

CLEAN FILL ENVIRONMENTAL DUE DILIGENCE [EDD] PHASE 2

DATE: _____

SR/SEC: _____

ECMS PROJECT #: _____

COUNTY: _____

SEGMENT: _____

ACTIVITY: _____

LOCATION: _____

A Phase 1 EDD was conducted for the above project and has identified evidence of a potential spill or release of regulated substances to the material. A Phase 2 EDD was performed.

Finding: Check all that apply:

- 1. Based on the results of the EDD Phase 2: Step 1 investigation, it has been determined that no spill or release has occurred.
- 2. Based on the results of the EDD Phase 2: Step 1 investigation there is documented evidence that a spill or release has occurred. **MUST COMPLETE ITEM 3**
- 3. The materials were Collected and sampled, in accordance with Appendix A of the PADEP Management of Fill Guidance, and
 - All regulated substances analyzed were reported as non-detectable. Form FP-001 must be completed along with the laboratory data, and provided to the property owner of the fill receiving site. Attach documentation.
 - The concentration of regulated substances detected were below the levels indicated in Table FP-1a/1b. Form FP-001 must be completed along with the laboratory data, and provided to the property owner of the fill receiving site. Attach documentation.
 - The concentration of regulated substances detected exceeds the levels in Table FP-1a/1b, but are below the levels indicated in Table GP-1a/1b. **The material is Regulated Fill** and must be approval by the PENNDOT Project Manager for use. If approved, PADEP General Permit WMGR096 must be obtained .
 - The concentration of regulated substances detected exceeds the levels in Table GP-1a/1b. **The materials are a waste.** Manage in accordance with applicable PA Solid Waste Management Act waste regulations. Attach documentation.

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

ORGANIZATION: _____

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

NOTE: PERSONS INVOLVED IN PERFORMING EDD ACTIVITIES DO NOT NEED TO COMPLETE ALL STEPS OF THIS PROCESS. ONLY THOSE REQUIRED FOR PROPERLY CHARACTERIZING MATERIALS TO DETERMINE THEY ARE CLEAN FILL.

EDD Phase 2: STEP 1

- o **Property ownership and use histories (deed reviews) for evidence of potential releases of wastes or chemicals from operations along the PennDOT ROW:**

Land and Property Use and Ownership Types Found (Check All That Apply):

- *Public* []
- *Private* []
- *Agricultural* []
- *Industrial* []
- *Commercial* []
- *Residential* []
- *Unused* []
- *Other* []

(Specify) _____

- o **Searching environmental databases to determine the existence of potential impacts from any types of waste sites or related activities that exist or may have existed within the vicinity of the PennDOT ROW: (See Appendix 1)**

Databases Searched (Check All That Apply):

- *PennDOT* []
- *PA DEP* []
- *US EPA* []
- *Other* []

(Specify) _____

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

- o **Conducting Interviews with All Relevant Parties to determine whether there had been any incidents that involved the release of substances directly to the PennDOT ROW:**

Interviews Conducted (Check All That Apply):

- *Former Property Owners* []
- *Current Property Owners* []
- *Former Land Owners* []
- *Current Land Owners* []
- *Fire Departments* []
- *Hazardous Materials Teams* []
- *Regulatory Agencies* []

(Specify) _____

- o **Examination of aerial photographs in order to determine all land uses within the vicinity of the ROW:**

- Aerial Photographs Evaluated Yes [] No []; if "Yes": refer to Appendix 1 for a Pennsylvania Department of Conservation and Natural Resources (PA DCNR) web site address for locating aerial photographs.

- o **Examination of Sanborne or other fire insurance maps (there is an additional cost for obtaining these), in order to determine the existence of businesses that may have had any prior releases of regulated substances to the PennDOT ROW:**

- *Sanborne Fire Insurance Maps Examined* []; refer to Appendix 1 for web site address and telephone number for obtaining these maps;
- *Alternate Fire Insurance Maps Examined* []

(Specify) _____

EDD Phase 2 STEP 2:

- o **Sampling and Analysis of PennDOT ROW Materials. If there is documented evidence of a spill or release, materials must be tested to determine if they are clean fill, regulated fill, or to characterize for proper waste disposal.**
- o **Sampling and analysis should be conducted in accordance with Appendix A of the PA DEP Management of Fill Guidance: 258-2182-773 April 24, 2004.**

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES

Pennsylvania Department of Environmental Protection (PA DEP) -Related Sites

- **Pennsylvania Municipal and Residual Waste Facilities** (web link: www.dep.state.pa.us/dep/deputate/airwaste/wm/mrw/Docs/Landfill_lst.htm); (this website contains descriptions of all Pennsylvania landfills and incinerators (site name, permit number, host county, municipality, and contact person), all arranged by PA DEP region; for more information, click on either the facility name link (this leads to the PA DEP Environmental Facility Application and Compliance Tracking System (E-Facts) information about any specific facility) or contact person (e-mail) link).
- **Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) Sites** (web link: www.pasitefinder.state.pa.us/Site_listing.asp); this website contains information on all Act 2 sites that have been completed to date and updates that are made to the website when needed; click on the "more details" box associated with each site listed to obtain an interactive "E-Map" location/link for any site selected along with pertinent site information).
- **Pennsylvania Hazardous Sites Cleanup Act (HSCA) Sites** (web link: www.dep.state.pa.us/dep/deputate/airwaste/wm/hscp/docs/HSCA_Site_List.pdf); this website brings up a list of Pennsylvania HSCA sites that are arranged by PA DEP Region and shows municipality, county, number and dates for HSCA responses (interim and remedial levels), in addition to the site status (complete, listed on Pennsylvania Priority List, or de-listed).
- **Pennsylvania Storage Tank Release and Active Storage Tank Sites** (web link for storage tank releases: www.dep.state.pa.us/dep/deputate/airwaste/wm/Tanks/Document/tank_release.htm); this website contains a listing of all known storage tank incidents, and is arranged by PA DEP region (with each regional incident alphabetized by county); other details included are facility I. D. #, site name, address, city, county, incident description, confirmation date, type of incident (underground storage tank release (petroleum or hazardous material), or above-ground storage tank release; click on the "Tank Incidents" PDF or Adobe Acrobat Files to see the entire list of storage tank releases to date); web link for active storage tanks: www.dep.state.pa.us/dep/deputate/airwaste/wm/tanks/storagetanks/tank_listings.htm; click on the PA DEP Regional links to obtain Excel spreadsheet lists of storage tanks; information similar to what can be found on the storage tank release sites (except releases) can be found on the active storage tanks list).

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES

United States Environmental Protection Agency (US EPA)-Related Sites

- *Pennsylvania Comprehensive Environmental Response and Liability Act (CERCLA/Superfund) Sites* (web link: www.epa.gov/reg3hwmd/super/PA/index.htm); this website contains information on all Pennsylvania Superfund sites, including name, address, city, county, zip code, US EPA I. D. number, and National Priority List (NPL) status; click on the site name to learn more about any Superfund site).
- *Pennsylvania Resource Conservation and Recovery Act (RCRA) Facilities* (web link: www.epa.gov/reg3wcmd/ca/pa.htm); this website contains information for all Pennsylvania RCRA sites, including facility name (click on this for more details), US EPA I. D. number, location (click on this link to get a map showing the site in relation to nearby roadways), environmental indicators (human exposure, groundwater – click on either of these to get the documentation sheets for either or both), and clean up status (initiated, remedy selected, complete with or without controls, construction completed)).
- *Toxic Release Inventories (TRI)* (web link: www.epa.gov/tri); this website is from the US EPA, and contains some background information about TRI is and how it is used; releases for specific areas can be found by entering a zip code on the title page; from here, the user can view the facilities that are part of the TRI for the zip code entered, and the extent of releases that have occurred over the years (starting with 1989, and continuing through 2001, the latest year for which TRI information is available); click on the name of any facility shown to obtain a detailed report about the releases and related activities associated with the facility (onsite, off-site, air emissions, water discharges, land disposal)).
- *Comprehensive Federal and State Site Environmental Database (Enviro-Facts)* (web link: www.epa.gov/enviro/index_java.html); this website contains information about virtually every type of environmental matter known, both in terms of facilities and the media affected by these facilities' collective activities; under the "topics" tab, click on the links related to "waste", "water", "air", "toxics", "land", "radiation", "maps", and "other", to determine the type of media information desired; under the "advanced capabilities" tab, click on the "queries", "maps", or "reports" links to locate more specific information; from here, the user will be led to a page where queries about any type of environmental site can be entered using a zip code, county or State abbreviation; click on the "find it" link to locate information about one or multiple environmental sites, or, to generate map locations for the any type of environmental site activity desired; the map is interactive, and the user can "zoom in" for closer details about the site; this database may include information on sites from the aforementioned Municipal and Residual Waste, Storage Tanks, RCRA, HSCA, CERCLA, Act 2, and TRI databases; sites with National Pollutant Discharge Elimination System (NPDES) and radiation-related permits also included in this database).

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

**APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR
ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES**

Sites for Aerial Photographs and Fire Insurance Maps

- **Aerial Photographs:** Aerial photographs may be accessed via the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) web site (web link: www.dcnr.state.pa.us/topogeo/gismaps/aerials.aspx.htm; click on the "Proceed to the new DCNR" link, then click on the "Aerial Photos" option; this will lead to a link for the U. S. Geological Survey's Aerial Photo Finder; information can be sought, and site location maps can be generated by selecting the "zip code", "populated place", or "map location" options).
- **Sanborne Fire Insurance Maps:** These maps may be obtained from EDR Sanborne, Inc., at 1-800-352-0050, or at www.edrnet.com; click on the "Sanborne Maps" link, and then click on the phrase "Download Sample" to view an example of this map type. **There is an additional cost for obtaining these maps.**

**ENVIRONMENTAL DUE DILIGENCE (EDD) PHASE I
VISUAL INSPECTION FORM**

DATE: 7/10/12SR/SEC: SR 0053, Section ENH COUNTY: Clearfield
Coalport Streetscape ProjectSEGMENT: 0030/1752 to 0040/0629

ECMS

Project#: 92521ACTIVITY: Installation of sidewalk, ADA ramps, and street lighting.LOCATION: Borough of Coalport**Visual Site Inspection (EDD-Phase 1):**

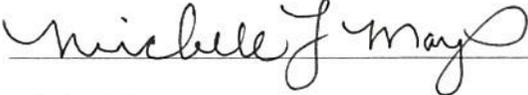
- | | | |
|---|------------------------------|--|
| ▪ <i>Stressed Vegetation</i> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| ▪ <i>Staining on Soils</i> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| ▪ <i>Staining Along PennDOT ROW
or on ROW Materials</i> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| ▪ <i>Detectable Odors</i> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

Comments:

Findings

Check one:

- Due diligence inspection performed and no visual evidence of a spill or release in project ROW was detected.
- Due diligence inspection performed and evidence of a spill or release in project ROW was detected. Phase 2 documents attached.
- Due diligence not applicable for this project. No waste or fill.

SIGNATURE: PRINTED NAME: Michelle L. MaysTITLE: Project ManagerORGANIZATION: PennDOT District 2-0***FORM MUST BE MAINTAINED FOR A MINIMUM 5 YEARS IN THE PROJECT FILE***

General Decision Number: PA120004 07/13/2012 PA4

Superseded General Decision Number: PA20100004

State: Pennsylvania

Construction Types: Heavy and Highway

Counties: Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Mifflin, Potter, Somerset, Venango, Warren, Washington and Westmoreland Counties in Pennsylvania.

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS (excluding sewer grouting projects and excluding sewage and water treatment plant projects)

Modification Number	Publication Date
0	01/06/2012
1	02/10/2012
2	02/24/2012
3	03/16/2012
4	04/13/2012
5	04/20/2012
6	05/04/2012
7	05/11/2012
8	06/01/2012
9	06/15/2012
10	07/13/2012

BOIL0013-005 01/01/2011

CENTRE, FRANKLIN, POTTER, CLINTON, FULTON, HUNTINDON AND MIFFLIN COUNTIES

	Rates	Fringes
BOILERMAKER.....	\$ 37.35	30.02

BOIL0154-004 06/01/2012

ALLEGHENY, ARMSTRONG, BEAVER, BEDFORD, BLAIR, BUTLER, CAMBRIA, CAMERON, CLARION, CLEARFIELD, CRAWFORD, ELK, FAYETTE, FOREST, GREENE, INDIANA, JEFFERSON, LAWRENCE, MCKEAN, MERCER, SOMERSET, VENANGO, WARREN, WASHINGTON AND WESTMORELAND COUNTIES

	Rates	Fringes
BOILERMAKER.....	\$ 36.17	24.99

BOIL0744-003 07/01/2008

ERIE COUNTY

	Rates	Fringes
BOILERMAKER.....	\$ 35.34	18.48

BRPA0009-023 06/02/2011

BEAVER COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 27.95	16.00

BRPA0009-024 06/01/2011

WASHINGTON (Cross Creek, Hanover, Jefferson, Mt Pleasant,
Nottingham, Peters, Robinson, Smith, Union Twps) COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 29.77	16.03

BRPA0009-025 06/01/2011

BUTLER, LAWRENCE, AND MERCER COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 27.95	15.88

BRPA0009-032 06/01/2011

FAYETTE (Jefferson & Washington Twps), GREENE (Except
Cumberland, Dunkirk, Greene, Monongahelia Twps), INDIANA, AND
WESTMORELAND (Rostraver Twp) COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 29.55	15.59

BRPA0009-033 06/01/2011

ARMSTRONG, CLARION (Brady, Madison, Perry, Tobe, Porter,
Redbank Twps), FAYETTE (Except Jefferson & Washington Twps),
GREENE (Cumberland, Dunkirk, Greene, Monongahelia Twps),
INDIANA, AND WESTMORELAND (Except Rostrave Twp) COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 29.45	15.69

BRPA0009-034 05/01/2011

ERIE COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 25.65	15.11

 CARP2235-005 01/01/2012

	Rates	Fringes
PILEDRIVERMAN		
Piledriverman (welder).....	\$ 31.15	13.60
Piledriverman.....	\$ 30.85	13.60

 CARP2235-006 01/01/2007

	Rates	Fringes
Diver.....	\$ 40.40	10.77
Tender.....	\$ 26.93	10.77

 CARP2274-001 01/01/2012

	Rates	Fringes
CARPENTER (ALLEGHENY, ARMSTRONG, BEAVER, BUTLER, ERIE, FAYETTE, GREENE, LAWRENCE, MERCER, WASHINGTON, AND WESTMORELAND COUNTIES)		
Carpenter (Welders).....	\$ 29.69	14.40
Carpenters.....	\$ 28.99	14.40
CARPENTER (BEDFORD, BLAIR, CAMBRIA, CAMERON, CENTRE, CLARION, CLINTON, CLEARFIELD, CRAWFORD, ELK, FOREST, FRANKLIN, FULTON, HUNTINGDON, INDIANA, JEFFERSON, MCKEAN, MIFFLIN, POTTER, SOMERSET, VENANGO, AND WARREN COUNTIES)		
Carpenters (Welders).....	\$ 29.45	14.40
Carpenters.....	\$ 28.74	14.40

 ELEC0005-006 12/23/2011

ALLEGHENY, ARMSTRONG, BEDFORD, BLAIR, BUTLER CAMBRIA, CAMERON,
CENTRE (Remainder), CLARION, CLEARFIELD, ELK, FAYETTE, FULTON,
GREENE, HUNTINGDON, INDIANA, JEFFERSON, MCKEAN, SOMERSET,
VENANGO, WASHINGTON, AND WESTMORELAND COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 35.76	20.75

 ELEC0056-004 06/01/2011

ERIE, FOREST AND WARREN COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.00	19.37

 ELEC0126-005 05/28/2012

ALLEGHENY, ARMSTRONG, BEAVER, BEDFORD, BLAIR, CAMBRIA, CENTRE,
CLARION, CLEARFIELD, FAYETTE, FULTON, GREENE, HUNTINGDON,
INDIANA, JEFFERSON, SOMERSET, WASHINGTON AND WESTMORELAND

	Rates	Fringes
Line Construction:		
Groundman.....	\$ 24.42	26%+7.50
Lineman.....	\$ 40.70	26%+7.50
Truck driver.....	\$ 26.45	26%+7.50
Winch truck operator.....	\$ 28.49	26%+7.50

ELEC0126-007 05/28/2012

FRANKLIN AND MIFFLIN COUNTIES

	Rates	Fringes
Line Construction:		
Groundman.....	\$ 22.98	26%+7.50
Lineman.....	\$ 38.30	26%+7.50
Truck driver.....	\$ 24.89	26%+7.50
Winch truck operator.....	\$ 26.81	26%+7.50

ELEC0143-007 06/01/2011

FRANKLIN and MIFFLIN COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.70	17.60

ELEC0712-003 12/27/2010

CRAWFORD, BEAVER, LAWRENCE AND MERCER COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.50	3%+18.68

ELEC0812-008 06/01/2011

CLINTON COUNTY

	Rates	Fringes
ELECTRICIAN.....	\$ 27.54	16.67

ELEC0812-009 06/01/2011

POTTER COUNTY

	Rates	Fringes
ELECTRICIAN.....	\$ 28.55	16.70

ELEC0812-011 06/01/2011

CENTRE COUNTY (Burnside, Curtin, Liberty, Howard, Marion,

Walker, Miles, Haines Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 27.54	16.67

 ELEC1319-004 09/05/2011

BUTLER, CAMERON, CLINTON, CRAWFORD, ELK, ERIE, FOREST,
 LAWRENCE, MCKEAN, MERCER, VENANGO, WARREN AND POTTER COUNTIES

	Rates	Fringes
Line Construction:		
Groundmen.....	\$ 28.46	10.13
Heavy Equipment Operator....	\$ 45.45	14.40
Linemen.....	\$ 45.91	18.45
Truck Drivers.....	\$ 29.84	10.24

 ENGI0066-016 01/01/2012

	Rates	Fringes
Power equipment operators: (ALLEGHENY, ARMSTRONG, BEAVER, BLAIR, BUTLER, CAMBRIA, CENTRE, CLARION, CLEARFIELD, CRAWFORD, ERIE, ELK, FAYETTE, GREENE, INDIANA, JEFFERSON, LAWRENCE, MCKEAN, MERCER, SOMERSET, VENANGO, WARREN, WASHINGTON, AND WESTMORELAND COUNTIES)		
GROUP 1.....	\$ 28.08	16.39
GROUP 2.....	\$ 27.82	16.39
GROUP 3.....	\$ 24.17	16.39
GROUP 4.....	\$ 23.71	16.39
GROUP 5.....	\$ 23.46	16.39

Power equipment operators: (BEDFORD, CAMERON, CLINTON, FOREST, FRANKLIN, FULTON, HUNTINGDON, MIFFLIN, AND POTTER COUNTIES)		
GROUP 1.....	\$ 27.79	16.39
GROUP 2.....	\$ 27.51	16.39
GROUP 3.....	\$ 23.87	16.39
GROUP 4.....	\$ 23.38	16.39
GROUP 5.....	\$ 23.17	16.39

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1 - Asphalt Paving Machine (Spreader), Autograde
 (C.M.I. and similar); Backfiller, Compactor with Blade,
 Backhoe - 360 and 180 degree Swing; Cableway; Caisson Drill
 (similar to Hugh Williams), Central Mix Plant; Cooling
 Plant; Concrete Paving Mixer, Concrete Pump (self-
 propelled); Cranes; Cranes (boom or mast over 101ft.\$50
 per each additional 50 feet inclusive of jib), Cranes

(Tower Stationary- Climbing Tower Crane); Derrick; Derrick Boat; Dozer(greater than 25,000 lbs.); Dragline; Dredge; Dredge Hydraulic; Elevating Grader; Franki Pile Machine; Gradall (remote control or otherwise), Grader (power-fine grade); Hllift (4 cy. and over); Hoist 2 Drums or more (in one unit); Hydraulic Boom Truck with pivotal cab (single motor-Pitman or similar), (Boom and Mast over 101 feet will be paid an additional 50 feet inclusive of jib if used;) Kocal; Mechanic, Locomotive (std. Gauge); Metro-chip Harvester or similar; Milling Machine (Roto Mill or similar); Mix Mobile; Mix Mobile (with Self Loading Attachment), Mucking Machine (tunnel); Pile Driver Machine; Pipe Extrusion Machine; Presplitter Drill (self contained); Refrigeration Plant (soil Stablization) Rough Terrain Crane (25 ton over) (Boom and Mast over 101 feet will be paid an additional 50 feet inclusive of jib if used); Rough Terrain Crane (under 25 ton), Scrapers; Shovel-Power; Slip form Paver (C.M.I. and similar); Trenching Machine (30,000 lbs. and over), Trenching Machine (under 30,000 lb.), Tunnell Machine (Mark XXI Jarva or similar), Vermeer Saw, Whirley, Mechanic, Compactor with blade

GROUP 2: Asphalt plant operator; auger (tractor mtd.); auger (truck mtd.); belt loader (euclid or similar); boring machine; cable placer or layer; Directional drill over 3,000 lbs thrust; concrete batch plant (electronically synchronized); concrete belt placer (C.M.I. and similar); concrete finishing machine and spreader, concrete mixer (over 1 cy.) concrete pump (stationary); core drill (truck or skid mtd. - similar to penn drill), dozer (25,000 lbs or less); Ditch Witch Saw, force feedloader; fork lift (lull or similar); grader - power; grease unit opertor (head); guard rail post driver (truck mounted) guard rail post driver (skid type); hilift (under 4 cy.); skid steer loader; hydraulic boom truck (non-pivotal cab); job work boat (powered), jumbo operator; locomotive (narrow guage); minor equipment operator (accumulative four units); mucking machine; multi-head saw (groover); overhead crane; roller -power- asphalt; ross carrier; side boom or tractor mounted boom; shuttle buggy (asphalt), stone crusher (screening-washing plants); stone spreader (self propelled) truck mounted drill (davey or similar); welder and repairman; well point pump operator; bidwell concrete finishing machine (or similar).

GROUP 3: Broom Finisher (C.M.I. or similar); Compactors/Rollers (static or vibratory (Self-propelled) on dirt or stone; Curb Builder; Minor Equipment Opertor (two or three units); Multi-head Tie Tamper; Pavement Breaker (self-propelled or ridden); Soil Stablizer Machine; Tire Repairman; Tractor (snaking and hauling); Well Driller and Horizontal: Winch or "A" Frame Truck (when hoisting and lowering).

GROUP 4: Ballast Regulator; Compressor; Concrete Mixer (1 cy. & under with skip); Concrete Saw (Ridden or selp-propelled); Conveyor; Elevator (Material hauling only); Fork-lift (Ridden or self-propelled); Form Line Machine; Generator; Groute Pump; Heater (Machinical); Hoist (single Drum); Ladavator, Light Plant; Mulching Machine;

Personnel Boat (Powered), Pulverizer, Pumps, Seeding Machine, spray Cure Machine (powered Driven); Subgrader; Tie Puller; Tugger; Welding Machine (Gas or Diesel).

GROUP 5: Deck Hand; Farm Tractor; Fireman on Boiler; Oiler; Power Broom; Side Delivery Shoulder Spreader (attachment);

* IRON0003-001 06/01/2012

ALLEGHENY, FAYETTE, WESTMORELAND, CAMBRIA, INDIANA, ARMSTRONG, BUTLER, BEAVER, CLARION, AND WASHINGTON COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 31.41	24.45

* IRON0003-007 06/01/2012

BLAIR, CAMERON, CENTRE, CLEARFIELD, CLINTON, ELK, JEFFERSON, MCKEAN, AND POTTER COUNTIES

	Rates	Fringes
Ironworkers:.....	\$ 26.28	22.99
Pre-Engineered Metal		
Building.....	\$ 26.28	22.99
Structural, Reinforcing & Ornamental		

* IRON0003-009 06/01/2012

BLAIR, CAMERON, CENTRE, CLEARFIELD, CLINTON, ELK, JEFFERSON, MCKEAN AND POTTER COUNTIES

	Rates	Fringes
Ironworkers:.....	\$ 26.28	22.99

* IRON0003-011 06/01/2012

CRAWFORD, ERIE, FOREST, AND WARREN COUNTIES

	Rates	Fringes
Ironworkers:.....	\$ 27.02	23.14
Pre-Engineered Metal		
Building.....	\$ 27.02	23.14
Structural, Reinforcing & Ornamental		

IRON0207-002 06/01/2011

LAWRENCE, MERCER, AND VENANGO COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 27.06	18.96

IRON0404-008 07/01/2011

FRANKLIN (Remainder), HUNTINGDON (Remainder), AND MIFFLIN
COUNTIES

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 29.02	24.05

IRON0549-002 12/01/2011

GREENE COUNTY

	Rates	Fringes
IRONWORKER.....	\$ 29.35	16.04

IRON0568-004 05/01/2011BEDFORD, FRANKLIN (Southwest 1/3), FULTON, HUNTINGDON (Western
2/3), AND SOMERSET COUNTIES

	Rates	Fringes
Ironworkers:		
Sheeter, Bucker-Up.....	\$ 26.73	14.70
Structural, Ornamental, Reinforcing, Machinery Mover, Rigger & Machinery Erector, Welder, Fence Erector.....	\$ 26.48	14.70

LABO1058-001 01/01/2012

	Rates	Fringes
LABORER (BEDFORD, CAMERON, CENTRE, CLINTON, CRAWFORD, FOREST, FRANKLIN, FULTON, HUNTINGDON, JEFFERSON, MIFFLIN, AND POTTER COUNTIES)		
GROUP 1.....	\$ 23.97	15.58
GROUP 2.....	\$ 24.13	15.58
GROUP 3.....	\$ 24.62	15.58
GROUP 4.....	\$ 25.07	15.58
GROUP 5.....	\$ 25.48	15.58
GROUP 6.....	\$ 22.32	15.58
GROUP 7.....	\$ 24.97	15.58
GROUP 8.....	\$ 26.47	15.58

Laborers: (ALLEGHENY,
ARMSTRONG, BEAVER, BLAIR,
BUTLER, CAMBRIA, CLARION,
CLEARFIELD, ELK, ERIE,
FAYETTE, GREENE, INDIANA,
LAWRENCE, MCKEAN, MERCER,
SOMERSET, VENANGO, WARREN,
WASHINGTON, AND WESTMORELAND
COUNTIES)

GROUP 1.....	\$ 24.07	15.58
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GROUP 2.....	\$ 24.23	15.58
GROUP 3.....	\$ 24.62	15.58
GROUP 4.....	\$ 25.07	15.58
GROUP 5.....	\$ 25.48	15.58
GROUP 6.....	\$ 22.32	15.58
GROUP 7.....	\$ 25.07	15.58
GROUP 8.....	\$ 26.57	15.58

LABORERS CLASSIFICATIONS

GROUP 1: Asphalt curb sealer; Asphalt tamper; Batcherman (weigh) Blaster, Boatman, Brakeman, Change house attendant, Cofferdam, Concrete curing pitman, Puddler, Drill Runner's helper (Includes Drill Mounted on Truck, Track, or similar and Davey Drill Spots, Clean up, helps to maintain), Electric Brush and or Grinder, Fence Construction (Including Fence Machine Operator) Form stripper and Mover, Gabion (Erectors and Placers) Hydro jet blaster nozzleman; Landscape laborer, Manually moved emulsion sprayer, Radio actuated traffic control operator Rip rap work, scaffolds and Runways, Sheeters and Shorers (includes lagging) structural concrete Top Surfacers, Walk Behind Street Sweeper, and Wood Chipper; water boy

GROUP 2: Air tool operator (all types); Asphalt, batch & concrete plant operator (manually operated) Burner, Caisson; men (open air); Carryable pumps; Chain saw operator including attachments, Cribbing, (concrete or steel); Curb machine operator (asphalt or concrete walk behind); Diamond head Core Driller, Drill runner's helper (tunnel) Fork Lift, (walk behind), Form Setter (Road Forms Line man) Highway Slab reinforcement placers (including joint and Basket Setters) Hydraulic pipe pusher; Liner plates (Tile or Vitrified Clay) Mechanical compacting equipment operators, Mechanical joint sealer, Dope pot and Tar Kettle, Mortar mixer (hand or machine) Muckers, Brakemen & all other Labor, (Includes installation of utility lines) Pipe Layers /Fusion /Heating Iron (Regardless of materials) Portable Single Unit Conveyor, Post Hole Auger, (2 or 4 cycle hand operated) Power wheelbarrows and buggies, Rail porter or similar; Sand blaster; Signal Man, Vibrator operator, All RAILROAD TRACK WORK TO INCLUDE THE FOLLOWING: adzing machine, ballast Router, Bolting Machine, Power Jacks, Rail Drills, Railroad Brakeman, Rail Saws, Spike Drivers (Manually or hand held tool) Spike Pullers Tamping Machine, Thermitweld

GROUP 3: Asphalt Luteman/Raker, Blacksmith, Blaster, Brick, stone and block pavers and block cutters (wood, belgian and asphalt); Cement mortar lining car pusher; Cement mortar mixer (pipe relining); Cement mortar pipe reliners; concrete saw operator (walk behind); Curb cutters and setters; Elevated roadway drainage construction; erector of overhead signs, Form setter (road forms-lead man); Grout machine operator; Gunite or dry pack gun (nozzle and machine man); Manhole or catch basin builder (Brick block concrete or any prefabrication) Miners and drillers (including lining, supporting and form workmen, setting of shields, miscellaneous equipment and jumbos); Multi-plate pipe (aligning and securing); Placing wire mesh on gunite

projects; Wagon drill operators (air track or similar);
Walk behind ditching machine (trencher or similar); crown
screed adjuster and welder

GROUP 4: Reinforcing Steel Placer (Bending, aligning, and
securing, Cadweld)

GROUP 5: High Burner, (Any burning not done from deck), Welder
(Pipeline)

GROUP 6: Uniformed Flagperson, Watchman

GROUP 7: Toxic/Hazardous Waste Removal Laborer Levels C & D

GROUP 8: Toxic/Hazardous Waste Removal Laborer Levels A & B

PAIN0021-019 05/01/2010

CLINTON COUNTY

	Rates	Fringes
Painters:		
Bridge.....	\$ 29.60	13.00
Brush & Roller.....	\$ 23.30	13.00
Spray.....	\$ 24.30	13.00

PAIN0021-024 05/01/2010

FRANKLIN COUNTY

	Rates	Fringes
PAINTER		
Brush.....	\$ 22.57	9.60

* PAIN0057-014 06/01/2012

ALLEGHENY, FAYETTE, GREEN, WASHINGTON COUNTIES

	Rates	Fringes
Painters:		
Bridge.....	\$ 31.70	14.35
Brush & Roller.....	\$ 26.25	14.35
Spray.....	\$ 26.25	14.35

* PAIN0057-015 06/01/2012

ARMSTRONG, BEAVER, BEDFORD, BLAIR, BUTLER, CAMBRIA, CENTRE,
CLARION, CLEARFIELD, ELK, FULTON, HUNTINGTON, INDIANA,
JEFFERSON, LAWRENCE, MERCER, MIFFLIN, SOMERSET, VENANGO AND
WESTMORELAND COUNTIES

	Rates	Fringes
Painters:		
Bridge.....	\$ 31.70	14.35
Brush and Roller.....	\$ 26.25	14.35

Spray.....\$ 26.25 14.35

PAIN0057-022 05/01/2012

Rates Fringes

Painters: (ERIE, MCKEAN, AND
WARREN (Including Columbus
and Freehold twps) COUNTIES)

Bridges, Stacks, Towers.....\$ 22.79 14.24
Brush and Roller.....\$ 20.79 14.24
Spray and Sandblasting.....\$ 21.54 14.24

PAIN0057-027 06/01/2011

CAMERON, CRAWFORD, POTTER, WARREN, (Excluding Columbus and
Freehold twps)

Rates Fringes

PAINTER

Brush and Roller.....\$ 25.72 14.09

PLAS0526-002 06/07/2012

Rates Fringes

CEMENT MASON/CONCRETE FINISHER

Beaver, Cameron, Clarion,
Crawford, Elk, Forest,
Lawrence, McKean, Potter,
Venango and Warren
Counties.....\$ 28.22 15.17
Bedford, Blair, Cambria,
Centre, Clinton,
Huntingdon, Mifflin and
Somerset Counties.....\$ 28.22 15.17
All Other Counties.....\$ 28.22 15.17

PLUM0027-001 06/01/2011

ALLEGHENY, ARMSTRONG, GREENE (Except extreme Eastern portion),
WASHINGTON (Except extreme Eastern portion) and WESTMORELAND
(City of Arnold and City of New Kensington Only) COUNTIES

Rates Fringes

Plumbers and Pipefitters

(Bridge Drain Pipe).....\$ 35.85 17.57

PLUM0047-005 05/01/2011

BEAVER, BUTLER, MCKEAN, MERCER, VENANGO, CLARION, LAWRENCE,
FOREST, WARREN, CRAWFORD, AND ERIE COUNTIES

Rates Fringes

Plumbers and Pipefitters
 (Bridge Drain Pipe).....\$ 36.57 18.51

 PLUM0354-005 06/01/2011

BEDFORD, BLAIR, CAMBRIA, CAMERON, CLEARFIELD, ELK, FAYETTE,
 GREENE (Extreme Eastern portion), HUNTINGDON, INDIANA,
 JEFFERSON, SOMERSE, WASHINGTON (Extreme Eastern portion), AND
 WESTMORELAND COUNTIES

Rates Fringes

Plumbers and Pipefitters
 (Bridge Drain Pipe).....\$ 35.33 19.18

 * TEAM0040-001 01/01/2012

Rates Fringes

TRUCK DRIVER (ALLEGHENY,
 ARMSTRONG, BEAVER, BLAIR,
 BUTLER, CAMBRIA, CENTRE,
 CLARFIELD, CRAWFORD, ERIE,
 FAYETTE, GREENE, INDIANA,
 JEFFERSON, LAWRENCE, MCKEAN,
 MERCER, SOMERSET, VENANGO,
 WARREN, WASHINGTON, AND
 WESTMORELAND)

GROUP 1.....	\$ 25.88	13.49
GROUP 2.....	\$ 26.02	13.57
GROUP 3.....	\$ 26.53	13.83

Truck drivers: (BEDFORD,
 CAMERON, CLAIRON, CLINTON,
 ELK, FOREST, FRANKLIN,
 FULTON, HUNTINGDON, MIFFLIN,
 AND POTTER COUNTIES)

GROUP 1.....	\$ 25.69	13.41
GROUP 2.....	\$ 25.87	13.50
GROUP 3.....	\$ 26.37	3.79

FOOTNOTES: A. Hazardous/toxic waste material/work level A
 & B receive additional \$2.50 per hour above classification
 rate

B. Hazardous/toxic waste materials/Work level C & D receive
 \$1.00 per hour above classification

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Single Axle (2 axles including steering axle);
 Includes partsman and warehoueman

GROUP 2 - Tandem - Tri-Axle - Semi-Tractor Trailer
 (combination) (3 axles or more including steering axle)

GROUP 3 - Specialty Vehicles; Heavy equipment whose capacity
 exceeds that for which state licenses are issued
 specifically refers to units in excess of eight (8) feet
 width (such as Euclids, Atley Wagon, Payloader,

Tournawagons, and similar equipment when not self loaded);
 Tar and Asphalt Distributors Trucks, Heavy Duty Trailer,
 such as Low Boy, High Boy

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

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

The body of each wage determination lists the classification
 and wage rates that have been found to be prevailing for the
 cited type(s) of construction in the area covered by the wage
 determination. The classifications are listed in alphabetical
 order of "identifiers" that indicate whether the particular
 rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with
 characters other than "SU" denotes that the union
 classification and rate have found to be prevailing for that
 classification. Example: PLUM0198-005 07/01/2011. The
 first four letters , PLUM, indicate the international union and
 the four-digit number, 0198, that follows indicates the local
 union number or district council number where applicable ,
 i.e., Plumbers Local 0198. The next number, 005 in the
 example, is an internal number used in processing the wage
 determination. The date, 07/01/2011, following these
 characters is the effective date of the most current
 negotiated rate/collective bargaining agreement which would be
 July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any
 changes in the collective bargaining agreements governing the
 rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived
 from survey data by computing average rates and are not union
 rates; however, the data used in computing these rates may
 include both union and non-union data. Example: SULA2004-007
 5/13/2010. SU indicates the rates are not union rates, LA
 indicates the State of Louisiana; 2004 is the year of the
 survey; and 007 is an internal number used in producing the
 wage determination. A 1993 or later date, 5/13/2010, indicates
 the classifications and rates under that identifier were issued
 as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See reverse for public burden disclosure.)

Approved by OMB

0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, <i>if known</i> : Congressional District, <i>if known</i> : 4c	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, <i>if known</i> :	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, <i>if applicable</i> : _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

ENVIRONMENTAL DUE DILIGENCE (EDD) PHASE 1
VISUAL INSPECTION FORM

DATE: _____

SR/SEC: _____

COUNTY: _____

SEGMENT: _____

ECMS
Project#: _____

ACTIVITY: _____

Location: _____

Visual Site Inspection (EDD-PHASE 1):

- Stressed Vegetation Yes [] No []
- Staining on Soils Yes [] No []
- Staining Along PennDOT ROW
or on ROW Materials Yes [] No []
- Detectable Odors Yes [] No []

Comments: Attached additional pages or information as necessary.

Findings

Check one:

- Due diligence inspection performed and no visual evidence of a spill or release in project ROW was detected.
- Due diligence inspection performed and evidence of a spill or release in project ROW was detected. Phase 2 documents attached.
- Due diligence not applicable for this project. No waste or fill.

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

ORGANIZATION: _____

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract,

which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer

shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the

contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at

<http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages.

Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary

to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed,

or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification

or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each

participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each

participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-- Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Steel Escalation Option

The undersigned hereby certifies that he/she is authorized to make a decision, on behalf of the Bidder, regarding application of the provisions of the Standard Special Provision entitled "Price Adjustment for Steel Cost Fluctuations" to the following project:

ECMS Project No. _____ S R. _____, Section _____ Letting Date _____

SSP SUBSECTION	CATEGORY NAME	OPTION-IN*	OPTION-OUT**
4.a	Guide Rail and Metal Median Barrier	<input type="checkbox"/>	<input type="checkbox"/>
4.b	Reinforcement Bars	<input type="checkbox"/>	<input type="checkbox"/>
4.c	Piles	<input type="checkbox"/>	<input type="checkbox"/>
4.d	Steel Sign Structure(s)	<input type="checkbox"/>	<input type="checkbox"/>
4.e	Fabricated Structural Steel	<input type="checkbox"/>	<input type="checkbox"/>
4.f	Precast Reinforced Concrete Box Culvert(s) / Prestressed Concrete Bridge Beam(s)	<input type="checkbox"/>	<input type="checkbox"/>

* Checking here **elects** the option to apply the provisions of the SSP entitled "Price Adjustment for Steel Cost Fluctuations" to the steel used in applicable materials placed as part of the work items in the indicated category.

** Checking here **declines** the option to apply the provisions of the SSP entitled "Price Adjustment for Steel Cost Fluctuations" to the steel used in applicable materials placed as part of the work items in the indicated category

CONTRACTOR NAME

X

SIGNATURE

PRINTED NAME

DATE

The apparent low bidder is required to submit this form via fax to (717) 705-1504 by 3 00 pm prevailing local time within 7 calendar days after the bid opening. When the seventh calendar day after the bid opening falls on a day PennDOT offices are closed, submit this form via fax by 3 00 pm prevailing local time on the next business day

If a properly completed form is not provided by the apparent low bidder within the time specified, the Department will consider the option to apply the price adjustment provisions to the project to be declined (i.e. Option-OUT will be selected for the project). If the form, when provided within the time specified, has been completed such that the Department is unable to ascertain the bidder's intention with regard to the inclusion of any one of the applicable steel product categories, the Department will consider the option to apply the price adjustment provisions to that product category to be declined (i.e. Option-OUT will be selected for the category) No further opportunity to elect steel escalation for the project or an individual steel product category will be made available to the bidder.

API-136

Agreement No.
Date



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
DIVISION OF PLANT PROTECTION

COMPLIANCE AGREEMENT AND RELEASE

Name and Mailing Address of Establishment:

Location (s):

Regulated Articles Handled:

Approved Mill Facility Inside Quarantined Area Handling Ash Chips and Mulch (Excluding Firewood)

Applicable State Quarantines:

Pennsylvania Emerald Ash Borer Quarantine

I / We agree: that in authorizing and participating in these procedures and/or treatments as a basis for the certification of regulated articles,

1. no liability shall be attached either to the Pennsylvania Department of Agriculture or to any of its employees in the event of injury to the property or the regulated articles;
2. to handle, process and move regulated articles in accordance with the provisions of applicable plant quarantines;
3. to use all permits and certificates in accordance with the stipulations;
4. to maintain and offer for inspection such records as may be required;
5. to carry out all additional conditions, treatments, precautions and sanitary measures which may be required by the inspector in the following stipulations.

The affixing of the signatures will validate this agreement which shall remain in effect until cancelled but may be revised as necessary or revoked for noncompliance.

DATE SIGNED _____

PERSON / FIRM _____

FOR THE DEPARTMENT:

SIGNATURE _____

SIGNATURE _____

TITLE _____

TITLE _____

COMPLIANCE AGREEMENT STIPULATIONS

This establishment will ship regulated ash chips and mulch intrastate from a quarantined area ONLY after **ONE** of the following treatments is completed at the establishment's expense: (Circle those that apply)

1. Produce mulch chips that comply with the Mulch Sample Protocol provided in Attachment A-1
2. Composting process as provided in Attachment A-1.

The manufacturing/treatment process must take place within the quarantined area. Regulated articles that have undergone an approved treatment may be shipped throughout the year.

This establishment will ensure that each shipment of treated regulated material moved intrastate is accompanied by a completed State issued Certificate and will maintain copies of the Certificates at their premises. This establishment will ensure that Certificates are safeguarded from misuse, unauthorized use, and loss. No certificates are to be duplicated without the approval of the Pennsylvania Department of Agriculture. All certificates must be accounted for, including voids.

The Pennsylvania Department of Agriculture retains the right to conduct inspections of regulated articles, monitor inspection procedures, and examine shipment, treatment, and certificate records at any time. All records must be maintained for at least 36 months. All document requests will be filled within 48 hours of the initial request. Inspector copies must be forwarded to the issuing office once per month.

If **Establishment (Fill In)** fails to comply with the provisions of this Compliance Agreement and/or the Emerald Ash Borer Quarantine regulations, this Compliance Agreement will be canceled. In addition, violations of state regulations, including any alteration, forgery or unauthorized use of state forms, are subject to criminal prosecution carrying up to 90 days imprisonment and a fine of up to \$300 with respect to each violation. In addition, a person who violates this Compliance Agreement may be assessed a civil penalty of up to \$20,000 with respect to each violation.

Attachment A-1

MULCH SAMPLING PROTOCOL

Size Requirements and Screening Procedure for Hardwood Mulch and Chips in the Emerald Ash Borer Quarantine Area February 23, 2007

The following procedure should be followed to determine if hardwood and bark chips, nuggets, and mulch materials can be considered safe for movement from the emerald ash borer quarantine area:

Step 1. Using a 12inch diameter 3.25 inch deep sieve with 1.25 inch steel mesh openings (Fisher Scientific #04-884-1J) take 10 samples from random locations in the chip or mulch pile - - do not take all samples from the same location. If any chips are found that are greater than 2.5 inches in two dimensions the pile is rejected. If there are no chips found greater than 2.5 inches in two dimensions then proceed to Step 2.

Step 2. If four or more chips from the 10 samples do not pass through the sieve proceed to Step 3. If three or fewer chips from the 10 samples do not pass through the sieve, then the pile passes and can be moved.

Step 3. Resample. Take 10 additional samples from random locations in the chip pile. If any chips are found that are greater than 2.5 inches in two dimensions the pile is rejected. If there are no chips found greater than 2.5 inches then proceed to Step 4.

Step 4. If four or more chips from the 10 samples do not pass through/put through the sieve the pile is rejected. If three or fewer chips fail to pass through the sieve then the pile passes and can be moved.

NOTE: Mulch chips that do not meet the specified requirements as outlined above may be reground to meet this specification or composted as outlined below.

COMPOSTING REQUIREMENTS FOR HARDWOOD MULCH AND CHIPS IN THE EMERALD ASH BORER QUARANTINE AREA

To treat hardwood and bark chips, nuggets, and mulch material that are larger than 1.00 inches (2.54 cm) in two dimensions, to mitigate risk of spread of Emerald Ash Borer, they can be composted using the following procedure adapted from the Gypsy Moth Manual:

1. Compost piles must be a minimum of 200 cubic yards.
2. Internal temperature at a depth of 18 inches must reach 140 °F (60 °C) for four (4) continuous days.
3. Using a front-end loader or a bulldozer, remove the outer layer of the compost pile to a depth of three (3) feet.
4. Start a second compost pile using the recently-removed cover material as a core.
5. Move the core material from the first compost pile and place on the second compost pile as a cover at least three (3) feet deep.
6. Allow the second compost pile to remain undisturbed until the temperature reaches 140 °F (60 °C) for at least four (4) continuous days.
7. Remove the second compost pile and use as fully-composted material.

This procedure will allow continuous operation. After the first compost pile is "turned" to become the second compost pile, a new "first" compost pile can be started.

Electronic Stamp for EAB

This is a sample of certification stamp available for use as an attachment to commercial labels or invoices.



NOTICES

DEPARTMENT OF AGRICULTURE

Order of Quarantine; Emerald Ash Borer

Recitals

[40 Pa.B. 4764]

[Saturday, August 21, 2010]

- A. Emerald Ash Borer (EAB), *Agrius planipennis* (Fauremaire)— a beetle indigenous to Asia— is a serious plant pest that attacks and kills ash trees belonging to the genus *Fraxinus*. EAB has worked its way east from Michigan, where it was first detected in 2002.
- B. EAB has killed 40 million ash trees during the short time it has been present in North America. Typically, trees are killed within 3 years of the initial attack by this beetle. EAB presents a clear threat to this Commonwealth's forest and horticultural resources.
- C. The Plant Pest Act (act) (3 P. S. §§ 258.1–258.27) empowers the Department of Agriculture (Department) to take various measures to detect, contain and eradicate plant pests. These powers include the authority to establish quarantines to prevent the spread of plant pests within this Commonwealth.
- D. The Department has issued previous EAB-related Orders of Quarantine, establishing a quarantined area that includes all of Allegheny, Armstrong, Beaver, Bedford, Butler, Indiana, Juniata, Lawrence, Mercer, Mifflin, Washington and Westmoreland Counties, and restricting the movement of designated articles and materials from this quarantined area.
- E. EAB has recently been detected in Centre, Cumberland, Fulton, Somerset and Union Counties— counties outside of the current quarantined area— making it necessary to expand the quarantined area to include these counties. In addition, as the quarantined area continues to expand, the Department believes it is necessary to further expand the quarantined area to include various counties adjacent to counties in which EAB has, to date, been discovered. These additional counties include Blair, Cambria, Cameron, Clarion, Clearfield, Clinton, Columbia, Crawford, Elk, Erie, Fayette, Forest, Franklin, Greene, Huntingdon, Jefferson, Lycoming, McKean, Montour, Northumberland, Perry, Potter, Snyder, Tioga, Venango and Warren Counties.

Order

Under authority of section 21 of the act (3 P. S. § 258.21), and with the Recitals previously listed incorporated into this Order by reference, the Department orders the following:

1. *Confirmation of Quarantine; Addition of Counties to the Quarantined Area*

- a. The quarantine established by previous Orders with respect to Allegheny, Armstrong, Beaver, Bedford, Butler, Indiana, Juniata, Lawrence, Mercer, Mifflin, Washington and Westmoreland Counties (collectively, the "quarantined area") remains in effect, subject to the conditions set forth in this Order.

b. A quarantine is hereby established with respect to Blair, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford, Cumberland, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Jefferson, Lycoming, McKean, Montour, Northumberland, Perry, Potter, Snyder, Somerset, Tioga, Union, Venango and Warren Counties.

2 *Limitations Imposed.* The following objects or materials may not be moved out of the quarantined area, unless done in accordance with Paragraph No. 3 of this Order.

- a. The Emerald Ash Borer in any living stage of development,
- b. Ash trees of any size;
- c. Ash limbs, branches, stumps and roots;
- d. Any cut, nonconiferous (hardwood) firewood,
- e. Nonconiferous (hardwood) bark and nonconiferous (hardwood) wood chips larger than 1 inch in two dimensions;
- f. Ash logs and lumber with either the bark or the outer 1 inch of sapwood, or both, attached;
- g. Any item made from or containing the wood of the ash tree that is capable of spreading emerald ash borer; and
- h. Any other article, product or means of conveyance determined by the Department to present a risk of spreading the EAB infestation.

3 *Movement of regulated articles from quarantined areas* An article described in Paragraph No. 2 of this Order may be moved from a quarantined area only under the following circumstances:

- a. *With* a valid certificate or limited permit (as described in Paragraph No. 4) attached,
- b. *Without* a certificate or limited permit (as described in Paragraph No. 4) attached if:
 - i. The regulated article is moved by the United States Department of Agriculture or the Department for experimental or scientific purposes, or
 - ii. The regulated article originates outside the quarantined area and is moved intrastate through the quarantined area under the following conditions.
 - A. The points of origin and destination are indicated on a waybill accompanying the regulated article, and
 - B. The regulated article, if moved through the quarantined area during the period of May 1 through August 31 or when the ambient air temperature is 40° F or higher, is moved in an enclosed vehicle or is completely covered to prevent access by the EAB; and
 - C. The regulated article is moved directly through the quarantined area without stopping (except for refueling or for traffic conditions, such as traffic lights or stop signs), or has been stored, packed or handled at locations approved by an inspector as not posing a risk of infestation by emerald ash borer; and
 - D. The article has not been combined or commingled with other articles so as to lose its individual identity.

c. Without a certificate or limited permit (as described in Paragraph No. 4) attached if a USDA-issued or USDA-authorized (by USDA compliance agreement) certificate or permit is attached.

4. *Obtaining a Certificate or Limited Permit from the Department for Intrastate Movement of Articles.* The Department or a person operating under a compliance agreement will issue a certificate or limited permit authorizing the intrastate movement of articles described in Paragraph No. 2 of this Order if it is satisfied that all of the following are accurate:

a. The article is either of the following:

i. The article is apparently free of EAB, based on inspection, or the article has been grown, produced, manufactured, stored or handled in a manner that, in the judgment of the Department, prevents the article from presenting a risk of spreading EAB; or

ii. The article is to be moved to a specified destination for specific processing, handling or utilization (the destination and other conditions to be listed on the advance written permission), and this movement will not result in the spread of EAB because EAB will be destroyed by the specific processing, handling or utilization; and

b. The article is to be moved in compliance with this Order and any additional emergency conditions that the Department may impose under the Plant Pest Act in order to prevent the artificial spread of EAB; and

c. The article is eligible for intrastate movement under all other Federal domestic plant quarantines and regulations applicable to the regulated articles

5. *Cancellation of a Certificate or Limited Permit.* Any certificate or limited permit may be canceled orally or in writing by the Department whenever the Department determines that the holder of the certificate or limited permit has not complied with the act or this Order. If the cancellation is oral, the cancellation will become effective immediately, and the cancellation and the reasons for the cancellation will be confirmed in writing as soon as circumstances permit.

6. *Compliance Agreements* The Department will consider entering into a compliance agreement with any person that demonstrates an understanding of the requirements of this Order and otherwise satisfies the Department it is capable of issuing certificates or limited permits in accordance with the requirements of this Order. The Department shall either provide blank certificates and limited permits to a person operating under a compliance agreement or authorize reproduction of the certificates or limited permits on shipping containers, or both, as requested by the person operating under the compliance agreement. These certificates and limited permits may then be completed and used, as needed, for the intrastate movement of regulated articles that have met all of the requirements of Paragraph No. 4.

7. *Documentation to Accompany Articles in Intrastate Movement from the Quarantined Area.* If an article described in Paragraph No. 2 of this Order is to be moved intrastate from the quarantined area, the article must be plainly marked with the name and address of the consignor and the name and address of the consignee and must have a copy of the applicable Department-issued or Department-authorized (by compliance agreement as described in Paragraph No. 6) certificate or limited permit securely attached at all times during intrastate movement attached to the article itself, or to the container carrying the article, or to the consignee's copy of the accompanying waybill. Provided, that the description of the article on the certificate or limited permit, and on the waybill, are sufficient to identify the regulated article. The carrier must furnish the certificate or limited permit authorizing the intrastate movement of the article to the consignee at the destination of the shipment.

8. *Federal Requirements for Interstate Movement of Articles.* This Order is distinct from, and in addition to, any Federal statute, regulation or quarantine order addressing the interstate movement of articles from the quarantined area or this Commonwealth.

9. *Contacting the Department.* A person seeking information about the requirements of this Order, or a limited permit for intrastate movement of quarantined articles, or a compliance agreement for intrastate movement of quarantined articles, shall contact the Department at: Department of Agriculture, Attention. Walt Blosser, 2301 North Cameron Street, Harrisburg, PA 17110-9408, (717) 772-5205, wblosser@state.pa.us.

10. *Criminal and Civil Penalties.* A person who violates this Order will face summary criminal prosecution carrying up to 90 days imprisonment and a fine of up to \$300 with respect to each violation. In addition, a person who violates this Order may be assessed a civil penalty of up to \$20,000 with respect to each violation.

11. *Cooperation with other agencies.* The Department will consult with USDA, other State agencies and the Pennsylvania State University Cooperative Extension with respect to the most efficacious measures to survey for and detect EAB to slow the spread or eradicate this pest

12. *Effective Date.* This quarantine is effective as of August 1, 2010, and shall remain in effect until rescinded by subsequent order.

RUSSELL C. REDDING,
Secretary

[Pa.B. Doc. No. 10-1523. Filed for public inspection August 20, 2010, 9:00 a.m.]

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DIVISION 33

SECTION 33 11 13 – PUBLIC WATER UTILITY DISTRIBUTION PIPING

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Unclassified excavation, trenching, dewatering, the installation of water distribution pipes, as specified and indicated, including fittings, service connections, valves, connection to existing waterline, concrete thrust blocking, encasements, cradles, anchors, and demolition as required or necessary.
- B. System complete, tested and approved.
- C. Perform backfilling, grading, compaction, and compaction testing, including required hand excavation and backfill, where required.

1.2 RELATED SECTIONS

- A. Section 31 05 16 – Aggregates for Earthwork
- B. Section 31 23 17 – Trenching
- C. Section 03 30 00 – Cast-in-Place Concrete

1.3 RELATED DOCUMENTS

- A. Provisions of the Contract Documents, including requirements of Division 1 Sections of the Specifications apply to the work of this Section.
- B. The construction of the waterline work and appurtenances shall be constructed in accordance with Aqua Pennsylvania, Inc regulations.

1.4 REFERENCES

- A. AWWA Manual M3
- B. AWWA Manual 23
- C. AWWA C104 Cement-Mortar Linings for Ductile Iron Pipe and Fittings for Water.
- D. AWWA C105 Polyethylene Encasement for Ductile Iron Pipe.
- E. AWWA C110 Ductile Iron and Gray Iron Fittings, 3 in. through 48 in. for Water and Other Liquids.
- F. AWWA C111 Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings.

- G. AWWA C150 Thickness Design of Ductile Iron Pipe
- H. AWWA C151 Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand Lined Molds, for Water or Other Liquids.
- I. AWWA C153 Ductile Iron Compact Fittings, 3 in. through 24 in. and 54 in. through 64 in. for Water Service.
- J. AWWA C219 Bolted, Sleeve-Type, Couplings for Plain End Pipe
- K. AWWA C509 Resilient-Seated Gate Valves, for Water Supply Service.
- L. AWWA C600 Installation of Ductile-Iron Water Mains and Their Appurtenances.
- M. AWWA 605-94 Installation of Polyvinyl Chloride (PVC) Pressure Pipe
- N. AWWA C651 Disinfecting Water Mains.
- O. AWWA C800 Underground Service Line Valves and Fittings
- P. The Commonwealth of Pennsylvania, Department of Transportation (PaDOT) Publication 408, Specifications, latest edition.

1.5 SUBMITTALS

- A. Submit the following in accordance with the Contract Documents.
 - 1. Manufacturer's Catalog Data
 - a. Pipe and fittings
 - b. Joints and couplings
 - c. Valves
 - d. Corporation stops
 - e. Valve boxes
 - f. Fire hydrants
 - 2. Certificates of Compliance
 - a. Pipe and fittings
 - b. Pipe-shop applied linings and coatings
 - c. Pipe joint materials
 - d. Valves
 - e. Hydrostatic Test Equipment Calibration
 - f. Concrete certifications for thrust blocking
- B. Submit manufacturer's standard drawings or catalog cuts. Include information concerning gaskets with submittal for joints and couplings.
- C. Certificates of Compliance shall attest that tests set forth in each applicable referenced publication have been performed, whether specified in that publication to be mandatory or otherwise and that production control tests have been performed at the intervals or

frequency specified in the publication. Other tests shall have been performed within 3 years of the date of submittal of certificates on the same type, class, grade, and size of material as is being provided for the project.

- D. Hydrostatic Testing Submittal: The Contractor shall submit to the Engineer and MMA a testing sequence schedule and shall include listing or testing equipment to be used. A minimum of three (3) working days prior to the start of testing, the Contractor shall submit to the Owner notarization certificates attesting that all pressure gauges being used have been calibrated and are accurate to 0.1 lbs./sq.in. The Contractor shall submit to the Owner the results of all testing as specified herein.
- E. Disinfection Test Results: Shall be submitted as described in Paragraph 3.18 of this Section.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Contractor will be required to transport all materials at his own expense to the site of the work and assume all responsibility for damage or loss to material in transportation and/or in the storage of the material after delivery to the site of the work, and/or in the installation of the material in the pipeline.
- B. The specifications may provide that any materials furnished by the BCI Authority are subject to inspection and acceptance by the contractor or the contractor's agent at the manufacturer's plant or at the point of delivery. The BCI Authority or the BCI Authority's agent may perform tests as specified in ANSI/AWWA C900, ANSI/AWWA C905, or ANSI/AWWA C907 to ensure conformance. Unless otherwise specified by the BCI Authority, inspection by the BCI Authority does not relieve the contractor of responsibility to inspect and accept materials.
- C. Contractor, when he accepts any material, assumes the responsibility of its being in good condition, and to protect himself should carefully inspect all material furnished to him at point or points of delivery. In case of delivery of pipe and fittings on cars at railroad siding careful inspection of all material must be made prior to unloading and a list of same submitted to the BCI Authority. In case any material is found to be damaged, such damage shall be promptly called to the attention of the BCI Authority so that the BCI Authority may make proper claim for damage to the railroad company. Any such damaged material unloaded or accepted by the Contractor, without having been instructed to do so by the BCI Authority or by the freight agent of the carrier after due notation of such damage on freight bill, will be considered as having delivered to the contractor in good condition and he shall be liable for such damage. All demurrage charges on carloads of pipe or other materials which are to be unloaded by Contractor shall be paid by Contractor.
- D. Inspect materials delivered to site for damage. Unload and store with minimum handling. Store materials on site in enclosures or under protective covering. Store plastic piping, jointing materials and rubber gaskets under cover out of direct sunlight. Rubber gaskets that are not to be installed immediately shall be stored in a cool and dark place. Do not store materials directly on the ground. Keep inside of pipes and fittings free of dirt and debris.
- E. PVC Pipe stored outdoors and expected to be exposed to direct sunlight for periods of one year or more after delivery shall be covered with canvas or other opaque material

with provision for adequate air circulation. PVC pipe shall not be stored close to heat sources, such as heaters, boilers, steam lines, or engine exhaust.

- F. Pipe and accessories shall be handled so as to insure delivery to the installed location in sound undamaged condition. Particular care shall be taken not to injure the pipe coating or lining. Repairs to the cement lining of Ductile Iron Pipe and fittings shall not be permitted. No other pipe or material of any kind shall be placed inside a pipe or fitting after the coating has been applied. Pipe shall be carried into position and not dragged. Use of pinch bars and tongs for aligning or turning pipe will be permitted only on the bare ends of the pipe. The interior of pipe and accessories shall be thoroughly cleaned and foreign matter before lowered into the trench and shall be kept clean during laying operations by plugging or other approved method. Before installation, the pipe shall be inspected for defects. Material found to be defective before or after laying shall be replaced with sound material without additional expense to the Owner.
- G. Unless otherwise specified by the BCI Authority, the contractor shall be responsible for all unloading and loading of materials at the jobsite. To avoid damage, all pipe and appurtenances shall be loaded and unloaded with care and in accordance with the manufacturer's published recommendations. Adherence to the pipe manufacturer's published unloading recommendations is particularly important when temperatures are below 32°F (0°C). Under no circumstances shall such material be dropped.
- H. Slings (other than nylon straps), hooks, or pipe tongs shall be padded and used properly to prevent damage to all pipe and appurtenances.
- I. Store valves and appurtenances in accordance with manufacturer's recommendations.
- J. When possible, pipe shall be stored in unit packages on flat surfaces to avoid bending. When unit packages are stacked, care shall be exercised to ensure that the weight of the upper units does not cause deformation to pipe in lower units. Unit packages shall be supported by racks or dunnage to prevent damage or bending of the pipe. When unit packages are stacked, care shall be exercised to ensure that the height of the stack does not result in instability that could cause stack collapse, pipe damage, or personal injury. Generally, stack height should not exceed 8 ft (2.4 m). Safe stack height will vary by unit package configuration.
- K. The Contractor shall be responsible for the delivery, storage, and handling of products.
- L. Valves, rubber gaskets, gasket lubricants and other appurtenances shall be protected from excessive exposure to heat, direct sunlight, ozone (from electric motors and equipment), oil, grease, or other contaminants.

1.7 QUALITY ASSURANCE

- A. Perform Work in accordance with MMA standards.
- B. All gate valves shall be of the resilient wedge non-rising stem type. Valves shall have a minimum rated working pressure of 250 p.s.i.g. and 500 p.s.i.g. minimum test pressure rating. Unless otherwise specified, the valves shall meet the latest revision of AWWA Standard C509 or C907 Specifications. Directly cast on the body of the

valve shall be the manufacturers name, valve size, direction of flow, and working pressure.

1. All gate valves shall be manufactured by Mueller Co.-Catalogue No. A-2360, American Darling - Series 2500, or Kennedy Valve – KEN-SEAL II, or approved equivalent.

PART 2 – PRODUCTS

2.1 GENERAL

- A. All pipe, fittings, and appurtenances shall be as shown on the Contract Drawings and specified in this Section. All pipe, fittings, and appurtenances shall be new and unused. Piping shall be ductile iron unless otherwise shown on the Plans.
- B. Pipe material, valves, hydrants, fittings, jointing material and caulking yarn may be furnished by the BCI Authority at its warehouses, pipe storage yards, railroad sidings or freight depots, but all material shall be purchased by the Contractor. The locations from which material is to be obtained may be secured by application to the office of the BCI Authority. Before any work is started on the laying and installation of the pipe, Contractor shall secure from the BCI Authority all necessary permits which the BCI Authority has obtained granting permission to open streets or rights of way for the installation of the water line, such permits to be returned to the BCI Authority upon the completion of the work.

2.2 MATERIALS

A. Pipe

1. Ductile Iron Pipe (DIP) to be placed underground shall meet the requirements of American National Standards Institute (ANSI)/American Water Works Association (AWWA) C151/A21.51 and shall be Pressure Class 250 or class identified on the Contract Drawings. All pipe supplied shall have standard outside coating of coal tar or asphalt base and double inside cement-mortar lining complete with seal coat in accordance with ANSI/AWWA C104/A21.4.

B. Pipe Joints

1. Pipe joints shall be restrained push-on type with locking gaskets. Ductile iron joints shall meet the requirements of ANSI/AWWA C111/A21.11. Mechanical joints w/ retainer gland and locking gasket shall be provided on the first pipe joint after connection from existing water line.
2. Mechanical joints, retainer glands, locking rubber gaskets, nuts, bolts, and appurtenances shall meet the requirements of ANSI/AWWA C111/A21.11 (ductile iron).
3. Gaskets shall be supplied by the pipe manufacturer. Pipe and gaskets from different manufacturers are not acceptable.

C. Fittings

1. Fittings for ductile iron and shall meet the requirements of ANSI/AWWA C110/A21.10. All fittings shall be pressure class 250, with standard outside coating of coal-tar or asphalt base and double inside cement mortar lining complete with seal coat all in accordance with ANSI A21.4/AWWA C104.
2. Underground DIP fitting joints shall be mechanical joint with restraint follower glands, except fitting joints for restrained joint pipe which shall be of the same joint as that of the pipe. Joints shall meet the requirements of ANSI/AWWA C111/A21.11. The restraint follower gland shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Twist off nuts shall be used to insure proper actuating of the restraining devices. The restraining glands shall have a pressure rating equal to that of the pipe on which it is used. Glands shall be EBAA Iron Inc. Megalug or equal.
3. Rubber gaskets, nuts, bolts, retainer glands and appurtenances shall meet the requirements of ANSI/AWWA C111/A21.11.
4. Couplings under 2-inch nominal diameter other than copper shall be compression type Smith-Blair, flexible service couplings Series 522, or equal. For 2-inch nominal diameter and over, couplings shall be ductile iron, rated for proposed test pressure, and shall meet the requirements of ANSI/AWWA C219.

D. Polyethylene Encasement.

1. Polyethylene tubes or sheets meeting the minimum requirements of ANSI/AWWA C105/A21.5 shall be used on all underground ductile iron pipe, fittings, valves, and hydrants.

E. Gate Valves.

1. General. All gate valves shall be of the resilient wedge non-rising stem type. Valves shall have a minimum rated working pressure of 250 p.s.i.g. and 500 p.s.i.g. minimum test pressure rating. Unless otherwise specified, the valves shall meet the latest revision of AWWA Standard C-509 Specification. Directly cast on the body of the valve shall be the manufacturers name, valve size, direction of flow, and working pressure.
2. Gate Valves 3-inch Through 12-inch
 - a. General. All Gate Valves 3-inch through 12-inch shall be of the resilient seated non-rising stem type. Unless otherwise specified, the valves shall meet the latest revision of AWWA Standard C-509 Specification.

All valves shall open left (counter-clockwise) and shall be equipped with flanged joint ends.

- b. Construction. The bonnet, body, gate, yoke, wrench nut, O-ring packing plate or seal plate shall be made of gray cast iron. The valve stem shall be constructed of manganese bronze and shall have a minimum tensile strength of 60,000 psi.

- c. Affidavit of Compliance. The Contractor shall obtain from the manufacturer of the valves an affidavit stating that the valve and all materials used in its construction conform to the applicable requirements of the above referenced AWWA standard and supplementary specifications and that all tests specified therein have been performed and met.
 3. Valves installed within standard push-on joint pipe shall be equipped with mechanical joint ends with restraint follower glands (as specified herein for fittings) complying with ANSI/AWWA C111/A21.11. Valves installed within restraint joint pipe shall be equipped with either mechanical joint ends and Megalug restraints as manufactured by EBBA Iron Sales, Inc., a push-on type joint with "Field Lok" gasket as manufactured by U.S. Pipe and Foundry Co., or equivalent restraint joint system as approved by the Owner.
 4. All valves shall have 2" square operating nuts except for valves within vaults and manholes which shall be provided with handwheel (max. 15-inch diameter) for operation.
 5. All bolts, studs and nuts shall be cadmium-plated (ASTM B766) or zinc coated (ASTM A153 or ASTM B633).
 6. All gate valves shall be manufactured by Mueller Co.- Catalogue No. A-2360, American Darling - Series 2500, Kennedy Valve - KEN-SEAL II, or approved equivalent.
- F. Valve supports shall be compatible with the valve being served.
- G. Valve Boxes
1. Each buried valve shall have a valve box.
 2. Cast iron, 2-piece construction, screw type, with 18-inches lengths, not less than 5 1/4" in diameter shaft.
 3. Depth of setting shall be adjustable over a range to accommodate a cover over the pipe of 4' - 0" (minimum) and the box length shall be variable to suit the installation.
 4. Furnish a deep socket type cast iron cover with each valve box with the word "WATER" cast on the cover.
 5. Coat valve boxes with two (2) coats of coal tar epoxy.
 6. Valve boxes shall be Bingham and Taylor, Figure No. 4905 or approved equivalent.
 7. Furnish one valve wrench with a stem of sufficient length to suit all installations. Wrench shall fit a 2-inch square nut and have a tee handle welded on the other end.
- H. Detectable Utility Marking Tape

1. An electronically detectable tape with a minimum width of 2 inches and a minimum thickness of 5 mils with the message "CAUTION - BURIED WATERLINE BELOW" every 24-inches, and color per the AWWA requirements shall be provided.

I. Concrete Thrust Blocks/Encasement/Pipe Cradles

1. Concrete thrust blocks, encasement, and pipe cradles are sized per the details on the Drawings. Where casing is required it shall be smooth steel pipe or reinforced concrete culvert pipe. Concrete shall be PaDOT Class A and meet the requirements of PaDOT 408, Section 704. Miscellaneous metals for concrete thrust blocks shall be as specified on the Drawings and shall be protected against corrosion by galvanizing, by coating with bituminous paint or by encasing the entire assembly with polyethylene (as per AWWA C105).

J. Pipe Hangers, Supports and Miscellaneous Metal Fabrications:

1. Shall meet applicable MMA requirements.
2. Furnish and install supports required to hold pipe fittings, and valves at the lines and grades indicated on the drawings and without strain upon pipe, fittings, and valves.
3. Support piping by suitable saddle stands.
4. Locate supports where necessary (and as a minimum where shown on the drawings) but not more than six feet on center.

K. Service Line Connections (where applicable).

1. Water service connections shall be the size indicated on the Drawings. Water service lines shall be copper, Type K, seamless tubing, conforming to ASTM B-88, and carrying the National Sanitation Foundation (NSF) seal of approval for potable water.

Fittings for copper pipe shall be brass compression type for copper tube meeting the requirements of AWWA C800. All unions or couplings shall be manufactured by Ford Meter Box Co. and have a Ford Quick Joint joining system (or approved equivalent).

2. Water service line connections to the mainline shall be by the connection taps complying with applicable portions of AWWA C800.
 - a. Corporation stops shall be bronze, plug type where working pressures will not exceed 125 psig and ball type where working pressures will exceed 125 psig, with standard corporation stop thread as manufactured by the Ford Meter Company, Inc. Catalog No. F1000 and FB1000, respectively or approved equivalent. Joining system shall be Ford Quick Joint or approved equivalent.
 - b. Water service saddles shall be bronze two strap type or single strap Styles 202B or 101B, respectively as manufactured by the Ford Meter Box Company, Inc. or approved equivalent.

3. Curb stops shall be bronze, plug type where working pressures will not exceed 125 psig and ball type where working pressures will exceed 125 psig, and comply with AWWA C800, Section 4.2 as manufactured by the Ford Meter Box Company, Inc., Catalog Nos. Z44 or B44, respectively or approved equivalent. Joining system shall be Ford Quick Joint or approved equivalent.
4. Curb boxes shall be extension type with arch pattern base of the length required, complete with 1-inch upper section, 2 hole Erie pattern lid, and inside rod and pin as manufactured by the Ford Meter Box Company, Inc. or approved equivalent.

L. Tapping Sleeve.

1. Sleeves shall be suitable for connection to pipe of nominal diameter and material required.
2. Sleeve shall be stainless steel and suitable for 250 psi maximum working pressure.
3. Sleeve outlet flange shall be compatible with the material it's connected to and shall have outlet dimensions and be drilled to comply with ANSI B16.1, class 125 and recessed in accordance with MSS SP-60.
4. Body shall contain 3/4" NPT test plug.
5. Tapping sleeve shall be as manufactured by Mueller Company, Model H-304 or approved equivalent.

M. Tapping Valve.

1. Tapping valve shall meet the requirements "Gate Valves" specified in this section.
2. In addition, the tapping valve shall have inlet flange complying with ANSI B16.1, class 125 drilling and with MSS SP-60.

N. Flush-mounted Hose Bibb (where applicable).

1. Flush-mounted hose bibb shall be Zurn Industries Catalog No. Z-1360 or approved equal.
2. Encased, non-freeze ground hydrant; complete with bronze casting, all bronze interior parts, bronze seat and replaceable seat washer, non-turning operating rod with free-floating compression closure valve, 3/4-inch hose connection.
3. Plain bronze box with hinged scoriated cover with operating key-lock and "WATER" cast in cover. Depth of bury shall be 4 feet.
4. Tapped 1/4-inch drain port in valve housing and in box.
5. All supplied flush-mounted hose bibbs shall be from the same manufacturer and be opened with the same key.

O. Backflow Preventer.

1. Backflow Preventer shall be Watts Industries, Inc. Model 709 Series 007 Double Check Valve or approved equivalent.
2. Plastic crock with bolted plastic cover and "WATER" on cover. Depth of bury shall be 4 feet.
3. All supplied backflow preventers shall be from the same manufacturer.
4. Backflow Preventers shall be in accordance with MMA. requirements.

P. Fire Hydrants

1. Model shall be consistent with Aqua Pennsylvania, Inc. requirements. See section 3.16.

PART 3 – EXECUTION

3.1 INSPECTION

A. General

1. All work to be done, including excavation, backfilling, pipe laying, etc., will be subject to the inspection of a representative of the BCI Authority and the Contractor shall perform all work in accordance with the terms of the specifications and if any work is done and later found to be inferior or defective, prior to the final acceptance of the completed project, such inferior or defective work shall be corrected by and at the expense of the Contractor.
2. The quality of all materials, the process of manufacturer, and the finished products shall be subject to inspection and approval by the Owner. Such inspection may be made at the place of manufacturer or on the work after delivery, or at place of manufacture or on the work after delivery, or at both places; and the products shall be subject to rejection at any time on account of failure to meet any of the specifications' requirements even though sample products may have been accepted as satisfactory at the place of manufacture.
3. Prior to being installed, each pipe, fitting, valve and/or hydrant shall be carefully inspected, and those not meeting the specifications shall be rejected and at once removed from the site.

3.2 CUTTING OF PIPE

A. Ductile Iron

1. Cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe or its lining. Unless otherwise recommended by the manufacturer, cutting shall be done with an approved type mechanical cutter. A wheel cutter shall be used when practicable. Squeeze type mechanical cutters shall not be used for ductile iron. Grind cut ends and rough edges smooth. Bevel end for push-on joints.

3.3 ADJACENT FACILITIES SEPARATION

A. Paralleling Installation

1. All potable water mains shall be separated from all other pressure and gravity sewer pipe systems by at least ten (10) feet horizontally measured edge to edge.
2. In cases where it is not possible to maintain 10 feet horizontal separation, the water line must be installed in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18-inches above the top of the sewer.
3. Should conditions prevent a minimum vertical separation of 18 inches or should sanitary or drainage utilities be installed above a potable waterline, regardless of vertical separation, the utility crossing the waterline shall be concrete encased a minimum of ten (10) feet on either side of the utility crossing.

B. Crossing Installation

1. Should the water main be installed less than 18-inches above the top of the sewer, the water main shall be concrete encased a minimum of 10 feet (from outside edge of sewer) on either side of the crossing.
2. Should the water main be installed beneath a sewer, a concrete pipe cradle shall be installed along the water main a distance of 2 feet (from outside edge of sewer) on either side of the crossing.
3. When crossing sewer pipes, one full length section of water pipe shall be centered over the adjacent utility such that both joints will be as far from the crossing as possible.

3.4 JOINT DEFLECTION

A. Ductile Iron Pipe

1. The allowable deflection will be 80% of the maximum as permitted in AWWA C600 and by the pipe manufacturer (most stringent criteria applies). If the alignment requires deflection in excess of the above limitations, special bends or a sufficient number of shorter lengths of pipe shall be furnished to provide angular deflections within the limit set forth.

3.5 PIPE BEDDING AND HAUNCHING

- A. Normally, the width of the trench shall be twelve (12) inches plus the diameter of the pipe. The depth of trench is normally 4.5 feet plus the diameter of the pipe.
- B. The bottom of the approved trench will be filled with six (6) inches of sand or rock dust. Granulated slag will not be allowed. The bottom will then be smoothed, leveled and tamped. Bell holes will be provided so the pipe is uniformly supported along its length. After the pipe has been installed and approved, the trench will then be backfilled with twelve (12) inches of rock dust or sand above the top of the installed

pipeline and will then be tamped. Succeeding layers of backfill materials may be of the excavated material if it meets with the BCI Authority approval. The Contractor shall, in general, tamp all remaining layers of backfill by mechanical means and in layers not to exceed six (6) inches.

- C. Each pipe section shall be laid in a firm bedding and haunched and backfilled with care. Selection of the required laying conditions and the method of embedment shall be made in accordance with the requirements specified by the BCI Authority. The design parameters specified by the BCI Authority should be used to calculate pipe deflection per the design information provided in ANSI/AWWA C900, ANSI/AWWA C905, and AWWA Manual M23.
- D. The type of pipe embedment should be selected so as to prevent a vertical cross-section deflection of more than 5 percent. Maximum embedment particle size shall not exceed $\frac{3}{4}$ in (20 mm) for angular rock or 1 $\frac{1}{2}$ in. (40 mm) for round rock. Embedment shall be selected and placed to prevent gouges, crimping, or puncture of pipe, joints, or appurtenances.
- E. Bedding shall be as described in the Drawings and Section 31 23 17 – Trenching of these Specifications. AWWA C600 shall be referenced as necessary.

3.6 PLACING AND LAYING

- A. Pipe and accessories shall be placed and laid according to AWWA C600 and these Specifications.
- B. Before lowering the pipe into position in the trench, all dirt and foreign matter that cannot be removed by normal flushing shall be cleaned by mechanical means. The BCI Authority or BCI Authority's agent shall determine when such mechanical cleaning is required. During laying operations, no debris, hand tools, clothing, or other materials shall be placed in the pipe. Pipe shall be kept clean during and after laying. Do not lower pipe into the trench except that which is to be immediately installed.
- C. Lay pipe to a uniform line with the barrel of the pipe resting solidly in bedding material throughout its length. Excavate recess in bedding material to accommodate joints, fitting, and appurtenances. Do not subject pipe to a blow or shock to achieve solid bearing or grade. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to required line and grade within tolerances specified by the BCI Authority. The pipe and joint shall be uniformly supported and secured in place with the specified embedment material.
- D. In preparation for installation, distribution (stringing) of pipe and appurtenances shall be as close to the trench as practical and, if possible, on the opposite side from the excavated earth stockpile. Pipe shall be protected from traffic and secured to prevent rolling. Bell ends on pipe should be pointed in the direction of work progress. Caution shall be exercised to minimize the contamination of pipe interiors and joint components. Where pipe is laid on a grade of ten percent or greater, the laying shall start at the bottom and shall proceed upward with the bell ends of the pipe upgrade.

- E. Lay each section of pipe in such a manner as to form a close concentric joint with adjoining section and to avoid offsets.
- F. Lubricate pipe and gaskets as recommended by the manufacturer. Assemble to provide tight, flexible joints that permit movement caused by expansion, contraction, and ground movement.
- G. Check each pipe installed as to line and grade in place. Correct deviations immediately. Deflection of pipe joints in excess of 80 percent of the maximum deflection of those specified in AWWA C600 and by the manufacturer (most stringent applies) will be cause for rejection.
- H. Install fittings and valves as pipe laying progresses. Do not support weight of fittings and valves from pipe.
- I. When work is not in progress, and at the end of each working day, securely plug the ends of pipe and fittings to prevent trench water, small animals, earth, or other substances from entering the pipes or fittings. Precautions shall be taken to prevent flotation of the sealed pipe during work stoppages.
- J. Backfill in accordance with Section 31 23 17 and the Drawings, concurrently with pipe laying to hold the installed pipe in place. When pipe laying is terminated for any reason, provide at least 2 feet of backfill over all pipe except the last piece laid.
- K. Where the requirements of the Pennsylvania Department of Highways and any political sub-division in which the work is performed require backfill to be mechanically tamped, the Contractor will backfill in accordance with the applicable regulations and shall include such cost in the base price per foot for Excavating, laying, joining, backfilling, etc. No extra payment will be made by the Owner to the Contractor for mechanical tamping.
- L. Crossing under roadway surfaces shall be made by tunneling, drilling, boring, pushing or open cut as required or permitted by the Pennsylvania Department of Highways or any political sub-division having jurisdiction. All backfilling shall be in accordance with their applicable regulations. Where casing is required it shall be furnished and installed by the Contractor at his expense. No extra payment will be made for roadway crossings or for the casing required. All costs in connection therewith shall be included in the base price per foot for excavating, laying, jointing backfilling.
- M. The Contractor shall restore and/or replace paving, curbing, sidewalks, gutters, shrubbery fences, sod or any other disturbed surface to a condition equal to that before the work began and to the satisfaction of the Owner and BCI Authority (where applicable), and shall furnish all labor and material incidental thereto. Temporary paving shall be installed prior to the placement of permanent surfaces when called for by the Pennsylvania Department of Highways or other sub-divisions in which the work is performed. The Contractor shall, unless otherwise stipulated by the Owner, maintain the surfaces of unpaved trenches and adjacent curbs, gutters, sidewalks, shrubbery sod, or other disturbed surfaces until accepted and released by the political sub-division having jurisdiction. All costs in connection with restoration of surfaces and/or structures shall be included in the Contractor's base price per foot for excavation, laying, joining, backfilling, etc.

3.7 JOINT ASSEMBLY

- A. All ductile iron pipe joint assembly shall comply with AWWA C600.
 - 1. Push-on Joints.
 - a. Clean the inside of the bell and the outside of the spigot. Insert rubber gasket into the bell recess.
 - b. Apply a thin film of gasket lubricant to either the inside of the gasket or the spigot end of the pipe, or both.
 - c. Insert the spigot end of the pipe into the socket using care to keep the joint form contacting the ground. Complete the joint by forcing the plain end to the bottom of the socket. Mark pipe that is not furnished with a depth mark before assembly to assure that the spigot is fully inserted.
 - 2. Mechanical Joints.
 - a. Wash the socket and plain end. Apply a thin film of lubricant. Slip the gland and gasket over the plain end of the pipe. Apply lubricant to the gasket.
 - b. Insert the plain end of the pipe into the socket and seat the gasket evenly in the socket.
 - c. Slide the gland into position, insert bolts, and finger-tighten nuts.
 - d. Bring bolts to uniform tightness. Tighten bolts 180-degrees apart alternately.
 - 3. Restrained Joints.
 - a. As recommended by the pipe manufacturer.

3.8 CONNECTIONS TO EXISTING LINES

- A. The Contractor will make connections to existing water pipe line or lines, and the Contractor's work shall include such connection. In some instances the connecting point will be a valve. The excavation necessary to permit the making connection to existing water pipe line or lines shall be made and be a part of the work to be performed by the Contractor. The backfilling of such excavation shall also be included in the work to be done by the Contractor. The time for making connections to existing mains of the BCI Authority shall be determined by the BCI Authority.
- B. The contractor shall locate existing pipe horizontally and vertically sufficiently in advance of making connections to allow ample time for making changes in the connection location. Backfill excavation immediately after buried pipe is located and measured.
- C. In case the waterline to be laid by the Contractor is to connect with the end of an existing line, which end is plugged, the Contractor will release the pressure, and will, after excavation is made, break out or otherwise remove the cast iron plug and the Contractor's work shall include the connection of the line proposed to be laid to the end of such existing pipe line. If a cut-in is required by the plans, the Contractor will perform that work.

- D. Make each connection with fittings and valves indicated on the Contract Drawings. Furnish and install sleeves required to complete connections. All required pipe, fittings, valves, tools, and equipment shall be at the connection site prior to start connection. The Owner will operate existing valves. Install sufficient pipe and restrained joints so existing pipe can be put in service immediately after connection and disinfection is completed. Inspect joints and eliminate leaks immediately after connection is completed and existing pipe is put in service. Install watertight plugs on open ends of pipe and valves and backfill excavation if new piping is not connected to dry connection within 48 hours after completing dry connection.
- E. Make connections to existing lines under pressure in accordance with the recommended procedures of the manufacturer of the pipe being tapped, except as otherwise specified.
- F. The Contractor shall notify the Owner a minimum of three (3) working days prior to connecting to the existing system.

3.9 SETTING OF VALVES AND VALVE BOXES

- A. Install gate valves conforming to AWWA C500 in accordance with the requirements of AWWA C600 for valve-and fitting installation and with the recommendations of the Appendix (“Installation, Operation, and Maintenance of Gate Valves”) to AWWA C509. Make and assemble joints to gate valves as specified for making and assembling the same type joints between pipe and fittings.
- B. Valve Boxes shall be installed where shown or specified, shall be set plumb, and shall be left at established street grade or ground surface. Valve boxes shall be centered on the valves. Boxes shall be installed over each gate valve unless otherwise shown. Contractor shall verify the location at each valve box before setting.
- C. Valves after delivery shall be drained to prevent freezing and shall have the interiors cleaned of all foreign matter before installation. Stuffing boxes shall be tightened and the hydrant or valve shall be fully opened and fully closed to insure that all parts are in working condition.

3.10 PIPE LINE SPECIALS AND FITTINGS

- A. All pipe line fittings in the ground of unbalanced water pressure shall be blocked with concrete that is poured solidly between the said fittings and the firm trench wall in such a manner as to prevent and pulling apart or movement of the pipe line due to such unbalanced water pressure, such as for trees, bends, tapping sleeves, and wyes or plugs. Rigid support must be provided also for and fire hydrant against the thrust of the water pressure, by means of solid stones, or concrete blocking between the fire hydrant and the solid earth wall for a sufficient area behind the base of the fire hydrant and opposite the hydrant hub or hydrant branch connection.
- B. When required by the BCI Authority, steel rod clamps or concrete for bracing fittings, valves or hydrants shall be furnished by the Contractor at his expense. The Contractor may obtain information from the BCI Authority as to the number of valves, hydrants, specials and valve boxes to be used in the laying of the pipeline.

3.11 BACKFLOW PREVENTERS

- A. Install in accordance with manufacturer's instructions and as shown on the Contract Drawings.
- B. Backflow Preventers shall be installed where shown or specified. Contractor shall verify the location at each backflow preventer before setting.
- C. Backflow preventers after delivery shall be drained to prevent freezing and shall have their interiors cleaned of all foreign matter before installation. Backflow preventers shall be tested according to manufacturer's directions to insure that all parts are working properly.
- D. Backflow preventers shall be installed at each noted location. The assembly shall consist of two positive seating check modules with captured springs and rubber seat discs. The check module seats and seat discs shall be replaceable. Service of all internal components shall be through a single access cover secured with stainless steel bolts. The assembly shall also include two resilient seated isolation valves: four top mounted, resilient seated test cocks. The assembly shall meet the requirements of ASSE Std. 1015 and AWWA Std. C150.

3.12 THRUST BLOCKING

- A. Reaction or thrust restraint shall be provided for each dead end, valve, bend, T-connector, and unrestrained hydrant; at reducers or fittings otherwise unrestrained; and where changes in pipe diameters or directions occur. The size and shape of concrete thrust blocks shall be as specified by the BCI Authority. The length of restrained joint piping and details of joint restraint glands, clamps, friction slabs, or other anchors shall be as specified by the BCI Authority. Restraining mechanisms for PVC pipe and fittings shall be tested and pressure rated in accordance with UNI-B-13.
- B. Valves shall be securely anchored with thrust blocking to prevent movement. Blocking shall be placed between undisturbed earth and fitting to be anchored. The sides of thrust blocks not subject to thrust may be poured against forms. Blocking shall be placed so that the fitting joints will be accessible for repair. Miscellaneous iron and steel thrust block connections shall be protected by galvanizing or by coating with bituminous paint.
- C. Anchor dimensions recommended for 2000 psf soil bearing strength shall be used when soil is encountered along the sides and bottom of trench. Anchor dimensions recommended for 4000 psf soil bearing strength shall be used when rock is encountered along the sides and bottom of trench.
- D. If adequate bearing surface for blocking cannot be obtained, a joint restraint system (i.e., multiple pipe joints restrained) as approved by the BCI Authority's Representative shall be provided in lieu of blocking. All piping that is rodded together shall be assembled by replacing the affected bolts of the mechanical joint fittings with "tie Bolt Restraints" as manufactured by Star National Products of Columbus, OH, or approved equal.
- E. Where any section of a water line is provided with concrete thrust blocking for fittings, the hydrostatic tests shall not be made until at least seven (7) days after

installation of the concrete thrust blocking unless otherwise approved.

3.13 CONCRETE PIPE CRADLE, ANCHOR, AND ENCASUREMENT

- A. Concrete thrust blocks, encasement, and pipe cradles are sized per the details on the Drawings. Where casing is required it shall be smooth steel pipe or reinforced concrete culvert pipe.
- B. The pipe to be encased or supported shall be adequately braced in both horizontal and vertical directions.
- C. Concrete shall be placed under, around and over pipe in a manner which will maintain the existing sewer pipe at line and grade.
- D. Pipe anchor shall be installed just down slope of nearest pipe joint at the approximate spacing indicated on the Drawings.

3.14 POLYETHYLENE WRAP (DUCTILE IRON PIPE)

- A. All pipe, fittings, valves, etc. shall be polyethylene wrapped.
- B. Pipe shall be wrapped using polyethylene tube, cut approximately 2 feet longer than the length of the pipe.
- C. Enough of the film shall be left bunched up, accordion fashion, at each end of a length of pipe to overlap the adjoining pipe about 1 foot.
- D. To make the overlap joint, pull the film over the bell of the pipe, fold around the adjacent spigot and wrap with three or more circumferential turns of 2-inch wide plastic adhesive tape to seal the tube of film to be piped. The tube on the adjacent pipe shall then be pulled over the first wrap on the pipe bell and sealed in place behind the bell using three or more circumferential turns of the 2-inch plastic adhesive tape.
- E. Fold-over excess material at the top of the pipe and hold the folded material in place by means of 6-inch strips of the 2-inch wide plastic adhesive tape at intervals of about 3 feet along the pipe barrel.
- F. Fittings, valves, hydrants, etc., shall be hand wrapped, using polyethylene film held in place with plastic adhesive tape.
 - 1. Bends, reducers and offsets can be wrapped with the polyethylene tube in the same manner as pipe.
 - 2. Valves can be wrapped by bringing the tube wrap on the adjacent pipe over the bells or flanges of the valve and sealing with adhesive tape. The valve bodies are then wrapped with a flat sheet of the film passed under the valve bottom and brought up around the body to the stem and fastened in place with adhesive tape.
 - 3. Hydrants can be wrapped with polyethylene tube slipped over the hydrant to encase the hydrant from the lead-in-valve to the ground level of the hydrant. To provide drainage of the hydrant, it is necessary to cut a small hole in the film and insert a short pipe nipple to drain the water to the soil outside the film wrap.

4. All service lines shall be polyethylene wrapped from the main to the curb box.
- G. All fittings that require concrete backing shall be completely wrapped prior to pouring the concrete backing block.

3.15 DETECTABLE UTILITY MARKING TAPE

- A. A continuous length of electronically detectable marker tape shall be installed at an approximate depth of 12 inches below finished grade in accordance with manufacturer's recommendations. Tape shall be installed for all underground waterlines without exception.

3.16 FIRE HYDRANTS AND FIRE HYDRANT PARTS

1. General
 - a. All hydrants furnished under this Specification shall be designed and manufactured in accordance with the latest version of AWWA Standard C-502, and in conjunction with the requirements of Aqua Pennsylvania, Inc and City of Sharon.
 - b. All hydrants shall be installed in accordance with the latest version of AWWA Standard C-600 and the requirements of MMA and City of Sharon.
 - c. More stringent requirements may be defined for an individual project.
2. Models Accepted
 - a. Mueller Company or Kennedy Valve – “Guardian” Type K81, or approved equal. Model shall be consistent with Aqua Pennsylvania and City of Sharon requirements..
3. Technical Requirements
 - a. Hydrants shall be compression-type, with the main valve (minimum 5-1/4”) opening against the pressure.
 - b. Hydrants shall be of dry top design and provided with traffic type features designed to break on impact and allow 360 degree rotation of the standpipe.
 - c. Main valve seat ring removal and extension of the hydrant shall be accomplished without digging.
 - d. Hydrant shall be designed for a minimum cover of four (4) feet, unless shown otherwise on the contract plans.
 - e. Hydrant shall have two 2-1/2” hose nozzles with Pittsburgh Six thread design and one 4-1/2” steamer nozzle of same threading, or as required by City of Sharon. All nozzles are to be mechanically-retained type.
 - f. Hydrants shall be provided with a 6” mechanical joint inlet connection.
 - g. The operating stem nut shall be pentagonal in shape and 1-1/2” in size, measured from a flat side to the opposite point.

- h. The main valve shall turn in the direction required by the local water BCI Authority and/or fire marshal/department requirements.
- 4. Hydrant Identification Numbers
 - a. The Contractor shall stencil the hydrant number on each new hydrant.
- 5. Affidavit of Compliance
 - a. The Contractor shall obtain from the manufacturer of the hydrant an affidavit stating that the hydrant and all materials used in its construction conform to the applicable requirements of the aforementioned AWWA Standard and Supplemental Specifications, and that all tests specified herein have been performed and met.

3.17 HYDROSTATIC TESTING

- A. Where any section of a water line is provided with concrete thrust blocking, hydrostatic tests shall not be made until at least 7 days after installation of the concrete thrust blocking unless otherwise approved. The method proposed for disposal of waste water from hydrostatic tests and disinfection shall be submitted to the Owner for review prior to performing hydrostatic tests. The water required for one hydrostatic test shall be provided by the Owner. Subsequent test water shall be purchased by the Contractor at no expense to the Owner. All testing shall be witnessed by the Owner. The Contractor shall provide temporary thrust restraint at the ends of piping to prevent pipe or joint damage, separation, or movement resulting from the internal pipe pressure developed during testing.
- B. Pressure Test:
 - 1. After the pipe is laid, the joints completed, and the trench partially backfilled leaving the joints exposed for examination, the newly laid piping or any valved section of piping shall, unless otherwise specified, be subjected for 2 hours to a hydrostatic pressure test.
 - 2. Pressure testing shall be conducted in accordance with AWWA C600-87.
 - 3. Each valve, if existing between testing points (valves), shall be opened and closed several times during the test. Exposed pipe, joints, fittings, valves, and hydrants shall be carefully examined during the partially open trench test. Joints showing visible leakage shall be replaced or remade. Cracked or defective pipe, joints, fittings, valves or hydrants discovered in consequence of this pressure test shall be removed and replaced with sound material, and the test shall be repeated until the test results are satisfactory.
 - 4. The requirement for the joints to remain exposed for the hydrostatic tests may be waived by the Owner when one or more of the following conditions are encountered:
 - Wet or unstable soil conditions in the trench.
 - Compliance would require maintaining barricades and walkway

around and across an open trench in a heavily used area that would require continuous surveillance to assure safe conditions.

- The Contractor requests from the Owner permission to backfill the trench prior to testing with the understanding that the Owner may request re-excavation at no additional cost to the Owner.

- C. Leakage Test: Leakage test shall be conducted in accordance with AWWA C600-87 after the pressure tests have been satisfactorily completed. No piping installation will be accepted until the leakage is less than the number of gallons per hour as determined by this formula (from AWWA C600-87, Sec. 4).

$$L = 0.000007507 \text{ NDX}$$

In which L equals the allowable leakage in gallons per hour; N is the length in feet of pipeline tested; D is the nominal diameter of the pipe in inches; and X is the square root of the average test pressure during the leakage test, in psi gage. Should any test of pipe disclose leakage greater than that specified, the defective joints shall be located and repaired until the leakage is within the specified allowance, without additional cost to the Owner. All visible leaks are to be repaired regardless of the amount of leakage.

- D. Time for Making Test. Except for joint material setting or where concrete thrust blocking necessitates a 7-day delay, pipelines jointed with rubber gaskets, mechanical or push-on joints, or couplings may be subjected to hydrostatic pressure, inspected, and tested for leakage at any time after partial completion of backfill.
- E. Concurrent Hydrostatic Tests. The Contractor may elect to conduct the hydrostatic tests using either or both of the following procedures. Regardless of the sequence of tests employed, the results of pressure tests, leakage test, and disinfection shall be satisfactory as specified. All replacement, repair, or retesting required shall be accomplished by the Contractor at no additional cost to the Owner.
 - 1. Pressure Test and Leakage Test may be conducted concurrently.
 - 3. Hydrostatic Tests and Disinfection may be conducted concurrently, using the water treated for disinfection to accomplish the hydrostatic tests. If the water is lost when treating for disinfection and air is admitted to the unit being tested, or if any repair procedure results in contamination of the unit, disinfection shall be re-accomplished by the Contractor at no additional cost.
- F. After the pipeline has been completed, water shall be turned on and the line flushed. After having been properly flushed; valves will be closed and the line subjected to the full water pressure or 60lbs. above a normal operating pressure after said pipeline is placed in service. If any leakage be visible at the joints or along the line, the defects shall be repaired and made tight. A time test shall then be applied for any pipeline section, at the required pressure, for a period of time to be specified by the Engineer, but not less than a 2-hour duration.
- G. If the rate of leakage, during test, should exceed the requirements of the BCI Authority, the Contractor shall do such work as may be necessary to bring the leakage within allowable limits, by cutting out and replacing any broken section of

pipe, repairing or repouring defective joints, or any other work necessary to correct defects causing such leakage. All materials required and all work necessary in repairing or correcting leaks shall be paid for by Contractor. Installation and testing of water lines shall meet AWWA C 600-99.

3.18 DISINFECTION

- A. Description: Disinfection shall be conducted on the water supply system in general conformance with AWWA C651-99 and MMA rules and regulations.
- B. Treated water shall be retained in the pipe long enough to destroy all nonsporeforming bacteria. This period should be at least 48 hours and preferably longer, as may be directed by the Owner. After the chlorine-tested water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points should be at least 25 ppm.
- C. Following disinfection, all treated water shall be thoroughly flushed from the newly laid pipe line at its extremities until replacement water throughout its length shall, upon test, show a residual chlorine content of not more than 0.5 ppm.
- D. Upon attainment of a 0.5 ppm chlorine residual reading, the Contractor shall collect and transport three (3) water samples to an approved laboratory where they shall be analyzed for coliform bacteria. Should the waterline be over 1,000 feet in length, the Contractor shall be required to obtain three (3) water samples for analysis at each point of not more than 1,000 feet apart. The analytical results shall indicate that all samples were completely free of coliform bacteria. A complete written analysis report shall be provided to the Owner in accordance with the Submittals section of these Specifications indicating:

Coliform Densities
Date and Hour Samples Collected
Date and Hour Samples Tested
Analytical Method Employed

- E. Should the initial treatment fail to result in the conditions specified in the above paragraphs, disinfection procedure shall be repeated, at no additional cost to the Owner, until such results are obtained and are satisfactory in the opinion of the Owner.
- F. All expenses and costs incurred in carrying out the specified disinfection work including disinfectants, suitable disposal of chlorinated test water, test equipment and laboratory testing shall be included in the cost of installing the waterlines.
- G. The Owner reserves the right to direct the Contractor to provide material and labor as is necessary to channel the discharge of flushing water, disinfection solution and testing water to a drainage structure if, in the opinion of the Owner, the unrestricted discharge of said liquids causes an undesirable or hazardous condition.

3.19 CLEANUP

- A. After the pipe has been laid and the trench has been backfilled, any earth, rock or any other surplus material shall be removed and material distributed or disposed of as directed by the Owner. All material not used in the laying of the pipeline shall be returned by the Contractor to the Warehouse or to the stockyard of the BCI Authority.
- B. The clean-up work shall follow the laying of the pipeline. It shall include the replacing of fences, sidewalks, driveways, highway guard rails, replacing of top soil where required and such other work as is necessary to leave the site of the work in a clean and workmanlike manner. The BCI Authority's Engineer or Inspector shall be the sole judge as to the clean-up work required. Where work is performed in or along a public thoroughfare all rules and regulations of the public body having jurisdiction shall be fully complied with.
- C. In the event the clean-up work is not being performed by the Contractor in a manner satisfactory to the BCI Authority, the Contractor shall be notified in writing to correct the unsatisfactory condition and upon his failure to do so within five (5) days from the date of the notice, the Contractor hereby authorizes the BCI Authority to have the work performed by others at the Contractor's expense.

END OF SECTION 33 31 13