

# 73

**Letting September 22, 2023**

## **Notice to Bidders, Specifications and Proposal**



**Contract No. 89767  
PEORIA County  
Section 18-00377-00-SP (City Of Peoria)  
Routes FAU 6673 & FAU 6674 (Jefferson Ave. & Adams**

**St.)**

**Project 1CDZ-284 ()  
District 4 Construction Funds**

Prepared by

Checked by

F





- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. September 22, 2023 at which time the bids will be publicly opened from the iCX SecureVault.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 89767  
PEORIA County  
Section 18-00377-00-SP (City Of Peoria)  
Project 1CDZ-284 ()  
Routes FAU 6673 & FAU 6674 (Jefferson Ave. & Adams St.)  
District 4 Construction Funds**

**Conversion of Jefferson Avenue and Adams Street to Two-Way Traffic, from Walnut Street to Fayette Street in Peoria.**

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.  
  
(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to re-advertise the proposed improvement, and to waive technicalities.

By Order of the  
Illinois Department of Transportation

Omer Osman,  
Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2023

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-22) (Revised 1-1-23)

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## BDE SPECIAL PROVISIONS

The following special provisions indicated by an "X" are applicable to this contract. An \* indicates a new or revised special provision for the letting.

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099	120	<input checked="" type="checkbox"/> Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2022
80274		<input type="checkbox"/> Aggregate Subgrade Improvement	April 1, 2012	April 1, 2022
80192		<input type="checkbox"/> Automated Flagger Assistance Device	Jan. 1, 2008	April 1, 2023
80173		<input type="checkbox"/> Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80426	122	<input checked="" type="checkbox"/> Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	Jan. 1, 2022
80436	124	<input checked="" type="checkbox"/> Blended Finely Divided Minerals	April 1, 2021	
80241		<input type="checkbox"/> Bridge Demolition Debris	July 1, 2009	
50531		<input type="checkbox"/> Building Removal	Sept. 1, 1990	Aug. 1, 2022
50261		<input type="checkbox"/> Building Removal with Asbestos Abatement	Sept. 1, 1990	Aug. 1, 2022
* 80449	125	<input checked="" type="checkbox"/> Cement, Type II	Aug. 1, 2023	
80384	126	<input checked="" type="checkbox"/> Compensable Delay Costs	June 2, 2017	April 1, 2019
80198		<input type="checkbox"/> Completion Date (via calendar days)	April 1, 2008	
80199		<input type="checkbox"/> Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80261		<input type="checkbox"/> Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80434		<input type="checkbox"/> Corrugated Plastic Pipe (Culvert and Storm Sewer)	Jan. 1, 2021	
80029	130	<input checked="" type="checkbox"/> Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Mar. 2, 2019
80229		<input type="checkbox"/> Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80447		<input type="checkbox"/> Grading and Shaping Ditches	Jan 1, 2023	
80433	140	<input checked="" type="checkbox"/> Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	Jan. 1, 2022
80443		<input type="checkbox"/> High Tension Cable Median Barrier Removal	April 1, 2022	
* 80446		<input type="checkbox"/> Hot-Mix Asphalt – Longitudinal Joint Sealant	Nov. 1, 2022	Aug. 1, 2023
80438		<input type="checkbox"/> Illinois Works Apprenticeship Initiative – State Funded Contracts	June 2, 2021	Sept. 2, 2021
80045		<input type="checkbox"/> Material Transfer Device	June 15, 1999	Jan. 1, 2022
* 80450		<input type="checkbox"/> Mechanically Stabilized Earth Retaining Walls	Aug. 1, 2023	
80441	142	<input checked="" type="checkbox"/> Performance Graded Asphalt Binder	Jan 1, 2023	
* 80451	147	<input checked="" type="checkbox"/> Portland Cement Concrete	Aug. 1, 2023	
34261		<input type="checkbox"/> Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2022
80445		<input type="checkbox"/> Seeding	Nov. 1, 2022	
80448	148	<input checked="" type="checkbox"/> Source of Supply and Quality Requirements	Jan. 2, 2023	
80340		<input type="checkbox"/> Speed Display Trailer	April 2, 2014	Jan. 1, 2022
80127		<input type="checkbox"/> Steel Cost Adjustment	April 2, 2014	Jan. 1, 2022
80397	149	<input checked="" type="checkbox"/> Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	150	<input checked="" type="checkbox"/> Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
80437	151	<input checked="" type="checkbox"/> Submission of Payroll Records	April 1, 2021	Nov. 1, 2022
80435		<input type="checkbox"/> Surface Testing of Pavements – IRI	Jan. 1, 2021	Jan. 1, 2023
80410		<input type="checkbox"/> Traffic Spotters	Jan. 1, 2019	
20338	153	<input checked="" type="checkbox"/> Training Special Provisions	Oct. 15, 1975	Sept. 2, 2021
80429		<input type="checkbox"/> Ultra-Thin Bonded Wearing Course	April 1, 2020	Jan. 1, 2022
80439	156	<input checked="" type="checkbox"/> Vehicle and Equipment Warning Lights	Nov. 1, 2021	Nov. 1, 2022
80440		<input type="checkbox"/> Waterproofing Membrane System	Nov. 1, 2021	
80302	157	<input checked="" type="checkbox"/> Weekly DBE Trucking Reports	June 2, 2012	Nov. 1, 2021
80427	158	<input checked="" type="checkbox"/> Work Zone Traffic Control Devices	Mar. 2, 2020	
80071		<input type="checkbox"/> Working Days	Jan. 1, 2002	

## **STATE OF ILLINOIS SPECIAL PROVISIONS**

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction”, Adopted January 1, 2022, the latest edition of the “Manual on Uniform Traffic Control Devices for Streets and Highways”, and the “Manual of Test Procedures of Materials” in effect on the date of invitation of bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of Jefferson Avenue and Adams Street HSIP Two-Way Conversion and, Section 18-00377-00-SP, in the City of Peoria, Peoria County. In case of conflict with any part, or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

### **LOCATION OF PROJECT**

The project is located on Jefferson Avenue, Adams Street, and Kumpf Boulevard in Peoria, Peoria County (T8N, R8E, Section 9), Illinois. The project limits are from approximately Walnut Street to Fayette Street.

### **DESCRIPTION OF PROJECT**

The Jefferson Avenue and Adams Street HSIP Two-Way Conversion project consists of hot mix surface removal, HMA overlay, corner bump-out and ADA ramp improvements, traffic signals, and associated work items. Improvements include median removal, concrete base course widening, pavement patching, concrete sidewalk, concrete curb and gutter, drainage improvements, and all incidental items shown in the plans and as described in these Special Provisions.

### **CONTACT INFORMATION**

The City of Peoria’s Project Manager is Mandy Mooberry. She can be reached at (309) 208-0620.

### **PROSECUTION AND PROGRESS OF WORK**

Special attention is called to Section 108 of the "Standard Specifications for Road and Bridge Construction," and specifically to Article 108.03, which states that the Contractor shall notify the City at least twenty-four (24) hours in advance of either discontinuing or resuming operations. If a City representative is not on the job and notification as required has been given, the Contractor in charge of the work shall immediately notify the City, that work has been resumed and request that the City representative in charge of the work be notified.

Work performed without proper notification to the City as indicated herein may be rejected by the City and no compensation will be made for said work. In addition, the Contractor may be required to remove the item of construction at its own expense and replace the item of construction in accordance with the specifications.

### **COMPLETION DATE**

The completion date for this project is June 30, 2026.

The assessment of liquidated damages in accordance with Article 108.09 of the Standard Specifications shall be defined with respect to the following interim completion date and final completion date for the project.

The Kumpf/Adams intersection and Adams Street from Walnut to Kumpf shall be completed as soon as possible. Construction operations to be performed during this period shall include all work necessary to complete removals; install underground utilities, construct all pavements, curbs, sidewalks, signals, and pavement marking as shown in the plans, and other work necessary to open this leg of road to two-way traffic in conjunction with the re-opening of the Bob Michel Bridge. This work does not include removal of the eastbound left turn lane from Kumpf Boulevard to Adams Street.

Interim Completion Date. All other work except the mill and overlay and final striping shall be complete by November 21, 2025. Construction operations to be performed during this period shall include all work necessary to complete removals; install underground utilities, construct all pavements, curbs, sidewalks, and signals as shown in the plans, and other work necessary. The full amount of liquidated damages as specified herein will be assessed per calendar day should the Contractor fail to complete the specified work on or before midnight November 21, 2025.

During winter shutdown, both Adams Street and Jefferson Avenue shall have two lanes of traffic open, unless otherwise approved by the Engineer.

Final Completion Date. Final Mill and overlay and striping, except on Adams from Walnut to Kumpf, required to open facilities to two-way traffic shall be completed by midnight, June 30, 2026. No additional working days will be allowed. The full amount of liquidated damages as specified herein shall be assessed per calendar day should the Contractor fail to complete the specified work on or before June 30, 2026.

The provisions for completion date shall be as set forth in Section 108 of the Standard Specifications. All applicable provisions of Section 108 shall apply. The Contractor shall note that these completion dates are based on an expedited work schedule.

### **PROJECT SCHEDULE**

A Project Schedule indicating project milestones as required by Section 108 of the Standard Specifications shall be submitted to the Engineer before construction can begin on a project. Schedules shall be updated as requested by the City.

### **CONSTRUCTION ON PRIVATE PROPERTY**

Whenever excavation is made within a temporary or permanent construction easement, including tree planting easements, on private property for driveways, sidewalks, steps, retaining walls, utility connections, tree plantings or other construction, the topsoil disturbed by the excavation operations shall be restored as nearly as possible to its original position and the whole area involved in the construction operation shall be left in a neat and presentable condition. The Contractor shall use reasonable care to avoid disturbing portions of private property not necessary to the construction operations. If, in the judgment of the Engineer, areas are disturbed unnecessarily, the Contractor shall restore these areas at his own expense. The Contractor shall not pile excavated material outside the limits of the Right-of-Way upon adjacent private property without the written consent of the property owner and the Engineer. The cost of compliance with this Special Provision will not be paid for separately but shall be considered, as included in the various pay items of the contract and no additional compensation will be allowed.

### **DAMAGE TO EXISTING TREES**

All necessary precautions shall be taken to prevent damage to existing trees. Precautions shall be taken to prevent damage to the bark, branches and foliage of existing trees by machinery or other means. Any damage shall be corrected as directed by the City at the expense of the Contractor.

### **EXISTING UNDERGROUND FACILITIES**

The City of Peoria assumes no responsibility for the presence, specific size or location of underground distribution systems of the several public utility corporations. No responsibility for the protection of said underground systems will be assumed by the City of Peoria. If such protection is found to be necessary for water mains, gas mains, steam mains, underground electrical distribution systems, underground telephone circuit systems or any other underground systems of non-city Ownership, the cost of same, in whole or in part, is disclaimed of the City of Peoria.

### **COOPERATION WITH UTILITY COMPANIES**

It is understood and agreed that the Contractor has considered, in their bid, all the permanent and temporary utility appurtenances in their present or relocated positions and that no additional compensation will be allowed for any delays, inconvenience or damage sustained by the contractor due to any interference from the said utility appurtenances or the operations of moving them. All telephone, cableway, fiber, gas, water and wire lines, within the limits of the proposed construction owned by various utility companies, are to be moved by the owners of the utility involved at the owner's expense.

## **NOTIFICATION OF UTILITIES PRIOR TO CONSTRUCTION**

All utility companies must be notified, in writing, by the Contractor at least one (1) week in advance prior to starting construction. All utility companies must be notified so that they may have personnel on the job site to assist in locating their utility lines and avoid damage to their utilities. A copy of the letter notifying the utility companies of the Contractor's intention to start work must be received by the City of Peoria Engineering Department before he will be permitted to start construction.

## **J.U.L.I.E. SYSTEM**

The J.U.L.I.E. (Joint Utility Locating Information for Excavators) must be notified prior to starting construction so that the respective utilities may have adequate time to locate and mark their underground facilities. Phone: 1-800-892-0123. The following information may be requested by J.U.L.I.E.:

County Name: Peoria  
Township Name: Peoria  
Section Number: 9, T8N, R8E

## **LOCATION OF UNDERGROUND STATE MAINTAINED FACILITIES**

Effective: August 3, 2007 Revised: July 31, 2009

The Contractor shall be responsible for locating existing and proposed IDOT electrical facilities (traffic signal, overhead lighting, Intelligent Transportation System, etc.) prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for existing electrical facilities from the Department.

The Contractor shall also be responsible for locating and providing protection for IDOT facilities during all phases of construction. If at any time the facilities are damaged, the Contractor shall immediately notify the Department and make all necessary arrangements for repair to the satisfaction of the Engineer. This work will not be paid for separately but shall be included in the contract bid price.

## **UTILITIES – LOCATIONS/INFORMATION ON PLANS**

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines, and other utilities as shown on the plans are based on field investigation and locations provided by the utility companies, but they are not guaranteed. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

**STATUS OF UTILITIES/UTILITIES TO BE ADJUSTED**

Effective: January 21, 2005

Revised: January 1, 2022

The following utilities are located within the project limits. For relocations, the utility companies have provided the estimated dates.

Name, Contact, Address And Phone Number of Utility	Type	Location	Relocation Needed	Estimated Date Relocation <u>Completed</u>
Ameren Electric Samantha Carlyle (309)693-4715	Underground duct		No work anticipated	
Ameren Gas Elizabeth Cooke (309)401-9000	Underground	Various	Valve Adjustments	During Construction
AT&T William Conover (309)550-8043	Underground			
Comcast Mark Wabel (309)303-2037	Underground			
GPSD Travis Griffin (309) 678-9035	Underground	Various	Manhole Adjustments	During Construction
Illinois American Water Trip Barton (309)566-4148	Underground	Various	Valve Adjustments Only	During Construction
I3 Broadband Lukas Dye (309)670-0400	Underground		No Work Anticipated	
Stratus Network Butch Forkell (309)696-6349	Underground			

The above represents the best information of the Department and is only included for the convenience of the bidder. Articles 105.07, 107.20 and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply. The estimated utility relocation dates should be part of the progress schedule submitted by the Contractor. If any utility adjustments or relocations have not been completed by the above dates specified and when required by the Contractor's operations after these dates, the Contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's critical path schedule is affected.



## **ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION**

All removal items and excavated material remain the property of the City of Peoria unless the City indicates a desire to the Contractor that they should dispose of the removed items and/or excavated material outside the limits of the improvement as the Contractor may provide. Should the City desire to keep the removed items and/or excavated material and have it disposed of at a location outside the improvement limits, the Contractor shall haul to the City's designated disposal site, provided the disposal site is within the limits of the City of Peoria. The cost of salvaging removed items and/or excavated material, as outlined herein, will not be paid for separately, but the cost shall be included in the contract unit price of the construction item involved. All waste sites shall be approved in accordance with Article 107.22 of the Standard Specifications.

## **SALVAGING EXISTING MATERIALS**

All existing municipally owned street castings, frames and grates on inlets and manholes, signs and posts in usable condition within the limits of the improvement shall, if not required for further use in the construction of the improvement, be carefully excavated and preserved by the Contractor. Said street castings, frames and grates on inlets and manholes, signs and posts if desired by the City, shall be picked up and hauled from the job site by the City or the Contractor shall deliver such items to a location (within the City limits) determined by the City.

The overhead sign truss and sign panels on Adams Street west of Kumpf Boulevard shall be salvaged to the City unless otherwise directed by the Engineer.

The cost of salvaging existing municipally owned street castings, frames and grates on inlets and manholes, signs and posts, as outlined herein, will not be paid for separately, but the cost shall be included in the contract unit price for the item of construction involved.

## **CONSTRUCTION SEQUENCE AND SCHEDULE**

The Contractor shall prepare a progress schedule as required by Section 108 of the Standard Specifications. The Contractor shall coordinate items of work in order to keep hazards, traffic inconvenience and limited access to businesses along the corridor to a minimum. In particular, construction shall be staged as shown on the plans and as listed below to meet the following requirements:

- Temporary Erosion control items shall be installed before work begins on any part of the project.
- Prior to the start of any work, the City of Peoria shall be contacted, two weeks in advance, to inform them of the beginning date of construction. Construction staging shall be implemented according to plans or as agreed to by the City Engineer.

A construction progress schedule indicating project milestones shall be completed and strictly adhered to by the Contractor unless a request to modify the schedule is submitted in writing and approved by the Engineer.

## **TRAFFIC CONTROL AND PROTECTION (SPECIAL)**

### **CHANGEABLE MESSAGE SIGN**

This work shall consist of providing the necessary traffic control personnel and devices and the installation, maintenance, relocation and removal of these devices during construction of the improvement.

### **TRAFFIC CONTROL PLAN**

Traffic control shall be in accordance with the applicable sections of the "Standard Specifications for Road and Bridge Construction," the applicable guidelines contained in the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways," these Special Provisions, and any special details and Highway Standards contained herein and in the plans.

Special attention is called to Articles 107.09 and 107.14 and Sections 701 through 705 of the SSRBC and the traffic control related Highway Standards shown in the plans; Supplemental Specifications and Recurring Special Provisions; BDE Special Provisions; and Other Special Provisions relating to Traffic Control.

Highway Standards: 701011, 701101, 701301, 701311, 701427, 701501, 701502, 701601, 701606, 701611, 701701, 701801, and 701901

#### Special Provisions

LRS 3                      Work Zone Traffic Control Surveillance  
LRS 4                      Flaggers in Work Zones apply.

### **Traffic/Access:**

The contractor is required to:

- Provide aggregate for temporary access at vehicle entrances.
- Maintain traffic on all roads during construction. Plans indicate the minimum number of lanes and directions for various stages of work.
- Adams Street from Walnut Street to Kumpf Boulevard shall be marked and ready to open to two-way traffic as soon as possible. Removal of the Kumpf Boulevard eastbound left turn lane to northbound Adams Street shall occur near the end of the project once Jefferson Avenue is opened to two-way traffic to allow for northbound access into the downtown area.

### **Maintenance of Traffic**

The conveyance of thru and local traffic within and around the construction zone shall be provided for in accordance with the Plan Details noted above and the use of the

above referenced Highway Standards as directed by the Engineer. Except as otherwise provided herein, the Contractor shall provide at least one entrance/exit point to properties at all times. The Contractor shall maintain one way traffic on Adams Street and Jefferson Avenue with two 11 foot wide lanes until the roadway is ready to open to two-way traffic. Cross streets shall maintain one 11 foot lane in each direction except Fulton Street which may be restricted to a single lane of travel heading from Jefferson Avenue towards Madison Street after the first corner bump out is constructed on that leg of the intersection.

With the approval of the Engineer, the Contractor may modify the suggested construction sequence and traffic control procedures as shown. The Contractor shall submit their proposed sequence of operations and any necessary revisions to traffic control to the Engineer for approval before actual construction operations begin.

Existing pavement markings that conflict with each stage of construction shall be removed and restored at the completion of each stage. Temporary and short-term pavement markings shall be installed at locations shown on the plans and in accordance with the plan details and IDOT Highway Standards.

Temporary crosswalk markings shall be installed after the overlay has been placed until permanent markings can be installed.

#### Temporary Traffic Signals

During construction, a combination of existing traffic signals and temporary traffic signals shall be used at all existing signalized intersections. Existing non signalized intersections shall maintain existing stop sign control. This work will be paid at the contract unit price per EACH for TEMPORARY TRAFFIC SIGNAL INSTALLATION.

#### Driveways

Except where the plans expressly authorize temporary complete closures, the Contractor shall keep driveways open to local traffic by keeping at least half of the width of said driveway open or by providing access at a temporary location, as approved by the Engineer. The Contractor shall provide and maintain access to commercial and private properties abutting the roadway being improved in accordance with Article 107.09 of the Standard Specifications. Access to commercial property shall, at no time, be shut off completely except as expressly authorized in the plans. At no time shall a driveway be closed for no more than 1 hour. An estimated quantity of AGGREGATE FOR TEMPORARY ACCESS has been included in the plans for use in the conveyance of local traffic and the provision of temporary access.

Construction of driveway entrances shall be completed within 5 consecutive days before or after construction of mainline pavement in front of the driveway. This is necessary in order to accommodate vehicle turning movements in and out of the driveways after completion of construction on, and in front of, their properties thus eliminating the need for closure of these facilities twice, i.e., once for mainline pavement construction and

again for the entrance or side road construction. Closures shall be coordinated with property owners to minimize disruptions to normal driveway use.

#### Removing and Resetting Traffic Signs

This work shall consist of the removal, relocation, and resetting of traffic signs which interfere with construction operations. This work shall also include the removal, relocation, and resetting of existing posts, delineators and other miscellaneous signs which interfere with construction operations. This work shall be performed in accordance with the applicable portions of Article 107.25 of the Standard Specifications and as directed by the Engineer. The contractor shall remove, temporarily relocate and/or permanently reset existing signs which interfere with the construction operations. This work will not be paid for separately but shall be included in the contract lump sum price of TRAFFIC CONTROL AND PROTECTION, (SPECIAL). The Engineer will determine which signs will be removed, temporarily relocated and permanently reset. Before the completion of each construction stage, the Contractor shall install traffic and street name signs in accordance with the signing plan.

#### Traffic Control Surveillance

Traffic control surveillance will be required, but will not be paid for separately on this project. The special provision check sheet LRS 3 "Work Zone Traffic Control Surveillance" will apply for the inspection of traffic control devices on this project along with the following additional requirements. The minimum frequency of worksite inspections by the Contractor shall be defined as daily unless directed otherwise by the Engineer. The person responsible for surveillance shall complete an inspection form, furnished by the Engineer, on a daily basis. The completed form shall be given to the Engineer on the first working day after the inspection.

#### Construction Signs

All signing for traffic control shall meet current IDOT policy for retro-reflectivity requirements.

Construction signs referring to daytime lane closures during working hours shall be removed, covered or turned away from the view of motorists during non-working hours. Flashing lights shall be used on each approach in advance of the work area, and in accordance with the details shown on the Plans and Standard Drawings.

All provisions of Article 107.25 of the Standard Specifications shall apply except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish, and replace at his/her own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party."

All advance-warning signs shall be in new or like new condition at the start of the project. If an advanced warning sign is damaged or becomes unreadable, the sign shall be replaced by a new or like new sign.

Temporary stop signs shall be post mounted and not placed on type II barricades. Signs shall be mounted at the standard heights noted in the standard details. This work

will not be paid for separately but shall be included in the contract lump sum price of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Solar Powered Changeable Message Signs

Changeable message signs shall be placed at each end of the improvements for two weeks before construction begins. Changeable message signs shall be furnished, placed and maintained in accordance with the "Stage Construction and Maintenance of Traffic Plans" and Section 701 of the Standard Specifications. All changeable message signs to be used on this project shall be solar powered. This work will be paid at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN.

#### Solar Powered Arrow Boards

Arrow boards shall be used as required by the Standards and as directed by the Engineer. All arrow boards to be used on this project shall be solar powered. Any additional cost in meeting this requirement shall be considered as included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Placement and Removal of Signs and Barricades

Placement of all signs and barricades shall proceed in the direction of flow of traffic. Removal of all signs and barricades shall start at the end of the construction areas and proceed toward oncoming traffic unless otherwise directed by the Engineer.

#### Public Safety and Convenience

The Contractor shall provide a telephone numbers, utilizing IDOT Form BSPE 725, where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall dispatch personnel, materials and equipment to correct any such deficiencies. The Contractor shall respond to any call from the Engineer or government agencies concerning any request for improving or correcting traffic control devices and begin making the requested repair within **two (2) hours** from the time of notification.

When traveling in lanes open to public traffic, the Contractor's vehicles shall always move with and not against or across the flow of traffic. These vehicles shall enter or leave work areas in a manner which will not be hazardous to, or interfere with, traffic and shall not park or stop except within areas designated by the Engineer.

Personal vehicles will not be allowed to park within the right-of-way. The Contractor shall provide for off-site parking of his/her personal vehicles.

The Contractor shall maintain entrances and side roads along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused to the Contractor by complying with these requirements shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Flaggers

Remove last sentence of Article 701.20 (i).

Flaggers shall be provided in accordance with Article 701.13 of the Standard Specifications during all milling, priming, paving, median work, and any activities which place the contractor's equipment or personnel within 10 feet of active traffic. Any additional cost in meeting this requirement shall be considered as included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Temporary Ramps

At the end of each work day, and as directed by the engineer, temporary ramps shall be placed in accordance with Article 406.08 of the Standard Specifications to address elevation differences in pavement at entrances and intersections. Temporary ramps may also include rubber mats placed at mill joints. Temporary ramps shall not be removed until the day on which new pavement will be placed unless otherwise approved by the engineer. Placement and removal of Temporary Ramps will not be paid for separately but shall be included in the contract lump sum price of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Construction Access

The Contractor shall present a plan of the access that will be used during construction of said project by the Contractor or Subcontractor to the Engineer at the time of the Pre-Construction Meeting. The Engineer and Contractor shall both examine the plan noting any areas of concern before construction begins.

Upon completion of the project, the Engineer shall examine the streets prior to approving final payment to the Contractor. Any areas that have been damaged, due to construction activity, shall be repaired by the Contractor to the satisfaction of the Engineer. When work is complete, the Contractor shall arrange, within a reasonable time period, to clean up and restore areas where equipment or material has been stored on the right-of-way or easement. This work shall be included in the cost of the contract.

The Engineer may restrict the movement of construction vehicles on the completed surface in order to prevent damage to these surfaces.

#### Contractor Access

At road closure locations where Type III barricades are installed in a manner that will not allow Contractor access to the project without relocation of one or more of the barricades, the arrangement of the barricades at the beginning of each work day may be relocated, when approved by the Engineer, in the manner shown on Highway Standard 701901 for Road Closed to Through Traffic. "Road Closed" signs (R11-2), supplemented by "Except Authorized Vehicles" signs (R3-I101), shall be mounted on both the near-right and far-left barricade(s). At the end of each work day, the barricades shall be returned to their in-line positions. This work will be included in the cost of the contract, and no extra compensation will be allowed.

#### Pedestrian Sidewalk Control

The Contractor shall install, maintain, and remove necessary signs, fences and barricades needed to direct pedestrians to usable sidewalks and walkways during the construction, and as directed by the Engineer. Temporary chain link fences (6 foot tall

minimum) shall be erected along the edge of sidewalks to prevent pedestrians from entering the work zone as directed by the Engineer. The cost of installing, maintaining, and removing the signs, fences and barricades shall be considered as included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

At each point of closure, a sufficient number of barricades shall be used to completely close the sidewalk to pedestrian movement. Where construction activities involve sidewalks on both sides of the street, the work shall be staged so that both are not out of service at the same time.

#### Brooming of Pedestrian Routes

All pedestrian routes which are closed during construction operations shall be broomed or swept free of all loose gravel or construction debris before the pedestrian routes are reopened. All pedestrian route surface conditions shall be approved by the Engineer before they are opened. This work will not be paid for separately but shall be considered included in the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Impact to On Street Parking

On street parking should generally be maintained as much as practicable during construction. Parking adjacent to active work zones may be closed beyond the limits required by the current stage of work with prior approval of the Engineer. Parking shall be restored once the bump out under construction is reopened to pedestrian traffic. Closure of parking may only occur along the block faces currently under construction and may not occur on opposite sides of the same block at the same time. Space for deliveries to businesses near the closure should be coordinated with the property/business owners and Engineer prior to closure.

The cost of complying with these requirements shall be considered as included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

Basis of Payment. All work described and referenced herein shall be measured and paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). This price shall be considered payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish, install, relocate, maintain and remove all traffic control devices as required by the traffic control plan and as directed and approved by the Engineer, for the duration of the contract. No separate payment will be made for complying with the provisions of the listed Highway Standards. Article 701.20 of the Standard Specifications is revised in that no additional payment will be made for furnishing, installing, maintaining, and removing additional traffic control devices or signs from those shown on the plans or as directed by the Engineer.

The cost of furnishing, placing, compacting, maintaining, removing, and disposing of coarse aggregate for temporary driveways will be paid for at the contract unit price per ton of material furnished for AGGREGATE FOR TEMPORARY ACCESS.

The portable changeable message signs will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN, which work shall include furnishing, installing, maintaining, replacing, relocating and removing all portable changeable message signs as directed by the Engineer.

### **COORDINATION WITH OTHER CONTRACTORS**

The Illinois Department of Transportation has an ongoing project on the Bob Michel Bridge (IL 40) over the Illinois River starting at Adams Street. The roadway contractor will need to coordinate work along Kumpf Boulevard, especially the intersection of Adams Street and Kumpf Boulevard.

The City of Peoria has an ongoing project for Wayfinding throughout Downtown Peoria. The roadway contractor will need to coordinate work at sign locations along Adams Street and Jefferson Avenue.

The cost for coordination between contractors will not be paid for separately but shall be included in the cost of the contract.

### **EARTHWORK**

Description. Earth excavation and embankment to the proposed subgrade will not be measured separately but shall be considered included in the various pay items in the contract.

Backfilling shall be made with an approved material and compacted in accordance with Article 205.06.

Topsoil shall be removed and stored for reuse before placement of embankment or other improvements.

### **PROOF ROLLING**

Description. This work shall consist of proof rolling the subgrade with a fully loaded tandem axle dump truck and driver at the direction of the Engineer. The truck shall travel the subgrade in all of the proposed lanes of traffic in the presence of the Engineer. This work will not be measured separately but shall be considered included in the various pay items in the contract.

### **REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES**

Description. This work shall consist of the removal and disposal of regulated substances according to Section 669 of the Standard Specifications as revised below.



Contract Specific Work Areas. The excavated soil and groundwater within the work areas listed below shall be managed as either “uncontaminated soil”, hazardous waste, special waste or non-special waste. For stationing, the lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit, whichever is less.

Soil Disposal Analysis. When the waste material requires sampling for landfill disposal acceptance, the Contractor shall secure a written list of the specific analytical parameters and analytical methods required by the landfill. The Contractor shall collect and analyze the required number of samples for the parameters required by the landfill using the appropriate analytical procedures. A copy of the required parameters and analytical methods (from landfill email or on landfill letterhead) shall be provided as Attachment 4A of the BDE 2733 (Regulated Substances Final Construction Report). The price shall include all sampling materials and effort necessary for collection and management of the samples, including transportation of samples from the job site to the laboratory. The Contractor shall be responsible for determining the specific disposal facilities to be utilized; and collect and analyze any samples required for disposal facility acceptance using a NELAP certified analytical laboratory registered with the State of Illinois.

The following contract specific work areas shall be monitored by the Environmental Firm for soil contamination and workers protection.

**ISGS Site 3829-2 – Caterpillar, 501 SW Jefferson Avenue, Peoria, Peoria County**

- Station 267+29.33 to Station 1011+72.07. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-3 – Peoria Civic Center, 201 SW Jefferson Avenue, Peoria, Peoria County**

- Station 1012+09.37 to Station 1012+33.88. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-4 – Caterpillar Parking Lot, 520 SW Jefferson Avenue, Peoria, Peoria County**

- Station 267+07.38 to Station 1010+09.70. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-5 – Big Al's, 400 SW Jefferson Avenue, Peoria, Peoria County**

- Station 1010+44 to Station 268+98.85. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-7 – Myah’s Just 4 Kids Learning, 415 SW Adams Avenue, Peoria, Peoria County**

- Station 1007+00 to Station 168+00. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-9 - Peoria Park District Rock Island Greenway, 400 block of SW Adams Street, Peoria, Peoria County**

- Station 1005+30.46 to Station 169+07.91. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-10 – The Hot Spot, 416 SW Adams Street, Peoria, Peoria County**

- Station 169+07.91 to Station 169+23.94. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-11 – Quinn, Johnston, Henderson Pretorious and Cerulo Law Firm, 227 NE Jefferson Street, Peoria, Peoria County**

- Station 294+16.31 to Station 1605+57.20. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-13 – Commercial Building, 228 NE Jefferson Street, Peoria, Peoria County**

- Station 294+63.45 to Station 1604+00. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-14 – ROW, 200 Block of Fayette Street, Peoria, Peoria County**

- Station 1603+69.84 to Station 295+67.00. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-15 – Peoria County Courthouse, 324 Main Street, Peoria, Peoria County**

- Station 1286+03.99 to Station 290+63.63. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.
- Station 185+78 to Station 2190+35.12. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.
- Station 1404+13.30 to Station 1408+67.05. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.
- Station 1504+01.28 to Station 1508+60.37. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-16 – De Kroyft-Metz & Company, 201 NE Adams Street, Peoria, Peoria County**

- Station 1505+00 to Station 191+04. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-17 – Caterpillar Administration Building, 100 NE Adams Street, Peoria, Peoria County**

- Station 1403+14.76 to Station 186+72.84. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.
- Station 189+49.27 to Station 1501+33.88. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

**ISGS Site 3829-18 – Caterpillar Administration Building East, 200 NE Adams Street, Peoria, Peoria County**

- Station 1503+00 to Station 191+06.58. The Engineer has determined this material meets the criteria of and shall be managed in accordance to Article 669.05(a)(5).  
Contaminants of concern sampling parameters: PCBs, VOCs, SVOCs, and Metals.

Work Zones

Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites: None

Additional information on the contract specific work areas listed above collected during the regulated substances due-diligence process is available through the District's Environmental Studies Unit (DESU).

**REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PESA REC Site)**

Description.

This work shall consist of the removal and disposal of regulated substances according to Section 669 of the Standard Specifications as revised below.

Contract Specific Sites. The excavated soil and groundwater within the areas listed below shall be managed as either "uncontaminated soil", hazardous waste, special waste or non-special waste. For stationing, the lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit, whichever is less.

### **PESA REC Site #19– 203 NE Jefferson Street, Peoria, Peoria County**

Station 290+92.19, 62.12 LT to Station 291+73.20, 52.29 LT (203 NE Jefferson Street, northeast corner of Jefferson Street and Hamilton Street) (PESA REC Site #19, boring S1) - The engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameters include: mercury.

Work Zones. Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites: **None.**

Additional information on the above sites collected during the Phase I Engineering process is available through the District's Environmental Studies Unit (DESU).

### **STORM SEWER REMOVAL**

Description. This work shall consist of the removal and disposal of existing storm sewers at the locations shown on the plans in accordance with Section 551 of the Standard Specifications and as directed by the Engineer.

Storm sewer materials determined not to be salvageable by the Engineer shall be disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications. Excavations resulting from the removal of the pipe culverts and storm sewers that result in holes within two feet of paved surfaces shall be backfilled with controlled low-strength material. Controlled low-strength material shall not be paid for separately but shall be included in the contract unit price per foot for STORM SEWER REMOVAL, of the diameter specified. Where existing storm sewer that connect to an existing drainage structure to remain in place are removed, any holes left by removing the storm sewer shall be plugged as directed by the engineer.

Basis of Payment. This work will be measured for payment and paid for at the contract unit price per foot for STORM SEWER REMOVAL, of the diameter specified, which price shall be considered payment in full for all labor, equipment, and materials required for the satisfactory removal and disposal of the existing storm sewers.

### **REMOVING INLETS**

Description. This work shall consist of removal and disposal of existing inlets at locations shown on the plans in accordance with Section 605 of the Standard Specifications and as directed by the Engineer. Where existing storm sewer will remain,

but is not reconnected to the system, the pipes shall be plugged or capped as directed by the Engineer. No additional compensation will be allowed.

### **CONNECTION INTO PROPOSED DRAINAGE STRUCTURES**

Description. This work shall consist of furnishing all labor, material, and equipment necessary to satisfactorily complete the connection of existing storm sewer into proposed drainage structures as shown in the plans and as determined by the Engineer.

At locations where proposed drainage structures are to be placed at the end of existing storm sewer lines or on existing storm sewer lines, storm sewer removal may be required for installation of the proposed structure. The cost of storm sewer removal shall be included in the proposed drainage structure item to be constructed and no additional compensation will be allowed.

### **CONNECTION INTO EXISTING DRAINAGE STRUCTURES**

Description. This work shall consist of furnishing all labor, material, and equipment necessary to satisfactorily complete the connection of proposed storm sewer into existing drainage structures as shown in the plans and as determined by the Engineer.

At locations where proposed storm sewers are to be connected into existing drainage structures, the connections shall be made by core drilling holes into the structures and constructing brick and masonry around the connections to prevent leakage.

Basis of Payment. This work shall not be paid for separately but shall be included in the contract unit price of STORM SEWERS, of the class, type, and diameter specified.

### **STORM SEWER GRADE CHANGE**

The Contractor shall be aware that at times the Engineer may require a change in storm sewer elevation due to a utility or other obstruction. If such a grade change does not alter the pipe type, the additional excavation or sheeting required shall be considered as incidental to the cost of the storm sewer. However, if the revised grade results in a change in pipe types, as set forth in Article 542.03 of the Standard Specifications, payment will be for the revised type of storm sewer.

### **INLET-MANHOLE, TYPE G-1, 6' DIAMETER, SPECIAL**

This work shall consist of furnishing all labor, equipment, and materials for the construction of Inlet-Manhole, Type G-1, 6' Diameter, Special and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLET-MANHOLE, TYPE G-1, 6' DIAMETER, SPECIAL" to Article 602.16 of the Standard Specifications. Delete the first paragraph of Articles 606.14 and 606.15. Payment for transitional Combination Concrete Curb and Gutter will be included in "INLET-MANHOLE, TYPE G-1, 6' DIAMETER, SPECIAL" in accordance with details shown in the plans.

This work will be paid for at the contract unit price Each for INLET-MANHOLE, TYPE G-1, 6' DIAMETER, SPECIAL.

### **MANHOLE (SPECIAL)**

Description. This work shall consist of constructing manholes in accordance with the plan details, applicable Highway Standards, Sections 602 and 604 of the Standard Specifications, and as directed by the Engineer.

The manholes shall be 4'-diameter Type A manholes of various heights with cast in place bases and flat slab tops as shown on the details in the plans. The manhole barrel sections shall be precast reinforced concrete. Any necessary lengths of 24-inch diameter risers required to achieve the top-of-frame elevations as shown in the plans shall also be included. A new Type 1 Frame with an open lid shall also be included.

The Contractor shall core and saw cut a hole in the existing storm sewer as necessary to allow for drainage as shown on the detail in the plans. A reinforced concrete base shall be constructed as shown on the details in the plans.

Basis of Payment. This work will be measured and paid for at the contract unit price per each for MANHOLE (SPECIAL), which price shall include all labor, equipment, and materials necessary to complete the work as specified, including excavation, furnishing and installing the concrete base, reinforcement bars, manholes, flat slab tops, adjusting rings, frames and lids, concrete fillets, saw cutting, core drilling, and backfilling with controlled low-strength material.

### **COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL)**

Description. This work shall consist of construction of sidewalk with a variable height PCC curb or "step" along the front of the sidewalk. The curb or "step" will be located at the back of proposed curb and gutter and shall be constructed in accordance with the plan details and Section 424 of the Standard Specification at locations noted on the plans.

Reinforcement shall not be paid for separately, but shall be included in the cost of the item.

Method of Measurement: This work will be measured for payment in place based on the top surface area of the curb and sidewalk computed in square feet.

Basis of Payment. This work will be paid for at the contract unit price per square foot for COMBINATION CONCRETE CURB AND SIDEWALK 4 INCH (SPECIAL). The price shall include all materials, equipment and labor necessary to complete the work as specified herein.

### **PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH (SPECIAL)**

Description. This work shall be in accordance with Section 424 of the Standard Specifications, the plans, and as modified by the special provision.

This work will consist of constructing sidewalk and ramps for property at 333 Main Street (south quadrant of Jefferson Avenue and Main Street). Specific dimensions, grades, and construction details are included in the plans. The contractors will be required to construct the ramps in accordance with the Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG).

Submittals. The Contractor shall construct and finish a mock-up slab sample (approximate area equivalent to 6'x6') for review and approval by the Engineer prior to construction. The mock-up slab shall represent the final work in material and finish and shall be constructed under similar job site conditions including radial layout. If the mock-up slab sample is denied by the Engineer, the Contractor will be required to repeat the mock-up sample process until approved by the Engineer. The mock-up slab shall remain in place until the final work is completed and accepted by the Engineer. Upon completion of the work, the Contractor shall remove and dispose of the mock-up slab.

Color Requirements. The Portland Cement Concrete sidewalk shall be integrally colored using Dry Pigment Ready Mix Color No. 908 Carbon Black as produced by Solomon Colors, 4050 Color Plant Road, Springfield, Illinois 62702. Match the adjacent granite sidewalk as close as possible.

It shall be the responsibility of the Contractor to protect the adjacent concrete items from any discoloration as a result of contact with the coloring agent.

Final Finish. The concrete pavement shall be cured using a membrane curing compound for integrally colored concrete. The membrane curing compound Type II or III will not be allowed.

Basis of Payment. This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH (SPECIAL) and shall include all labor, materials, and equipment necessary to perform the work.

Handrail for ramps shall be paid for separately per foot as PIPE HANDRAIL as shown in the plan details.

Subbase under sidewalk ramps with handrails shall be paid for at the contract unit price per square yard for SUBBASE GRANULAR MATERIAL, TYPE B, 4"

### **SIDEWALK, SPECIAL**

Description. This work shall be in accordance with Section 424 of the Standard Specifications, the plans, and as modified by the special provision.

This work will consist of constructing concrete ADA ramps for access to existing buildings or from street level up to sidewalks along buildings. Specific locations, dimensions, grades, and construction details are included in the plans. The contractors will be required to construct the ramps in accordance with the Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG).

Method of Measurement: This work will be measured for payment across only the top surface area in square feet.

Basis of Payment. This work will be paid for at the contract unit price per square foot for SIDEWALK, SPECIAL and shall include all labor, materials, and equipment necessary to perform the work.

Handrail for ramps shall be paid for separately per foot as PIPE HANDRAIL as shown in the plan details.

Subbase shall be paid for at the contract unit price per square yard for SUBBASE GRANULAR MATERIAL, TYPE B, 4"

### **REMOVE EXISTING FLAGPOLE**

Description. This work shall consist of removal and off-site disposal of the existing flagpole and foundation to a depth of 24 inches below the proposed finished grade. Any remaining holes caused by the removal shall be backfilled and compacted with earth or aggregate material approved by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per Each for REMOVE EXISTING FLAGPOLE.

### **PARKING METER POSTS TO BE REMOVED**

Description. This work shall consist of the removal of existing parking meter posts along the project corridor at locations noted on the plans.

The City of Peoria will remove all signs and meter heads just prior to the start of construction. The Contractor shall give the City two weeks notice to complete this work.



Once the meter is removed, the parking meter post and foundation shall be removed per the following:

- A. Posts within the limits of proposed sidewalk improvements shall be completely removed and the grade backfilled using CLSM to an elevation six (inches) below the proposed grade. The removed post and concrete foundation shall be disposed of by the contractor. CLSM shall not be paid for separately, but shall be included in the contract unit price. All materials, equipment and labor necessary to complete the work shall be included in the unit price per each for PARKING METER POSTS TO BE REMOVED.
- B. Posts outside the limits of proposed sidewalk improvements shall be removed flush with the sidewalk to remain in place. The posts shall then be filled with grout and made flush with the sidewalk to remain as approved by the Engineer. All materials, equipment and labor necessary to complete the work shall be included in the unit price per Each for PARKING METER POSTS TO BE REMOVED.

Basis of Payment. This work will be paid for at the contract unit price per Each for PARKING METER POSTS TO BE REMOVED.

## **STEEL POSTS**

Description. This work shall include installing new steel posts for the parking meters to be reinstalled by the City.

Post location shall be laid out as indicated in the plan schedule and confirmed by the Engineer in the field. Offsets are generally meant to be 18 inches from face of curb.

Posts shall be constructed as shown in the Parking Meter Post Detail in the plans.

Basis of Payment. This work will be paid for at the contract unit price per each for STEEL POSTS, which price shall include all labor, equipment, and material necessary to complete the work as specified.

## **REMOVE CONCRETE FOUNDATION – OVERHEAD**

Description. This work shall include removing the foundations for the overhead sign on Adams Street according to Section 737 of the Standard Specifications with the following changes/additions.

The Concrete Foundation shall be removed 2 feet below the groundline.

The sidewalk panel replacement shall also be included in this pay item. Sidewalk shall be constructed according to Section 424 of the Standard Specification.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVE CONCRETE FOUNDATION – OVERHEAD, which price shall include all labor, equipment, and material necessary to complete the work as specified.

### **BRICK SIDEWALK REMOVAL**

Description. This work shall include the removal of existing brick sidewalk pavers at locations noted on the plans.

#### Construction Requirements

Care shall be taken during the removal of existing brick sidewalks to prevent damage to the bricks. Bricks which are broken, cut, or cracked or spalled should be discarded and properly disposed. Existing bricks, with minimal damage, shall be salvaged by the contractor. The salvaged bricks shall be delivered to the City of Peoria as directed by the Engineer. This work will not be paid for separately but shall be included in the cost of the BRICK SIDEWALK REMOVAL, and no additional compensation will be allowed.

Any concrete or HMA base material encountered below the existing brick pavers shall be removed completely and properly disposed of by the contractor. This work will not be paid for separately but shall be included in the cost of the BRICK SIDEWALK REMOVAL, and no additional compensation will be allowed.

#### Measurement and Payment

This work will be measured and paid for at the contract unit price per square foot for BRICK SIDEWALK REMOVAL, which price shall include all labor, equipment, and material necessary to complete the work as specified.

### **PLANTER REMOVAL**

Description. This work shall consist of the removal of existing planted areas built into the existing sidewalk.

The work shall include removal of any curbs and fences surrounding the planter, any plant material contained in the planter except trees larger than 6 units which shall be paid for separately in accordance with Section 201. Roots larger than a quarter inch shall be removed to a depth of 12 inches below the proposed finished grade, backfill, and compacted.

Basis of Payment. This work will be paid for at the contract unit price per each for PLANTER REMOVAL, which price shall include all labor, equipment, and material necessary to complete the work as specified.

## **RELOCATED PLANTER**

Description. This work shall consist of the relocation of free-standing planters of various shapes on the existing sidewalk.

Free standing planters belong to the business or property owner abutting the sidewalk and shall remain their property. The contractor will remove and protect the planters and plant material during construction. Once the sidewalk along the owner's property has been rebuilt, the contractor shall coordinate with the property owner and the Engineer on where place the planter.

Basis of Payment. This work will be paid for at the contract unit price per each for RELOCATED PLANTER, which price shall include all labor, equipment, and material necessary to complete the work as specified.

## **DOUBLE HANDHOLE TO BE ADJUSTED**

Description. This work shall consist of furnishing the materials and construction to adjust an existing double handhole in accordance with the applicable Articles of Section 814, 895, 1020, and 1088 of the Standard Specifications with the following modifications:

### **Construction Requirements**

The Contractor shall perform the following items:

- The Contractor shall remove the existing double handhole casting, lids, and hardware and dispose of them off the right of way.
- The Contractor shall remove a minimum of 12 inches of concrete from the existing handhole walls and shall furnish and install a new double handhole casting and lid. The new concrete shall be dowelled into the existing concrete.
- The double handhole installation shall be in accordance with the latest revision of Highway Standard 814006.
- The Contractor shall provide protection for the handhole cables during all phases of construction.
- The Contractor shall ground the handhole lids and frame in accordance with NEC requirements using #6 XLP-USE green copper conductor cable which shall be bonded to all items and their associated ground rods utilizing mechanical lugs and bolts. The use of split bolts will not be allowed.

### **Material Requirements**

- The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 10mm (3/8 inch) in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 10 mm (3/8 inch) in diameter. The lift ring and loop shall be recessed in the cover.
- The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Basis of Payment: This work will be paid for at the contract unit price each for DOUBLE HANDHOLE TO BE ADJUSTED, which price shall be payment in full for all labor, materials, and equipment required to remove the existing double handhole casting and lid and rebuild the handhole as described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

### **REMOVE AND RESET ORNAMENTAL FENCE**

Description. This work includes the removal and resetting of existing ornamental fencing that conflicts with the proposed improvements, including masonry pillars, posts, and post footings required to complete the work.

Footings shall be constructed in accordance with Standard 664001.

The fencing will be re-established at their permanent location as directed by the Engineer as soon as the construction operations permit. Additional compensation will NOT be allowed for varying types or heights comprising of the existing fencing. It shall be the Contractor's responsibility to determine the type of materials required to complete the relocation operations. Any fencing damaged by the Contractor shall be replaced in-kind at his/her own expense.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of end posts.

Basis of Payment. This work will be paid for at the contract unit price per foot for REMOVE AND RESET ORNAMENTAL FENCE.

### **FENCE REMOVAL**

Description. This work includes all labor and equipment necessary to remove and dispose of the existing fence at locations shown in the plans and as directed by the engineer. Removed fence shall be offered to the individual business owners. Any fence not kept by the business owner shall be disposed of by the contractor in

accordance with Article 202.03. All fence posts shall be cut off at least 24 inches below the proposed finished grade and back filled with a suitable material approved by the Engineer.

The fence shall be removed to a point where it can be appropriately terminated as determined in the field by the engineer. This may require ending the removal at a post or reinstalling sections to appropriately terminate the fence at the desired location to restore the fence to proper working order. Therefore, this may require the fence to be removed in such a manner that some pieces will be available for reuse. Any fence or post that is reused shall be installed and stabilized to a condition equal to or greater than the existing condition.

Method of Measurement. This work will be measured for payment in feet, along the top of the fence from center to center of end posts.

Basis of Payment. The removal of the existing fence will be paid for at the contract unit price per foot for FENCE REMOVAL. The price will include all materials, equipment and labor necessary to complete the work.

### **REMOVE EXISTING LIGHT POLE**

Description. This work shall consist of the removal of existing light poles located along the project limits at locations noted on the plans.

The light pole and fixture shall be removed in such a manner that it can be reused by the city. The contractor will coordinate with the Engineer to deliver items to a location (within the city limits) determined by the City.

Existing foundations shall be removed a minimum of 2 feet below the existing sidewalk and back filled with a suitable material approved by the Engineer.

Basis of Payment. The removal of the existing light poles and fixtures shall be paid for at the contract unit price per each for REMOVE EXISTING LIGHTING POLE. The price will include all materials, equipment and labor necessary to complete the work.

### **ORNAMENTAL FENCE**

Description. This work shall consist of furnishing and installing a steel ornamental fence and accessories as shown on the plans.

#### Materials.

A. The steel material for the fence framework (i.e., tubular pickets, rails and posts) shall meet the following:

I. Galvanized after forming:

- a. Conform to the requirements of ASTM A1011/1011M
- b. Minimum yield strength of 50,000 psi.
- c. The exterior shall be hot dip galvanized with a 0.45 oz/ft<sup>2</sup> minimum zinc weight.
- d. The interior surface shall be coated with a minimum 81% normal zinc pigmented coating, 0.3 mils minimum thickness.

II. Galvanized prior forming:

- a. Conform to the requirements of ASTM A924/A924M
- b. Minimum yield strength of 50,000 psi.
- c. The steel shall be hot-dip galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.90 oz/ft<sup>2</sup>, Coating Designation G-90.

B. The manufactured galvanized framework shall be subjected to a thermal stratification coating process (high-temperature, in-line, multi-stage, multi-layer) including as a minimum, a six-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a zinc-rich thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils. The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils. The color shall be black. The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in the following table.

C. The material for the fence pickets shall be 0.75” square x 16-gauge tubing. The cross-sectional shape of the rails shall conform to the manufacturer’s design with outside cross section dimensions of 1.25” square and a minimum thickness of 14 gauge. Picket holes in the horizontal rail shall be spaced 4.625” on center. The picket retaining rods shall be made of 0.125” diameter galvanized steel. The minimum post size shall be 2” square x 12 gauge. High quality PVC grommets shall be supplied to seal all picket-to-rail intersections.

The manufacturer's literature (or shop drawings and specifications) shall be submitted to the Engineer prior to ordering the fence.

<b>Quality Characteristics</b>	<b>ASTM Test Method</b>	<b>Performance Requirements</b>
<i>Adhesion</i>	<i>D3359 – Method B</i>	<i>Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).</i>
<i>Corrosion Resistance</i>	<i>B117 &amp; D1654</i>	<i>Corrosion Resistance over 3,500 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).</i>
<i>Impact Resistance</i>	<i>D2794</i>	<i>Impact Resistance over 60-inch lb. (Forward impact using 0.625" ball).</i>

<i>Weathering Resistance</i>	<i>D822, D2244, D523 (60° Method)</i>	<i>Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).</i>
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Table 1 – Coating Performance Requirements

General. Installation of the fence shall be according to the applicable portions of Section 664 of the Standard Specifications, except as follows:

- A. Dimensions are as shown on the plans.
- B. Fence post installation in soil shall be done using concrete footings at a minimum depth of 42”.

Fence Fabrication:

- A. The pickets, rails and posts shall be pre-cut to specified lengths. The horizontal rails shall be pre-punched to accept the pickets.
- B. The grommets shall be inserted into the pre-punched holes in the rails and the pickets shall be inserted through the grommets so that the pre-drilled picket holes align with the internal upper raceway of the horizontal rails. (Note: This can best be accomplished by using an alignment template.) Retaining rods shall be inserted into each horizontal rail so that they pass through the predrilled holes in each picket completing the panel assembly.
- C. The completed panels shall be capable of supporting a 600lb load (applied at midspan) without any permanent deformation. Panels with rings shall be usable to a 12.5% change in grade. Panels without rings shall be usable to a 25% change in grade.

Installation. The fence posts shall be set according to the spacing shown in the plan detail sheet for fence.

For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. For fencing installed in soil, posts shall be set in concrete footings having a minimum depth of 42”.

Fence Installation Maintenance

When cutting/drilling rails or posts adhere to the following steps to seal the exposed surfaces:

- A. Remove all metal shavings from cut area.
- B. Apply custom finish paint matching fence color.

Fence installation shall be coordinated with the existing gate relocation.

Method of Measurement. Ornamental Fence will be measured for payment in feet along the top of the fence from center to center of the end posts.

Basis of Payment. The fence will be paid for at the contract unit price per foot for ORNAMENTAL FENCE. The unit price shall include furnishing and installing the fence, including all fence connections, concrete foundations, fence openings and electric grounding.

### **GATE, SPECIAL**

Description. This work shall consist of removing and reinstalling the existing gate and posts at the location shown on the plans. The gate shall be carefully removed to not cause any damage and stored by the Contractor until the new fence is installed and the gate can be reinstalled. Any gate parts that are damaged shall be replaced by the contractor at no additional cost.

This work shall be coordinated with the Ornamental Fence installation. Gate posts shall be installed in concrete foundation similar to the detail shown for the fence post installation.

Basis of Payment. This work will be paid for at the contract unit price per each for GATE, SPECIAL. The unit price shall include removal, storage and reinstalling the gate in concrete foundations.

### **TRASH RECEPTACLE RELOCATION**

Description. This work shall consist of relocating existing trash receptacles at locations shown on the plans. Contractor shall remove the receptacles in the way of construction and store them if necessary. Any trash receptacles that are damaged shall be replaced by the contractor at no additional cost.

Once sidewalk work in the original area has been completed trash receptacles shall be moved to a new location, as directed by the Engineer.

Method of Measurement. Trash Receptacle Relocation will be measured for payment per each.

Basis of Payment. This work will be paid for at the contract unit price per each for TRASH RECEPTACLE RELOCATION. The unit price shall include removal, storage and resetting trash receptacles.



## **TRACK REMOVAL**

Description. Adams Street and Jefferson Avenue were previously streetcar routes. During the milling process, the Contractor may encounter streetcar track material. Streetcar track material shall be removed when encountered. Track material to be removed may include rails, cross ties, tie plates, spikes, joint bars, rail anchors, frogs, switches and appurtenances, and other track material. Any proposed cutting of rails must be approved by the Engineer.

Track material shall become the property of the Contractor and shall be removed from the project area and salvaged or properly disposed of. Contractor will be responsible for shaping, smoothing, and compacting the roadbed after removal of track or turnouts. The roadbed shall be free of ruts and depressions and shaped to allow for proper drainage.

Track removal work will include all labor, materials and equipment required to dismantle and remove streetcar track and associated materials from locations indicated on the plans, or as directed by the Engineer.

Basis of Payment. If encountered, track removal will be paid for as extra work according to Article 109.04 of the Standard Specifications. Pavement Patching will be paid for at the contract unit price for pavement patching of the type required.

## **IDOT DISTRICT 4 SPECIAL PROVISIONS**

### **SUBGRADE TREATMENT**

Effective July 1, 1990

Revised January 1, 2022

Revise first sentence of first paragraph of Article 301.04 as follows:

"When compacted, the subgrade shall have a minimum dry density of 95 percent of the standard laboratory dry density and a minimum immediate bearing value (IBV) of 3.0."

Delete the second paragraph (including subparagraphs a, b, and c) of Article 301.04 of the Standard Specifications and replace it with the following:

""In cut sections the Contractor responsible for the rough grading shall obtain not less than 95% of the standard laboratory density and not more than 110% of the optimum moisture for the top 1' (300 mm) of the subgrade.

The Contractor may, at his/her option, add a drying agent to lower the moisture content as specified. The drying agent must be approved by the Engineer prior to use. Additional compensation will not be allowed for the use of a drying agent but will be considered as included in the cost of the various items.""

## **SAWCUTTING OF PCC BASE COURSE AND BASE COURSE WIDENING**

Effective: January 1, 2016

Construction of the PCC Base Course and/or PCC Base Course Widening shall be according to Section 353 of the Standard Specifications and as described herein. When the PCC Base Course and/or PCC base Course Widening is to be constructed adjacent to concrete gutter, curb, or median, transverse contraction joints shall be cut into the base course or widening as a continuation of the joints required for the concrete gutter, curb, or median. These contraction joints shall be cut in accordance with Article 420.05 of the Standard Specifications. No dowel bars will be required at these contraction joints and no sealing of joints will be required.

This work will not be paid for separately, but will be included in the cost of the PCC BASE COURSE AND BASE COURSE WIDENING pay items and no additional compensation will be allowed.

## **HOT-MIX ASPHALT SURFACE REMOVAL, 2", VARIABLE DEPTH**

Effective: February 5, 1993

Revised: January 1, 2022

This work shall consist of removing a portion of the existing hot-mix asphalt concrete surface course in accordance with the applicable portions of Section 440 and 1101 of the Standard Specifications, this special provision, details in the plans and as directed by the Engineer. The cold milled salvaged aggregate resulting from this operation shall become the property of the Contractor.

When the teeth become worn so that they do not produce a uniform surface texture, they shall all be changed at the same time (as a unit). Occasionally, individual teeth may be changed if they lock up or break, but this method shall not be used to avoid changing the set of teeth as a unit.

The moldboard is critical in obtaining the desired surface texture. It shall be straight, true, and free of excessive nicks or wear, and it shall be replaced as necessary to uniformly produce the required surface texture. Gouging of the pavement by more than 1/4 inch (6 mm) shall be sufficient cause to require replacement of all teeth. Occasional gouges, due to deteriorated pavement condition, or separation of lifts will not be cause to replace all teeth. The Engineer will be the sole judge of the cause of the pavement gouging and the corrective work required. Corrective work due to negligence or poor workmanship will be at the Contractor's expense.

Add the following after the third sentence of Article 406.05 (c)(1):

"Vacuum sweeping shall be accomplished with a regenerative air sweeper."

### Construction Requirements

General: Weather conditions, when milling work is performed, must be such that short term or temporary pavement markings can be placed the day the surface is milled in accordance with Section 703 "Work Zone Pavement Markings."

An automatic grade control device shall be used when milling mainline pavement and shall be capable of controlling the elevation of the drum relative to either a preset grade control stringline or a grade reference device traveling on the adjacent pavement surface. The automatic grade control device may be utilized on only one side of the machine with an automatic slope control device controlling the opposite side. The traveling grade reference device shall not be less than 30 feet (9 m) in length for rural areas. For urban areas, a device not less than 20 feet (6 m) in length will be required. When milling cross roads, turn lanes, intersections, crossovers, or other miscellaneous areas, the Engineer may permit the use of a matching shoe.

For variable depth milling location the contractor shall mill 2" along the edge closest to the roadway centerline and project an increasing depth to leave a milled surface approximately 2" below the proposed edge of the pavement grades along the curb and gutter bump outs shown in the plans. This is needed to create longitudinal slope along the proposed curb and gutter to move surface drainage to inlets or down cross streets.

Surface tests will be performed according to Article 406.11 of the Standard Specifications. The profile will be taken 3 ft. (0.9 m) from and parallel to each edge of pavement and 3 ft. (0.9 m) from and parallel to the centerline on each side. If a shadow area is found at the 3 ft. (0.9 m) points, the pavement smoothness tester will be moved sufficient distance either side to measure the Contractor's milling efforts. If any (milled) surface variations found to be outside the tolerance of Article 406.11, then the roadway shall be reprofiled at no additional cost. In addition, the Contractor shall be responsible for refilling, with approved hot-mix asphalt mixtures, any area that lowered the pavement profile as a result of his faulty milling operations if directed by the Engineer. The Contractor shall be responsible for providing the pavement smoothness tester described elsewhere to retest the pavement profile obtained.

If the milling depth is intended to expose the original concrete pavement, then additional hand or machine work may be necessary to remove any remaining veneer of bituminous pavement which may be left in place behind the milling machine. Such work will be at the direction of the Engineer and at no extra cost to the State.

The Contractor shall provide a 10' (3 m) straightedge equipped with a carpenter's level or a 7' (2.1 m) electronic straightedge to check the cross slope of the roadway at regular intervals as directed by the Engineer.

Surface Texture: Each tooth on the cutting drum shall produce a series of discontinuous longitudinal striations. There shall be 16 to 20 striations (tooth marks) for each tooth for each 6' (1.8 m) in the longitudinal direction, and each striation shall be 1.7 inches  $\pm$  0.2 inch (43  $\pm$  5 mm) in length after the area is planed by the moldboard. Thus, the planed length between each pair of striations shall be 2.3 inches  $\pm$  0.2 inch (58  $\pm$  5 mm). There shall be 80 to 96 rows of discontinuous longitudinal striations for each 5' (1.5 m) in the transverse dimension. The areas between the striations in both the longitudinal and transverse directions shall be flat topped and coplaner. The moldboard shall be used to

cut this plane; and any time the operation fails to produce this flat plane interspersed with a uniform pattern of discontinuous longitudinal striations, the operation shall be stopped and the cause determined and corrected before recommencing. Other similar patterns of uniform discontinuous longitudinal striations interspersed on a flat plane may be approved by the Engineer.

The startup milling speed shall be limited to a maximum of 50' (15 m) per minute. The Contractor shall limit his operations to this speed to demonstrate his ability to obtain the striations and rideability as described above. If the Contractor is able to demonstrate that he can consistently obtain the desired striations and rideability at a greater speed he will be permitted to run at the increased speed.

Cleanup: After cold milling a traffic lane and before opening the lane to traffic, the pavement shall be swept by a regenerative air sweeper to prevent compaction of the cuttings onto the pavement. All loose material shall be removed from the roadway. Before the prime coat is placed, the pavement shall be cleaned of all foreign material to the satisfaction of the Engineer.

This cleanup work shall be considered included in the contract unit price per Square Yard (Square Meter) for HOT-MIX ASPHALT SURFACE REMOVAL of the depth specified, and no additional compensation will be allowed.

Method of Measurement:

- (a) Contract Quantities. The requirements for the use of Contract Quantities shall be Article 202.07(a) of the Standard Specifications.
- (b) Measured Quantities. Cold milling and planing will be measured and the area computed in square yards (square meters) of surface.

Areas not milled (shadow areas) due to rutting in the existing pavement surface will be included in the area measured for payment.

Basis of Payment. The cold milling and planing will be paid for at the contract unit price per Square Yard (Square Meter) for HOT-MIX ASPHALT SURFACE REMOVAL of the depth specified. Payment as specified will include variations in depth of cuts due to rutting, superelevations, and pavement crown and no additional compensation will be allowed.

**HOT-MIX ASPHALT SURFACE COURSE SURFACE TESTS**

Effective: November 1, 2003

Revised January 1, 2007

The Contractor shall provide a person to operate the straight edge in accordance with Article 406.11 of the Standard Specifications and communicate with IDOT Personnel to minimize the surface course bumps. If surface course bumps cannot be removed at this

time, IDOT personnel will record the locations and provide deductions as stated in Article 406.11.

### **STORM SEWER, (WATER MAIN QUALITY PIPE)**

Effective January 1, 2011

Revised January 1, 2021

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. The work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

- (1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.
- (2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:
  - (a) Local conditions prevent a lateral separation of 10 feet (3.05 meters); and
  - (b) The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and
  - (c) The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- (3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water

service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

#### Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, or C303.

Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

#### Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 2150 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints. Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

#### Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14, and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

1. Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454C.
2. Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454B.
3. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447B.
4. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442M/F422M. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the

SDR number, the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784.

5. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

6. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, butt fused or electro fused, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastometric seals (gaskets) used for push-on joints shall comply with ASTM F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

This work will be measured and paid for at the contract unit price per Foot (Meter) for STORM SEWER (WATER MAIN QUALITY PIPE) of the diameter and type specified.

### **INLETS, TYPE G-1**

Effective October 1, 1995    Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and material for the construction of Type G-1 Inlets and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLETS, TYPE G-1" to Article 602.16 of the Standard Specifications. Delete the first paragraph in Articles 606.14 and 606.15.

Payment for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1" in accordance with details shown in the plans.

This work will be paid for at the contract unit price Each for INLETS, TYPE G-1.

### **INLETS, TYPE G-1, SPECIAL**

Effective October 1, 1995 Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and material for the construction of Type G-1, Special inlets and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLETS, G-1, SPECIAL" to Article 602.16 of the Standard Specifications. Delete the first paragraph in Articles 606.14 and 606.15.

Payment for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1, SPECIAL" in accordance with details shown in the plans. This work will be paid for at the contract unit price Each for INLETS, TYPE G-1, SPECIAL.

### **INLET-MANHOLE, TYPE G-1, 4' (1.2M) DIAMETER**

Effective October 1, 1995 Revised January 1, 2007

This work shall consist of furnishing all labor, equipment, and materials for the construction of Inlet-Manhole, Type G-1, 4' Diameter and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications and the details in the plans.

Add "INLET-MANHOLE, TYPE G-1, 4' DIAMETER" to Article 602.16 of the Standard Specifications. Delete the first paragraph of Articles 606.14 and 606.15. Payment for transitional Combination Concrete Curb and Gutter will be included in "INLET-MANHOLE, TYPE G-1, 4' DIAMETER" in accordance with details shown in the plans.

This work will be paid for at the contract unit price Each for INLET-MANHOLE, TYPE G-1, 4' DIAMETER.

### **PCC QMP ELECTRONIC REPORT SUBMITTALS**

Effective January 13, 2022

The Contractor's QC personnel shall be responsible for electronically submitting the following reports to the Department: PRO and IND data for BMPR MI654 "Air, Slump, & Quantity"; PRO data for BMPR MI655 "PCC Strength"; and PRO data for BMPR MI504 "Field/Lab Gradation". The format for the electronic submittals will be the "QMP" reporting program which will be provided by the Department. Microsoft Office 2007 or newer is required for this program which must be provided by the Contractor.



## **PCC AUTOMATIC BATCHING EQUIPMENT**

Effective April 23, 2010

Revised November 7, 2014

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights and aggregate mixtures, all water added, amount of each admixture or additive per batch, and percentage variance from design. The ticket shall also state the actual water-cement ratio as batched, and the amount of water that can be added to the batch without exceeding the maximum water-cement ratio. Truck delivery tickets will still be required as per Article 1020.11 (a)(7) of the Standard Specifications.

## **ELECTRICAL SPECIAL PROVISIONS**

### **RESPONSIBILITY OF CONTRACTOR**

The Contractor shall deliver complete lighting systems, thoroughly tested and in operating condition. He is cautioned to use the procedures outlined. For example, it is necessary that the wiring be meggered in the presence of the Engineer. All defective or damaged parts must be replaced at no extra cost before payment will be made, even though approval has been given to use the parts on the basis of manufacturer's specifications and descriptions.

Any negligence on the part of the Contractor to comply with these provisions or any part thereof, may be considered by the City of Peoria as cause for default of contract in accordance with Section 105 of the "Standard Specifications for Road and Bridge Construction".

### **DELIVERY OF MATERIALS**

The Contractor shall designate on his progress schedule the quoted shipment on the lighting controllers and wiring and grounding materials that will be used to construct the project.

### **GUARANTEES**

If a guarantee is included in the standard sales prices of any items at no extra cost, the Contractor shall supply the Engineer with a copy.

### **PROSECUTION OF WORK**

The Engineer will determine the date for starting the work on the contract and shall give the Contractor ten (10) days' notice thereof.

The Contractor shall construct the lighting control and power connection system in the following stages:

1. Conduits, except for services
2. Foundations and handholes
3. Wiring, except in poles and services
4. Controllers and services

Stages may run in succession in any order or concurrently. Stages running concurrently will be combined into a single stage.

### **ELECTRIC UTILITY SERVICE CONNECTION (AMEREN)**

Description. This item shall consist of payment for work performed by Ameren in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the plans contained elsewhere herein.

## CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact Ameren. The Contractor shall coordinate his work fully with Ameren both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please coordinate all work with Jon Reick, Supervising Engineer North Region Electric, Ameren Illinois, Phone Number: 309.693.4697.**

The Contractor should make particular note of the need for the earliest attention to arrangements with Ameren for service. In the event of delay by Ameren, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by Ameren for their services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. Work provided by the Contractor for the temporary traffic signal work will be paid separately as described under the pay items TEMPORARY TRAFFIC SIGNAL INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$20,000.

Basis Of Payment. This work will be paid for at the contract lump sum price for ELECTRIC UTILITY SERVICE CONNECTION which shall be reimbursement in full for electric utility service charges.

### **RELOCATE EXISTING LIGHT POLE**

Description. This work shall consist of removing an existing light pole that conflicts with the new construction and relocating as shown on the construction plans.

The light pole and fixtures shall be removed in such a manner that it will be available for reuse. The contractor will coordinate with the Engineer and to determine an acceptable site for the relocation of the light pole. The contractor will be required to install and stabilize the light pole and fixtures to a condition equal to or greater than the existing condition.

Existing foundations shall be removed a minimum of 2 foot below the existing sidewalk.

Any components damaged by the Contractor shall be replaced in-kind at his/her own expense.

The existing conduits will be intercepted underground and extended to the new light pole location, a new foundation will be provided in accordance with Section 836 of the Standard Specifications, and the existing wiring will be removed and replaced entirely

from the upstream and downstream light poles to remain. Underground splicing of existing cabling will not be acceptable. All work to complete this will be in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer.

Materials: The materials shall be in accordance with Article 825 of the Standard Specifications and plan details:

Basis of Payment. New conduit and wiring will be incidental to the IDOT standard pay items included no additional compensation will be provided for the materials or standard labor included within those standards pay items. Ancillary Work associated with relocating the light poles shall be paid for at the contract unit price per EACH for RELOCATE EXISTING LIGHT POLE for the combination unit specified, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

### **RELOCATE EXISTING CONDUIT AND CABLES**

Description. This work shall consist of reconnecting an existing light pole that has been relocated. The existing conduits will be intercepted underground and extended to the new light pole location, a new foundation will be provided, and the existing wiring will be removed and replaced entirely from the upstream and downstream light poles to remain. Underground splicing of existing cabling will not be acceptable. All work to complete this will be in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer.

Materials: The materials shall be in accordance with Article 825 of the "Standard Specifications" and plan details:

Basis of Payment. New conduit and wiring will be incidental to the IDOT standard pay items included no additional compensation will be provided for the materials or standard labor included within those standard pay items. Ancillary work associated with relocating the conduit and cables shall be paid for at the contract unit price per FOOT for RELOCATE EXISTING CONDUIT AND CABLES for the work specified, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

### **METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT 240V, SPECIAL**

Description. This work shall consist of furnishing, transporting, and installing the Lighting Controller Combination Unit on concrete foundation and all electric cable connections in the unit in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer.

Materials: The materials shall be in accordance with Article 825 of the "Standard Specifications", plan details, and the following:

The Controller Combination Unit shall be manufactured and assembled by Milbank (Catalog #CP3B5111HA22SL1, 120/240 VAC, 3-wire; output 100 Amp, 100 Amp main circuit breaker, 12 Pole switched Loadcenter, Photocell, 12 Pole unswitched Loadcenter, Rainproof – Type 3R, Steel Enclosure, painted Ebony 334 Black), with 22KAIC rated breakers. Ameren approval of meter components must be satisfied.

Unit exterior will be free of defects and have no sharp edges.

Basis of Payment. Work shall be paid for at the contract unit price per EACH for METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT 240V, SPECIAL for the combination unit specified, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

### **METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT 480V, SPECIAL**

Description. This work shall consist of furnishing, transporting, and installing the Lighting Controller Combination Unit on concrete foundation and all electric cable connections in the unit in accordance with Section 825 of the Standard Specifications, the plans, and as directed by the Engineer.

Materials: The materials shall be in accordance with Article 825 of the “Standard Specifications”, plan details, and the following:

The Controller Combination Unit shall be manufactured and assembled by Milbank (Catalog #CP Series, 480Y/277 VAC, 4-wire; output 100 Amp, 100 Amp main circuit breaker, 12 Pole Switched Loadcenter, Photocell, 12 Pole Unswitched Loadcenter, Rainproof – Type 3R, Steel Enclosure, painted Ebony 334 Black), with 25 KAIC rated breakers. Ameren approval of meter components must be satisfied.

Unit exterior will be free of defects and have no sharp edges.

Basis of Payment. Work shall be paid for at the contract unit price per EACH for METER PEDESTAL AND LIGHTING CONTROLLER COMBINATION UNIT 480V, SPECIAL for the combination unit specified, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

### **GROUNDING**

All control cabinets shall be connected to a continuous ground consisting of copper wire 1/C #2 AWG, green color insulated or bare electric cable, as details on the construction plans.

The ground conductor shall have no splices or kinks below grade. It shall be solidly connected to the grounding lug on each pole and to the ground rod at the service installation.

Basis of Payment. Driven ground rods, connectors, connecting ground wire and their installation are included with the device being grounded. No extra compensation will be allowed.

## **WIRING TESTS**

The tests outlined in this section are witness tests to be performed during construction in the presence of the Engineer at times approved by the Engineer. They shall be performed by the Contractor's personnel and with his equipment. The cost is incidental, and no extra compensation will be allowed.

Testing will be performed at opportune times before final inspection. Defects shall be corrected, and testing repeated until all sections of the installation are sound. Splicing or repairing of insulation below grade is not permissible except in handhole.

All data required herein shall be read and recorded at the time of the test by the Engineer in the log which will be retained by him for examination and approval at the time of final inspection. It is the responsibility of the Contractor to make certain that the log is complete and the data proves that the system performance exceeds the minimum requirements. A complete log is to be submitted to the Engineer at the time of final inspection and the final, corrected system meets the minimum requirements.

It is the purpose of the test to confirm the quality of insulation in the wiring.

All construction shall be finished when the tests are completed. The Controller is in-place and operational. Trenches shall be backfilled, and all connections shall be made up in handholes, poles and control cabinets.

Insulation resistance shall be measured with a megger generating not less than 500 nor more than 1,000 volts. A multimeter is not acceptable because it applies only a few volts which will permit some insulation defects to go undetected. Erratic behavior of the megger during the test indicates an intermittent weakness which must be corrected. Only the lowest value indicated shall be considered or recorded.

The Engineer shall log the serial number and voltage rating of the megger used by the Contractor. He shall then confirm the calibration of the megger by connecting the two leads of the megger together so that the resistance to be measured by the megger when it is turned to full speed is zero. Unless this is true, the megger will give false readings under all other circumstances as well.

Each circuit shall be permanently tagged for identification and then tested at the control centers. The full voltage of the megger shall be applied between ground and each insulated wire in each circuit. The ground shall consist of a driven copper clad rod 2.4 m x 16 mm or larger, connected by #6 AWG wire to the power company neutral in the control cabinet. Circuits shall be isolated from each other by opening the circuit breakers.

**WIRING TEST LOG SHEET**

(One REQUIRED for each control of service center)

Control Center Number: \_\_\_\_\_

MEGGER DATA:

Volts generated \_\_\_\_\_ volts.  
(Must be 500 to 1,000)  
Scale used: 0 to \_\_\_\_\_ megohms.

Manufactured by: \_\_\_\_\_

Serial Number: \_\_\_\_\_

CONSTRUCTION STATUS:

Wiring complete\_                      Incomplete \_\_\_\_\_  
Trenches open                              Backfilled \_\_\_\_\_

MEGOHMS TO GROUND:

Wire A to power supply                      \_\_\_\_\_                      megohms  
Wire B to power supply                      \_\_\_\_\_                      megohms  
Wire A to lighting circuit 1                      \_\_\_\_\_                      megohms  
Wire B to lighting circuit 1                      \_\_\_\_\_                      megohms  
Wire A to lighting circuit 2                      \_\_\_\_\_                      megohms  
Wire B to lighting circuit 2                      \_\_\_\_\_                      megohms

AMPERES:

Wire A to power supply, initial                      \_\_\_\_\_                      amperes  
Wire B to power supply, initial                      \_\_\_\_\_                      amperes  
Wire A to power supply, after 5 minutes on                      \_\_\_\_\_                      amperes  
Wire B to power supply, after 5 minutes on                      \_\_\_\_\_                      amperes  
Wire A, Circuit 1 - after 5 minutes on                      \_\_\_\_\_                      amperes  
Wire A, Circuit 2 - after 5 minutes on                      \_\_\_\_\_                      amperes  
Wire B, Circuit 1 - after 5 minutes on                      \_\_\_\_\_                      amperes  
Wire B, Circuit 2 - after 5 minutes on                      \_\_\_\_\_                      amperes

**REGULATION:** (Make the following tests in order shown with lights burning after they have been on for five (5) minutes or more).

- (1) Voltage in control cabinet between Wire A and Wire B to Power supply  
\_\_\_\_\_ Volts.
- (2) Voltage between Wire A and Wire B at most distance light (designated by Engineer)  
\_\_\_\_\_ Volts.
- (3) Voltage in control cabinet between Wire A and Wire B to Power supply (same as 1)  
\_\_\_\_\_ Volts.

\_\_\_\_\_  
Engineer

## **TRAFFIC SIGNAL SPECIFICATIONS**

### **LOCATION OF UNDERGROUND STATE AND CITY OF PEORIA MAINTAINED ELECTRICAL AND FIBER OPTIC FACILITIES**

The Contractor shall be responsible for locating existing IDOT and City of Peoria electrical and fiber optic facilities prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT and City of Peoria facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for the existing electrical and fiber optic facilities from the Department and City of Peoria.

The Contractor shall also be responsible for locating and providing protection for IDOT, City of Peoria, and utility company facilities during all phases of construction. If at any time, the facilities are damaged, the Contractor shall immediately notify the Department and the City of Peoria and make all necessary arrangements for repair to the satisfaction of the Engineer. This work shall be included in the contract bid price and no additional compensation will be allowed.

### **CONTRACT GUARANTEE**

The Contractor shall guarantee all electrical equipment, apparatus, materials, and workmanship provided under the contract for a period of six (6) months after the date of final inspection according to Article 801.15.

All instruction sheets required to be furnished by the manufacturer for materials and supplies and for operations shall be delivered to the Engineer prior to the acceptance of the project, with the following warranties and guarantees:

1. The manufacturer's standard written warranty for each piece of electrical equipment or apparatus furnished under the contract.
2. The Contractor's written guarantee that, for a period of six (6) months after the date of final inspection of the project, all necessary repairs to or replacement of said warranted equipment, or apparatus shall be made by the Contractor at no cost to the Department.
3. The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of 6 months after final inspection of the project.

### **POTHOLING FOR LOCATION OF EXISTING UNDERGROUND UTILITIES**

Potholing to locate existing underground utilities shall be included in the contract bid price for the conduit pay items.



Removal and replacement of existing pavement and islands only for utility locating purposes will not be paid for separately but shall be included in the contract bid price for the conduit pay items.

### **AS-BUILT DOCUMENTATION**

The Contractor shall locate all proposed conduit, communication vaults, handholes, light poles, traffic signal posts, mast arms, controller cabinets, and all other electrical structures every 100 feet using a GIS locating device that is accurate to the nearest foot.

The Contractor shall provide a GIS based map of the conduit route (located every 100 feet) with all traffic and lighting components listed above with a complete listing of all of map coordinates in an electronic format (Google Earth KML or KMZ shape file).

### **LED MODULE AND HPS LAMP RECYCLING**

Description. The Contractor shall recycle all LED modules and high-pressure sodium lamps through a certified recycling company. The Contractor shall submit detailed information pertaining to recycling to the Department for review along with the electrical material submittals. The Contractor shall submit proof of recycling to the Department.

Basis of Payment. This work will not be paid for separately but shall be included in the contract unit price for the proposed traffic signal heads.

### **REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT**

Description. This work shall be in accordance with Section 895 of the Standard Specifications except as modified herein.

All existing traffic signal items not necessary for the operation of the proposed traffic signal shall be removed..

The Contractor shall verify all removal items prior to bidding. There will be no additional compensation.

The Contractor shall dispose of all items off the Right-of-Way and reflect the salvage value of the material in the contract bid price.

Upon removal, the Contractor shall deliver all traffic signal controllers and the traffic signal cabinet to the city of Peoria.

Upon removal, existing IDOT camera poles shall be delivered to the IDOT facility located at 6505 W US Route 150, Edwards IL. The contractor shall notify Tony Bridson at (309)370-7255, 48 hours prior to delivery.

The contractor shall remove existing preemption at the Jefferson Avenue and Kumpf Boulevard intersection and return it back to IDOT traffic building located at 1025 W Detweiller Dr. Peoria IL 61614.

The Contractor shall remove all LED modules and HPS lamps from luminaires prior to disposal. All HPS luminaire lamps shall be properly disposed of at a certified recycling center or alternate facility that is authorized to accept them.

Basis of Payment. The above work will be paid for at the contract unit price Each for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT and shall be payment in full for removing and disposing of the equipment described above, complete. No additional compensation will be allowed.

### **SIGN PANEL – TYPE 1**

Description. This work shall be in accordance with Sections 720 and 1090, 1091, and 1092 of the Standard Specifications except as modified herein.

The Contractor shall furnish street name signs as shown on the plan sheet details and install them on the mast arms at the locations indicated on the plan sheets.

The contractor shall supply all materials required to install the sign (stainless steel banding, brackets, hardware, etc.) as a part of this pay item.

Basis of Payment. This work shall be paid for at the contract unit price per square foot for SIGN PANEL – TYPE 1 which price shall be payment in full for all labor, equipment, and materials required to furnish and install the sign panel described above, complete.

### **HANDHOLE, PORTLAND CEMENT CONCRETE**

Description. This work shall consist of furnishing the materials and constructing a handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully galvanized hooks, with a minimum diameter of 1/2" in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Basis of Payment. This work will be paid for at the contract unit price each for HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

### **DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE**

Description. This work shall consist of furnishing the materials and constructing a double handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully-galvanized hooks, with a minimum diameter of 1/2" in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Basis of Payment. This work will be paid for at the contract unit price each for DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

### **TRAFFIC SIGNAL POST, GALVANIZED STEEL**

Description. This work shall be in accordance with Sections 878 and 1077 of the Standard Specifications except as modified herein.

The traffic signal post shall be attached to the foundation with four 3/4" x 18" galvanized anchor bolts. The post base shall be secured to the foundation using galvanized nuts and galvanized steel flat washers that have a minimum thickness of 1/4" and are trapezoidal in shape. The washers shall be sized so as to completely capture the mounting flanges of the traffic signal base. Round washers will not be acceptable.

The traffic signal post, breakaway base, caps, and appurtenances shall be galvanized.

Basis of Payment. This work will be paid for at the contract unit price Each for TRAFFIC SIGNAL POST, GALVANIZED STEEL of the height specified, which price shall be payment in full for all labor, material, and equipment required to provide and install the traffic signal post and base described above.

### **ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C**

Description. This work shall be in accordance with the applicable Articles of Sections 801, 806, 873, 1076, and 1088 of the Standard Specifications with the following modifications:

This work shall consist of furnishing and installing a grounding wire to bond all traffic signal handholes (lids and rings), mast arm assemblies, posts, light poles, cabinets and exposed metallic conduits.

The Contractor shall attach the proposed ground wire to the proposed traffic structures to ground and safety bond them in accordance with NEC requirements. All labor, materials, and equipment required to bond the proposed structures (wire, clamps, hardware, etc.) shall be included in the bid price for this pay item.

The Contractor shall also be responsible for locating all handholes and uncovering them as required to facilitate the work.

The proposed ground wire shall be an insulated #6 XLP copper conductor with green insulation.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C which price shall be payment in full for all labor, materials, and equipment required to furnish and install the grounding cable described above.

### **ELECTRIC SERVICE INSTALLATION**

The Contractor shall install an electric service installation at the locations shown in the plan sheets.

The Contractor shall furnish and install galvanized steel conduit posts, concrete, galvanized steel uni-strut, 200A meter socket, NEMA 4X stainless steel disconnect with external handle of the amperage specified, wire, PVC conduit, and all other items required for the service installation.

The service installation shall be constructed in accordance with the latest published Ameren electric service requirements and the plan sheet detail.

The Contractor shall verify utility company service installation requirements prior to bidding.

There will be no additional compensation to accommodate additional requirements.

The Contractor shall coordinate with Ameren during the construction and installation of the proposed electric service installations.

Basis of Payment: This work will be paid for at the contract unit price per each for ELECTRIC SERVICE INSTALLATION and shall be payment in full for all labor, materials, and equipment required to install the proposed service installation as described above, complete.

### **FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL**

Description. This work shall be in accordance with Sections 857, 1073, and 1074 of the Standard Specifications except as modified herein.

The Contractor shall remove the existing traffic signal cabinet and components and dispose of them off site. The contractor shall allow the city of Peoria to salvage any cabinet and any traffic signal components from the existing cabinets prior to disposal. The Contractor shall deliver these items to the city of Peoria Dries Lane Operations facility located at 3505 N. Dries Ln., Peoria. The Contractor shall contact Andy O'Neill at (309) 210-1005 a minimum of 48 hours prior to equipment delivery.

The proposed cabinet shall be compliant with NEMA TS-2 standards and NTCIP standards 1201 and 1202.

The existing Econolite Cobalt C-Series TS-2 Type 2 controllers will be re-used in the proposed traffic signal cabinet.

The proposed traffic signal cabinet shall be wired and the malfunction management unit shall be configured for Mode G Flashing Yellow Arrow operation.

The proposed traffic signal cabinet shall and risers shall have black powder coated finishes.

The proposed traffic signal cabinet emergency vehicle preemption functionality shall be configured to match the channels currently in use for the city of Peoria confirmation beacons and GPS EVP detectors. The cabinet shall be wired to drive the emergency vehicle preemption confirmation beacons using the red channels of load switches 13-16.

The cabinet shall be equipped with a cabinet riser that raises the cabinet approximately twelve inches above the concrete foundation. The riser shall bolt directly to the existing foundation anchor bolts and the riser shall be attached to the cabinet using galvanized steel hardware.

The riser shall be fabricated from 0.125-inch (3 mm) sheet aluminum with flanges on the top and bottom to provide rigidity. The riser shall be equipped with mounting flanges as required to connect with the controller cabinet and foundation anchor bolts. The outside surface of the riser shall have a smooth, uniform, natural finish.

The traffic signal cabinet shall have a NEMA TS-2 back panel. The cabinet shall include a malfunction management unit to allow enhanced fault monitoring capabilities.

The malfunction management unit shall support flashing yellow arrow operation and be a Reno A&E model MMU2-1600G equipped with a graphical display and Ethernet port.

The malfunction management unit shall be equipped with the latest software and firmware revisions. The cabinet shall be equipped with a plexi-glass shield that covers the power panel which houses the mercury bus relay, line filter, circuit breakers, and other electrical components.

The cabinet shall be equipped with a plexi-glass shield that covers the thermostat and a LED lighting assembly that turns on when the door is opened. The lighting assembly shall be mounted in a location that will not interfere with cabinet maintenance.

The traffic signal cabinet shall be equipped with a sixteen-load switch back panel to accommodate future expansion.

The cabinet shall be equipped with load switches that have LED status indicators for both inputs and outputs.

The cabinet shall be furnished with a compact heater strip to be used for moisture reduction during cold weather. The heater shall be thermostatically controlled, operate at 120 volts, have a minimum wattage of 150 watts, a maximum wattage of 250 watts, have a shield to protect service personnel and equipment from damaging heat, be separately fused, and be mounted where it does not interfere with a person working in the cabinet.

The traffic signal cabinets shall be equipped with two non GFCI duplex NEMA 5-15R receptacles to be used to provide power to auxiliary equipment.

The cabinet shall be equipped with toggle switch guards for all switches located on the door to prevent accidental switching. The cabinet shall include a permanent re-usable washable air filter.

The cabinet shall be equipped with additional surge protection for the controller, malfunction management unit, and detector amplifiers, and/or video detection system. The surge protector shall be a Transtector model ACP100BWN3 and shall be included in addition to an EDCO SHA-1250 IRS protector. The EDCO SHA-1250 IRS surge protector is to be provided in accordance with Section 1085.47 A(4a) and shall be wired to provide surge protection for the controller, malfunction management unit, and

detector amplifiers. The Transtector surge suppressor may be wired to the equipment protected power terminals of the EDCO SHA-1250 IRS unit provided that the controller, MMU, and detection system are protected.

The Contractor shall set up each cabinet in his or her shop for inspection by the Engineer. All phases that are utilized shall be hooked up to a light board to provide observation for each signal indication. The Engineer shall be notified when the setup is complete so that all pertinent timings may be entered into each traffic signal controller. The facility shall be subject to a seven-day burn-in period before installation will be allowed.

After installing the cabinet in the field, prior to resuming normal signal operation, the Contractor shall test the cabinet by connecting a jumper to the cabinet field terminals to ensure that all conflicting signals will place the cabinet into conflict flash and to verify that the cabinet, controller, and malfunction management unit are operating correctly. The Contractor shall make arrangements with the local police agency to provide traffic control during the conflict test.

Provide a 277-Volt Primary, 120-Volt Secondary, 3 KVA Transformer with Primary and Secondary Overcurrent Protection Circuit Breakers within the Traffic Signal Controller. The 277-volt main power feed for the lighting controller is to connect to the transformer via a 20-amp, 1-pole, 277-volt circuit breaker. 120-Volt, 1-Phase Secondary transformer power via a 35-amp, 1-pole, 120-volt circuit breaker is to be distributed through terminal blocks and circuit breakers to all branch feed loads of the traffic signal cabinet. Branch feed loads include, but are not limited to: Intersection LED luminaires, Traffic Signal LEDs, Controls, Strip Heater, Convenience and Service Receptacles, Ventilation Fans, and UPS Battery Backup System. The 277-Volt Primary, 120-Volt Secondary, 3 KVA Transformer shall be encapsulated in a NEMA 3R enclosure, 60 Hz, Temperature Rise of 115-degree Celsius, Input Voltage 277-Volts, Output Voltage 120-Volts, UL Listed with standard knockouts.\*

All transformer taps and lugs shall be covered with finger safe shields to minimize the possibility of electric shock during repair and maintenance operations. The transformer shall be securely secured to the bottom of the controller cabinet foundation,

\*The step-down transformer and associated overcurrent protection circuit breakers are not needed for the traffic signal cabinet located at Jefferson and Main as 120-volt power is readily available and being fed to that traffic signal controller. Only traffic signal controller cabinets that are fed by 277-volt lighting controllers require the step-down transformer and associated overcurrent protection circuit breakers. Refer to plans for more details.

Basis of Payment. This work will be paid for at the contract unit price Each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL and shall be payment in full for all labor, materials, and equipment required to furnish, install, and test the traffic signal cabinet described above, complete.

## **TRAFFIC SIGNAL LED MODULE SPECIFICATIONS**

Description. The material requirement shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

All traffic signal solid indication and arrow LED assemblies shall be designed for a fifteen-year service life with enhanced power supplies and LEDs and shall have a fifteen-year replacement warranty. Currently, the following manufacturers and models are approved for use:

- Dialight – 12" Long Life XL15 ITE Compliant Traffic Balls and 12" Long Life XOD15 ITE Compliant Omni-Arrows
- Leotek – 12" Extended Life DT Series Incandescent Look Ball and 12" Extended Life DT Series Incandescent Look Arrows

The LED assemblies for the red, yellow, and green solid and arrow indications shall meet or exceed the following minimum specifications:

### SOLID INDICATION LED MODULE SPECIFICATIONS

<u>Compliance:</u>	Fully compliant with ITE VTCSH LED Circular Signal Supplement specifications dated and adopted June 27, 2005
<u>Compliance Verification:</u>	Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
<u>Diameter:</u>	12" (300mm)
<u>Lens:</u>	UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, Incandescent Appearance
<u>LEDS:</u>	Hi-Flux
<u>Operating Temperature Range:</u>	-40°C to +74°C (-40°F to +165°F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%



<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	10.0 W (Red), 18.0W (Yellow), 12.5 W (Green)
<u>Nominal Wavelength:</u>	625-626 nm (Red), 589-590 nm (Yellow), 500-502 nm (Green)
<u>Minimum Maintained Intensity:</u>	365 Cd (Red), 910 Cd (Yellow), 475 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	15-year replacement (materials, workmanship, and intensity)

#### ARROW INDICATION LED MODULE SPECIFICATIONS (RED, YELLOW, GREEN)

<u>Compliance:</u>	Fully compliant with ITE VTCSH LED Vehicle Arrow Supplement specifications adopted July 1, 2007
<u>Compliance Verification:</u>	Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
<u>Diameter:</u>	12" (300mm)
<u>Lens:</u>	Clear Frosted, UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, incandescent appearance, omni-directional
<u>LEDS:</u>	Hi-flux LEDs
<u>Operating Temperature Range:</u>	-40°C to +74°C (-40°F to +165°F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)

<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	5.0-7.0 W (Red), 6.0-12.5W (Yellow), 5.0-7.0 W (Green)
<u>Nominal Wavelength:</u>	625-628 nm (Red), 590 nm (Yellow), 500nm (Green)
<u>Minimum Maintained Intensity:</u>	56.8-58.4 Cd (Red), 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	15-year replacement (materials, workmanship, and intensity)

#### 16" PEDESTRIAN LED MODULE SPECIFICATIONS (MAN/HAND WITH COUNTDOWN TIMER)

<u>Compliance:</u>	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
<u>Compliance Verification:</u>	Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
<u>Size:</u>	16" x 18"
<u>Configuration:</u>	Man/Hand Overlay with Countdown Timer
<u>Lens:</u>	UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance

<u>Operating Temperature Range:</u>	-40°C to +74°C (-40°F to +165°F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	6.0-9.0 W (Man), 7.0-9.0W (Hand), 5.0-8.0 W (Timer)
<u>Minimum Maintained Intensity:</u>	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	5-year replacement (materials, workmanship, and intensity)

## **SIGNAL HEAD, LED**

Description. This work shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The traffic signal heads shall consist of 12" polycarbonate sections and shall be equipped with LED assemblies for all red bulb, yellow bulb, green bulb, red arrow, yellow arrow, and green arrow indications.

The traffic signal heads shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

All costs associated with furnishing and installing new galvanized steel signal head bracketing shall be included in the cost of this pay item. The Contractor shall minimize the total number of holes drilled in a mast arm to no more than three.

Basis of Payment. This work will be paid for at the contract unit prices Each for SIGNAL HEAD, LED of the type specified and will be payment in full for all labor, equipment, and materials required to remove the existing signal heads and bracketing and furnish and install traffic signal heads equipped with LED indications and new bracketing as described above, complete.

### **TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE**

Description. This work shall be in accordance with Sections 882 and 1078 of the Standard Specifications except as modified herein.

The traffic signal backplates shall be of the same material as the traffic signal heads as specified on the plans.

A three (3) inch wide strip of reflective sheeting shall be applied to the outside perimeter of the face of the backplates. The reflective tape shall be fluorescent yellow in color and shall consist of type AZ sheeting.

Basis of Payment. This work will be paid for at the contract unit price Each for TRAFFIC SIGNAL BACKPLATE, RETROREFLECTIVE and shall be payment in full for all labor, materials, and equipment required to furnish and install a traffic signal backplate with reflective tape as described above, complete.

### **PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER**

Description. This work shall be in accordance with Section 881 and 1078 of the Standard Specifications except as modified herein.

The pedestrian signal head shall consist of a single 16" polycarbonate section and shall be equipped with an overlaid LED indication with countdown timer (Walking Person/Upraised Hand).

The traffic signal head shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED signal face shall have international symbols (Upraised Hand – Color: Portland Orange, Walking Person – Color: Lunar White). Only filled indications will be allowed.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

Combination hand/person pedestrian signal modules shall incorporate separate power supplies for the hand and the person displays.

All costs associated with furnishing and installing new pedestrian signal head bracketing shall be included in the cost of this pay item. The Contractor shall minimize the total number of holes drilled in a mast arm to no more than three.

Basis of Payment. This work will be paid for at the contract unit prices Each for PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER and will be payment in full for all labor, equipment, and materials required to provide and install the pedestrian traffic signal heads equipped with LED indications described above, complete.

### **TRAFFIC SIGNAL BATTERY BACKUP SYSTEM**

Description. The following models of Battery Backup Systems are approved for use within District Four:

- Alpha Technologies Novus XFM 1100 (with standard IDOT cabinet or Alpha Technologies Side Mount 6 Integrated BBS Cabinet), Equipped with Ethernet SNMP Interface and Enhanced Capability Battery Monitoring System (AlphaGuard Plus)
- Multilink, EP 2200-T, 1500 Watts/2 kVA, 48 Volt, Equipped with Internal Communication Card and Monitoring Software
- Myers Emergency Powers Systems, Model MP2000CA, Equipped with Ethernet SNMP card and Web Based Configuration

The Contractor may elect to submit an alternate product for consideration provided that it meets the minimum requirements contained in this specification.

The Contractor shall be responsible for providing Battery Backup Systems that are sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

The Battery Backup System shall be equipped with a deluxe pleated air filter and plexiglass covers to prevent accidental contact to terminal strips and connections carrying line voltage.

The battery backup systems shall be installed as shown on the plan detail sheets and as follows:

- A separate circuit breaker shall be installed in the battery backup system cabinet (or in the traffic signal cabinet). The circuit breaker shall be rated equivalent to the main power circuit breaker rating in the existing traffic signal cabinet. The Contractor shall install #6 wiring from the test circuit breaker to the line voltage in the traffic signal cabinet. The circuit breaker shall be used to shut off the incoming utility power to test the battery backup system.
- The cabinet light, ventilation fans, heater strips, and service receptacle shall be wired to a separate circuit that will not be powered by the battery backup system. Equipment receptacles shall be wired for BBS power.
- A hole of sufficient size for the cables will be drilled into the side of the cabinet to accommodate the battery backup system cables and harnesses from the BBS cabinet. The hole shall be free of sharp edges and equipped with a plastic or rubber grommet.
- The fail-safe automatic by-pass switch and blue indicator light shall be installed in the battery backup cabinet (or in the existing traffic signal cabinet).

GENERAL REQUIREMENTS: The Battery Back-up System (BBS) shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate failsafe automatic bypass switch and all necessary hardware and interconnect wiring. The BBS shall provide reliable emergency power to a traffic signal in the event of a power failure or interruption. The transfer from utility power to battery power and vice versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit or any other peripheral devices within the traffic controller assembly.

The BBS shall provide power for full run-time operation for an "LED-only" intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using Red LED's. As the battery reserve capacity reaches 50%, the intersection shall automatically be placed in all-red flash. The BBS shall allow the controller to automatically resume normal operation after the power has been restored. The BBS shall log an alarm in the controller for each time it is activated.

All 48-volt Battery Backup Systems shall include four batteries and all 36-volt Battery Backup Systems shall include six batteries.

The BBS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies," or applicable successor NEMA specifications, except as modified herein.

The BBS shall conform to the following specifications:

## 1.0 OPERATION

- 1.1 The BBS shall be on line and provide voltage regulation and power conditioning when utilizing utility power.
- 1.2 The BBS shall provide a minimum two (2) hours of full run-time operation and four (4) hours all-red flash operation for an "LED-only" intersection (minimum 1,000W/1,000VA active output capacity, with 80% minimum inverter efficiency).
- 1.3 The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 150 milliseconds.
- 1.4 The BBS shall provide the user with 4-sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block, rated at a minimum 120V/1A, and labeled to identify each contact. For typical configuration, see the plan detail sheet.
- 1.5 A first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt."
- 1.6 The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40% of remaining useful capacity. Contact shall be labeled or marked "Low Batt."
- 1.7 The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer."
- 1.8 The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure, battery failure or complete battery discharge. Contact shall be labeled or marked "BBS Fail or Status."
- 1.9 A surge suppression unit shall be provided for the output power if available as an option by the BBS manufacturer.
- 1.10 Operating temperature for both the inverter/power transfer relay and failsafe automatic bypass switch shall be -37°C to +74°C.
- 1.11 The Power Transfer Relay shall be rated at 120VAC/35AMPS minimum and failsafe automatic bypass switch shall be rated at 120VAC/30 amps, minimum.
- 1.12 The fail-safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.13 The BBS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 2.5 – 4.0 mV/°C per cell.

- 1.14 The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 2 meters (6' – 6") of wire.
- 1.15 Batteries shall not be recharged when battery temperature exceeds  $50^{\circ}\text{C} \pm 3^{\circ}\text{C}$ .
- 1.16 BBS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100VAC to 130VAC ( $\pm 2\text{VAC}$ ).
- 1.17 When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output,  $\pm 3\%$  THD, 60Hz  $\pm 3\text{Hz}$ .
- 1.18 BBS shall be compatible with Illinois DOT's traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.
- 1.19 When the utility line power has been restored at above 105 VAC  $\pm 2$  VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.20 When the utility line power has been restored at below 125VAC  $\pm 2$  VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.21 BBS shall be equipped to prevent malfunction feedback to the cabinet or from feeding back to the utility service.
- 1.22 In the event of inverter/charger failure, battery failure or complete battery discharge, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. The BBS shall always revert to utility line power and shall be designed to revert to utility line power in the event of a BBS fault condition.
- 1.23 Recharge time for the battery, from "protective low-cutoff" to 80% or more of full battery charge capacity, shall not exceed twenty (20) hours.
- 1.24 When the intersection is in battery operation, the BBS shall bypass all internal cabinet lights, ventilation fans, heater strips, and service receptacles.
- 1.25 The fail-safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.26 A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the BBS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the BBS is in operation.



The light shall be a minimum 1" diameter, be viewable from the driving lanes, and shall be large enough and visible enough to be seen from 200 ft. away.

- 1.27 All 36 volt and 48-volt systems shall include an external component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries. All cables, harnesses, cards, and other components that are required to provide the functionality described above shall be included in the unit bid price for the battery backup system. The following products are currently approved for use within District 4: Alpha Technologies: AlphaGuard with Charge Management Technology Module.
- 1.28 The BBS shall be equipped with an integrated safety switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter/charger or externally mounted inside of the BBS cabinet. The safety switch shall be designed to interrupt output power if the charger/inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the BBS until the charger/inverter has been "reset". The switch shall also be resettable and reusable unless it has been physically damaged.
- 1.29 The BBS shall be equipped with an Ethernet port and network management card.

## 2.0 MOUNTING AND CONFIGURATION

### 2.1 GENERAL

2.2 Inverter/Charger Unit shall be rack or shelf mounted.

2.3 (Reserved).

2.4 All interconnect wiring provided between Power Transfer Relay, Bypass Switch and Cabinet Terminal Service Block shall be no greater than two (2) meters (6' – 6") of #10 AWG wire.

2.5 Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be #18 AWG wire.

2.6 All necessary hardware for mounting (shelf angles, rack, etc.) shall be included in the bid price of the BBS. The swing-trays shall be screwed to the Type IV or Type V NEMA cabinets using continuous stainless steel or aluminum piano hinge. All bolts/fasteners and washers shall be ½" diameter galvanized or stainless steel.

### 3.0 EXTERNAL BATTERY CABINET

- 3.1 The external cabinet shall be a rated NEMA Type 3R Cabinet.
- 3.2 Inverter/Charger and Power Transfer Relay shall be installed inside the external battery cabinet and the failsafe automatic bypass switch shall be installed inside the existing traffic signal cabinet or proposed battery backup cabinet.
- 3.3 Batteries shall be housed in the external cabinet which shall be NEMA Standard rated cabinet mounted to the side of the Type IV or Type V Cabinet (see plan sheets for details). This external battery cabinet shall conform to the IDOT Standard Specifications for traffic signal cabinets for the construction and finish of the cabinet.
- 3.4 The external battery cabinet shall mount to the Type IV or Type V NEMA Cabinet with a minimum of four (4) bolts to the satisfaction of the Engineer.
- 3.5 The dimensions of the external battery cabinet shall be 25" (L) x 16" (W) x 41" (H) and installed in accordance with the plan sheet cabinet detail and this specification.
- 3.6 The cabinet shall include heater mats for each battery shelf and/or battery. If the BBS charger/inverter does not have facilities to accommodate heater mat connections, thermostatically controlled heater mats shall be provided with the system. The heater mat thermostat shall be a separate thermostat (from the ventilation fan thermostat) and be adjustable from 0°F to 32°F for heater mat turn-on.
- 3.7 A warning sticker shall be placed on the outside of the cabinet indicating that there is an Uninterruptible Power Supply inside the cabinet.
- 3.8 The external battery cabinet shall be ventilated using louvered vents (2), filters, and one thermostatically controlled fan as per NEMA TS 2 Specifications. The cabinet shall include a cleanable or replaceable cabinet filter.
- 3.9 External battery cabinet fan shall be AC operated from the same line output of the bypass switch that supplies power to the Type IV or Type V Cabinet.
- 3.10 The BBS with external battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. The external battery cabinet shall have a hinged door opening to the entire cabinet. The cabinet shall include a bottom constructed from the same material as the cabinet.
- 3.11 The external cabinet shall be equipped with a power receptacle to accommodate the inverter/charger. The receptacle shall be wired to the line output of the manual bypass switch.

#### 4.0 MAINTENANCE, DISPLAYS, CONTROLS AND DIAGNOSTICS

- 4.1 The BBS shall include a display and /or meter to indicate current battery charge status and conditions.
- 4.2 The BBS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.
- 4.3 The BBS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.
- 4.4 The BBS and batteries shall be easily replaced with all needed hardware and shall not require any special tools for installation.
- 4.5 The BBS shall be equipped with a RS-232 port.
- 4.6 The BBS shall include a resettable front-panel event counter display to indicate the number of times the BBS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.
- 4.7 Manufacturer shall include two (2) sets of equipment lists, operation and maintenance manuals, and board-level schematic and wiring diagrams of the BBS, and the battery data sheets. Manufacturer shall include any software needed to monitor, diagnose, and operate the BBS. The manufacturer shall include any required cables to connect to a laptop computer.
- 4.8 The BBS shall include a data cable for the serial connection to the RS232 port and diagnostic software if it is available as an option with the unit (only two cables required for project).
- 4.9 One copy of the owner/maintenance manuals shall be provided with the BBS.
- 5.1 BATTERY SYSTEM
- 5.2 Individual batteries shall be 12V type and shall be easily replaced and commercially available off the shelf.
- 5.3 The batteries shall be premium gel type with a 5-year full replacement warranty.
- 5.4 Batteries used for BBS shall consist of a minimum of four (4) to eight (8) batteries with a cumulative minimum rated capacity of 280 amp-hours.
- 5.5 Batteries shall be deep cycle, completely sealed, silver alloy VRLA (Valve Regulated Lead Acid) requiring no maintenance with maximum run time.

- 5.6 Batteries shall be certified by the manufacturer to operate over a temperature range of – 40°C to +71°C.
- 5.7 The batteries shall be provided with appropriate interconnect wiring and corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.
- 5.8 Batteries shall indicate maximum recharge data and recharging cycles.
- 5.9 Battery interconnect wiring shall be via modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. Harness shall be equipped with mating power-pole style connectors for batteries and a single, insulated plug-in style connection to inverter/charger unit. Harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.
- 5.10 Battery terminals shall be covered and insulated to prevent accidental shorting.

## 6.0 QUALITY ASSURANCE

- 6.1 BBS shall be manufactured in accordance with a manufacturer quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) Design quality assurance and (2) Production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of BBS units built to meet this specification and a documented process of how problems are to be resolved.
- 6.2 QA process and test results documentation shall be kept on file for a minimum period of seven years.
- 6.3 Battery Backup System designs not satisfying design qualification testing and the production quality assurance testing performance requirements described below shall not be labeled, advertised, or sold as conforming to this specification.

## 7.0 DESIGN QUALIFICATION TESTING

- 7.1 The manufacturer, or an independent testing lab hired by the manufacturer, shall perform design Qualification Testing on new BBS designs, and when a major design change has been implemented on an existing design. A major design change is defined as a design change (electrical or physical) which changes any of the performance characteristics of the system, or results in a different circuit configuration.

- 7.2 Burn In. The sample systems shall be energized for a minimum of 5 hours, with full load of 700 watts, at temperatures of +74°C and -37°C., excluding batteries, before performing any design qualification testing.
- 7.3 Any failure of the BBS, which renders the unit non-compliant with the specification after burn-in, shall be cause for rejection.
- 7.4 For Operational Testing, all specifications may be measured including, but not limited to:
- 7.5 Run time while in battery backup mode, at full load.
- 7.6 Proper operation of all relay contact closures ("On-Batt", "Low-Batt", "Timer" and "BBSFail").
- 7.7 Inverter output voltage, frequency, harmonic distortion, and efficiency, when in battery backup mode.
- 7.8 All utility mode – battery backup mode transfer voltage levels. See Section 1 Operation.
- 7.9 Power transfer time from loss of utility power to switchover to battery backed inverter power.
- 7.10 Backfeed voltage to utility when in battery backup mode.
- 7.11 IEEE/ANSI C.62.41 compliance.
- 7.12 Battery charging time.
- 7.13 Event counter and runtime meter accuracy.
- 8.0 PRODUCTION QUALITY CONTROL TESTING
- 8.1 Production Quality Control tests shall consist of the above listed tests and shall be performed on each new system prior to shipment. Failure to meet requirements of any of these tests shall be cause for rejection. The manufacturer shall retain test results for seven years.
- 8.2 Each BBS shall be given a minimum 100-hour burn-in period to catch any premature failures.
- 8.3 Each system shall be visually inspected for any exterior physical damage or assembly anomalies. Any defects shall be cause for rejection.
- 9.0 WARRANTY

- 9.1 Manufacturers shall provide a minimum two (2) year factory-repair warranty for parts and labor on the BBS from date of acceptance by the State. Batteries shall be warranted for full replacement for five (5) years from date of purchase. The warranty shall be included in the total bid price of the BBS.
- 9.2 The Contractor shall furnish a warranty certificate for each Battery Backup System that includes the equipment description and details, serial numbers, effective dates, and the details of the warranty regarding materials and labor. The warranty period shall begin on the date of installation and the warranty certificate shall reflect this date.

Basis of Payment. The above work will be paid for at the contract unit price Each for TRAFFIC SIGNAL BATTERY BACKUP SYSTEM shall be payment in full for all labor, materials, and equipment required to provide, install, and test the battery backup system described above, complete.

### **CLOSED-CIRCUIT TELEVISION DOME CAMERA, HD**

Description. This work shall consist of furnishing and installing an integrated Closed-Circuit Television (CCTV) Dome Camera Assembly, camera bracket, and all other items required for installation and operation. This assembly shall contain all components identified in the Materials Section and shall be configured as indicated on the plan sheets.

#### Materials.

The CCTV camera shall be an Axis Model Q6075-E Dome Camera Assembly for integration into the existing District 4 ITS system.

The Contractor shall provide all materials required to install the proposed camera on the proposed sign structure camera mast as shown on the plan sheets.

The Contractor shall submit catalog cut sheets to the Department for all items (mounting brackets, hardware, etc.) that will be utilized for review prior to commencing work.

The Department will program the cameras prior to installation.

The camera shall meet or exceed the following specifications:

#### CAMERA

VIDEO: 60 Hz (NTSC), 50 Hz (PAL)

IMAGE SENSOR: 1/2.8" progressive scan CMOS

LENS: 4.44–142.6 mm, F1.6–4.41

Horizontal angle of view: 62.8°–2.23°  
Vertical angle of view: 36.8°–1.3°  
Autofocus, auto-iris

DAY AND NIGHT: Automatically removable infrared-cut filter

MINIMUM ILLUMINATION: Color: 0.3 lux at 30 IRE F1.6  
B/W: 0.03 lux at 30 IRE F1.6  
Color: 0.5 lux at 50 IRE F1.6  
B/W: 0.04 lux at 50 IRE F1.6

SHUTTER TIME: NTSC: 1/33000 s to 1/3 s with 50 Hz  
1/33000 s to 1/4 s with 60 Hz

PAN/TILT/ZOOM: Pan: 360° endless, 0.05° - 450°/s  
Tilt: 220°, 0.05°-450°/s  
32x optical zoom and 12x digital zoom, total 384x zoom  
E-flip, 256 preset positions, Tour recording, Guard tour, Control  
queue, On-screen directional indicator, Set new pan 0°,  
Adjustable zoom speed

## VIDEO

VIDEO COMPRESSION: H.264 (MPEG-4 Part 10/AVC), Motion JPEG

RESOLUTIONS: HDTV 1080p 1920x1080 to 320x180  
HDTV 720p 1280x720 to 320x180

FRAME RATE (H.264): Up to 60/50 fps (60/50 Hz) in HDTV 720p  
Up to 30/25 fps (60/50 Hz) in HDTV 1080p

VIDEO STREAMING: Multiple, individually configurable streams in H.264 and Motion  
JPEG, Axis' Zipstream technology, Controllable frame rate and  
bandwidth, VBR/MBR H.264

IMAGE SETTING: Manual shutter time, compression, color, brightness,  
sharpness,  
white balance, exposure control, exposure zones, fine tuning of  
behavior at low light, rotation: 0°, 180°, text and image overlay,  
32 individual 3D privacy masks, image freeze on PTZ,  
automatic  
defog, backlight compensation

Wide Dynamic Range (WDR): Up to 120 dB depending on scene,  
highlight compensation

## NETWORK

SECURITY: Password protection, IP address filtering, HTTPSa encryption, IEEE 802.1Xa network access control, Digest authentication, User access log, Centralized Certificate Management

PROTOCOLS: IPv4/v6, HTTP, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP

## SYSTEM INTEGRATION

APPLICATION PROGRAM INTERFACE: Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at [www.axis.com](http://www.axis.com), AXIS Video Hosting System (AVHS) with One-Click Connection, ONVIF Profile S, specification at [www.onvif.org](http://www.onvif.org)

ANALYTICS: Video motion detection, Autotracking, Active Gatekeeper Basic Analytics (not to be compared with third-party analytics): Object removed, Enter/Exit detector, Fence detector, Object Counter, Highlight compensation, Support for AXIS Camera Application Platform enabling installation of third-party applications, see [www.axis.com/acap](http://www.axis.com/acap)

EVENT TRIGGERS: Detectors: Live stream accessed, Video motion detection, Shock Detection, Object removed, Enter/Exit detector, Fence detector, Object counter; Hardware: Fan, Network, Temperature, Casing Open; PTZ: Autotracking, Error, Moving, Ready, Preset Reached; Storage: Disruption, Recording; System: System Ready; Time: Recurrence, Use Schedule; Input signal: Manual trigger, Virtual input



EVENT ACTIONS: Day/night mode, overlay text, video recording to edge storage, pre- and post-alarm video buffering, send SNMP trap PTZ: PTZ preset, start/stop guard tour  
File upload via FTP, SFTP, HTTP, HTTPS network share and Email; Notification via email, HTTP, HTTPS and TCP

DATA STREAMING Event data

BUILT IN INSTALLATION AID Pixel Counter

## GENERAL

CASING: IP66-, NEMA 4X- and IK10-rated  
Metal casing (aluminum), polycarbonate (PC) clear dome, sunshield (PC/ASA)

SUSTAINABILITY: PVC Ffree

MEMORY: 512 MB RAM, 128 MB Flash

POWER CAMERA: Axis High PoE midspan 1-port: 100–240 V AC, max 74 W  
Camera consumption: typical 16 W, max 60 W

CONNECTORS: RJ45 10BASE-T/100BASE-TX PoE, RJ45 Push-pull Connector (IP66) included

EDGE STORAGE: Support for SD/SDHC/SDXC card  
Support for recording to dedicated network-attached storage (NAS); For SD card and NAS recommendations see [www.axis.com](http://www.axis.com)

OPERATING CONDITIONS: With 30 W midspan: -20 °C to 50 °C (-4 °F to 122 °F)  
With 60 W midspan: -50 °C to 50 °C (-58 °F to 122 °F)  
Maximum temperature (intermittent): 60 °C (140 °F)  
Arctic Temperature Control: Start-up as low as -40 °C (-40 °F)  
Humidity 10–100% RH (condensing)

APPROVALS: EMC: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 22 Class A, KCC KN32 Class A, KN35

Safety: IEC/EN/UL 60950-1, IEC/EN/UL 60950-22

Environment: EN 50121-4, IEC 62236-4, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60721-4-3, NEMA 250 Type 4X, IEC 60068-2-30, IEC 60068-2-60, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA TS-2-2003 v02.06, Subsection 2.2.7, 2.2.8, 2.2.9; IEC 62262 IK10, ISO 4892-2

Midspan: EN 60950-1, GS, UL, cUL, CE, FCC, VCCI, CB, KCC, UL-AR

WEIGHT: 3.7 kg (8.2 lb.)

INCLUDED Connector Axis High PoE 60 W midspan 1-port, RJ45 Push-pull

ACCESSORIES: (IP66), Sunshield, Installation Guide, Windows decoder 1-user license

VIDEO MANAGEMENT: AXIS Camera Companion, AXIS Camera Station, Video SOFTWARE: management software from Axis' Application Development Partners available on [www.axis.com/techsup/software](http://www.axis.com/techsup/software)

WARRANTY: Axis 3-year warranty and AXIS Extended Warranty option

#### Environmental Enclosure/Housing

The environmental enclosure shall be designed to physically protect the integrated camera from the outdoor environment and moisture via a sealed enclosure. If the option exists in the standard product line of the manufacturer, the assembly shall be supplied with an integral sun shield. The enclosure shall be fully water and weather resistant with a NEMA 4 rating or better.

The camera dome shall be constructed of distortion free acrylic or equivalent material that must not degrade from environmental conditions. The environmental housing shall include a camera-mounting bracket. In addition, the environmental housing shall include a heater, blower, and power surge protector. An integral fitting compatible with a standard 1-1/2 in (38.1 mm) NPT pipe, suitable for outdoor pendant mounting shall also be provided.

The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall turn on when the temperature within the enclosure falls below 40° F (4.4°C). The heater shall turn off when the temperature exceeds 60°F (15.6°C). The heater will

minimize internal fogging of the dome faceplate when the assembly is operated in cold weather.

In addition, a fan shall be provided as part of the enclosure. The fan will provide airflow to ensure effective heating and to minimize condensation.

The enclosure shall be equipped with a hermetically sealed, weatherproof connector, located near the top for external interface with power, video, and control feeds.

### CCTV Dome Camera Mounting Supports

The Contractor shall furnish and install an Axis Pole Mount Bracket T91L61 (Part Number 5801-721) for camera installation on traffic signal mast arms and CCTV camera poles and stainless steel banding as required. The CAT5 cable shall be terminated inside the bracket by using the IEC punch down blocks.

Mounting supports shall be configured as shown on the camera support detail plans and as approved by the Engineer. Mount shall be of aluminum construction with enamel or polyester powder coat finish. Braces, supports, and hardware shall be stainless steel. Wind load rating shall be designed for sustained gusts up to 90 mph (145 km/hr), with a 30% gust factor. Load rating shall be designed to support up to 75 lb (334 N). For roof or structural post/light pole mounting, mount shall have the ability to swivel inward for servicing. The mounting flange shall use standard 1-1/2 inch (38.1 mm) NPT pipe thread.

### Connecting Cables

The Contractor shall furnish and install outdoor rated, shielded CAT 5E cable at the locations shown on the plan sheets. The cable shall be terminated using the terminal block inside the camera bracket and the IDC connector and pre-formed IP66 rated RJ-45 connector on the camera end and a shielded RJ-45 connector in the cabinet. The Contractor shall test the cable prior after termination.

Cable will be paid for separately as CAT 5 ETHERNET CABLE.

### Construction Requirements.

#### General

The Contractor shall prepare a shop drawing detailing the complete CCTV Dome Camera Assembly and installation of all components to be supplied for approval of the Engineer. Particular emphasis shall be given to the cabling and the interconnection of all of the components.

The Contractor shall install the CCTV dome camera assembly at the locations indicated in the Plans. The CCTV Dome Camera Assembly shall be mounted on a pole, wall, or other structure.

### Testing

The Contractor shall test each installed CCTV Dome Camera Assembly. The test shall be conducted from the field cabinet using the standard communication protocol and a laptop computer. The Contractor shall verify that the camera can be fully exercised and moved through the entire limits of Pan, Tilt, Zoom, Focus and Iris adjustments, using both the manual control and presets. The Contractor shall maintain a log of all testing and the results. A representative of the Contractor and a representative of the Engineer shall sign the log as witnessing the results. Records of all tests shall be submitted to the Engineer prior to accepting the installation.

Method of Measurement. The closed circuit television dome camera bid item will be measured for payment by the actual number of CCTV dome camera assemblies furnished, installed, tested, and accepted.

Basis of Payment. Payment will be made at the contract unit price for each CLOSED CIRCUIT TELEVISION DOME CAMERA, HD including all equipment, material, testing, documentation, and labor detailed in the contract documents for this bid item.

## **WIDE AREA VIDEO DETECTION SYSTEM COMPLETE**

Description. The following video detection systems are approved for use within District 4:

- Iteris VantageNext (4 Camera System)
- Econolite Autoscope Vision (4 Camera System)

The video vehicle detection system shall include all necessary electric cable, electrical junction boxes, electrical and communications surge suppression, hardware, software, programming, and any camera brackets that are required for installation and configuration. These items should be taken into consideration and shall be included in the bid price for the video detection system.

The video detection camera and system shall be able to differentiate and detect bicycles.

All cameras shall be installed on traffic signal mast arms using five foot extension brackets.

All CAT 5 Ethernet cable shall meet the requirements contained in the special provisions (outdoor rated, gel-filled, shielded, etc.) and the cost of the cable shall be included in the bid price for this pay item.

One 12" – 15" color LCD video monitor and 4-camera video selector (if required to switch camera videos) shall be included for each installation to allow for the setup and monitoring of the video detection system.

All vehicle video detection systems shall be equipped with the latest software or firmware revisions.

All video detection cameras shall be installed on the mast arms, centered over the detection area, at a 25 ft. minimum mounting height. All camera brackets shall be constructed of aluminum.

The video vehicle system shall be configured and installed to NEMA TS2 Standards (use of the SDLC port and BIU). Installation conforming to NEMA TS1 standards will not be allowed.

The minimum requirements for a video vehicle detection system are listed below:

## 1.0 General

This Specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images and provides detector outputs to a traffic controller or similar device.

### 1.1 System Hardware

The system shall consist of four video cameras and an automatic control unit (ACU). The ACU shall process all detected calls and shall be equipped with the latest firmware revisions.

### 1.2 System Software

The system shall be able to detect either approaching or receding vehicles in multiple traffic lanes. A minimum of 24 detection zones shall be user-definable per camera. The user shall be able to modify and delete previously defined detection zones. The software shall provide remote access operation and shall be the latest revision.

## 2.0 Functional Capabilities

### 2.1 Real-Time Detection

2.2 The ACU shall be capable of simultaneously processing information from up to four (4) digital video sources. The video shall be digitized and analyzed at a rate of 30 times per second.

- 2.3 The system shall be able to detect the presence of vehicles in a minimum of 96 detection zones within the combined field of view of the image sensors.

### 3.0 Vehicle Detection

#### 3.1 Detection Zone Placement

The video detection system shall provide flexible detection zone placement anywhere and at any orientation within the combined field of view of the image sensors. In addition, detection zones shall have the capability of implementing logical functions including AND OR.

#### 3.2 Optimal Detection

The video detection system shall reliably detect vehicle presence when the image sensor is mounted 10m (30 ft.) or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the length of the detection area or field of view (FOV) is not greater than ten (10) times the mounting height of the image sensor. The image sensor shall not be required to be mounted directly over the roadway. A single image sensor, placed at the proper mounting height with the proper lens, shall be able to monitor six (6) to eight (8) traffic lanes simultaneously.

#### 3.3 Detection Performance

Overall performance of the video detection system shall be comparable to inductive loops. Using standard image sensor optics and in the absence of occlusion, the system shall be able to detect vehicle presence with 98% accuracy under normal conditions, (days & night) and 96% accuracy under adverse conditions (fog, rain, snow). The ACU shall output a constant call for each enabled detector output channel if a loss of video signal occurs in any camera.

The ACU shall be capable of processing a minimum of twenty detector zones placed anywhere in the field of view of the camera.

### 4.0 ACU Hardware

#### 4.1 ACU Mounting

The ACU shall be shelf or rack mountable. Nominal outside dimensions excluding connectors shall not exceed 180mm (7.25") x 475mm (19") x 260mm (10.5") (H x W x D).

#### 4.2 ACU Environmental

The ACU shall be designed to operate reliably in the adverse environment found in the typical roadside traffic cabinet. It shall meet the environmental requirements set forth by the NEMA (National Electrical Manufacturers Association) TS1 and TS2 standards as well as the environmental requirements for Type 170 and Type 179 controllers. The minimum operating temperature range shall be from -35 to +74 degrees C at 0% to 95% relative humidity, non-condensing.

## 5.0 ACU Electrical

- 5.1 The ACU shall be modular in design and provide processing capability equivalent to the Intel Pentium microprocessor. The bus connections used to interconnect the modules of the ACU shall be gold-plated DIN connectors.
- 5.2 The ACU shall be powered by 89 - 135 VAC, 60 Hz, single phase, and draw 0.25 amps, or by 190 - 270 VAC, 50 Hz, single phase and draw 0.12 amps. If a rack mountable ACU is supplied, it shall be capable of operating from 10 to 28 VDC. The power supply shall automatically adapt to the input power level. Surge ratings shall be as set forth in the NEMA TS1 and TS2 specifications.
- 5.3 Serial communications to a remote computer equipped with remote monitoring software shall be through a RJ-45 Ethernet port.
- 5.4 The ACU shall be equipped with a NEMA TS2 RS-485 SDLC interface for communicating input and output information. Front panel LEDs shall provide status information when communications are open.
- 5.5 The ACU and/or camera hookup panel shall be equipped with four RJ-45 connector based/terminal block connections for cameras so that signals from four image sensors can be processed in real-time.
- 5.6 The ACU shall be equipped with USB ports, WiFi, and Ethernet ports to provide communications to a computer running the configuration and remote access software.
- 5.7 The ACU and/or camera hookup panels used for a rack mountable ACU shall be equipped with a video output port.
- 5.8 The ACU shall be equipped with viewable front panel detection LED indications.

## 6.0 Camera

- 6.1 The video detection system shall use high resolution, color, cameras as the video source for real-time vehicle detection. As a minimum, each image sensor shall provide the following capabilities:

- a. MPEG-4 and H.264 video compression and transport
  - b. Support video streaming that is viewable through a standard web browser with an adjustable frame rates of 5/15/30 fps
  - c. Images shall be produced with a CCD sensing element with horizontal resolution of at least 720 lines and vertical resolution of at least 480 lines.
  - d. Useable video and resolvable features in the video image shall be produced when those features have luminance levels as low as 0.1 lux at night.
  - e. Useable video and resolvable features in the video image shall be produced when those features have luminance levels as high as 10,000 lux during the day.
  - f. Automatic gain, automatic iris, and absolute black reference controls shall be furnished.
  - g. An optical filter and appropriate electronic circuitry shall be included in the image sensor to suppress "blooming" effects at night.
- 6.2 The image sensor shall be equipped with an integrated zoom lens with zoom and focus capabilities that can be changed using either configuration computer software or hand-held controller. The machine vision processor (MVP) may be enclosed within the camera.
- 6.3 The image sensor and lens assembly shall be housed in an environmental enclosure that provides the following capabilities:
- a. The enclosure shall be waterproof and dust-tight to NEMA-4 specifications. The camera shall be IP-67 rated.
  - b. The enclosure shall allow the image sensor to operate satisfactorily over an ambient temperature range from -34C to +74C while exposed to precipitation as well as direct sunlight.
  - c. The enclosure shall allow the image sensor horizon to be rotated in the field during installation.
  - d. A heater shall be at the front of the enclosure to prevent the formation of ice and condensation in cold weather, as well as to assure proper operation of the lens' iris mechanism. The heater shall not interfere with the operation of the image sensor electronics, and it shall not cause interference with the video signal.



- f. The enclosure shall be light-colored and shall include a sun shield to minimize solar heating. The front edge of the sunshield shall protrude beyond the front edge of the environmental enclosure and shall include provision to divert water flow to the sides of the sunshield. The amount of overhang of the sun shield shall be adjustable to prevent direct sunlight from entering the lens or hitting the faceplate.
  - g. The total weight of the image sensor in the environmental enclosure with sunshield shall be less than 2.7 kg (6 pounds).
  - h. When operating in the environmental enclosure with power and video signal cables connected, the image sensor shall meet FCC class B requirements for electromagnetic interference emissions.
- 6.3 The video output of the image sensor shall be isolated from earth ground. All video connections from the image sensor to the video interface panel shall also be isolated from earth ground.
- 6.4 The video output, communication, and power to the image sensor shall include transient protection to prevent damage to the sensor due to transient voltages occurring on the cable leading from the image sensor to other field locations.
- 6.5 A stainless steel junction box shall be available as an option with each image sensor for installation on the structure used for image sensor mounting. The junction box shall contain a terminal block for terminating power to the image sensor and connection points for cables from the image sensor and from the ACU.
- 6.6 Software
- 7.1 The system shall include the remote access software that is used to setup and configure the video detection system. The software shall be of the latest revision.
- 7.2 All necessary cable, adapters, and other equipment shall be included with the system.

## 8.0 Installation and Training

- 8.1 The supplier of the video detection system shall supervise the installation and testing of the video and video vehicle detection equipment. A factory certified representative from the supplier shall be on-site during installation.

## 9.0 Warranty, Maintenance, and Support

- 9.1 The video detection system shall be warranted by its supplier for a minimum of three (3) years from date of turn-on. This warranty shall cover all material defects and shall also provide all parts and labor as well as unlimited technical support.
- 9.2 Ongoing software support by the supplier shall include updates of the ACU and supervisor software. These updates shall be provided free of charge during the warranty period.
- 9.3 The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be made available to the contracting agency in the form of a separate agreement for continuing support.

Basis of Payment. This work will not be paid for separately, but shall be included in the contract unit price each for WIDE AREA VIDEO DETECTION SYSTEM COMPLETE which price shall be payment in full for all labor, equipment, and materials required to furnish, install, and test the video vehicle detection system described above, complete.

### **PEDESTRIAN PUSH-BUTTON POST**

Description. This work shall be in accordance with Section 876 and 1077 of the Standard Specifications except as modified herein.

This work will consist of furnishing and installing a pedestrian pushbutton post.

The pedestrian pushbutton post shall be constructed from 3" diameter galvanized steel pipe as shown in the pedestrian push button post detail and in accordance with applicable portions of Highway Standard 876001.

Pedestrian push button posts to have a black finish.

The Contractor shall verify all field conditions prior to bidding. There will be no additional compensation for this work.

Basis of Payment. This work will be paid for at the contract unit price per Each for PEDESTRIAN PUSH-BUTTON POST and shall be payment in full for all labor, materials, and equipment required to furnish and install the pedestrian pushbutton post as described above, complete.

### **CAT 5 ETHERNET CABLE**

Description. This work shall be in accordance with Sections 873, 1076, and 1088 of the Standard Specifications except as modified herein.

This work shall consist of furnishing and installing an outdoor rated CAT5E cable in conduits, handholes, and poles.

The cable shall be rated for outdoor use and conform to the following specifications:

- Outdoor CMX Rated Jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket Material (PVC-UV, UV Stabilized)
- Outer Jacket Ripcord
- Designed for Outdoor Above – Ground or Conduit Duct applications
- Cat5E rated to 350MHz (great for 10/100 or even 1000mbps Gigabit Ethernet)
- Meets TIA/EIA 568b.2 Standard
- Shielded Twist Pair
- Flooded with Water Blocking Gel
- 4 Pairs, 8 Conductors
- 24AWG, Solid Core Copper
- UL 444 ANSI TIA/EIA-568.2 ISO/IEC 11801
- RoHS Compliant

Basis of Payment. This work will be paid for at the contract unit price per Foot for CAT 5 ETHERNET CABLE and shall be payment in full for all labor, equipment, and materials required to provide, install, terminate, splice, and test the CAT 5E cable described above, complete.

### **ETHERNET MANAGE SWITCH**

Description. The Contractor shall furnish a managed Ethernet switch complete with the accessories specified below and install it inside an existing or proposed traffic signal cabinet.

The Contractor shall install a 10" section of DIN for mounting the ethernet switch and power supply.

The Contractor shall wire the proposed power supply using a standard NEMA 5-15P three prong power cord and plug the power supply into the equipment outlets inside each cabinet.

The Ethernet switch shall meet or exceed the following minimum specifications:

Approved Models: Antaira Technologies Model LMX-804G-SFP-T (8-Port (4-port 10/100/1000TX + 4 10/100/1000T SFP slots Industrial Ethernet Switch, Wide Operating Temperature)

Technology.

Total Ports: 8

Ethernet Ports: 4 x Gigabit ports (10/100/1,000BaseTx ), auto negotiation speed, full/half duplex mode and auto MDI connection

Fiber Ports: 4 x 100/1,000 SFP Slots

Wavelength:	Refer to SFP Module
Standards:	IEEE 802.3, 802.3u, 802.3ab, 802.3x, 802.3ad, 802.1d, 802.1w, 802.1s, 802.1Q, 802.1X, 802.1p, ITU-T G.8032/Y.1344 ERPS protocol
Protocol:	IGMPv1/v2, SNMPv1/v2c/v3, TFTP, SNTP, SMTP, RMON, HTTP, HTTPS, Telnet, Syslog, DHCP Option 66/67/82, SSH/SSL, Modbus/TCP, LLDP, IPv4/IPv6
Industrial Protocol:	ModbusTCP
Jumbo Frame:	9.6 Kbytes
MAC Table Size:	8K

#### Network Management.

Network Redundancy: STP, RSTP, MSTP, G.8032 ERPS Ring Redundancy Recovery <50ms

IEEE 802.1Q VLAN: Port Based, Tag Based, 1 ~ 4094

IGMP Snooping / GMRP: IGMP v1, v2 and Query Mode. Up to 256 Groups

IEEE 802.1x Authentication: RADIUS Support

QoS: Provides 4 Priority Queues per Port

System Alert Email: By Exception Through Email

Serial Console : RS-232 (RJ45 jack) with console cable, 115.2Kbps, 8,N,2

Configuration Backup: USB Port

System Configuration: Web Console, Telnet, CLI

#### Power.

Input Voltage: 12 - 48VDC, Redundant

Power Consumption: 15 Watts

Connection: 1 Removable 6-Contact Terminal Block

EFT Protection: 2,000 VDC

ESD Protection: 6,000 VDC

Relay Alarm Contact: 1A @ 24VDC

Reverse Polarity Protection: Yes

Overload Protection: Yes

Mechanical.

Enclosure: Metal, IP30 Protection

Dimensions: 54 x 142 x 99 mm

Weight: 2.5 lbs.

Mounting: DIN-rail or wall mount

Shock / Vibration: IEC60068-2-27, IEC60068-2-32, IEC60068-2-6

Ratings

Operating Temperature: Standard: -10 to 70°C or Extended: -40 to 75°C

Storage Temperature: -40°C to 85°C

Humidity: 5% to 95% non-condensing

RoHS Compliant: Yes

Certifications: FCC, CE, UL-61010-2-201 (Pending)

EMC: FCC Class A, CE EN6100-4-2, EN6100-4-3, EN6100-4-4,  
EN6100-4-5, EN6100-4-6, EN6100-4-8, EN6100-6-2, EN6100-6-4

Warranty: Five-Year Warranty

The following items shall be included with each switch:

- SFP Fiber Optic Module – Qty. 2 (Antaira SFP-S20-T, 1.25Gbps Ethernet SFP Transceiver, Single Mode 20KM / LC / 1310nm, -40°C~85°C)
- Fiber Optic Patch Cables – Qty. 2 (single mode fiber, 1 meter length, duplex, LC/ST connectors)
- Power Supply – Qty. 1 (Antaira DR-45-12, 45 Watt Series Industrial, Single Output, DIN Rail Power Supply, 12V DC, 3.5 Amps)

Basis of Payment. This work will be paid for at the contract unit price per Each for ETHERNET MANAGE SWITCH, which price shall be payment in full for all labor, materials, and equipment required to furnish the Ethernet switch described above complete with accessories and deliver it to the Department.

## **FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH**

Description. The Contractor shall furnish a fiber optic drop and repeat switch complete with the accessories specified below and install it inside an existing or proposed traffic signal cabinet.

The Contractor shall install a 10" section of DIN for mounting the ethernet switch and power supply.

The Contractor shall wire the proposed power supply using a standard NEMA 5-15P three prong power cord and plug the power supply into the equipment outlets inside each cabinet.

The fiber optic drop and repeat switch shall meet or exceed the following minimum specifications:

Approved Models: Antaira Technologies Model LNX-0702C-SFP-T (7-Port (5-port 10/100T + 2 10/100/1000T SFP ports Industrial Ethernet Switch, Wide Operating Temperature).

- Features:
- 5-Port 10/100TX + 2-Port 10/100/1000T/Mini-GBIC Combo
  - Store-and-Forward Switching Architecture
  - 10Gbps Back-Plane (Switching Fabric)
  - 1 Mbits Memory Buffer
  - 8K MAC Address Table
  - Wide-Range Redundant Power Design
  - Power Polarity Reserve Protect
  - Provides EFT Protection 3000 VDC for Power Line
  - Supports 6000 VDC Ethernet ESD Protection
  - IP30 Rugged Aluminum Case Design
  - 5-Year Warranty
- Standard:
- IEEE 802.3 10BaseT Ethernet
  - IEEE 802.3u 100BaseTX Fast Ethernet
  - IEEE 802.z Gigabit Fiber
  - IEEE 802.3x Flow Control and Back-Pressure
- Protocol:
- CSMA/CD
- Switch Architecture:
- Back-Plane (Switching Fabric): 10Gbps

- Transfer Rate:
- 14,880pps for Ethernet Port
  - 148,800pps for Fast Ethernet Port
  - 1,488,000pps for Gigabit Fiber Ethernet Port
- MAC Address:
- 8K MAC Address Table
- Memory Buffer:
- 7,926 pps (default)
- LED:
- Unit: Power 1, Power 2, Fault
  - 10/100 TX: Link/Activity, Full Duplex/Collision
  - Gigabit Copper: Link/Activity, Speed
  - SFP: Link/Activity
- Connector:
- 10/100T: 5 x RJ-45
  - 100/1000T: 2 x 100/1000 SFP Sockets
- Network Cable:
- 10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m)
  - 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)
- Power Supply:
- DC 12 ~ 48V, Redundant Power with Polarity Reverse Protect Function and Removable Terminal Block
- Power Consumption:
- 6 Watts
- Reverse Polarity Protection:
- Present
- Overload Current Protection:
- Present
- Mechanical:
- Casing: IP30 Metal Case
  - Dimension (W x H x D): 30 x 99 x 142 mm
  - Installation: DIN-Rail/Wall Mountable
- Weight:
- Unit Weight: 1.3 lbs.
  - Shipping Weight: 1.7 lbs.
- Operation Temperature:
- Wide Operating Temperature: -40° C to 75° C (-40° F to 176° F)
- Operation Humidity:
- 5% to 95% (Non-condensing)
- Storage Temperature:
- -40° C to 85° C

- EMI:
- FCC Class A
  - CE EN6100-4-2/EN6100-4-3/EN6100-4-4/EN6100-4-5/EN6100-4-6
  - /EN6100-4-8/EN6100-4-11/EN6100-4-12/EN6100-6-2/EN6100-6-4
- Stability Testing:
- Shock: IEC60068-2-27
  - Free Fall: IEC60068-2-32
  - Vibration: IEC60068-2-6
- Warranty:
- 5-Year Warranty

The following items shall also be included with each switch:

- SFP Fiber Optic Module – Qty. 2 (Antaira SFP-S20-T, 1.25Gbps Ethernet SFP Transceiver, Single Mode 10KM / LC / 1310nm, -40°C~85°C)
- Fiber Optic Patch Cable – Qty. 2 (single mode fiber, 1 meter length, duplex, LC/ST connectors)

Basis of Payment. This work will be paid for at the contract unit price per Each for FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH which price shall be payment in full for all labor, materials, and equipment required to provide the fiber optic Ethernet drop and repeat switch and associated equipment and install it inside the proposed traffic signal cabinet.

### **FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE**

Description. This work shall be in accordance with Sections 801, 864, 871, and 1076 of the Standard Specifications except as modified herein.

The Contractor shall furnish and install a fiber optic cable for traffic signal interconnect as shown in the plans.

The Contractor may elect to furnish a fiber optic cable that has more than 24 single mode fibers at no additional cost.

Each cable shall be clearly labeled in each cabinet utilizing a durable computer-generated label. The label shall contain information in regard to the location where the cable is going to or coming from, buffer tube, and fiber color. The Contractor shall provide numerical foot marking data at each handhole, vault, and cabinet to the Department.

The entire length of fiber shall remain continuous from end to end and the Contractor shall laterally splice from the mainline fiber into each traffic signal cabinet.



Twelve multimode fibers from each fiber end shall be terminated with ST connectors inside each traffic signal cabinet. All terminated fibers shall be clearly labeled with color and fiber optic cable origin. The remaining fibers contained in the unterminated buffer tubes shall remain continuous.

All terminated fibers shall be laterally spliced into the mainline fiber inside the nearest handhole or communication vault as shown on the plan sheets. Unused buffer tubers and fiber optic cable strands shall be left intact for future use.

Unused buffer tubes shall be readily accessible for future use. Each buffer tube shall be neatly coiled inside each traffic signal and CCTV cabinet with a minimum length of eight feet.

Fibers not being used shall be labeled "spare", and fibers not attached to a distribution enclosure shall be capped and sealed.

All ancillary components, required to complete the fiber optic cable plant, including but not limited to, moisture and water sealants, cable caps, fan-out kits, weather-proof splice kits, boots, cable trays, splice enclosures, termination panels, etc., shall be supplied under this pay item and will not be paid for separately. These items shall be submitted to the Department for approval.

The fiber optic cable shall be clearly marked in each handhole, communication vault, and cabinet with a brightly colored (orange or yellow) weather resistant label securely attached to the cable.

The Contractor shall provide and install a 12 Ga., stranded (EPR-TYPE RHW or THHN), insulated tracer cable in all conduits that contain fiber optic cable and do not contain an existing tracer wire. This work shall be done at the same time the fiber optic cable is pulled. There will be no additional compensation for this work.

Materials. The single-mode, fiber optic cable shall incorporate a loose, buffer-tube design. The cable shall conform to the requirements of RUS 7 CFR1755.900 (PE-90) for a single sheathed, non-armored cable, and shall be new, unused and of current design and manufacture. The number of fibers in each cable shall be as specified on the plans.

#### Construction Requirements:

#### Experience Requirements.

Personnel involved in the installation, splicing and testing of the fiber optic cables shall meet the following requirements:

A minimum of three (3) years' experience in the installation of fiber optic cables, including splicing, terminating and testing single mode fibers.

Install two systems where fiber optic cables are outdoors in conduit and where the systems have been in continuous satisfactory operation for at least two years. The Contractor shall submit as proof, photographs or other supporting documents, and the names, addresses and telephone numbers of the operating personnel who can be contacted regarding the installed fiber optic systems.

One fiber optic cable system (which may be one of the two in the preceding paragraph), which the Contractor can arrange for demonstration to the Department representatives and the Engineer.

Installers shall be familiar with the cable manufacturer's recommended procedures for installing the cable. This shall include knowledge of splicing procedures for and equipment being used on this project and knowledge of all hardware such as breakout (furcation) kits and splice closures. The Contractor shall submit documented procedures to the Engineer for approval and to be used by Construction inspectors.

Personnel involved in testing shall have been trained by the manufacturer of the fiber optic cable test equipment to be used, in fiber optic cable testing procedures. Proof of this training shall be submitted to the Engineer for approval. In addition, the Contractor shall submit documentation of the testing procedures for approval by the Engineer.

#### Installation in Conduit.

During cable pulling operations, the Contractor shall ensure that the minimum bending of the cable is maintained during the unreeling and pulling operations. Entry guide chutes shall be used to guide the cable into the handhole conduit ports. Lubricating compound shall be used to minimize friction. Corner rollers (wheels), if used, shall not have radii less than the minimum installation-bending radius of the cable. A series array of smaller wheels can be used for accomplishing the bend if the cable manufacturers specifically approve the array.

The pulling tension shall be continuously measured and shall not be allowed to exceed the maximum tension specified by the manufacturer of the cable. Fuse links and breaks can be used to ensure that the cable tensile strength is not exceeded. The pulling system shall have an audible alarm that sounds whenever a pre-selected tension level is reached. Tension levels shall be recorded continuously and shall be given to the Engineer upon request.

The cable shall be pulled into the conduit as a single component, absorbing the pulling force in all tension elements. The central strength member and Aramid yarn shall be attached directly to the pulling eye during cable pulling. "Basket grip" or "Chinese-finger type" attachments, which only attach to the cable's outer jacket, shall not be permitted. A breakaway swivel, rated at 95% of the cable manufacturer's approved maximum tensile loading, shall be used on all pulls. When simultaneously pulling fiber optic cable with other cables, separate grooved rollers shall be used for each cable.

Splicing Requirements: Splices shall be made at locations shown on the Plans. Any other splices shall be permitted only with the approval of the Engineer. The Contractor shall submit a splicing plan to the Department for approval.

Operation and Maintenance Documentation: After the fiber optic cable plant has been installed, two (2) complete sets of Operation and Maintenance Documentation shall be provided. The documentation shall, as a minimum, include the following:

- Complete and accurate as-built diagrams showing the entire fiber optic cable plant including locations of all splices.
- Final copies of all approved test procedures.
- Complete performance data of the cable plant showing the losses at each terminal connector.
- Complete parts list including names of vendors.
- Electronic Testing Files (OTDR traces, power meter data, etc.)

Testing Requirements: Testing shall be in accordance with Article 801.13 except where modified by this special provision.

The Contractor shall submit detailed test procedures for approval by the Engineer. All continuous fiber runs shall be tested bi-directionally at both 1310 nm and 1550 nm with a power meter and optical source and OTDR. For testing, intermediate breakout fibers may be concatenated and tested end-to-end. Any discrepancies between the measured results and these specifications will be resolved to the satisfaction of the Engineer.

The Contractor shall provide the date, time and location of any tests required by this specification to the Engineer at least 5 days before performing the test. Upon completion of the cable installation, splicing, and termination, the Contractor shall test all fibers in each link for continuity and attenuation. The test procedure shall be as follows:

A Certified Technician utilizing an Optical Source/Power Meter and OTDR shall conduct the testing. The Technician is directed to conduct the test using the standard operating procedures defined by the manufacturer of the test equipment. All fibers installed shall be tested in both directions.

At the completion of the test, the Contractor shall provide two copies of documentation of the test results to the Engineer. The test documentation shall be bound and shall include the following:

Cable & Fiber Identification:

Cable ID  
Cable Location - beginning and end point  
Fiber ID, including tube and fiber color  
Operator Name  
Date & Time  
Setup Parameters  
Wavelength  
Pulse width (OTDR)  
Refractory index (OTDR)  
Range (OTDR)  
Scale (OTDR)  
Setup Option chosen to pass OTDR "dead zone"

Test Results:

OPTICAL SOURCE/POWER METER

Total Attenuation  
Attenuation (dB/km)

These results shall be provided in tabular form. The following shall be the criteria for the acceptance of the cable:

The test results shall show that the dB/km loss does not exceed +3% of the factory test or 1% of the cable's published production loss. However, no event shall exceed 0.10 dB. If any event is detected above 0.10 dB, the Contractor shall replace or repair the proposed fiber and/or fusion splice and connector including that event point.

The total dB loss of the cable, less events, shall not exceed the manufacturer's production specifications as follows: 0.5 dB/km at both 1310 and 1550 nm.

If the total loss exceeds these specifications, the Contractor shall replace or repair that cable run at the Contractor's expense, both labor and materials. Elevated attenuation due to exceeding the pulling tension during installation shall require the replacement of the cable run at the Contractor's expense, including labor and materials.

The Contractor shall label the destination of each trunk cable onto the cable in each handhole and termination panel.

Slack Storage of Fiber Optic Cables.

A part of this pay item, slack fiber shall be supplied as necessary to allow splicing the fiber optic cables in a controlled environment, such as a splicing van or tent. After splicing has been completed, the slack fiber shall be stored underground in handholes and in the traffic controller cabinets.

The amount of slack cable listed in Article 873.03 shall be revised as follows:

<u>Location</u>	<u>Length of Slack Cable (Ft.)</u>
Double Handhole	50.0
Handhole	20.0
CCTV or Signal Cabinet	10.0
Junction Box	10.0
Equipment Cabinet	3.0

Basis of Payment. This work will be paid for at the contract unit price per foot for FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE and shall be payment in full for all labor, equipment, and materials required to provide, install, terminate, splice, and test the fiber optic cable described above, complete.

### **CONFIRMATION BEACON**

Description. This work shall be in accordance with Sections 887 and 1072 of the Standard Specifications except as modified herein.

The Contractor shall furnish and install a two-way emergency vehicle system confirmation beacon from the mast arm mounted confirmation beacon to the traffic signal controller cabinet.

The Contractor shall furnish and install all other items required for the installation of the confirmation beacon.

The confirmation beacon shall be equipped with outdoor rated LED lamps and shall be compatible with the existing Global Traffic Technologies Opticom GPS/secure radio communication system that is installed at multiple intersections in the city of Peoria.

Basis of Payment. This work will be paid for at the contract unit price each for CONFIRMATION BEACON and shall be payment in full for all labor, materials, and equipment required to furnish, test, and install the equipment described above, complete.

### **EMERGENCY VEHICLE PRIORITY SYSTEM**

Description. This work shall be in accordance with Sections 887 and 1072 of the Standard Specifications except as modified herein.

The Contractor shall furnish an Opticom Emergency Vehicle Preemption system at the locations shown on the plan sheets.

The EVP system shall be a Global Traffic Technologies Opticom GPS system for integration into the city of Peoria's existing emergency vehicle preemption system.

The Contractor shall perform the following work:

- Furnish and install one Opticom 3101 GPS Radio Unit containing a GPS receiver and a 2.4 GHz spread spectrum transceiver, with Opticom 1050 GPS/Radio Antenna and Opticom 1072 GPS Cable Assembly. The radio unit shall be installed on the mast arm strain pole as shown in the plans. The radio unit shall be installed at a 40 Ft. mounting height.
- Furnish and install one Opticom 764 Multimode Phase Selector inside the proposed traffic signal cabinet.
- Furnish and install one Opticom Model 760 Card Rack inside the proposed traffic signal cabinet.
- Furnish and install Opticom 1070 GPS Installation Cable inside the proposed traffic signal cabinet.
- The Contractor shall furnish and install cables, brackets, and all other components required for integration into the proposed traffic signal cabinets and as required for a complete and fully functional system.

Upon installation and activation of the EVP system, the Contractor shall coordinate testing of the EVP system with the city of Peoria Traffic Operations section. The Contractor shall notify Andy O'Neill at (309) 210-1005 to schedule a time for system testing.

Basis of Payment. This work will be paid for at the contract unit price each for EMERGENCY VEHICLE PRIORITY SYSTEM and shall be payment in full for all labor, materials, and equipment required to furnish, test, and install the equipment described above, complete.

**RELOCATE EXISTING PTZ CAMERA**

Description. This work shall be in accordance with the applicable Articles of Sections 895, 1073, and 1074 of the Standard Specifications with the following modifications:

This item shall consist of removing an existing CCTV camera from a mast arm strain pole and relocating it to a proposed mast arm.

The Contractor shall remove the existing CCTV camera and camera bracket and install it on the strain pole of a proposed mast arm at the locations shown in the plans.

The Contractor shall install new CAT 5E cabling from the existing controller cabinet to the proposed camera location. The CAT 5E cable will be paid for separately under the pay item for CAT 5 ETHERNET CABLE.

The Department will test the camera after relocation to verify that it is functioning correctly.

Basis of Payment. This work will be paid for at the contract unit price per each for RELOCATE EXISTING PTZ CAMERA which price shall be payment in full for all labor, materials, and equipment required to relocate the existing CCTV camera as described above.

### **ILLUMINATED SIGN, LED**

Description. This work shall be in accordance with the applicable specifications contained in Sections 891 and 1084 of the Standard Specifications except as modified herein.

This work shall consist of furnishing and installing an electrically illuminated LED sign at the locations shown in the plans.

The sign will be either a bracket mounted sign installed on a traffic signal post or mast arm strain pole or a mast arm mounted sign installed on a mast arm.

Signs shall be graphical No Left Turn LED or No Right Turn LED Blank-Out signs for lane control (FHWA MUTCD R3-1) with outside dimensions of 30" x 30".

The Contractor shall furnish brackets, hardware, and all other items required to install the sign on a traffic signal post, mast arm or mast arm strain pole.

The LED illuminated sign shall have the following features:

- Single face models.
- Utilizes standard ITE colors.
- Comply with MUTCD requirements.
- Fail-safe protection.
- Complete blank out when not energized.
- Low power consumption
- Easy to service.

#### 1. General Description

- 1.1. Sign shall be capable of displaying either "No Left Turn" Symbol or "No Right Turn" Symbol. These messages shall be red and white. These messages shall be displayed on one side. The circle shall have a minimum of two (2) rows of LED's.

#### 2. Functional Description

- 2.1. All messages shall be clearly legible and attract attention under any lighting condition. At full intensity, the sign shall be highly visible anywhere within a 15 degree cone centered about the optic axis.

2.2. The sign shall consist of:

- 2.2.1. Weatherproof housing and door.
- 2.2.2. LED's.
- 2.2.3. Transformers.

2.3. All LED's will be T-1  $\frac{3}{4}$  (5 millimeters)

2.4. LED's will have an expected lifetime of 100,000 hours.

2.5. All LED's will be high in optical power emitting radiation on the order of 1.5 to 2.3 candelas when operated at 20 milliamps DC.

2.6. Operating wavelengths shall be:

- 2.6.1. Red – 626 nm.
- 2.6.2. Amber – 590 nm.
- 2.6.3. Bluish/Green – 505 nm.

2.7. Transformers shall be used to reduce the incoming 120 volts AC to the design DC voltage.

2.8. The transformers shall contain Class A insulation and weatherproofing.

2.9. The sign shall be capable of continuous operation over a range in temperatures from -37C to +75C (-35F to + 165F).

### 3. Aluminum Housing

3.1. Housing shall be constructed of extruded aluminum. A flat aluminum panel shall be welded into the housing back for one-way signs.

3.2. All corners and seams of one-way housings are to be heli-arc welded to provide a weatherproof seal around the entire case.

3.3. Continuous full-length stainless steel hinges shall connect the housing and the extruded aluminum door.

3.4. Signs shall have 3 stainless steel  $\frac{1}{4}$  turn link-locks per door to tightly secure the door onto a gasket between it and the housing.

3.5. Door gaskets shall be  $\frac{3}{16}$ " x 1" neoprene to provide a weatherproof seal.

3.6. The extruded aluminum doors shall be 0.125" thick and shall have one side removable to gain access to the sign face.



3.7. The sign face shall be 0.080" thick aluminum and have the entire LED assembly mounted to it.

3.8. Each door shall include sun visor of 0.063" thick aluminum with a standard length of 6".

3.9. The sign face is to be protected by a polycarbonate, matte clear, lexan face plate.

3.10. Drainage shall be provided by four drain holes at the corners of the housing.

3.11. Finish on the sign housing shall be two (2) coats of exterior enamel applied after the surface material is acid etched and primed with zinc-chromate primer.

3.12. The sign housing shall be painted black.

#### 4. LED Message Modules

4.1. The LED message module shall consist of the following components:

4.1.1. A rigid aluminum message plate.

4.1.2. High intensity LED's.

4.1.3. LED drive electronics.

4.2 The LED's shall be mounted in a panel via mounted fixing clips.

4.3 Door panels shall be flat black to maximize legibility when activated.

4.4 Electrical connections shall be made via a barrier-type terminal strip.

4.5 All fasteners and hardware shall be corrosion resistant stainless steel.

#### 5. Warranty

5.1. All products shall be warranted to be free of defects due to material and workmanship for a period of two (2) years from date of installation.

Basis of Payment. This work will be paid for at the contract unit price per each for ILLUMINATED SIGN, LED, which shall be payment in full for all labor, equipment, and materials required to furnish and install the sign described above, complete.

#### **PAINT TRAFFIC SIGNAL EQUIPMENT**

Description. This work shall include surface preparation, powder coated finish application and packaging of new galvanized steel traffic signal mast arm poles, pedestrian push button posts, and posts assemblies. All work associated with applying

the painted finish shall be performed at the vendor's facility for the pole assembly or post or at a painting facility approved by the Engineer. Traffic signal mast arm shrouds and post bases shall also be painted the same color as the pole assemblies and posts.

Surface Preparation. All weld flux and other contaminants shall be mechanically removed. The traffic mast arms, and post assemblies shall be degreased, cleaned, and air dried to assure all moisture is removed.

Painted Finish. All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450F for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400F.

The finish paint color shall be one of the vendor's standard colors and shall be as selected by the local agency responsible for paint costs. The Contractor shall confirm in writing, the color selection with the local responsible agency and provide a copy of the approval to the Engineer and a copy of the approval shall be included in the material catalog submittal.

Painting of traffic signal heads, pedestrian signal heads and controller cabinets is not included in this pay item.

Any damage to the finish after leaving the vendor's facility shall be repaired to the satisfaction of the Engineer using a method recommended by the vendor and approved by the Engineer. If while at the vendor's facility the finish is damaged, the finish shall be re-applied at no cost to the contract.

Warranty. The Contractor shall furnish in writing to the Engineer, the paint vendor's standard warranty and certification that the paint system has been properly applied.

Packaging. Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment. This work shall be paid for at the contract unit price Lump sum for PAINT TRAFFIC SIGNAL EQUIPMENT, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases, and appurtenances.

## **TEMPORARY TRAFFIC SIGNAL INSTALLATION**

Description. This work shall be in accordance with Section 890 of the Standard Specifications except as modified herein.

This work shall consist of furnishing, installing, maintaining, and removal of temporary traffic signals and their associated components.

The Contractor shall stage construction of the proposed traffic signals in a manner to keep the combination of existing and temporary traffic signals operational at all times during construction.

The combination of existing and temporary traffic signals shall remain in operation during the construction of the proposed traffic signals. The Contractor may utilize existing traffic signal controllers and cabinets, posts, signal heads, and other signal components for temporary traffic signal operation and supplement with their own components as needed to maintain continuous operation at all traffic signal locations.

All existing traffic signals are programmed to operate in pre-timed mode and do not have any vehicle detection, pedestrian pushbuttons, emergency vehicle preemption capabilities.

The existing traffic signal interconnect cables shall remain in operation whenever possible to provide time synchronization for the downtown traffic signals.

The temporary traffic signals shall conform to all applicable MUTCD requirements including but not limited to displaying a minimum of two traffic signal heads per phase, traffic signal head placement, and pedestrian signal head placement.

The Contractor shall perform the following work items at each intersection as required to keep traffic signals operational:

- Furnish and install temporary wiring feeds to re-feed existing signal heads located on traffic signal posts and decorative light poles. The temporary wiring feeds shall be connected directly to the existing controller or through existing traffic signal handholes. The Contractor shall protect all temporary wiring by installing it inside PVC conduit and securing it to traffic structures as needed to ensure that it is not in conflict with the proposed construction or a hazard to pedestrians. All temporary traffic signal wiring shall be installed at a minimum height of twelve feet for pedestrian clearance on sidewalks and walkways and at the height required to prevent damage from equipment during construction of the permanent traffic signals. The Contractor shall furnish and install rubber mats for all temporary wiring that is installed on the ground in locations that has pedestrian foot traffic. All temporary wiring splices shall be weatherproof and watertight to prevent issues with moisture and water intrusion.
- Furnish and install temporary traffic signal post and light pole foundations at locations where the existing traffic signal structures have to be removed to install the proposed traffic signals. The Contractor may relocate the existing traffic signal structures to the temporary foundations and furnish temporary wiring as needed for operation. All temporary structures shall be adequately secured to existing permanent or other permanent structures to prevent tipping from wind or other weather related events.

- Furnish and install temporary traffic signals posts, traffic signal heads, and pedestrian signal heads as needed to maintain traffic signal operation. The temporary traffic signal posts shall be constructed from either treated wood posts, treated wood poles, aluminum, or steel. Temporary traffic signal posts shall be adequately secured to existing pavement or other permanent structures to prevent tipping from wind or other weather related events. All temporary traffic signal heads shall be securely tightened to prevent turning from wind and other weather related events.
- The Contractor shall maintain all existing and temporary traffic signals until the proposed traffic signals are operational. The Contractor shall furnish and replace traffic signal and pedestrian head LED modules as needed to maintain signal operation. The Contractor shall re-aim traffic signal heads as required for stage construction to ensure that signal heads are visible to motorists and pedestrians. In the event that there is an issue with the existing traffic signal controller or cabinet, the city of Peoria will furnish replacement equipment as needed for the Contractor to install.
- The Contractor shall remove all temporary traffic signal components upon activation of the proposed traffic signals. The Contractor shall remove all items and dispose of them off ROW.

Basis of Payment. This work will be paid for at the contract unit price per Each for TEMPORARY TRAFFIC SIGNAL INSTALLATION and shall be payment in full for all labor, equipment, and materials required to furnish, install, maintain, and remove the temporary traffic signals described above, complete.

### **LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G**

Description: This work shall consist of furnishing and installing the luminaire in accordance with Section 821 of the Standard Specifications, details in the plans, and the following additions or exceptions.

The luminaire shall be:

- Philip Lumec catalog number RFM0160W-48LED-4K-T-R3S-UNIV or
- American Electric Lighting catalog number ATB2-40BLEDE13-MVOLT-R3

General: The work shall be completed in accordance with Section 821 of the "Standard Specifications," plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per EACH for LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the luminaires.

## **SANITARY SEWER**

### **SANITARY MANHOLES TO BE ADJUSTED**

This work shall consist of adjusting sanitary manholes with new frames and lids. Contact GPSD at least 2 working days prior to beginning work. All work must be completed in accordance with GPSD Standard Specifications and by a contractor licensed and bonded with GPSD.

Contractor shall coordinate with GPSD to provide traffic control to allow GPSD personnel to inspect each of the structures to be adjusted. Any additional work identified during the inspection, beyond a standard adjustment, will be paid for as extra work in accordance with Article 109.04.

Manholes shall be adjusted with a new cast iron frame and cover, equal to either Neenah Foundry Number R-1530, Type "B", or East Jordan Iron Works, Inc., 1920 Frame and Lid with modifications as shown on the Sanitary District's Detail Drawing for castings, included in these specifications. A waterproof frame and cover equal to Neenah Number R-1915-H2, Neenah Number R-1916-C or East Jordan Iron Works, Inc., 1058 Frame and Lid shall be used where shown on the Plans. Where waterproof frames and covers are constructed, bolts used to secure covers to frames shall be completely coated with anti-seize compound. Anti-Seize compound shall be a pure nickel-based anti-seize compound rated for hostile environments and meet MIL PRF-907F requirements. Anti-Seize compound shall be acid resistant and have a strong resistance to water wash off. Compound may not contain copper, lead, chlorides or other halogens, phosphorus, or silicones. Approved materials are Nikal Jet-Lube as manufactured by Whitmore Manufacturing, LLC, Loctite LB 771 Nickel Anti-Seize as manufactured by the Henkel Corporation, or CRC Nickel Anti-Seize as manufactured by CRC Industries.

Not all sanitary manholes to be adjusted belong to GPSD. The stamp on the new cover will vary by location as indicated below:

Street	Station	Offset	Stamp on Lid
Jefferson Ave.	281+43.47	26.94' RT	"PSD"
Adams St.	190+11.42	41.29' LT	"SANITARY"

All castings shall be of uniform quality, free from blowholes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shot blasting or by some other approved method, and shall be coated with asphalt paint. Casting shall be sealed to the top of the manhole with butyl rubber sealant. The contractor shall be responsible for any damage to the existing sign.

The maximum height of adjusting rings to be allowed for use under the manhole frame shall be eight (8) inches. Rubber adjusting rings shall be used for adjustments where the raise is less than or equal to three (3) inches; for all adjustments, at least two (2) inches of rubber adjusting rings shall be used immediately below the manhole frame.

Manhole casting adjusting rings may be used for minor height adjustments not exceeding eight (8) inches; however, concrete adjusting rings of thickness two (2) inches or less shall not be allowed. If the surface surrounding the manhole is uneven, tapered rubber adjusting rings as provided by the manufacturer may be used.

Rubber adjusting rings shall be either Infra-Riser Multi-Purpose Rubber Composite Adjustment Risers as manufactured by East Jordan Iron Works, Inc. or rubber adjusting rings as manufactured by American Highway Products, Ltd.

Basis of Payment: The adjustment of sanitary manholes shall be paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED.

### **SANITARY MANHOLES TO BE RECONSTRUCTED**

This work shall consist of reconstructing the sanitary manholes with new frames and lids at the locations shown in the plans in accordance with the Sanitary District's Detail Drawings included in these specifications. Contact GPSD at least 2 working days prior to beginning work. All work must be completed in accordance with GPSD Standard Specifications and by a contractor licensed and bonded with GPSD.

Manholes shall be reconstructed with a new cast iron frame and cover, equal to either Neenah Foundry Number R-1530, Type "B", or East Jordan Iron Works, Inc., 1920 Frame and Lid with modifications as shown on the Sanitary District's Detail Drawing for castings, included in these specifications. A waterproof frame and cover equal to Neenah Number R-1915-H2, Neenah Number R-1916-C or East Jordan Iron Works, Inc., 1058 Frame and Lid shall be used where shown on the Plans. Where waterproof frames and covers are constructed, bolts used to secure covers to frames shall be completely coated with anti-seize compound. Anti-Seize compound shall be a pure nickel-based anti-seize compound rated for hostile environments and meet MIL PRF-907F requirements. Anti-Seize compound shall be acid resistant and have a strong resistance to water wash off. Compound may not contain copper, lead, chlorides or other halogens, phosphorus, or silicones. Approved materials are Nikal Jet-Lube as manufactured by Whitmore Manufacturing, LLC, Loctite LB 771 Nickel Anti-Seize as manufactured by the Henkel Corporation, or CRC Nickel Anti-Seize as manufactured by CRC Industries.

Not all sanitary manholes to be adjusted belong to GPSD. The stamp on the new cover will vary by location as indicated below:

Street	Station	Offset	Stamp on Lid
Jefferson Ave.	286+67.59	18.63' RT	"SANITARY"

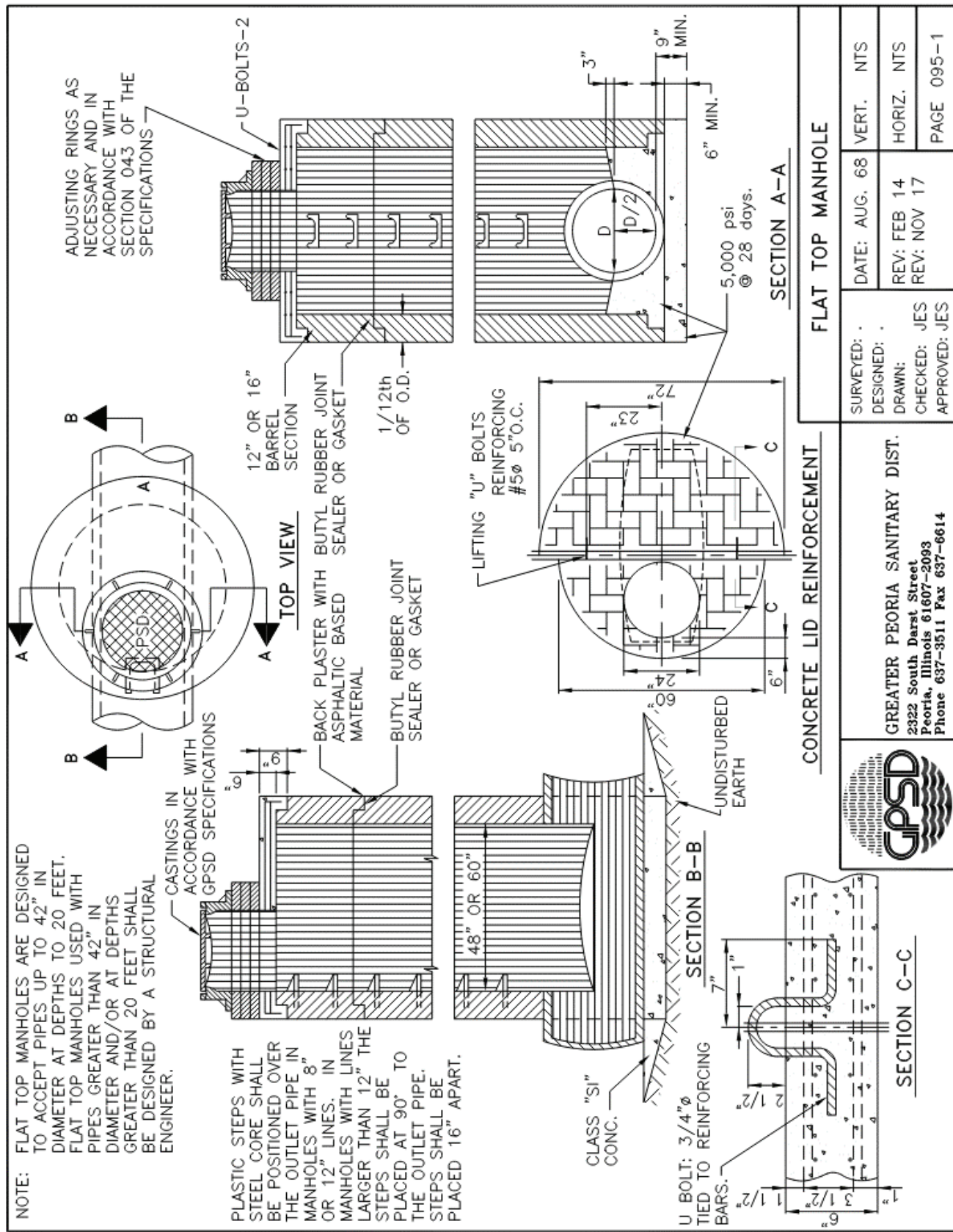
All castings shall be of uniform quality, free from blowholes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shot blasting or by some other approved method, and shall be coated with asphalt paint.

Casting shall be sealed to the top of the manhole with butyl rubber sealant. The contractor shall be responsible for any damage to the existing sign.

The maximum height of adjusting rings to be allowed for use under the manhole frame shall be eight (8) inches. Rubber adjusting rings shall be used for adjustments where the raise is less than or equal to three (3) inches; for all adjustments, at least two (2) inches of rubber adjusting rings shall be used immediately below the manhole frame. Manhole casting adjusting rings may be used for minor height adjustments not exceeding eight (8) inches; however, concrete adjusting rings of thickness two (2) inches or less shall not be allowed. If the surface surrounding the manhole is uneven, tapered rubber adjusting rings as provided by the manufacturer may be used.

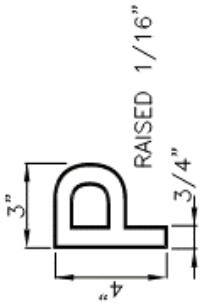
Rubber adjusting rings shall be either Infra-Riser Multi-Purpose Rubber Composite Adjustment Risers as manufactured by East Jordan Iron Works, Inc. or rubber adjusting rings as manufactured by American Highway Products, Ltd.

Basis of Payment: The adjustment of sanitary manholes shall be paid for at the contract unit price per each for SANITARY MANHOLES TO BE RECONSTRUCTED.

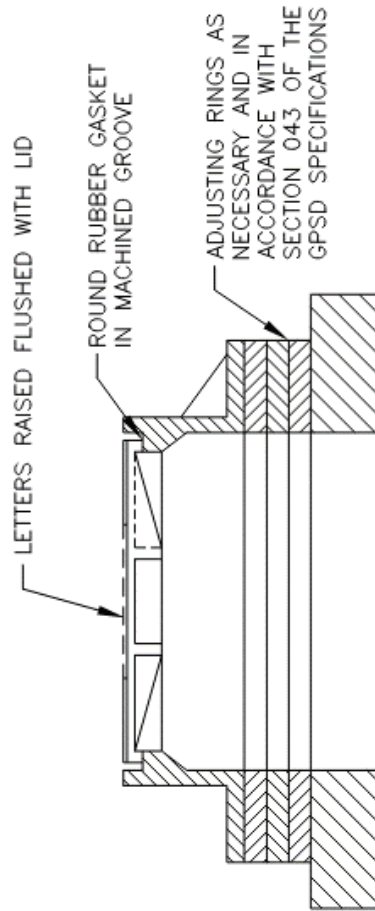


E:\Manuols\GPSD - Regulations\Future Revision\Detail Drawings\CAD Details\1403 Flat Top Manhole (095-01).dwg

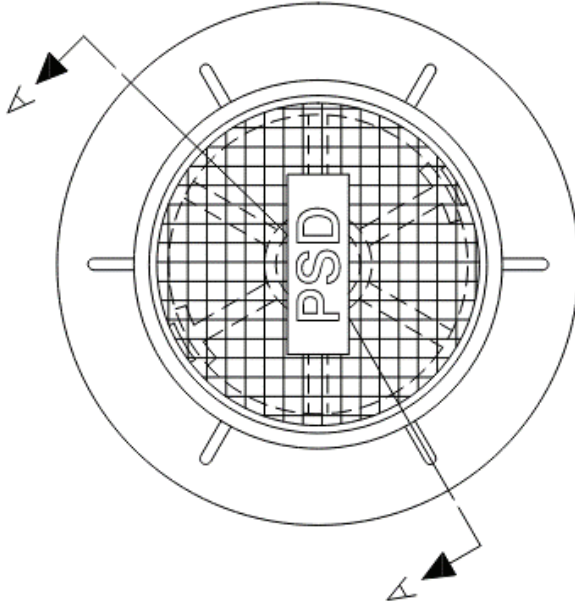




LETTER DETAIL



SECTION A-A



PLAN

MANHOLE FRAME & COVER

NEENAH R-1530 TYPE "B",  
 R1915-H2 OR R-1916-C, OR  
 EAST JORDAN NO. 1920, OR EQUAL

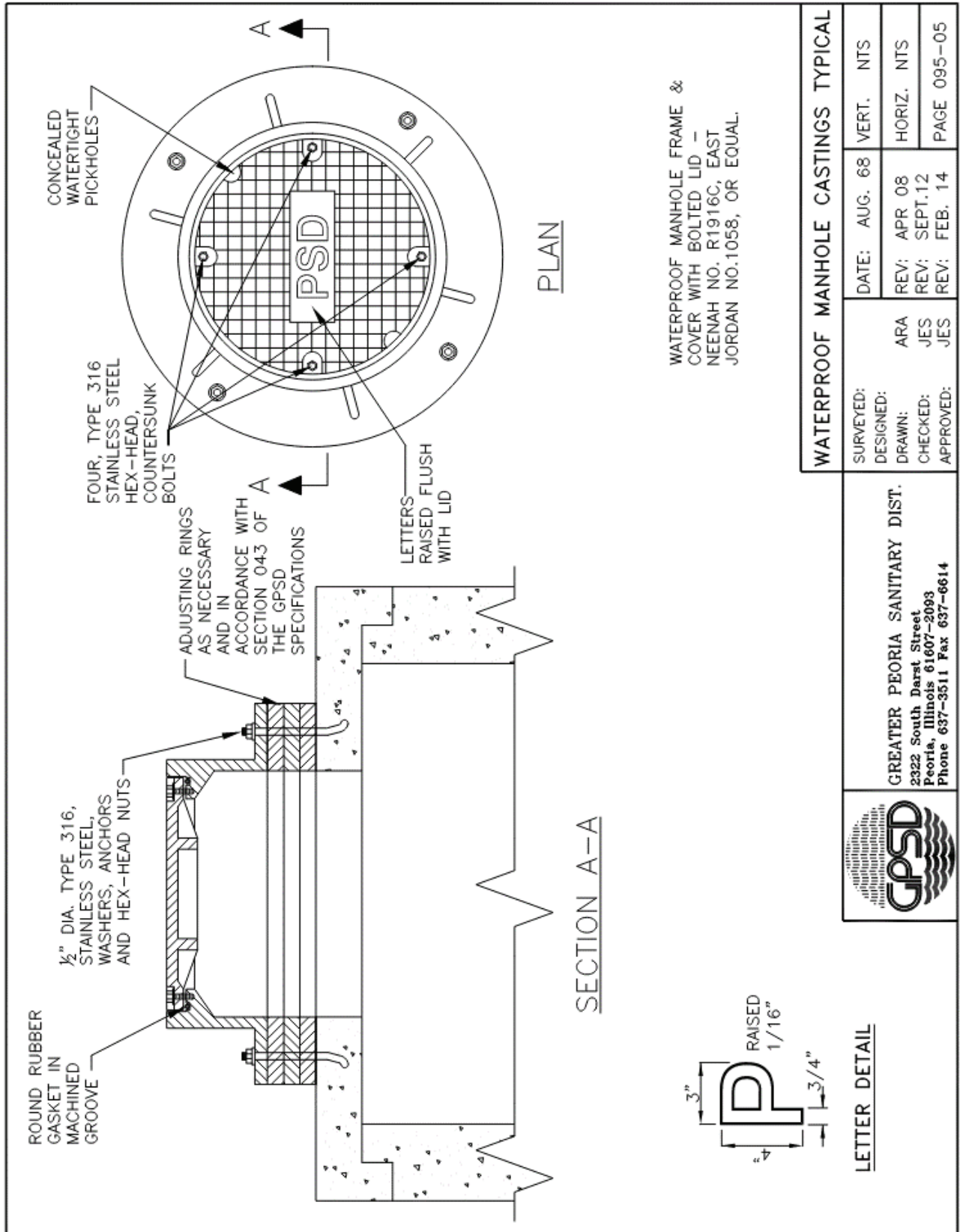
STANDARD MANHOLE CASTINGS

SURVEYED: .	DATE: APR. 08	VERT. NTS
DESIGNED: .	REV: FEB. 11	HORIZ. NTS
DRAWN: ARA	REV: SEP. 12	PAGE 095-4
CHECKED: JES	REV: FEB. 14	
APPROVED: JES		

GREATER PEORIA SANITARY DIST.

2322 South Darst Street  
 Peoria, Illinois 61607-2093  
 Phone 637-3511 Fax 637-6614

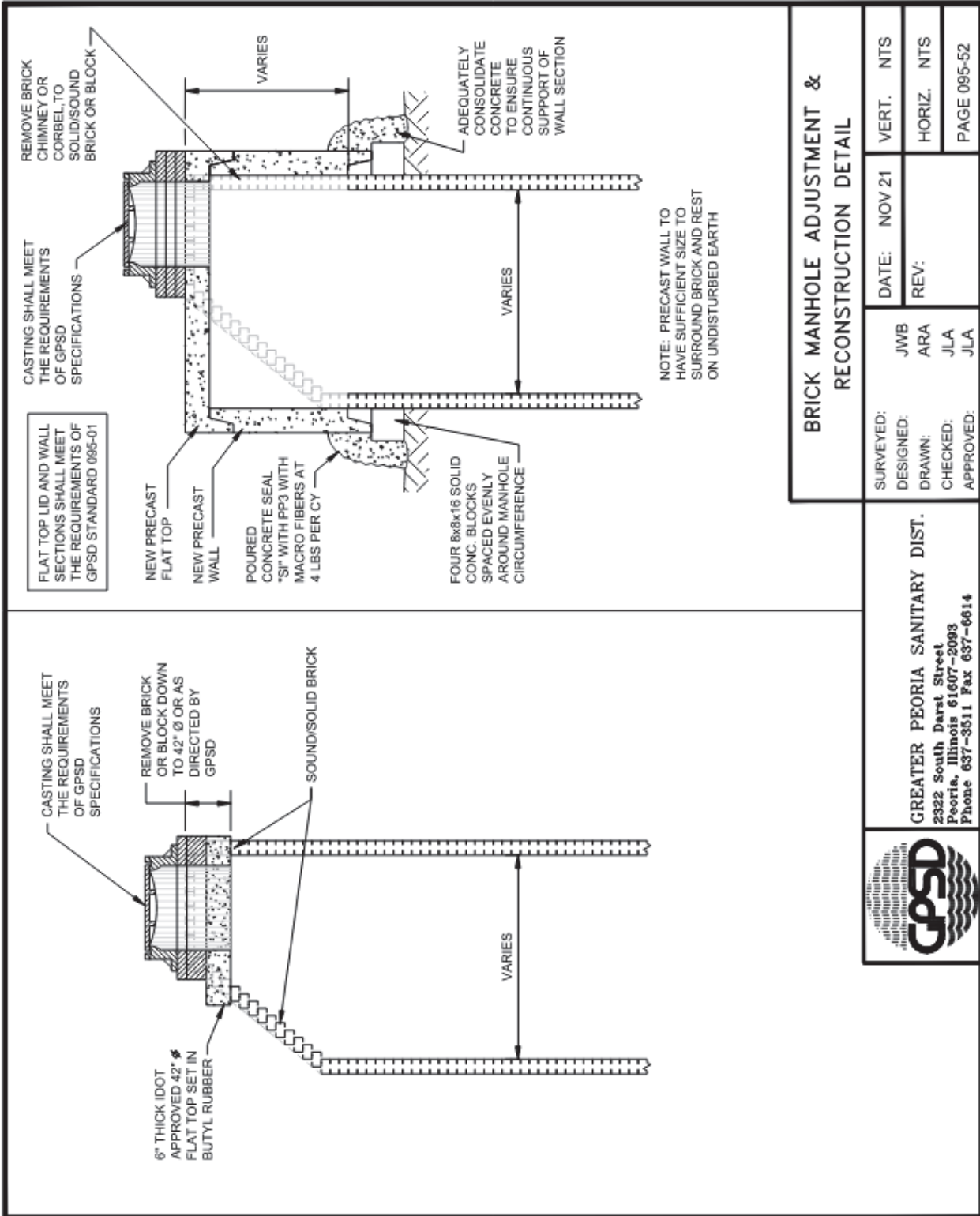




WATERPROOF MANHOLE CASTINGS TYPICAL		
SURVEYED:	DATE: AUG. 68	VERT. NTS
DESIGNED:	REV: APR 08	HORIZ. NTS
DRAWN:	ARA	JES
CHECKED:	JES	REV: SEPT.12
APPROVED:	JES	REV: FEB. 14
		PAGE 095-05


GREATER PEORIA SANITARY DIST.  
 2322 South Darst Street  
 Peoria, Illinois 61607-2093  
 Phone 637-3511 Fax 637-6614





<b>BRICK MANHOLE ADJUSTMENT &amp; RECONSTRUCTION DETAIL</b>		DATE:	NOV 21	VERT.	NTS
		DESIGNED:	JWB	REV:	
SURVEYED:		DRAWN:	CHECKED:	APPROVED:	
		ARA	JLA	JLA	
		JLA	JLA	JLA	PAGE 095-52

**GREATER PEORIA SANITARY DIST.**  
 2322 South Darst Street  
 Peoria, Illinois 61607-2093  
 Phone 637-3511 Fax 637-6614



## **ENVIRONMENTAL PERMITTING**

### **NPDES PERMIT**

The Engineer will apply for and obtain a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) prior to beginning construction.

The CGP has four main elements:

- Notice of Intent (NOI)
- Storm Water Pollution Prevention Plan (SWPPP)
- Incident of Non-Compliance (ION)
- Notice of Termination (NOT)

The Notice of Intent (NOI) serves as the application for the CGP. A Notice of Intent must be post-marked at least thirty days prior to the commencement of any construction activity on site. The Erosion Control Plan sheets will convey the information required for a Storm Water Pollution Prevention Plan (i.e. drainage patterns, area of soil disturbance, location of storm water discharges, etc.). The Contractor shall be responsible for having these plan sheets available for viewing during business hours at the project site. An Incident of Non-Compliance must be completed and submitted to the IEPA if, at any time, an erosion or sediment control device fails.



Route FAU 6673/6674	Marked Route Jefferson Ave & Adams St	Section Number 18-00377-00-SP
Project Number 1CDZ(284)	County Peoria	Contract Number 89767

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature <i>Andrea Klopfenstein</i>	Date 03/23/23
---	------------------

Print Name <i>Andrea Klopfenstein</i>	Title <i>City Engineer</i>	Agency City of Peoria
--	-------------------------------	--------------------------

**Note:** Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

**I. Site Description:**

A. Provide a description of the project location; include latitude and longitude, section, town, and range:

This project is located in downtown Peoria on the following streets:  
 Jefferson Ave from Walnut St. to Spalding Ave; Adams St from Walnut St to Fayette St;  
 The following streets north of where they cross Jefferson Ave to south of where they cross Adams St:  
 Walnut St, William Kumpf Blvd, Harrison St, Liberty St, Fulton St, Main St, Hamilton Blvd, Fayette St.  
 T8N R8E Section 9, 40°41'31.2"N 89°35'31.0"W

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:

Construction activity consists of resurfacing mainline pavement, replacing: curbs, gutters, traffic signals, lighting updates, sidewalks, storm sewer improvements, and entrance pavements.

C. Provide the estimated duration of this project:

September 2023 - Nov 2025

D. The total area of the construction site is estimated to be 23.5 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.5 acres.

E. The following are weighted averages of the runoff coefficient for this project before and after construction activities are completed; see Section 4-102 of the IDOT Drainage Manual:

EX & PR 0.90

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:

533 - Urban Land

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report:

N/A

H. Provide a description of potentially erosive areas associated with this project:

Ground will be open cut for new sidewalks and curb bump outs.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g., steepness of slopes, length of slopes, etc.):

Open ground from removed pavement for new sidewalk, sidewalk ramps, and entrances.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) , and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

City of Peoria

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located:

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. In addition, include receiving waters that are listed as Biologically Significant Streams by the Illinois Department of Natural Resources (IDNR). The location of the receiving waters can be found on the erosion and sediment control plans:

Illinois River

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes (i.e., 1:3 or steeper), highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc. Include any commitments or requirements to protect adjacent wetlands.

For any storm water discharges from construction activities within 50-feet of Waters of the U.S. (except for activities for water-dependent structures authorized by a Section 404 permit, describe: a) How a 50-foot undisturbed natural buffer will be provided between the construction activity and the Waters of the U.S. or b) How additional erosion and sediment controls will be provided within that area.

Areas outside the limits of construction shall remain undisturbed to preserve natural vegetation and trees.

O. Per the Phase I document, the following sensitive environmental resources are associated with this project and may have the potential to be impacted by the proposed development. Further guidance on these resources is available in Section 41-4 of the BDE Manual.

N/A

303(d) Listed receiving waters for suspended solids, turbidity, or siltation.  
The name(s) of the listed water body, and identification of all pollutants causing impairment:

Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

[Empty text box]

Applicable Federal, Tribal, State, or Local Programs

[Empty text box]

Floodplain

[Empty text box]

Historic Preservation

[Empty text box]

Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation

TMDL (fill out this section if checked above)

The name(s) of the listed water body:

[Empty text box]

Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

[Empty text box]

If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet that allocation:

[Empty text box]

Threatened and Endangered Species/Illinois Natural Areas (INAI)/Nature Preserves

[Empty text box]

Other

[Empty text box]

Wetland

[Empty text box]

P. The following pollutants of concern will be associated with this construction project:

Antifreeze / Coolants

Concrete

Concrete Curing Compounds

Concrete Truck Waste

Fertilizers / Pesticides

Paints

Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)

Soil Sediment

Solid Waste Debris

Solvents

Waste water from cleaning construction equipments

Other (Specify) \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Other (Specify) \_\_\_\_\_

**II. Controls:**

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in Section I.C above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

**A. Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

**B. Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II.B.1 and II.B.2, stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- |  |  |
|--|--|
| <input type="checkbox"/> Erosion Control Blanket / Mulching        | <input type="checkbox"/> Temporary Turf (Seeding, Class 7) |
| <input type="checkbox"/> Geotextiles                               | <input type="checkbox"/> Temporary Mulching                |
| <input type="checkbox"/> Permanent Seeding                         | <input type="checkbox"/> Vegetated Buffer Strips           |
| <input checked="" type="checkbox"/> Preservation of Mature Seeding | <input type="checkbox"/> Other (Specify) _____             |
| <input checked="" type="checkbox"/> Protection of Trees            | <input type="checkbox"/> Other (Specify) _____             |
| <input checked="" type="checkbox"/> Sodding                        | <input type="checkbox"/> Other (Specify) _____             |
| <input type="checkbox"/> Temporary Erosion Control Seeding         | <input type="checkbox"/> Other (Specify) _____             |

Describe how the stabilization practices listed above will be utilized during construction:

During construction area of disturbance will be limited to only the area required for construction of the proposed roadway improvements to preserve and protect existing vegetation where present.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

After construction activities have been completed, permanent seeding will be completed on all areas designated on the final improvement plans.

**C. Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- |  |  |
|--|--|
| <input type="checkbox"/> Aggregate Ditch           | <input type="checkbox"/> Stabilized Construction Exits |
| <input type="checkbox"/> Concrete Revetment Mats   | <input type="checkbox"/> Stabilized Trench Flow        |
| <input type="checkbox"/> Dust Suppression          | <input type="checkbox"/> Slope Mattress                |
| <input type="checkbox"/> Dewatering Filtering      | <input type="checkbox"/> Slope Walls                   |
| <input type="checkbox"/> Gabions                   | <input type="checkbox"/> Temporary Ditch Check         |
| <input type="checkbox"/> In-Stream or Wetland Work | <input type="checkbox"/> Temporary Pipe Slope Drain    |



- |  |  |
|--|--|
| <input type="checkbox"/> Level Spreaders                         | <input type="checkbox"/> Temporary Sediment Basin  |
| <input type="checkbox"/> Paved Ditch                             | <input type="checkbox"/> Temporary Stream Crossing |
| <input type="checkbox"/> Permanent Check Dams                    | <input type="checkbox"/> Turf Reinforcement Mats   |
| <input type="checkbox"/> Perimeter Erosion Barrier               | <input type="checkbox"/> Other (Specify) _____     |
| <input type="checkbox"/> Permanent Sediment Basin                | <input type="checkbox"/> Other (Specify) _____     |
| <input type="checkbox"/> Retaining Walls                         | <input type="checkbox"/> Other (Specify) _____     |
| <input type="checkbox"/> Riprap                                  | <input type="checkbox"/> Other (Specify) _____     |
| <input type="checkbox"/> Rock Outlet Protection                  | <input type="checkbox"/> Other (Specify) _____     |
| <input type="checkbox"/> Sediment Trap                           | <input type="checkbox"/> Other (Specify) _____     |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Other (Specify) _____     |

Describe how the structural practices listed above will be utilized during construction:

Inlet protection will be used on existing and proposed inlets within the project limits to prevent sediment from entering local waterways.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

**D. Treatment Chemicals**

Will polymer flocculants or treatment chemicals be utilized on this project:  Yes  No

If yes above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

**E. Permanent (i.e., Post-Construction) Storm Water Management Controls:** Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT BDE Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

- Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

**F. Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the IEPA's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342A.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:

- Approximate duration of the project, including each stage of the project
- Rainy season, dry season, and winter shutdown dates
- Temporary stabilization measures to be employed by contract phases
- Mobilization time-frame
- Mass clearing and grubbing/roadside clearing dates
- Deployment of Erosion Control Practices
- Deployment of Sediment Control Practices (including stabilized cons
  
- Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
- Paving, saw-cutting, and any other pavement related operations
- Major planned stockpiling operation
- Time frame for other significant long-term operations or activities that may plan non-storm water discharges as dewatering, grinding, etc
- Permanent stabilization activities for each area of the project

2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material Delivery, Storage and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

### III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacturer's specifications.

#### IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site including Borrow, Waste, and Use Areas, which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report, BC 2259. Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: [epa.swnoncomp@illinois.gov](mailto:epa.swnoncomp@illinois.gov), telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attn: Compliance Assurance Section  
1021 North Grand East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

#### V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Contractor Certification Statement



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route FAU 6673/6674	Marked Route Jefferson Ave & Adams St	Section Number 18-00377-00-SP
Project Number 1CDZ(284)	County Peoria	Contract Number 89767

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Additionally, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
- Sub-Contractor

Signature		Date	
[Signature Box]		[Date Box]	
Print Name		Title	
[Print Name Box]		[Title Box]	
Name of Firm		Phone	
[Name of Firm Box]		[Phone Box]	
Street Address	City	State	Zip Code
[Street Address Box]	[City Box]	[State Box]	[Zip Code Box]

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets

SPECIAL PROVISION  
FOR  
INSURANCE

Effective: February 1, 2007  
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

City of Peoria

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The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets  
SPECIAL PROVISION  
FOR  
CONSTRUCTION AND MAINTENANCE SIGNS

Effective: January 1, 2004  
Revised: June 1, 2007

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

701.14. Signs. Add the following paragraph to Article 701.14:

All warning signs shall have minimum dimensions of 1200 mm x 1200 mm (48" x 48") and have a black legend on a fluorescent orange reflectorized background, meeting, as a minimum, Type AP reflectivity requirements of Table 1091-2 in Article 1091.02.

State of Illinois  
 DEPARTMENT OF TRANSPORTATION  
 Bureau of Local Roads & Streets  
 SPECIAL PROVISION  
 FOR  
 LOCAL QUALITY ASSURANCE/ QUALITY MANAGEMENT QC/QA  
 Effective: January 1, 2022

Replace the first five paragraphs of Article 1030.06 of the Standard Specifications with the following:

**“1030.06 Quality Management Program.** The Quality Management Program (QMP) will be Quality Control / Quality Assurance (QC/QA) according to the following.”

Delete Article 1030.06(d)(1) of the Standard Specifications.

Revise Article 1030.09(g)(3) of the Standard Specifications to read:

“(3) If core testing is the density verification method, the Contractor shall provide personnel and equipment to collect density verification cores for the Engineer. Core locations will be determined by the Engineer following the document “Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations” at density verification intervals defined in Article 1030.09(b). After the Engineer identifies a density verification location and prior to opening to traffic, the Contractor shall cut a 4 in. (100 mm) diameter core. With the approval of the Engineer, the cores may be cut at a later time.”

Revise Article 1030.09(h)(2) of the Standard Specifications to read:

“(2) After final rolling and prior to paving subsequent lifts, the Engineer will identify the random density verification test locations. Cores or nuclear density gauge testing will be used for density verification. The method used for density verification will be as selected below.

Density Verification Method	
<input checked="" type="checkbox"/>	Cores
<input type="checkbox"/>	Nuclear Density Gauge (Correlated when paving ≥ 3,000 tons per mixture)

Density verification test locations will be determined according to the document “Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations”. The density testing interval for paving wider than or equal to 3 ft (1 m) will be 0.5 miles (800 m) for lift thicknesses of 3 in. (75 mm) or less and 0.2 miles (320 m) for lift thicknesses greater than 3 in. (75 mm). The density testing interval for paving less than 3 ft (1 m) wide will be 1 mile (1,600 m). If a day’s paving will be less than the prescribed density testing interval, the length of the day’s paving will be the interval for that day. The density testing interval for mixtures used for patching will be 50 patches with a minimum of one test per mixture per project.

If core testing is the density verification method, the Engineer will witness the Contractor coring, and secure and take possession of all density samples at the

density verification locations. The Engineer will test the cores collected by the Contractor for density according to Illinois Modified AASHTO T 166 or AASHTO T 275.

If nuclear density gauge testing is the density verification method, the Engineer will conduct nuclear density gauge tests. The Engineer will follow the density testing procedure detailed in the document "Illinois Modified ASTM D 2950, Standard Test Method for Density of Bituminous Concrete In-Place by Nuclear Method".

A density verification test will be the result of a single core or the average of the nuclear density tests at one location. The results of each density test must be within acceptable limits. The Engineer will promptly notify the Contractor of observed deficiencies."

Revise the seventh paragraph and all subsequent paragraphs in Section D. of the document "Hot-Mix Asphalt QC/QA Initial Daily Plant and Random Samples" to read:

"Mixtures shall be sampled from the truck at the plant by the Contractor following the same procedure used to collect QC mixture samples (Section A). This process will be witnessed by the Engineer who will take custody of the verification sample. Each sample bag with a verification mixture sample will be secured by the Engineer using a locking ID tag. Sample boxes containing the verification mixture sample will be sealed/taped by the Engineer using a security ID label."



## **IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION**

Effective: August 1, 2012    Revised: February 2, 2017

In addition to the Contractor's equal employment opportunity (EEO) affirmative action efforts undertaken as required by this Contract, the Contractor is encouraged to participate in the incentive program described below to provide additional on-the-job training to certified graduates of the IDOT pre-apprenticeship training program, as outlined in this Special Provision.

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at \$15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

**METHOD OF MEASUREMENT:** The unit of measurement is in hours.

**BASIS OF PAYMENT:** This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is **4**.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of \$15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

## ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE)

Effective: April 1, 2003

Revised: January 1, 2022

Description. This work shall consist of furnishing and installing accessible pedestrian signals (APS). Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Electrical Requirements. The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29 to +160 °F (-34 to +70 °C).

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Audible Indications. A pushbutton locator tone shall sound at each pushbutton and shall be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Pushbutton locator tones shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. Each actuation of the pushbutton shall be accompanied by the speech message "Wait".

If two accessible pedestrian pushbuttons are placed less than 10 ft (3 m) apart or placed on the same pole, the audible walk indication shall be a speech walk message. This message shall sound throughout the WALK interval only. The verbal message shall be modeled after: "Street Name, Walk Sign is on to cross Street Name." For signalized intersections utilizing exclusive pedestrian phasing, the verbal message shall be "Walk sign is on for all crossings". In addition, a speech pushbutton information message shall be provided by actuating the APS pushbutton when the WALK interval is not timing. This verbal message shall be modeled after: "Wait. Wait to cross 'Street Name' at 'Street Name'".

Where two accessible pedestrian pushbuttons are separated by at least 10 ft (3 m), the walk indication shall be an audible percussive tone. It shall repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz.

Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

At locations with railroad interconnection, an additional speech message stating "Walk time shortened when train approaches" shall be used after the speech walk message. At locations with emergency vehicle preemption, an additional speech message "Walk time shortened when emergency vehicle approaches" shall be used after the speech walk message.

Pedestrian Pushbutton. Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N).

A red LED shall be located on or near the pushbutton which, when activated, acknowledges the pedestrians request to cross the street.

Signage. A sign shall be located immediately above the pedestrian pushbutton and parallel to the crosswalk controlled by the pushbutton. The sign shall conform to one of the following standard MUTCD designs: R10-3, R10-3a, R10-3e, R10-3i, R10-4, and R10-4a.

Tactile Arrow. A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided on the pushbutton.

Vibrotactile Feature. The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

Method of Measurement. This work will be measured for payment as each, per pushbutton.

Basis of Payment. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS.

80099

## BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006

Revised: August 1, 2017

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI<sub>P</sub> = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI<sub>L</sub> = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).

%AC<sub>V</sub> = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC<sub>V</sub> will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC<sub>V</sub> and undiluted emulsified asphalt will be considered to be 65% AC<sub>V</sub>.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards:  $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$ . For HMA mixtures measured in square meters:  $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$ . When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different  $G_{mb}$  and % AC<sub>V</sub>.

For bituminous materials measured in gallons:  $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters:  $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

$G_{mb}$  = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).  
SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI<sub>L</sub> and BPI<sub>P</sub> in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

80173

## **BLENDED FINELY DIVIDED MINERALS (BDE)**

Effective: April 1, 2021

Revise the second paragraph of Article 1010.01 of the Standard Specifications to read:

“Different sources or types of finely divided minerals shall not be mixed or used alternately in the same item of construction, except as a blended finely divided mineral product according to Article 1010.06.”

Add the following article to Section 1010 of the Standard Specifications:

**“1010.06 Blended Finely Divided Minerals.** Blended finely divided minerals shall be the product resulting from the blending or intergrinding of two or three finely divided minerals. Blended finely divided minerals shall be according to ASTM C 1697, except as follows.

- (a) Blending shall be accomplished by mechanically or pneumatically intermixing the constituent finely divided minerals into a uniform mixture that is then discharged into a silo for storage or tanker for transportation.
- (b) The blended finely divided mineral product will be classified according to its predominant constituent or the manufacturer’s designation and shall meet the chemical requirements of its classification. The other finely divided mineral constituent(s) will not be required to conform to their individual standards.”

80436

**CEMENT, TYPE IL (BDE)**

Effective: August 1, 2023

Add the following to Article 302.02 of the Standard Specifications:

“(k) Type IL Portland-Limestone Cement .....1001”

Revise Note 2 of Article 352.02 of the Standard Specifications to read:

“Note 2. Either Type I or Type IA portland cement or Type IL portland-limestone cement shall be used.”

Revise Note 1 of Article 404.02 of the Standard Specifications to read:

“Note 1. The cement shall be Type I portland cement or Type IL portland-limestone cement.”

Revise Article 1019.02(a) of the Standard Specifications to read:

“(a) Cement, Type I or IL .....1001”

80449



## COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

"(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

**“109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
  - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

80384

## **DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)**

Effective: September 1, 2000

Revised: March 2, 2019

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract the Contractor signs with a subcontractor.

The Contractor, subrecipient, 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 contracts funded in whole or in part with federal or state funds. 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 recipient deems appropriate, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a

good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **3.00%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:

<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.
  - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
  - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.
  - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
  - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
  - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
  - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
  - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the



bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.

- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "[DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov)" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

**CALCULATING DBE PARTICIPATION.** The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
  
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
  
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

**CONTRACT COMPLIANCE.** Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at [DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov).
- (b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) SUBCONTRACT. The Contractor must provide copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
- (1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
  - (2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
  - (3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

- (e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

- (6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.
- (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be

made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

80029

**GREEN PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (BDE)**

Effective: January 1, 2021

Revised: January 1, 2022

Revise the following in Table 1 of Article 780.15 of the Standard Specifications to read:

"SYMBOLS <sup>1/</sup>		
Symbol	Large Size sq ft (sq m)	Small Size sq ft (sq m)
Through Arrow	11.5 (1.07)	6.5 (0.60)
Left or Right Arrow	15.6 (1.47)	8.8 (0.82)
2 Arrow Combination Left (or Right) and Through	26.0 (2.42)	14.7 (1.37)
3 Arrow Combination Left, Right, and Through	38.4 (3.56)	20.9 (1.94)
Lane Drop Arrow	41.5 (3.86)	--
Wrong Way Arrow	24.3 (2.26)	--
Railroad "R" 6 ft (1.8 m)	3.6 (0.33)	--
Railroad "X" 20 ft (6.1 m)	54.0 (5.02)	--
International Symbol of Accessibility	3.1 (0.29)	--
Bike Symbol	4.7 (0.44)	--
Shared Lane Symbol	8.0 (0.74)	
Intersection Bicycle Box <sup>2/</sup>	variable sizes	
Two-Stage Bicycle Turn Box <sup>2/</sup>	variable sizes	

1/ Table applies to all types of pavement marking materials, except intersection bicycle box and two-stage bicycle turn box which are limited to preformed thermoplastic.

2/ The cost of symbols appearing in the box are included in the overall square area of the box."

Add the following paragraph to the end of Article 1095.01(a)(2) of the Standard Specifications:

"The pigments used for the green thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable, and color-fast greens. The pigment shall be uniformly distributed throughout the thermoplastic compound."

Add the following to Article 1095.01(b)(1)e. of the Standard Specifications:

"Green **	Daylight Reflectance	15 % min.
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\*\* Shall meet the coordinates of the following color tolerance chart.

x	0.230	0.266	0.367	0.444
y	0.754	0.460	0.480	0.583"

80433



## PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

**“1032.05 Performance Graded Asphalt Binder.** These materials will be accepted according to the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.” The Department will maintain a qualified producer list. These materials shall be free from water and shall not foam when heated to any temperature below the actual flash point. Air blown asphalt, recycle engine oil bottoms (ReOB), and polyphosphoric acid (PPA) modification shall not be used.

When requested, producers shall provide the Engineer with viscosity/temperature relationships for the performance graded asphalt binders delivered and incorporated in the work.

- (a) Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans and the following.

Test	Parameter
Small Strain Parameter (AASHTO PP 113) BBR, $\Delta T_c$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5 °C min.

- (b) Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans.

Asphalt binder modification shall be performed at the source, as defined in the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.”

Modified asphalt binder shall be safe to handle at asphalt binder production and storage temperatures or HMA construction temperatures. Safety Data Sheets (SDS) shall be provided for all asphalt modifiers.

- (1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrene-butadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders		
Test	Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SB/SBS PG 76-22 SB/SBS PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

- (2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient

grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois Modified AASHTO T 27 “Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates” or AASHTO PP 74 “Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method”, a 50 g sample of the GTR shall conform to the following gradation requirements.

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 µm)	95 ± 5
No. 50 (300 µm)	> 20

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
Test	Asphalt Grade GTR PG 64-28 GTR PG 70-22	Asphalt Grade GTR PG 76-22 GTR PG 76-28 GTR PG 70-28
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

- (3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified

asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: \*.SPA, \*.SPG, \*.IRD, \*.IFG, \*.CSV, \*.SP, \*.IRS, \*.GAML, \*. [0-9], \*.IGM, \*.ABS, \*.DRT, \*.SBM, \*.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Test	Asphalt Grade	
	SM PG 46-28	SM PG 46-34
	SM PG 52-28	SM PG 52-34
	SM PG 58-22	SM PG 58-28
	SM PG 64-22	
Small Strain Parameter (AASHTO PP 113) BBR, $\Delta T_c$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5°C min.	
Large Strain Parameter (Illinois Modified AASHTO T 391) DSR/LAS Fatigue Property, $\Delta G^* _{peak}$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	≥ 54 %	

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

“(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

Ndesign	Binder	Surface	Polymer Modified Binder or Surface <sup>3/</sup>
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

- 2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
  - 3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.
- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % <sup>1/2/</sup>			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface <sup>3/</sup>
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	--	--	25
IL-4.75	--	--	35

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for GTR modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.”

Add the following to the end of Note 2 of Article 1030.03 of the Standard Specifications.

“A dedicated storage tank for the ground tire rubber (GTR) modified asphalt binder shall be provided. This tank shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ±0.40 percent.”

## **PORTLAND CEMENT CONCRETE (BDE)**

Effective: August 1, 2023

Revise the second paragraph of Article 1103.03(a)(4) the Standard Specifications to read:

“The dispenser system shall provide a visual indication that the liquid admixture is actually entering the batch, such as via a transparent or translucent section of tubing or by independent check with an integrated secondary metering device. If approved by the Engineer, an alternate indicator may be used for admixtures dosed at rates of 25 oz/cwt (1630 mL/100 kg) or greater, such as accelerating admixtures, corrosion inhibitors, and viscosity modifying admixtures.”

80451

## **SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)**

Effective: January 2, 2023

Add the following to Article 106.01 of the Standard Specifications:

“The final manufacturing process for construction materials and the immediately preceding manufacturing stage for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply that is or consists primarily of the following.

- (a) Non-ferrous metals;
- (b) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (c) Glass (including optic glass);
- (d) Lumber;
- (e) Drywall.

Items consisting of two or more of the listed construction materials that have been combined through a manufacturing process, and items including at least one of the listed materials combined with a material that is not listed through a manufacturing process shall be exempt.”

80448

## **SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)**

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

**“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.**  
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

80397



## **SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)**

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

80391

## **SUBMISSION OF PAYROLL RECORDS (BDE)**

Effective: April 1, 2021

Revised: November 1, 2022

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

### **“STATEMENTS AND PAYROLLS**

The payroll records shall include the worker’s name, the worker’s address, the worker’s telephone number when available, the worker’s social security number, the worker’s classification or classifications, the worker’s gross and net wages paid in each pay period, the worker’s number of hours worked each day, and the worker’s starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker’s hourly wage rate, the worker’s hourly overtime wage rate, the worker’s hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

The Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee’s social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option (“No Work”, “Suspended”, or “Complete”) selected.”

STATE CONTRACTS. Revise Item 3 of Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

- “3. Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15<sup>th</sup> day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Illinois Prevailing Wage Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an

identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPtracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

80437

## **TRAINING SPECIAL PROVISIONS (BDE)**

Effective: October 15, 1975

Revised: September 2, 2021

This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be **4**. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor Employment Training Administration shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting its performance under this Training Special Provision.

For contracts with an awarded contract value of \$500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

Basis of Payment. This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price, and total price have been included in the schedule of prices.

20338

## **VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)**

Effective: November 1, 2021

Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

“The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations.”

80439

## **WEEKLY DBE TRUCKING REPORTS (BDE)**

Effective: June 2, 2012

Revised: November 1, 2021

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Sunday through Saturday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302



## WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports ..... 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact

attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH-16 compliant is available, an NCHRP 350 or MASH-2009 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”

80427

**REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated 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. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

**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, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

**II. NONDISCRIMINATION** (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 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 Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure 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. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. 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, sexual orientation, gender identity, 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, 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. Assurances Required:**

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**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 more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

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, 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 Administrator for determination. The 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 (29 CFR 5.5)**

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 (29 CFR 5.5)**

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. 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 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), 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 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 18 U.S.C. 1001 and 31 U.S.C. 231.

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 (29 CFR 5.5)

##### 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. 29 CFR 230.111(e)(2). 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 as provided in 29 CFR 5.5.

**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 as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, 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 (29 CFR 5.5)**

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**

Pursuant to 29 CFR 5.5(b), 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. 29 CFR 5.5.

**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 currently provided in 29 CFR 5.5(b)(2)\* 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. 29 CFR 5.5.

\* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

### **3. Withholding for unpaid wages and liquidated damages.**

The FHWA or 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 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. 29 CFR 5.5.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 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. 29 CFR 5.5.

## **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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" in paragraph 1 of Section VI 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: (based on longstanding interpretation)

- (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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

## **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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 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 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)**

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

### **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. 2 CFR 180.220 and 1200.220.

#### **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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

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## **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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

## **3. 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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "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 recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

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**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:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

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

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**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 Part 20, App. A.

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.

## **XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

