in CADD (if not previously provided) with all amendments incorporated, to be used for final as-built drawings. [Any contract modifications that were developed by revision of contract drawing CADD files, will already have the modifications reflected in the files provided to the Contractor.] These contract drawings will be furnished in the format specified in paragraph "Computer Aided Design and Drafting" (CADD). These drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, adding such additional drawings as may be necessary. These drawings are part of the permanent records of this project and the Contractor shall be responsible for the protection and safety thereof until returned to the Contracting Officer. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

In the event the Contractor accomplishes additional work which changes the as-built conditions of the facility, after submission and approval of the working as-built drawings, he shall be responsible for the addition of these changes to the working as-built drawings and also to the final as-built documents.

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.

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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)".

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 AutoCAD Release 2004 CADD software system. The media files will be supplied by the Contractor to the COR on Using Agency's specified media.

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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 3/16 inch 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.

b. Revision markers defined in paragraph "Markings and Indicators" shall be placed as follows:

(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 30 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 Not Used

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

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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: Godman Army Airfield, Ft. Knox, KY, Louisville, KY, Louisville Airport

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.

Hydrographs are shown on the drawings.

1.12 UTILITIES (APR 1984) FAR 52.236-14 (Para. 1.12.a.(1) & 1.12.a.(2) only).
15 June 1990

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a. Scan the construction site with electromagnetic or sonic equipment, and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing piping, utilities, and any type of underground obstruction not indicated to be specified or removed but indicated or discovered during scanning in locations to be traversed by piping, ducts, and other work to be conducted or installed. Verify elevations before installing new work closer than nearest manhole or other structure at which an adjustment in grade can be made.

b. Availability and Use of Utility Services

***1**

(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. **Payment for utility services is specified in Section 01500A TEMPORARY CONSTRUCTION FACILITIES AND ADMINISTRATIVE REQUIREMENTS, paragraph 1.2.** *1

(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.

(3) Electric Power for Small Tools not exceeding 20 amperes and 115 volts will be furnished from existing outlets at no cost to the Contractor, subject to proper use, and that total estimated consumption will not exceed 1,000 kilowatts per month. The Contractor's Small Tool Usage Plan shall be submitted for determination of estimated consumption. In the event the estimate exceeds the above allowance, the requirements for other utilities will apply.

(4) Drinking Water may be obtained from approved outlets on the locks, and at no cost to the Contractor, subject to proper use.

(5) Existing Washing Facilities in the Operations Building may be used by Contractor employees during the lunch period, provided the Contractor furnishes daily cleaning service to the first floor of the Operations Building.

c. 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.

d. Interruptions of Utilities

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(1) No utility services shall be interrupted by the Contractor to make connections, to relocate, or for any purpose without approval of the Contracting Officer.

(2) Request for Permission to shut down services shall be submitted in writing to the Contracting Officer not less than seventeen (17) days before date of proposed interruption. The request shall give the following information:

- (a) Nature of Utility (Gas, L.P. or H.P., Water, etc.)
- (b) Size of line and location of shutoff;
- (c) Buildings and services affected.
- (d) Hours and date of shutoff.
- (e) Estimated length of time services will be interrupted.

(3) Services shall not be shutoff until receipt of approval of the proposed hours and date from the Contracting Officer.

(4) Shutoffs which will cause interruption of Government work operations as determined by the Contracting Officer shall be accomplished during regular non-work hours or on non-work days of the Using Agency without any additional cost to the Government.

(5) Operation of valves on water mains will be by Government personnel. Where shutoff of water lines interrupts service to fire hydrants or fire sprinkler systems, the Contractor shall arrange his operations and have sufficient material and personnel available to complete the work without undue delay or to restore service without delay in event of emergency.

(6) Flow in gas mains which have been shut off shall not be restored until the Government inspector has determined that all items serviced by the gas line have been shut off.

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.

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1.15 NOT USED

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 SUPERINTENDENCE OF SUBCONTRACTORS
24 February 1992

a. The Contractor shall be required to furnish the following, in addition to the superintendence required by CONTRACT CLAUSE:
SUPERINTENDENCE BY THE CONTRACTOR.

(1) If more than 50 percent and less than 70 percent of the value of the contract work is subcontracted, one superintendent shall be provided at the site and on the Contractor's payroll to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

(2) If 70 percent or more of the value of the work is subcontracted, the Contractor shall be required to furnish two such superintendents to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

b. If the Contracting Officer, at any time after 50 percent of the subcontracted work has been completed, finds that satisfactory progress is being made, he may waive all or part of the above requirements for additional superintendence subject to the right of the Contracting Officer to reinstate such requirement if at any time during the progress of the remaining work he finds that satisfactory progress is not being made.

1.18 IDENTIFICATION OF EMPLOYEES.
15 June 1990

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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.(10) 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.

(a) Warranty Payment: Warranty work is a subsidiary portion of the contract work, and has a value to the Government approximating 1% of the contract award amount. 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. If the Contractor fails to respond to warranty items as provided in paragraph 1.20.e.(5), the Government may elect to acquire warranty repairs through other sources and, if so, shall backcharge the Contractor for the cost of such repairs. Such backcharges shall be accomplished under the Changes Clauses of the contract through a credit modification(s).

(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

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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.e) 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.

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(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 warrantied 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 Warrantied Equipment: The tag for this equipment shall be similar to the following. Exact format and size will be as approved.

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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 Traffic Control and Air Navigation Systems and Equipment.

Code 1 Air Conditioning System
a. Hospital.
b. Buildings with computer equipment.
c. Commissary and Main PX.
d. Clubs.
e. Barracks, mess halls, BOQ/BEQ (entire building down).
f. Troop medical and dental.

Code 2 Air Conditioning Systems
a. Recreational support.
b. Air conditioning leak in part of building, if causing damage.
c. 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. Traffic control devices.
c. 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.
b. No gas to family housing unit or cantonment area.

Code 1 Heat
a. Hospital/Medical facilities.
b. Commissary and Main PX.
c. Clubs.

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- d. Area power failure affecting heat.
- Code 2 Heat
 - a. Medical storage.
 - b. Barracks.
- Code 1 Intrusion Detection Systems
 - Finance, PX and Commissary, and high security areas.
- Code 2 Intrusion Detection Systems
 - Systems other than those listed under Code 1.
- Code 1 Kitchen Equipment
 - a. Dishwasher.
 - b. All other equipment hampering preparation of a meal.
- Code 2 Kitchen Equipment
 - All other equipment not 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 Refrigeration
 - a. Commissary.
 - b. Mess Hall.
 - c. Cold Storage.
 - d. Hospital.
 - e. Medical storage.
- Code 2 Refrigeration
 - Mess hall - other than walk-in refrigerators and freezers.
- 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 1 Swimming Pools
 - Chlorine leaks or broken pumps.
- Code 1 Tank Wash Racks (Bird Baths)
 - All systems which prevent tank wash.
- Code 1 Water (Exterior)
 - Normal operation of water pump station.
- Code 2 Water (Exterior)
 - No water to facility.
- Code 1 Water, Hot (and Steam)
 - a. Hospitals.

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- b. Mess halls.
- c. BOQ, BEQ, barracks (entire building).
- d. Medical and dental.

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 Contractor's 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.

- 1.21 NOT USED
- 1.22 NOT USED
- 1.23 NOT USED
- 1.24 NOT USED
- 1.25 BUILDING NUMBER IDENTIFICATION SIGNS

The Contractor shall furnish and install building number identification signs.

Size shall be 8" X 20" X 1/4" thick with 1/4-inch raised characters.

Material/Finish shall be 1/4-inch thick cast aluminum, plain border, black leatherette background with 6-inch raised characters (centered on plaque).

Typestyle: Helvetica medium

Placement will be on the sides of the facility at corners for rapid identification (not less than 7 feet from finish grade) and fastened with four theft-proof anchors.

Classroom numbers are as follows:

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Mudge = 5383
Kingsolver = 1398
Pierce = 7505

1.26 PROJECT SIGN
1 August 1996

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

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 2' x 4' left section shall be Communication Red (CR) with white lettering. 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:

Kingsolver, Mudge and Pierce Elementary Schools
Fort Knox, Kentucky

Name of the designer shall be as follows:

Parkhill, Smith & Cooper, Inc.
Lubbock, Texas

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 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

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subsidiary obligation of the Contractor.

1.27 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
(11)	(8)	(6)	(6)	(5)	(4)	(5)	(4)	(4)	(4)	(4)	(6)

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)".

1.28 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.

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1.29 NOT USED

1.29 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.

1.30 NOT USED

1.31 NOT USED

1.32 COMPLIANCE WITH POST/BASE REGULATIONS.
1 August 1996

a. The site of the work is on a military reservation and all rules and regulations issued by the Commanding Officer covering general safety, security, sanitary requirements, pollution control and traffic regulations, shall be observed by the Contractor. Information regarding these requirements may be obtained by contacting the Contracting Officer, who will provide such information or assist in obtaining same from appropriate authorities.

b. Contractor personnel shall park only in areas authorized by the Contracting Officer.

c. The Contractor shall provide a Seven Day Notice of Soil Treatment to the Contracting Officer, in writing, before required soil treatment agents are applied, to assure that DOD Certified Pest Control Personnel are present during soil treatment applications. All soil treatment applications must be in the presence of DOD Certified Pest Control personnel.

1.33 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

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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.

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9	008-022-00262-6
10	008-022-00263-4
11	008-022-00264-2
12	008-022-00265-1

1.34 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

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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

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otherwise approved by the Government representative in writing.

1.35 NOT USED

1.36 NOT USED

1.37 NOT USED

1.38 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.

1.39 NOT USED.

1.40 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

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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.

1.41 IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM
March 2002

RMS shall be maintained in accordance with Section 01312A QUALITY CONTROL SYSTEM (QCS).

1.42 SCAFFOLDING
July 2003

The following requirements supplement EM 385-1-1. In the event of a conflict between these requirements and EM 385-1-1, the more strict requirement shall take precedence.

All scaffold systems shall be erected, inspected and disassembled under the direction of a competent person. The competent person must be present and on site during these operations. The qualifications and training of the competent person and the crew performing the work shall be submitted to the Contracting Officer and accepted prior to commencement of the work. All scaffold systems must be inspected daily and certified as usable prior to use each days use by the competent person. Scaffolds shall also be inspected and certified by the competent person upon completion of any changes to the scaffolding system i.e. adding or removing a level or etc. The competent person must be present and on site during these changes to the scaffold system. The contractor shall develop a system that notifies all parties of the certification status. The use a red/green tag system denoting the serviceability is an acceptable certification system.

A scaffold erection plan shall be submitted for all scaffold systems regardless of type scaffold to be used. This plan shall include erection and dismantling operations and all manufacture's details of the system and shall demonstrate compliance with EM 385-1-1. The plan shall be accepted by the Contracting Officer prior to the erection of the scaffold. This plan shall be reviewed at the preparatory and initial meetings with all parties involved in the scaffolding operation and use thereof. In the event others crafts will be using the scaffolding system, they shall also be briefed on the proper use of the system.

Every level of conventional and masonry type scaffolding systems shall be fully planked and include handrails and toe boards. The contractor is

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advised that he must analyze the added weight of this requirement on the capacity of the scaffold system and adjust his operations accordingly. All personnel erecting and dismantling scaffolds must be protected by a personal fall protection system.

Access to any type scaffold system above 6 (six) feet shall be by stair tower.

1.43 USE OF INCLINOMETER FOR LONG BED DUMP TRUCKS (DACF BULLETIN 25 MARCH 1993)
4 June 1993

The recommendation of EM 385-1-1, Section 16.B.15, is mandatory for this project.

1.44 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>

1.45 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".

1.46 HAUL ROADS
2 Jan 1996

Whenever practical, one-way haul roads shall be used on this contract. Haul roads built and maintained for this work shall comply with the following:

a. One-way haul roads for off-the road equipment; e.g., belly dumps, scrapers, and off-the-road trucks shall have a minimum usable width of 25 ft. One-way haul roads for over-the-road haulage equipment only (e.g., dump trucks, etc.) may be reduced to a usable width of 15 ft. When the Contracting Officer determines that it is impractical to obtain the required width for one-way haul roads (e.g., a road on top of a levee), a usable width of not less than 10 ft. may be approved by the Contracting Officer, provided a positive means of traffic control is implemented. Such positive means shall be signs, signals, and/or signalman and an effective means of speed control.

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b. Two-way haul roads for off-the-road haulage equipment shall have a usable width of 60 ft. Two-way haul roads for over-the-road haulage equipment only may be reduced to a usable width of 30 ft.

c. Haul roads shall be graded and otherwise maintained to keep the surface free from potholes, ruts, and similar conditions that could result in unsafe operation.

d. Grades and curves shall allow a minimum sight distance of 200 ft. for one-way roads and 300 ft. for two-way roads. Sight distance is defined as the centerline distance an equipment operator (4.5 ft. above the road surface) can see an object 4.5 ft. above the road surface. When conditions make it impractical to obtain the required sight distance (e.g., ramps over levees), a positive means of traffic control shall be implemented.

e. Dust abatement shall permit observation of objects on the roadway at a minimum distance of 300 ft.

f. Haul roads shall have the edges of the usable portion marked with posts at intervals of 50 ft. on curves and 200 ft. maximum elsewhere. Such markers shall extend 6 ft. above the road surface and, for nighttime haulage, be provided with reflectors in both directions.

1.47 RADIOACTIVE MATERIAL/EQUIPMENT
13 March 1996

All equipment (e.g. nuclear density gauges) or items containing radioactive material brought onto Fort Knox must be licensed by the Nuclear Regulatory Commission, and a DA Authorization (DARA) or Permit (DARP) secured. Fort Knox is considered a non-agreement site with respect to reciprocity with State permits; an NRC Form 241 must be obtained for each contract. Contractors must submit a DA Form 3337, "Application for Department of the Army Radiation Authorization or Permit", to the Fort Knox Safety Office before a DARA or a DARP can be obtained. A minimum of 45 days is required to process the DARA/DARP.

The Ft. Knox Safety Office can provide a waiver of the DARA/DARP for 15 calendar days. A proper NRC Form 241 and a current radioactive material license must be provided to secure a waiver.

1.48 NOT USED

1.49 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

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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

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information and training.

1.50 NOT USED

1.51 MECHANICAL ROOM LAYOUT (ORL).
24 February 1992

Detailed mechanical room layout drawings shall be submitted for approval in accordance with SD-02 Section [01330] [01331]. Layout drawings shall show location and maintenance clearances for all mechanical 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.

1.52 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.

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(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

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(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

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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.

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(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

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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 With Restrictions*	Asserted Basis for Assertion**	Name of Person Rights Asserting 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,

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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

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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.

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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

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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.

1.53 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

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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.

1.54 NOT USED

1.55 NOT USED

1.56 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 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.

1.57 NOT USED

1.58 CONSTRUCTION AND DEMOLITION (C&D) WASTE MANAGEMENT PLAN
16 July 1999

a. The Contractor is required to submit for government approval a

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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

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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.

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1.59 NOT USED

1.60 NOT USED

1.61 NOT USED

1.62 NOT USED

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1.76 NOT USED

1.77 NOT USED

1.78 NOT USED

1.79 NOT USED

1.80 POLLUTION PREVENTION PLAN

1.81 NOT USED

1.82 Electrical Utility Service

The electrical service at the sites will be relocated and reinstalled by the electrical Utility Service Company, Nolin RECC. Nolin will also perform other work as shown on the drawings. The Contractor shall coordinate the electrical installation described in the contract with the utility service as required.

1.83 Conduct and Dress

Workers shall be properly attired at all times. Full length pants (no shorts), shirts (tee-shirt minimum), and proper shoes (no thongs, flip-flops or open toed sandals) are required. These criteria do not

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release the Contractor from responsibility of complying with other more stringent safety and dress criteria. Logos, slogans or other adornment of clothing that could be considered to be offensive to minors are prohibited.

No smoking is allowed in buildings. Department of the Army Smoking Policy (AR 1-8) shall be observed. Smoking shall be permitted in designated areas only. Smoking is allowed outside as long as butts, wrappers, packages, etc., are policed daily. The Contractor shall ensure that all lunch and breaktime debris are contained and removed from the project site at the end of each break or lunch period and disposed of properly. The Contractor shall confine his personnel to the area within which the work is being performed. Profanity is strictly forbidden. The utmost courtesy shall be extended to the building occupants at all times. Conversation with occupants shall be limited to and pertain to the work at hand. All privately owned vehicles shall be parked in the Contractor storage and staging area. Lights shall be turned off and doors and windows shall be locked in buildings at end of each work day or period unless building is occupied. Only necessary company operational vehicles shall be driven to project site. All privately owned vehicles shall be parked at Contractor's storage area unless otherwise directed in writing by Contracting Officer. Streets and driveways shall be left free at all times.

1.84 SCHOOL CALENDAR

Attached is Fort Knox Community Schools (FKCS) calendar for school years 2003-2004, 2004-2005 and 2005 thru 2006.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

-- End of Section --

Amdt. #0001

SECTION 02360

SOIL TREATMENT FOR SUBTERRANEAN TERMITE CONTROL
(AMDT. #0001)

03/03

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 within the text by the basic designation only.

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

7 USC Section 136

Federal Insecticide, Fungicide, and
Rodenticide Act

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. 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

Termiticide Application Plan;

Termiticide application plan with proposed sequence of treatment work with dates and times. The termiticide trade name, EPA registration number, chemical composition, formulation, concentration of original and diluted material, application rate of active ingredients, method of application, area/volume treated, amount applied; and the name and state license number of the state certified applicator shall be included.

Termiticides;

Manufacturer's label and Material Safety Data Sheet (MSDS) for termiticides proposed for use. Fort Knox Community Schools must receive at least 14 days prior to use.

Foundation Exterior;

Written verification that other site work will not disturb the treatment.

Utilities and Vents;

Written verification that utilities and vents have been located.

Verification of Measurement;

Written verification that the volume of termiticide used meets the application rate.

Application Equipment;

A listing of equipment to be used.

Warranty;

Copy of Contractor's warranty.

SD-04 Samples

Termiticides;

Submit on request samples of the pesticides used in this work or the Contracting Officer may draw, at any time and without prior notice, from stocks at the job site. Should analysis, performed by the Government, indicate such samples to contain less than the amount of active ingredient specified on the label, work performed with such products shall be repeated, with pesticides conforming to this specification, at no additional cost to the Government.

SD-06 Test Reports

Equipment Calibration and Tank Measurement;

Certification of calibration tests conducted on the equipment used in the termiticide application.

Soil Moisture;

Soil moisture test result.

Quality Assurance;

Pest Management Report and copies of daily records signed by an officer of the Contractor.

SD-07 Certificates

Qualifications;

Qualifications and state license number of the termiticide applicator.

1.3 QUALIFICATIONS

***1**

Contractor may use base entomology contractor (Integrated Pest Management Services, Inc., 502-456-4416 who is already qualified, or a contractor meeting the following qualifications. The Contractor's principal business shall be pest control. The Contractor shall be licensed and the termiticide applicators certified in the state where the work is to be performed. Termiticide applicators shall also be certified in the U.S. Environmental Protection Agency (EPA) pesticide applicator category which includes structural pest control.

***1**

The Contractor shall:

- a. Have personnel with a state of Kentucky certification and D.O.D. certification.
- b. Provide a submittal with the following information to Contracting Officer:
 - (1) Quantity of pesticide used.
 - (2) Rate of dispersion.
 - (3) Percent of use.
 - (4) Total amount used.
 - (5) Date of application prior to application.

The Contractor will not be allowed to mix bulk chemical in any Post approved mixing areas.

1.4 SAFETY REQUIREMENTS

Formulate, treat, and dispose of termiticides and their containers in accordance with label directions. Draw water for formulating only from sites designated by the Contracting Officer, and fit the filling hose with a backflow preventer meeting local plumbing codes or standards. The filling operation shall be under the direct and continuous observation of a contractor's representative to prevent overflow. Secure pesticides and related materials under lock and key when unattended. Ensure that proper protective clothing and equipment are worn and used during all phases of termiticide application. Dispose of used pesticide containers off Government property.

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Delivery

Termiticide material shall be delivered to the site in the original unopened containers bearing legible labels indicating the EPA registration number and manufacturer's registered uses. All other materials to be used on site for the purpose of termite control shall be delivered in new or otherwise good condition as supplied by the manufacturer or formulator.

1.5.2 Storage

Materials shall be stored in designated areas and in accordance with manufacturer's labels. Termiticides and related materials shall be kept under lock and key when unattended.

1.5.3 Handling

Termiticides shall be handled in accordance with manufacturer's labels. Manufacturer's warnings and precautions shall be observed. Materials shall be handled preventing contamination by dirt, water, and organic material. Protect termiticides from sunlight as recommended by the manufacturer.

1.6 INSPECTION

Termiticides shall be inspected upon arrival at the job site for conformity

to type and quality in accordance with paragraph TERMITICIDES. Each label shall bear evidence of registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended or under appropriate regulations of the host county. Other materials shall be inspected for conformance with specified requirements. Unacceptable materials shall be removed from the job site.

1.7 WARRANTY

The Contractor shall provide a 5-year written warranty against infestations or reinfestations by subterranean termites of the buildings or building additions constructed under this contract. Warranty shall include annual inspections of the buildings or building additions. If live subterranean termite infestation or subterranean termite damage is discovered during the warranty period, and the soil and building conditions have not been altered in the interim, the Contractor shall:

- a. Retreat the soil and perform other treatment as may be necessary for elimination of subterranean termite infestation;
- b. Repair damage caused by termite infestation; and
- c. Reinspect the building approximately 180 days after the retreatment.

1.8 QUALITY ASSURANCE

The Contractor shall comply with 7 USC Section 136 for requirements on contractor's licensing, certification, and record keeping. The Contractor shall maintain daily records using Pest Management Maintenance Record, DD Form 1532-1 and submit copies of records when requested by the Contracting Officer. These forms may be obtained from the main web site:

http://web1.whs.osd.mil/icdhome/formsrpt/WWWDDAllbyNumber_1Page10.htm.

Or directly from the following websites:

<http://web1.whs.osd.mil/forms/DD1532-1.pdf>

and <http://web1.whs.osd.mil/forms/DD1532.pdf>.

Upon completion of this work, submit Pest Management Report. DD Form 1532 identifying target pest, type of operation, brand name and manufacturer of pesticide, formulation, concentration or rate of application used.

PART 2 PRODUCTS

2.1 TERMITICIDES

Termiticides shall be currently registered by the EPA or approved for such use by the appropriate agency of the host county. Termiticide shall be selected for maximum effectiveness and duration after application. The selected termiticide shall be suitable for the soil and climatic conditions at the project site.

PART 3 EXECUTION

3.1 TECHNICAL REPRESENTATIVE

The certified installation pest management coordinator shall be the technical representative, shall be present at all meetings concerning treatment measures for subterranean termites, and may be present during treatment application. The command Pest Control Coordinator shall be contacted prior to starting work.

3.2 SITE PREPARATION

Site preparation shall be in accordance with Sections 02231 CLEARING AND GRUBBING, 02300A EARTHWORK FOR BUILDINGS AND UTILITIES and 02936 TURF-BERMUDA GRASS SEEDING. Work related to final grades, landscape plantings, foundations, or any other alterations to finished construction which might alter the condition of treated soils, shall be coordinated with this specification.

3.2.1 Ground Preparation

Food sources shall be eliminated by removing debris from clearing and grubbing and post construction wood scraps such as ground stakes, form boards, and scrap lumber from the site, before termiticide application begins.

3.2.2 Verification

Before work starts, the Contractor shall verify that final grades are as indicated and smooth grading has been completed in accordance with Section 02300A EARTHWORK FOR BUILDINGS AND UTILITIES. Soil particles shall be finely graded with particles no larger than 1 inch and compacted to eliminate soil movement to the greatest degree.

3.2.3 Foundation Exterior

The Contractor shall provide written verification that final grading and landscape planting operations will not disturb treatment of the soil on the exterior sides of foundation walls, grade beams, and similar structures.

3.2.4 Utilities and Vents

The Contractor shall provide written verification that the location and identity of HVAC ducts and vents, water and sewer lines, and plumbing have been accomplished prior to the termiticide application.

3.3 SITE CONDITIONS

The following conditions shall determine the time of application:

3.3.1 Soil Moisture

Soils to be treated shall be tested immediately before application. Soil moisture content shall be tested to a minimum depth of 3 inches. The soil moisture shall be as recommended by the termiticide manufacturer. The termiticide will not be applied when soil moisture exceeds manufacturer's recommendations because termiticides do not adhere to the soil particles in saturated soils.

3.3.2 Runoff and Wind Drift

Termiticide shall not be applied during or immediately following heavy rains. Applications shall not be performed when conditions may cause runoff or create an environmental hazard. Applications shall not be performed when average wind speed exceeds 10 miles per hour. The termiticide shall not be allowed to enter water systems, aquifers, or endanger humans or animals.

3.3.2.1 Vapor Barriers and Waterproof Membranes

Termiticide shall be applied prior to placement of a vapor barrier or waterproof membrane.

3.3.2.2 Utilities and Vents

Prior to application, HVAC ducts and vents located in treatment area shall be turned off and blocked to protect people and animals from termiticide.

3.3.3 Placement of Concrete

Concrete covering treated soils shall be placed as soon as the termiticide has reached maximum penetration into the soil. Time for maximum penetration shall be as recommended by the manufacturer.

3.4 TERMITICIDE TREATMENT

The Contractor shall submit a Termiticide Application Plan for approval before starting the specified treatment.

3.4.1 Equipment Calibration and Tank Measurement

Immediately prior to commencement of termiticide application, calibration tests shall be conducted on the application equipment to be used and the application tank shall be measured to determine the volume and contents. These tests shall confirm that the application equipment is operating within the manufacturer's specifications and will meet the specified requirements. The Contractor shall provide written certification of the equipment calibration test results within 1 week of testing.

3.4.2 Mixing and Application

Formulating, mixing, and application shall be performed in the presence of the Contracting Officer or the technical representative. A closed system is recommended as it prevents the termiticide from coming into contact with the applicator or other persons. Water for formulating shall only come from designated locations. Filling hoses shall be fitted with a backflow preventer meeting local plumbing codes or standards. Overflow shall be prevented during the filling operation. Prior to each day of use, the equipment used for applying termiticides shall be inspected for leaks, clogging, wear, or damage. Any repairs are to be performed immediately.

3.4.3 Treatment Method

For areas to be treated, the Contractor shall establish complete and unbroken vertical and/or horizontal soil poison barriers between the soil and all portions of the intended structure which may allow termite access to wood and wood related products.

3.4.3.1 Surface Application

Surface application shall be used for establishing horizontal barriers. Surface applicants shall be applied as a coarse spray and provide uniform distribution over the soil surface. Termiticide shall penetrate a minimum of 1 inch into the soil, or as recommended by the manufacturer.

3.4.3.2 Rodding and Trenching

Rodding and trenching shall be used for establishing vertical soil barriers. Trenching shall be to the depth of the foundation footing. Width of trench shall be as recommended by the manufacturer, or as indicated. Rodding or other approved method may be implemented for saturating the base of the trench with termiticide. Immediately after termiticide has reached maximum penetration as recommended by the manufacturer, backfilling of the trench shall commence. Backfilling shall be in 6 inch rises or layers. Each rise shall be treated with termiticide.

3.4.4 Sampling

The Contracting Officer may draw from stocks at the job site, at any time and without prior notice, samples of the termiticides used to determine if the amount of active ingredient specified on the label is being applied.

3.5 VERIFICATION OF MEASUREMENT

Once termiticide application has been completed, tank contents shall be measured to determine the remaining volume. The total volume measurement of used contents for the application shall equal the established application rate for the project site conditions. The Contractor shall provide written verification of the measurements.

3.6 CLEAN UP, DISPOSAL, AND PROTECTION

Once application has been completed, the Contractor shall proceed with clean up and protection of the site without delay.

3.6.1 Clean Up

The site shall be cleaned of all material associated with the treatment measures, according to label instructions, and as indicated. Excess and waste material shall be removed and disposed off site.

3.6.2 Disposal of Termiticide

The Contractor shall dispose of residual termiticides and containers off Government property, and in accordance with label instructions and EPA criteria.

3.6.3 Protection of Treated Area

Immediately after the application, the area shall be protected from other use by erecting barricades and providing signage as required or directed.

3.7 CONDITIONS FOR SATISFACTORY TREATMENT

3.7.1 Equipment Calibrations and Measurements

Where results from the equipment calibration and tank measurements tests are unsatisfactory, re-treatment will be required.

3.7.2 Testing

Should an analysis, performed by a third party, indicate that the samples of the applied termiticide contain less than the amount of active ingredient specified on the label, and/or if soils are treated to a depth

less than specified or approved, re-treatment will be required.

3.7.3 Disturbance of Treated Soils

Soil and fill material disturbed after treatment shall be re-treated before placement of slabs or other covering structures.

3.7.4 Termites Found Within the Warranty Period

If live subterranean termite infestation or termite damage is discovered during the warranty period, the Contractor shall re-treat the site.

3.8 RE-TREATMENT

Where re-treatment is required, the Contractor shall comply with the requirements specified in paragraph WARRANTY.

-- End of Section --

Amdt. #0001

SECTION 05500A

MISCELLANEOUS METAL
(AMDT. #0001)

01/02

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

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

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.

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

***1**

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; epoxy filled screen anchors equal to Hilti **HIT HY20** and through bolts for masonry; machine and carriage bolts for steel; and lag bolts and screws for wood.

***1**

1.7 ALUMINUM FINISHES

Unless otherwise specified, aluminum items shall have standard mill 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 16 gauge steel with welded joints and finished with anchorage for securing into construction. Access doors shall be not lighter than 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 CORNER GUARDS

Corner Guards shall be molded vinyl/acrylic, .078 inch thick, 3 inch wide with 1/4 inch corner radius.

Retainer shall be .063 inch thick continuous extruded aluminum. End caps shall be molded, high-impact type, color to match corner guard. All exposed vinyl/acrylic to have matte finish pebble grain texture, color as indicated in 09915 COLOR SCHEDULE.

2.2.1 Accessories

Provide mounting brackets and attachment hardware appropriate to component and substrate.

2.3 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.

2.4 TELEVISION BRACKETS

***1**

Television brackets shall be a structure mounted yoke style TV/monitor bracket with support tray, lockable **adjustable double VCR/DVD mount**, ceiling plate and hardware for attachment to steel joists or beams. The support frame shall have a two part perforated or solid steel plate support shelf with a support structure capable of tilting a minimum of 7 degrees and be capable of swiveling a minimum of 270 degrees. The television bracket shall accommodate 25" - 27" sets and the height and width shall be adjustable to the exact dimensions of the TV/monitor. Top part of support shelf shall be designed to be lockable when set in bottom portion of support shelf, shall be easily removable and shall be predrilled for universal screw attachment to base of TV. Television bracket shall be furnished with a lockable **adjustable double universal VCR/DVD mount** attached to the bottom of the support **tray**. The television bracket shall have a 300 lb. load rating. It shall provide top and front roll-out protection clamps. The television and VCR bracket shall be finished with manufacturer's standard black powder coat or baked enamel finish.

***1**

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 12 by 12 inches shall be installed directly below each valve, flow indicator, damper, or air splitter that is located in concrete masonry and gypsum board walls and partitions and above the ceiling, other than an acoustical ceiling, and that would otherwise not be accessible.

3.3 INSTALLATION OF CORNER GUARDS

Install components in accordance with manufacturer's instructions, level and plumb, securely rigid in position. Position corner guards flush with top of resilient base, extend to 36" high.

3.4 INSTALLATION OF TELEVISION BRACKETS

Install television brackets at locations indicated on drawings, plumb, level and flush with the wall using the predrilled bracket mounting holes. Mount bracket at height indicated on plans unless otherwise directed by Contracting Officer. Mount shelf to wall with resin filled screen anchors designed for hollow masonry, or a suitable size for specified load rating and in accordance with manufacturer's recommendations.

-- End of Section --

Amdt. #0001

SECTION 07840

FIRESTOPPING
(AMDT. #0001)

06/03

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 within the text by basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 119	(2000a) Fire Tests of Building Construction and Materials
ASTM E 1399	(1997; R 2000) Cyclic Movement and Measuring the Minimum and Maximum Joint Widths of Architectural Joint Systems
ASTM E 1966	(2001) Fire-Resistive Joint Systems
ASTM E 814	(2002) Fire Tests of Through-Penetration Fire Stops
ASTM E 84	(2003) Surface Burning Characteristics of Building Materials

FM GLOBAL (FM)

FM P7825a	(2003) Approval Guide Fire Protection
FM Standard 4991	(2001) Approval of Firestop Contractors

UNDERWRITERS LABORATORIES (UL)

UL 1479	(2003) Fire Tests of Through-Penetration Firestops
UL 723	(1996; Rev thru Sep 2001) Test for Surface Burning Characteristics of Building Materials
UL Fire Resist Dir	(2003) Fire Resistance Directory (Vol 1, 2A, 2B & 3)

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. 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

Firestopping Materials;

Detail drawings including manufacturer's descriptive data, typical details conforming to UL Fire Resist Dir or other details certified by another nationally recognized testing laboratory, installation instructions or UL listing details for a firestopping assembly in lieu of fire-test data or report. For those firestop applications for which no UL tested system is available through a manufacturer, a manufacturer's engineering judgement, derived from similar UL system designs or other tests, shall be submitted for review and approval prior to installation. Submittal shall indicate the firestopping material to be provided for each type of application. When more than a total of 5 penetrations and/or construction joints are to receive firestopping, provide drawings that indicate location, "F" and "T" ratings, and type of application.

SD-07 Certificates

Firestopping Materials;

Certificates attesting that firestopping material complies with the specified requirements. In lieu of certificates, drawings showing UL classified materials as part of a tested assembly may be provided. Drawings showing evidence of testing by an alternate nationally recognized independent laboratory may be substituted.

Installer Qualifications;

Documentation of training and experience.

Inspection;

Manufacturer's representative certification stating that firestopping work has been inspected and found to be applied according to the manufacturer's recommendations and the specified requirements.

1.3 GENERAL REQUIREMENTS

Firestopping shall consist of furnishing and installing tested and listed firestop systems, combination of materials, or devices to form an effective barrier against the spread of flame, smoke and gases, and maintain the integrity of fire resistance rated wall assemblies, including through-penetrations and construction joints and gaps. Through-penetrations include the annular space around pipes, tubes, conduit, wires, cables and vents. Gaps requiring firestopping include gaps between the top of the fire-rated walls and the roof deck above.

1.4 DELIVERY AND STORAGE

Materials shall be delivered in the original unopened packages or containers showing name of the manufacturer and the brand name. Materials shall be stored off the ground and shall be protected from damage and exposure to elements. Damaged or deteriorated materials shall be removed from the site.

1.5 INSTALLER QUALIFICATIONS

The Contractor shall engage an experienced Installer who is:

- a. FM Research approved in accordance with FM Standard 4991, or
- b. Certified, licensed, or otherwise qualified by the firestopping manufacturer as having the necessary staff, training, and a minimum of 3 years experience in the installation of manufacturer's products per specified requirements. A manufacturer's willingness to sell its firestopping products to the Contractor or to an installer engaged by the Contractor does not in itself confer qualification on the buyer. The Installer shall have been trained by a direct representative of the manufacturer (not distributor or agent) in the proper selection and installation procedures.

1.6 COORDINATION

The specified work shall be coordinated with other trades. Firestopping materials, at penetrations of pipes and ducts, shall be applied prior to insulating, unless insulation meets requirements specified for firestopping. Firestopping materials at construction gaps shall be applied prior to completion of enclosing walls or assemblies.

PART 2 PRODUCTS

2.1 FIRESTOPPING MATERIALS

Firestopping materials shall consist of commercially manufactured, asbestos-free, containing no water soluble intumescent ingredients, noncombustible products FM P7825a approved for use with applicable construction and penetrating items, complying with the following minimum requirements:

2.1.1 Fire Hazard Classification

Material shall have a flame spread of 25 or less, and a smoke developed rating of 50 or less, when tested in accordance with ASTM E 84 or UL 723. Material shall be an approved firestopping material as listed in UL Fire Resist Dir or by a nationally recognized testing laboratory.

2.1.2 Toxicity

Material shall be nontoxic to humans at all stages of application or during fire conditions.

2.1.3 Fire Resistance Rating

Firestop systems shall be UL Fire Resist Dir listed or FM P7825a approved with "F" rating at least equal to fire-rating of fire wall in which penetrated openings are to be protected. Firestop systems shall also have "T" rating where required.

2.1.3.1 Through-Penetrations

Firestopping materials for through-penetrations, as described in paragraph GENERAL REQUIREMENTS, shall provide "F" and "T" fire resistance ratings in accordance with ASTM E 814 or UL 1479. Fire resistance ratings shall be as

follows:

- a. Penetrations of Fire Resistance Rated Walls and Partitions: F Rating = Rating of wall or partition being penetrated.

2.1.3.2 Construction Gaps

Fire resistance ratings of construction gaps such as those between roof decks and walls shall be as follows: gaps between top of the walls and the bottom of roof deck, 1 hour. Gaps shall be provided with firestopping materials and systems that have been tested per ASTM E 119 and ASTM E 1966 to meet the required fire resistance rating. Systems installed at construction joints shall meet the cycling requirements of ASTM E 1399.

PART 3 EXECUTION

3.1 PREPARATION

Areas to receive firestopping shall be free of dirt, grease, oil, or loose materials which may affect the fitting or fire resistance of the firestopping system. Surfaces shall be prepared as recommended by the manufacturer.

3.2 INSTALLATION

Firestopping material shall completely fill void spaces regardless of geometric configuration, subject to tolerance established by the manufacturer. Firestopping systems for filling floor voids 4 inches or more in any direction shall be capable of supporting the same load as the floor is designed to support or shall be protected by a permanent barrier to prevent loading or traffic in the firestopped area. Firestopping shall be installed in accordance with manufacturer's written instructions. Tested and listed firestop systems shall be provided in the following locations, except in floor slabs on grade:

- a. Penetrations of duct, conduit, tubing, cable and pipe through fire-resistance rated walls/partitions.
- b. Gaps at perimeter of fire-resistance rated walls and partitions, such as between the top of the walls and the bottom of roof deck.
- c. Other locations where required to maintain fire resistance rating of the construction.

3.2.1 Insulated Pipes and Ducts

Thermal insulation shall be cut and removed where pipes or ducts pass through firestopping, unless insulation meets requirements specified for firestopping. Thermal insulation shall be replaced with a material having equal thermal insulating and firestopping characteristics.

3.2.2 Data and Communication Cabling

Cabling for data and communication applications shall be sealed with re-enterable firestopping products that do not cure over time. Firestopping shall be modular devices, containing built-in self-sealing intumescent inserts. Firestopping devices shall allow for cable moves, adds or changes without the need to remove or replace any firestop materials.

3.3 INSPECTION

The manufacturer's representative shall inspect the applications initially to ensure adequate preparations (clean surfaces suitable for application, etc.) and periodically during the work to assure that the completed work has been accomplished according to the manufacturer's written instructions and the specified requirements. The Contractor shall submit written reports indicating locations of and types of penetrations and types of firestopping used at each location; type shall be recorded by UL listed printed numbers.

-- End of Section --

Amdt. #0001

SECTION 08110

STEEL DOORS AND FRAMES
(AMDT. #0001)

05/01

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 A250.3 | (1999) Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames |
| ANSI A250.6 | (1997) Hardware on Standard Steel Doors (Reinforcement - Application) |
| ANSI A250.8 | (1998) SDI-100 Recommended Specifications for Standard Steel Doors and Frames |

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | |
|-------------|--|
| ASTM A 591 | (1998) Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications |
| ASTM C 578 | (2001) Rigid, Cellular Polystyrene Thermal Insulation |
| ASTM C 591 | (2001) Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation |
| ASTM C 612 | (2002) Mineral Fiber Block and Board Thermal Insulation |
| ASTM D 2863 | (2000) Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index) |

DOOR AND HARDWARE INSTITUTE (DHI)

- | | |
|----------|---|
| DHI A115 | (1991) Steel Door Preparation Standards (Consisting of A115.1 through A115.6 and A115.12 through A115.18) |
|----------|---|

HOLLOW METAL MANUFACTURERS ASSOCIATION (HMMA)

- | | |
|----------|----------------------------|
| HMMA HMM | (1992) Hollow Metal Manual |
|----------|----------------------------|

STEEL DOOR INSTITUTE (SDOI)

SDI 105	(1998) Recommended Erection Instructions for Steel Frames
SDI 111-F	Recommended Existing Wall Anchors for Standard Steel Doors and Frames
SDI 113	(1979) Apparent Thermal Performance of STEEL DOOR and FRAME ASSEMBLIES

1.2 SUBMITTALS

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

SD-02 Shop Drawings

Doors

Frames

Accessories

Show elevations, construction details, metal gages, hardware provisions, method of glazing, and installation details.

Schedule of doors

Schedule of frames

Submit door and frame locations.

SD-03 Product Data

Doors.

Frames.

Accessories.

Submit manufacturer's descriptive literature for doors, frames, and accessories. Include data and details on door construction, panel (internal) reinforcement, insulation, and door edge construction. When "custom hollow metal doors" are provided in lieu of "standard steel doors," provide additional details and data sufficient for comparison to ANSI A250.8 requirements.

SD-04 Samples

Factory-applied enamel finish.

Submit manufacturer's standard colors and patterns for selection.

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver doors, frames, and accessories undamaged and with protective

wrappings or packaging. Provide temporary steel spreaders securely fastened to the bottom of each welded frame. Store doors and frames on platforms under cover in clean, dry, ventilated, and accessible locations, with 1/4 inch airspace between doors. Remove damp or wet packaging immediately and wipe affected surfaces dry. Replace damaged materials with new.

PART 2 PRODUCTS

2.1 STANDARD STEEL DOORS

ANSI A250.8, except as specified otherwise. Prepare doors to receive hardware specified in Section 08710, "Door Hardware." Undercut where indicated. Exterior doors shall have top edge closed flush and sealed to prevent water intrusion. Doors shall be 1 3/4 inches thick, unless otherwise indicated.

2.1.1 Classification - Level, Performance, Model

2.1.1.1 Heavy Duty Doors

ANSI A250.8, Level 2, physical performance Level B, Model 2, with core construction as required by the manufacturer for interior doors and exterior doors, of size(s) and design(s) indicated. Where vertical stiffener cores are required, the space between the stiffeners shall be filled with mineral board insulation.

2.2 CUSTOM HOLLOW METAL DOORS

At the Contractor's option, custom hollow metal doors may be provided in lieu of standard steel doors. Door size(s), design, materials, construction, gages, and finish shall be as specified for standard steel doors and shall comply with the requirement of HMMA HMM. Fill all spaces in doors with insulation. Close top and bottom edges with steel channels not lighter than 16 gage. Close tops of exterior doors flush with an additional channel and seal to prevent water intrusion. Prepare doors to receive hardware specified in Section 08710, "Door Hardware." Undercut doors where indicated. Doors shall be 1 3/4 inches thick, unless otherwise indicated.

2.3 ACCESSORIES

2.3.1 Moldings

Provide moldings around glass of interior and exterior doors. Provide nonremovable moldings on outside of exterior doors and on corridor side of interior doors. Other moldings may be stationary or removable. Secure inside moldings to stationary moldings, or provide snap-on moldings. Muntins shall interlock at intersections and shall be fitted and welded to stationary moldings.

2.4 INSULATION CORES

Insulated cores shall be of type specified, and provide an apparent U-factor of .48 in accordance with SDI 113 and shall conform to:

- a. Rigid Polyurethane Foam: ASTM C 591, Type 1 or 2, foamed-in-place or in board form, with oxygen index of not less than 22 percent when tested in accordance with ASTM D 2863; or

- b. Rigid Polystyrene Foam Board: ASTM C 578, Type I or II; or
- c. Mineral board: ASTM C 612, Type I.

2.5 STANDARD STEEL FRAMES

ANSI A250.8, except as otherwise specified. Form frames to sizes and shapes indicated, with welded corners. Provide steel frames for doors, transoms, sidelights, mullions, cased openings, and interior glazed panels, unless otherwise indicated.

2.5.1 Welded Frames

Continuously weld frame faces at corner joints. Mechanically interlock or continuously weld stops and rabbets. Grind welds smooth and fill as required for smooth flush appearance.

2.5.2 Mullions and Transom Bars

Mullions and transom bars shall be closed or tubular construction and shall member with heads and jambs butt-welded thereto. Bottom of door mullions shall have adjustable floor anchors and spreader connections.

2.5.3 Stops and Beads

Form stops and beads from 20 gage steel minimum 5/8 inch tall. Provide for glazed and other openings in standard steel frames. Secure beads to frames with oval-head, countersunk Phillips self-tapping sheet metal screws or concealed clips and fasteners. Space fasteners approximately 12 to 16 inches on centers. Miter molded shapes at corners. Butt or miter square or rectangular beads at corners.

2.5.4 Cased Openings

Fabricate frames for cased openings of same material, gage, and assembly as specified for metal door frames, except omit door stops and preparation for hardware.

2.5.5 Anchors

Provide anchors to secure the frame to adjoining construction. Provide steel anchors, zinc-coated or painted with rust-inhibitive paint, not lighter than 18 gage.

2.5.5.1 Wall Anchors

Provide at least three anchors for each jamb. For frames which are more than 7.5 feet in height, provide one additional anchor for each jamb for each additional 2.5 feet or fraction thereof.

- a. Masonry: Provide anchors of corrugated or perforated steel straps or 3/16 inch diameter steel wire, adjustable or T-shaped;
- b. Stud partitions: Weld anchors to backs of frames. Design anchors to be fastened to steel studs with sheet metal screws;
- c. Completed openings: Secure frames to previously placed concrete or masonry with expansion bolts in accordance with SDI 111-F; and

to steel with self-tapping screws. Frames shall be countersunk to receive flathead bolts or screws.

2.5.5.2 Floor Anchors

Provide floor anchors drilled for 3/8 inch anchor bolts at bottom of each jamb member. Where floor fill occurs, terminate bottom of frames at the indicated finished floor levels and support by adjustable extension clips resting on and anchored to the structural slabs.

*1

2.5.6 Contact Switch Boxes

Provide frames with **contact switch** boxes and provide cutout for **contact switch** in frame. Tack weld or otherwise attach **contact switch** boxes to frame to prevent dislodging during installation. **Refer to electrical communications drawings for locations of switches.**

*1

2.6 WEATHERSTRIPPING

As specified in Section 08710, "Door Hardware."

2.7 HARDWARE PREPARATION

Provide minimum hardware reinforcing gages as specified in ANSI A250.6. Swaging of screw holes will not be accepted in lieu of providing reinforcement of gages specified in ANSI A 250.6. Drill and tap doors and frames to receive finish hardware. Prepare doors and frames for hardware in accordance with the applicable requirements of ANSI A250.8 and ANSI A250.6. For additional requirements refer to DHI A115. Drill and tap for surface-applied hardware at the project site. Build additional reinforcing for surface-applied hardware into the door and frame at the factory. Locate hardware in accordance with the requirements of ANSI A250.8, as applicable. Punch door frames, with the exception of frames that will have weatherstripping or soundproof gasketing, to receive a minimum of two rubber or vinyl door silencers on lock side of single doors and one silencer for each leaf at heads of double doors. Set lock strikes out to provide clearance for silencers.

2.8 FINISHES

2.8.1 Factory-Primed Finish

All surfaces of doors and frames shall be thoroughly cleaned, chemically treated and factory primed with a rust inhibiting coating as specified in ANSI A250.8.

2.8.2 Electrolytic Zinc-Coated Anchors and Accessories

Provide electrolytically deposited zinc-coated steel in accordance with ASTM A 591, Commercial Quality, Coating Class A. Phosphate treat and factory prime zinc-coated surfaces as specified in ANSI A250.8.

2.8.3 Factory-Applied Enamel Finish

Coatings shall meet test procedures and acceptance criteria in accordance with ANSI A250.3. After factory priming, apply two coats of low-gloss enamel to exposed surfaces. Separately bake or oven dry each coat. Drying time and temperature requirements shall be in accordance with the coating manufacturer's recommendations. Color(s) of finish coat shall be as

scheduled in Section 09915 COLOR SCHEDULE and shall match approved color sample(s).

2.9 FABRICATION AND WORKMANSHIP

*1

Finished doors and frames shall be strong and rigid, neat in appearance, and free from defects, waves, scratches, cuts, dents, ridges, holes, warp, and buckle. Molded members shall be clean cut, straight, and true, with joints coped or mitered, well formed, and in true alignment. Dress exposed welded and soldered joints smooth. Fill spot welds as required for smooth flush appearance. Spot welds shall not be visible in finished exposed surfaces. Design door frame sections for use with the wall construction indicated. Corner joints shall be well formed and in true alignment. Conceal fastenings where practicable. *1

2.9.1 *1 Not Used

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Frames

Set frames in accordance with SDI 105. Plumb, align, and brace securely until permanent anchors are set. Anchor bottoms of frames with expansion bolts or powder-actuated fasteners. Build in or secure wall anchors to adjoining construction. Backfill frames with mortar. When an additive is provided in the mortar, coat inside of frames with corrosion-inhibiting bituminous material. For frames in exterior walls, ensure that stops are filled with rigid insulation before grout is placed.

3.1.2 Doors

Hang doors in accordance with clearances specified in ANSI A250.8. After erection and glazing, clean and adjust hardware.

3.2 PROTECTION

Protect doors and frames from damage. Repair damaged doors and frames prior to completion and acceptance of the project or replace with new, as directed. Wire brush rusted frames until rust is removed. Clean thoroughly. Apply an all-over coat of rust-inhibitive paint of the same type used for shop coat.

3.3 CLEANING

Upon completion, clean exposed surfaces of doors and frames thoroughly. Remove mastic smears and other unsightly marks.

-- End of Section --

Amdt. #0001

SECTION 10800

TOILET ACCESSORIES
(AMDT. #0001)

07/02

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. 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

Finishes.
Accessory Items; G, RE

Manufacturer's descriptive data and catalog cuts indicating materials of construction, fasteners proposed for use for each type of wall construction, mounting instructions, operation instructions, and cleaning instructions.

SD-04 Samples

Finishes.
Accessory Items.

One sample of each accessory proposed for use. Approved samples may be incorporated into the finished work, provided they are identified and their locations noted.

SD-07 Certificates

Accessory Items

Submit for each type of accessory specified, attesting that the items meet the specified requirements.

1.2 DELIVERY, STORAGE, AND HANDLING

Toilet accessories shall be wrapped for shipment and storage, delivered to the jobsite in manufacturer's original packaging, and stored in a clean, dry area protected from construction damage and vandalism.

1.3 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period shall be provided.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

Toilet accessories shall be provided where indicated in accordance with paragraph SCHEDULE. Each accessory item shall be complete with the necessary mounting plates and shall be of sturdy construction with corrosion resistant surface.

2.1.1 Anchors and Fasteners

Anchors and fasteners shall be capable of developing a restraining force commensurate with the strength of the accessory to be mounted and shall be suited for use with the supporting construction. Exposed fasteners shall have oval heads, be of tamperproof design, and shall be finished to match the accessory.

2.1.2 Finishes

Except where noted otherwise, finishes on metal shall be provided as follows:

<u>Metal</u>	<u>Finish</u>
Stainless steel	No. 4 satin finish
Carbon steel, copper alloy, and brass	Chromium plated, bright

2.2 ACCESSORY ITEMS

Accessory items shall conform to the requirements specified below.

2.2.1 Grab Bar (GB)

Grab bar shall be 18 gauge, 1-1/4 inches OD Type 304 stainless steel. Grab bar GB1 shall be 36 inches long with both ends returning to the wall. Grab bar GB2 shall be 42 inches long with both ends returning to the wall. Concealed mounting flange shall have mounting holes concealed. Grab bar shall have satin finish. Installed bars shall be capable of withstanding a 500 pound vertical load without coming loose from the fastenings and without obvious permanent deformation. Space between wall and grab bar shall be 1-1/2 inch.

2.2.2 Paper Towel Dispenser (PTD)

Paper towel dispenser shall be designed for C-fold and multi-fold paper towels with the dispenser slot on the bottom and shall be constructed of not less than 0.269 inch Type 304 stainless steel, and shall be surface mounted. Towel dispensers above sinks in classrooms shall be approximately 11 inches wide, 4 inches deep and 8 inches tall and shall be designed to hold approximately 200 C-fold towels and 350 multi-fold towels. Towel dispensers in all other spaces shall be approximately 11 inches wide, 4 inches deep and 15 1/4 inches tall and shall be designed to hold approximately 400 C-fold towels and 525 multi-fold towels. Locking mechanism shall be tumbler key lock.

2.2.3 Towel Pin (TP)

Towel pin shall have concealed wall fastenings, and a pin integral with or permanently fastened to wall flange. Maximum projection shall be 4 inches. Design shall be consistent with design of other accessory items. Finish shall be satin.

2.2.4 Toilet Tissue Dispenser, Jumbo (TTDJ)

Toilet tissue dispenser shall be surface mounted with 2 rolls of jumbo tissue. Cabinet shall be fabricated of high-impact plastic body and transparent plastic front cover. Cover shall have key lock.

2.2.5 Electric Hand Dryer (EHD)

Electric hand dryer shall have a series commutated, through-flow discharge, vacuum type powered 5/8 HP, 120 volt, 12.5 amp, 60 Hz, 20,000 RPM motor, and shall provide constant air velocities of 16,000 LFM at the outlet, and 14,000 LFM at the average hand position of 4 inches below outlet. It shall have an automatic resetting thermostat that will open when the air flow is restricted and close when air flow is resumed. It shall have a 900 watt air heater capable of heating the air stream up to 135 degrees. Infrared sensor automatically turns dryer on when hands are held under air outlet. Removal of hands causes dryer to stop within 2 seconds, and the electronic sensor shuts off dryer after 35 seconds if hands are not removed or an inanimate object is placed across the air outlet. Dryer shall be 11 3/4 inches wide by 12 11/16 inches high by 6 11/16 inches deep, and shall have a one piece, heavy duty, rust resistant, rib-reinforced, die-cast zinc alloy cover mounted to a wall plate with tamperproof bolts. Mount dryers at 31" AFF to highest operable part. Cover shall be finished with an electrostatically applied, chip resistant, white paint.

PART 3 EXECUTION

3.1 INSTALLATION

Surfaces of fastening devices exposed after installation shall have the same finish as the attached accessory. Exposed screw heads shall be oval. Install accessories at the location and height indicated. Protect exposed surfaces of accessories with strippable plastic or by other means until the installation is accepted. After acceptance of accessories, remove and dispose of strippable plastic protection. Coordinate accessory manufacturer's mounting details with other trades as their work progresses. After installation, thoroughly clean exposed surfaces and restore damaged work to its original condition or replace with new work.

3.1.1 Surface Mounted Accessories

*1

Mount on concealed backplates, unless specified otherwise. Accessories without backplates shall have concealed fasteners. Unless indicated or specified, install accessories with sheet metal screws, resin filled screen anchors equal to Hilti **HIT HY20**, or other approved fasteners as required by the construction. Toggle bolts shall not be used in hollow masonry. Install backplates in the same manner, or provide with lugs or anchors set in mortar, as required by the construction. Fasten accessories mounted on gypsum board walls without solid backing into the metal or wood studs or to solid wood blocking secured between wood studs, or to metal backplates secured to metal studs.

*1

3.2 CLEANING

Material shall be cleaned in accordance with manufacturer's recommendations. Alkaline or abrasive agents shall not be used. Precautions shall be taken to avoid scratching or marring of surfaces.

3.3 SCHEDULE

3.3.1 Kingsolver, Mudge, and Pierce Elementary Schools

Accessories Required

Room or Space	GB1	GB2	TP	TTDJ	PTD	EHD
Classrooms 102 and 103					1	
Classroom 104					2	
Toilets 105, 106, 107, & 108	1	1	1	1		1

-- End of Section --

Amdt. #0001

SECTION 15950

BUILDING MANAGEMENT SYSTEM
(AMDT. #0001)

12/03

PART 1 GENERAL

1.1 DESCRIPTION

1.1.1 General Project Scope

- a. Provide control of all split system heat pump units and heat recovery units from the Johnson Metasys System front end at Fort Knox community schools.
- b. Furnish combination temperature and humidity sensors in each classroom with local setpoint adjust, and override button for override of unoccupied mode.
- c. Furnish CO2 sensors in each classroom to determine the concentration of carbon dioxide. These units shall provide analog input into Johnson Metasys for control of ventilation mode. Verify if Kentucky building codes require supply fans to operate continuously in the occupied mode. If this is the case, the CO2 sensors will not be needed.
- d. Utilize the existing outdoor air sensor(s) for the system for automatic enabling of gas operation of the dual fuel heat pumps in gas mode when the outdoor temperature is below 35 Deg. F. (adjustable).
- e. Provide and install three power meters (Veris Hawkeye 8026-NC or equal) at each PTR main electrical locations as shown on the drawings. The meters will be installed on each electrical service by the temperature controls contractor.
- f. Prior to bid, at each PTR location physically verify the location of the N2 bus within the school. Extend the N2 bus to the PTR building through conduit routed in the canopy. Refer to the electrical drawings for canopy location and configuration.

Provide and install and fully commissioned a complete system of Automatic Temperature Controls as specified herein, and as illustrated on the contract drawings to allow for a complete and operational temperature control system. The Temperature Control system shall be Direct Digital Control (DDC), with electric actuation. All necessary control panels, relays, current switches, switches, system software, valves, valve actuators, control dampers, sensing devices, and damper operators shall be provided, installed, and commissioned to insure proper operation of the temperature control system as detailed in the sequence of operation and points list.

The direct digital control system specified for this project shall seamlessly interface to the existing Johnson Controls Metasys M5 Facility Management central Operator Workstation located in the Fort Knox Community

Schools Maintenance Supervisors office in building 7473.

The existing Metasys M5 Operator Work Station (OWS) shall communicate to the direct digital control system specified for this project and the Metasys energy management systems installed at Crittenberger school, P.A.P.A.C Building, Fort Knox High School Media Center, Kingsolver Elementary School Media Center, Mudge Elementary School Media Center, Pierce Elementary School Media Center, Van Voorhis Elementary School Media Center and Walker Intermediate School Media Center utilizing the Fort Knox Ethernet TCP/IP local area network. All new and existing network nodes (OWS and Network Control Units) shall provide real-time on-line interface for complete access to the system. All new and existing hardware points, software points, DDC controllers, Network Controllers, Workstations and software system objects shall be monitored, controllable and accessible as described in this section from the existing Metasys Operator Workstation. Providing separate computer workstations, Internet IP protocol access, gateways, software drivers, windowing between different or loading separate energy management system software on the existing Operator Workstation for interface to the new and existing facility management system is not acceptable.

The existing Metasys M5 OWS operating software shall be updated to the latest revision available upon owner acceptance.

The control system specified shall support an open integrating architecture which supports multiple communication transmission topographies including Archnet, Ethernet and Lonworks/Echelon.

The control system shall interface to over 144 different manufacturers digital controllers by utilizing integrator panels, Optomux 22 communication protocol or Windows DDE (Dynamic Data Exchange) protocol.

The control system specified for this project shall provide a continuous point history routine. The Point History routine shall continuously and automatically sample the value of all analog inputs at half hour intervals.

Samples for all points shall be stored for the past 24 hours to allow the user to immediately analyze equipment performance and all problem-related events for the past day. Point History Files for binary input or output points and analog output points shall include a continuous record of the last ten status changes or commands for each point.

Controls manufacturer shall provide all equipment, engineering and factory trained technical specialist time to check the installation required for a complete and functioning system. The Controls manufacturer shall furnish and install all interconnecting system components. Components to include, but not be limited to: hard drive, power line conditioners, field panels, sensors, motor starter interfaces, and any other hardware items not mentioned above.

Any feature or item necessary for complete operation, trouble-shooting, and maintenance of the system in accordance with the requirements of this specification shall be incorporated, even though that feature or item may not be specifically described herein. This shall include hardware and software.

All materials and equipment used shall be by the same manufacturer and standard components, regularly manufactured for this and/or other systems and not custom designed especially for this project. All systems and components shall be thoroughly tested and proven in actual use.

The energy management system, including application software, shall be of a fully modular architecture permitting expansion. System shall accommodate additional operator peripherals and field hardware.

The system as installed shall have sufficient computer memory and application software for 5000 point capacity of the same type and combination as the points listed in the Input/Output Summary.

All graphics employed by the DDC system shall match and be compatible with that currently being utilized at FKCS.

1.2 SUBMITTALS

1.2.1 Shop Drawings, Product Data, and Samples

Each submittal shall have a cover sheet with the following information provided: submittal ID number; date; project name, address, and title; FMS Contractor name, address and phone number; FMS Contractor project manager, quality control manager, and project engineer names and phone numbers.

Each submittal shall include the following information.

- a. FMS riser diagram showing all DDC controllers, operator workstations, network repeaters, and network wiring.
- b. One-line schematics and system flow diagrams showing the location of all control devices.
- c. Points list for each DDC controller, including: Tag, Point Type, System Name, Object Name, Expanded ID, Display Units, Controller Type, Address, Cable Destination, Module Type, Terminal ID, Panel, Slot Number, Reference Drawing, and Cable Number.
- d. Vendor's own written description for each sequence of operations, to include the following:
 1. Sequences shall reference input/output and software parameters by name and description.
 2. The sequences of operations provided in the submittal by the FMS Contractor shall represent the detailed analysis needed to create actual programming code from the design documents.
 3. Points shall be referenced by name, including all software points such as programmable setpoints, range limits, time delays, and so forth.
 4. The sequence of operations shall cover normal operation and operation under the various alarm conditions applicable to that system.
- e. Detailed Bill of Material list for each panel, identifying: quantity, part number, description, and associated options.
- f. Control Damper Schedules. This spreadsheet type schedule shall include a separate line for each damper and a column for each of the damper attributes, including: Code Number, Fail Position, Damper Type, Damper Operator, Blade Type, Bearing Type, Seals,

Duct Size, Damper Size, Mounting, and Actuator Type.

- g. Control Valve Schedules. This spreadsheet type schedule shall include a separate line for each valve and a column for each of the valve attributes, including: Code Number, Configuration, Fail Position, Pipe Size, Valve Size, Body Configuration, Close off Pressure, Capacity, Valve CV, Calc CV, Design Pressure, Actual Pressure, and Actuator Type.
- h. Cataloged cut sheets of all equipment used. This includes, but is not limited to, the following: DDC panels, peripherals, sensors, actuators, dampers, control air system components, and so forth.
- i. Range and scale information for all transmitters and sensors. This sheet shall clearly indicate one device and any applicable options. Where more than one device to be used is on a single sheet, submit two sheets, individually marked.
- j. Hardware data sheets for all operator workstations, local access panels, and portable operator terminals.
- k. Software manuals for all applications programs to be provided as a part of the operator workstations, portable operator terminals, programming devices, and so forth for evaluation for compliance with the performance requirements of this Specification.

1. At project completion, the Building Management System (BMS) vendor shall submit electronic drawings on CD to the building owner. Coordinate CAD requirements with FKCS.

FMS Contractor shall not order material or begin fabrication or field installation until receiving authorization to proceed in the form of an approved submittal. FMS Contractor shall be solely responsible for the removal and replacement of any item not approved by submittal at no cost to the Owner.

1.3 COORDINATION

Examine all sections for work related to work of this section, principal items of which are:

Mechanical - Division 15

Electrical = Division 16

The Contractor shall install automatic valves and separable wells that are specified to be supplied by the temperature control contractor.

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***1.4 CONTRACTOR'S QUALIFICATIONS AND BASIC REQUIREMENTS**

The Energy Management System (EMS) herein specified shall be fully integrated and installed as a complete package by the Energy Management System Contractor. The System shall include all wiring, piping, installation supervision, calibration, adjustments, and checkout necessary for a complete and fully operational system.. Work shall be installed under the supervision of a project manager with a minimum of 10 years experience. **Installers of a manufacturer's controls shall be certified and approved by the manufacturer. Present certification in writing prior to contract**

execution. All Johnson Controls products, warranty and services, shall be provided by the Building Energy Management System (BEMS) contractor. The BEMS contractor shall be licensed factory branch office of the controls manufacturer. All direct digital controllers, sensors, actuators, transducers etc. shall match the existing Johnson Controls products.

1.4.1 Qualified Contractors

The apparent low building energy management system contractor shall demonstrate to the total satisfaction of the end user and design engineer their ability to meet the full intent of the plans, specifications and points lists prior to contract signature with the mechanical contractor. If the end user or design engineer is not completely satisfied with the proposed system and services defined by this section, then the mechanical contractor shall pay all costs associated with using a listed building energy management system contractor which can demonstrate to the complete satisfaction of the end user and design engineer their ability to meet the full intent of the plans, specifications and points lists.

1.5 INSTRUCTION AND ADJUSTMENT

Upon completion of the project, the Control Contractor shall adjust and validate all sensors, controllers, valves, damper operators, relays, etc. provided under this section.

Instruction manuals shall be furnished covering the function and operation of the control system on the project for use by Fort Knox Community Schools operating personnel.

- a. Electronics Technicians: An on-site instruction period lasting four (4) hours shall be provided to completely familiarize personnel with the digital controllers, network layout, electronic sensors and end devices.
- b. EMS Operators: An on-site instruction period lasting four (4) hours shall be provided to completely familiarize operating personnel with the sequence of operations, digital controller software configurations, Object oriented database, Network Controller software configurations, system graphics and EMS network map.

1.6 WARRANTY

1.6.1 FMS Material

The Control System shall be free from defects in material and workmanship under normal use and service. If within thirty-six (36) months from the date of manufacture any of the FMS equipment herein described is defective in operation, workmanship or materials, it will be replaced, repaired or adjusted at the option of the FMS Contractor free of charge.

1.6.2 FMS Installation

The Control System shall be free from defects in installation workmanship for a period of one year from acceptance. The FMS Contractor shall, free of charge, correct any defects in workmanship within one week of notification in writing by the Owner.

PART 2 EXECUTION

2.1 INSTALLATION

General. Install systems and materials in accordance with manufacturer's printed instructions and roughing-in Drawings, and details on Drawings. Install electrical components and use electrical products complying with requirements of applicable Division 16 Sections of these Specifications. Mount controllers at convenient locations and heights.

Number-code or color-code pneumatic tubing, except local individual room control tubing, for future identification and servicing of control systems.

Install in accordance with National Electric Code. Electric wiring, conduits and wiring connections required for the installation of the EMS control system, as herein specified, shall be provided by the control contractor. All wiring and installation shall comply with the requirements Division 16000 and the local and national electrical codes. ALL control wiring regardless of voltage installed exposed or in mechanical spaces shall be installed in 3/4" EMT conduit, run perpendicular and parallel to building lines and fastened at regular intervals. Control wiring less than 25VAC installed in concealed assessable locations shall be plenum rated, run perpendicular and parallel to building lines and fastened at regular intervals.

Electrical power wiring for all controls, signal devices, alarms, etc., shall be in accordance with diagrams and instructions from the supplier of the systems. All power wiring, conduit and wiring connections required for the complete installation shall be part of the work by the Contractor under this Division. All work shall be installed in accordance with Division 16 specification requirements.

Lighting arresters shall be installed on network cable that is routed under canopy or anywhere outside the building. Install arresters on both ends of the exterior conduit.

PART 3 SEQUENCE OF OPERATION AND POINTS LIST

3.1 SEQUENCE OF OPERATION

Refer to Control Diagram on the drawings.

3.1.1 Scheduling

The system software shall provide start/stop capability for each split system dual fuel heat pump system and each heat recovery unit. Provide schedules of operation as described in the hardware capability section.

3.1.2 Temperature Control

- a. Provide and install a Johnson Metastat (Model HE-67xx combination temperature and humidity sensor) in each space served by the split system dual fuel heat pump units. The output from this device shall include room temperature sensed, room humidity sensed, desired setpoint, and tenant override of unit schedule by the use of an override button. System software shall have the ability to grant varying degrees of authority to the setpoint adjustment, based on programming at the main control workstation.

- b. On a rise in space temperature above the setpoint, enable the reversing valve for cooling sequence and start the unit fan and the unit compressor. Coordinate the cooling signal with the control terminal block provided by the unit manufacturer.
- c. On a fall in space temperature below setpoint, enable the system reversing valve for heating sequence and start the fan and compressor if the outdoor temperature is above 35 deg. F (adjustable). For outside air temperatures below 35 deg. F, the control shall start the fan and the gas fired furnace. There shall be an adjustable dead-band for heating to cooling changeover.
- d. Coordinate anti-cycle requirements with the unit manufacturer and program into software any required delays to maintain the manufacturer's standard warranty.

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- *e. **Note that the humidistats shall transmit RH% to the Johnson Metasys front end. If the space relative humidity rises to above 65%, stop the corresponding ERU.**

3.1.3 Ventilation Control

- a. For all units, provide a wall mounted CO2 sensor/transmitter (Johnson Controls CD-Wxx-00-0). The sensor shall provide analog input to the Metasys system of sensed ppm of carbon dioxide.
- b. On a rise in CO2 level in the classroom above 1000 ppm (adjustable), start the split system dual fuel heat pump fan and run the fan until the CO2 level falls below 800 ppm (adjustable)

3.1.4 Power Monitoring

Provide Veris Hawkeye 8026-NC or equal, Power Monitors in each of three PTR buildings. The units furnished shall be fully N2 compatible with pre-programmed point map. The unit shall provide digital communication interface with MS Windows Text Display of exactly 23 points, including KWH Consumption, KW demand, Power Factor, Voltage Line to Line, and amperage of each leg.

Point Type	Units	Description
AI	kWH	Consumption
AI	kW	Demand
AI	kVAR	Reactive Power
AI	kVA	VA (apparent power)
AI	- - -	Power Factor, Total
AI	kW	Average Demand
AI	kW	Minimum Demand
AI	kW	Maximum Demand
AI	Volts	Voltage, Line to Line
AI	Volts	Voltage, Line to Neutral
AI	Amps	Current
AI	kW	Demand, Phase A
AI	kW	Demand, Phase B
AI	kW	Demand, Phase C
AI	- - -	Power Factor, Phase A

Point Type	Units	Description
AI	- - -	Power Factor, Phase B
AI	- - -	Power Factor, Phase C
AI	Volts	Voltage, Phase A-B
AI	Volts	Voltage, Phase B-C
AI	Volts	Voltage, Phase A-C
AI	Volts	Voltage, Phase A-N
AI	Volts	Voltage, Phase B-N
AI	Volts	Voltage, Phase C-N
AI	Amps	Current, Phase A
AI	Amps	Current, Phase B
AI	Amps	Current, Phase C
ADI	- - -	Preset KWH, LSW
ADI	- - -	Preset kWH, MSW
BO	- - -	Reset kWH
BO	- - -	Reset Min/Max/Avg.

3.1.5 System Point Charts

Refer to the drawings for points required at the BAS system.

3.1.6 Requirement for Coordination

The Building Management System representative shall fully coordinate all required connections required connections to the Split System Dual Fuel Heat Pump units in consultation with the Unit Manufacturer. Connections and controls shall supplement the manufacturer's standard controls such that all safety sequences and devices are enabled and the manufacturer's standard warranty will be honored.

-- End of Section --