

# 153

Letting January 21, 2022

## Notice to Bidders, Specifications and Proposal



**Contract No. 64880  
JO DAVIESS County  
Section 29R-1  
Route FAP 301  
Project COVD-IH44(562)  
District 2 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 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. January 21, 2022 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. 64880  
JO DAVIESS County  
Section 29R-1  
Project COVD-IH44(562)  
Route FAP 301  
District 2 Construction Funds**

**Reconstruction of US 20 from Gear Street to Main Street in Galena.**

- 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,  
Acting Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2022

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

No ERRATA this year.

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page No.

No Supplemental Specifications this year.

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1 X Additional State Requirements for Federal-Aid Construction Contracts .....	1
2 X Subletting of Contracts (Federal-Aid Contracts) .....	4
3 X EEO .....	5
4 Specific EEO Responsibilities Non Federal-Aid Contracts .....	15
5 Required Provisions - State Contracts .....	20
6 Asbestos Bearing Pad Removal .....	26
7 Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal .....	27
8 Temporary Stream Crossings and In-Stream Work Pads .....	28
9 X Construction Layout Stakes .....	29
10 Use of Geotextile Fabric for Railroad Crossing .....	32
11 Subsealing of Concrete Pavements .....	34
12 Hot-Mix Asphalt Surface Correction .....	38
13 Pavement and Shoulder Resurfacing .....	40
14 Patching with Hot-Mix Asphalt Overlay Removal .....	41
15 Polymer Concrete .....	43
16 PVC Pipeliner .....	45
17 Bicycle Racks .....	46
18 Temporary Portable Bridge Traffic Signals .....	48
19 X Nighttime Inspection of Roadway Lighting .....	50
20 English Substitution of Metric Bolts .....	51
21 Calcium Chloride Accelerator for Portland Cement Concrete .....	52
22 Quality Control of Concrete Mixtures at the Plant .....	53
23 X Quality Control/Quality Assurance of Concrete Mixtures .....	61
24 X Digital Terrain Modeling for Earthwork Calculations .....	77
25 Preventive Maintenance – Bituminous Surface Treatment (A-1) .....	79
26 Temporary Raised Pavement Markers .....	85
27 Restoring Bridge Approach Pavements Using High-Density Foam .....	86
28 Portland Cement Concrete Inlay or Overlay .....	89
29 Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching .....	93
30 Longitudinal Joint and Crack Patching .....	96
31 Concrete Mix Design – Department Provided .....	98
32 X Station Numbers in Pavements or Overlays .....	99

## TABLE OF CONTENTS

LOCATION OF PROJECT .....	1
DESCRIPTION OF PROJECT .....	1
PRECAUTIONS FOR UTILITIES .....	1
GRANULAR BACKFILL FOR STRUCTURES .....	2
PRE-SPLITTING OF ROCK EXCAVATION .....	2
PROPERTY MARKERS.....	3
ROCK EMBANKMENT .....	4
GUARDRAIL REMOVAL.....	4
MOWING .....	4
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PROJECT SPECIFIC).....	5
TEMPORARY PAVEMENT .....	7
GEOTECHNICAL REINFORCEMENT .....	9
HOT-MIX ASPHALT SURFACE COURSE, LEVEL BINDER, AND BINDER.....	10
PAVEMENT BREAKING.....	11
MAINTENANCE OF ROADWAYS .....	11
PCC AUTOMATIC BATCHING EQUIPMENT .....	11
PCC QC/QA ELECTRONIC REPORTS SUBMITTAL .....	12
CRITICAL PATH SCHEDULE.....	12
BOX CULVERT END SECTIONS .....	13
STORM SEWER WATER MAIN REQUIREMENT .....	15
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE).....	16
WORK ZONE PAVEMENT MARKING AND REMOVAL .....	16
REMOVAL OF EXISTING STRUCTURES.....	17
HOT-MIX ASPHALT MIXTURE IL-9.5FG (CBM).....	17
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.....	20
PCC PAVEMENT.....	20
PCC DRIVEWAY PAVEMENT.....	20
PCC SIDEWALK.....	20
COMBINATION CONCRETE CURB AND GUTTER.....	20
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER .....	21
RELOCATE EXISTING TRAFFIC SIGNAL POST.....	21
RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE.....	21

CABLE SPLICE SPECIAL .....22

INTERCEPT EXISTING CONDUIT .....22

HANDHOLE TO BE ADJUSTED.....22

PAINT TRAFFIC SIGNAL EQUIPMENT .....23

PEDESTRIAN PUSH BUTTON POST .....25

CONCRETE FOUNDATIONS (SPECIAL).....26

PEDESTRIAN PUSH-BUTTON, SPECIAL.....26

VIDEO VEHICLE DETECTION .....26

CONSTRUCTION LAYOUT SPECIAL UTILIZING GPS EQUIPMENT.....33

AVAILABILITY OF ELECTRONIC FILES .....34

STORM SEWERS .....35

WATER MAIN.....35

WATER SERVICE LINE .....37

FIRE HYDRANTS .....39

FIRE HYDRANTS (SPECIAL).....39

TEMPORARY DRAINAGE CONNECTION .....40

TRAFFIC BARRIER TERMINAL, TYPE 1 .....41

FLAGSTONE SIDEWALK.....41

REMOVE AND RELOCATE SIGN (SPECIAL).....43

CONSTRUCTION VIBRATION MONITORING .....43

REMOVE AND REINSTALL BRICK PAVER.....45

REMOVE AND REINSTALL STONE PAVER .....45

VANE DRAIN .....46

SLOTTED DRAIN REMOVAL .....47

SLOTTED DRAINS.....47

DRAINAGE WEIR.....48

SANITARY MANHOLE AND PIPE CONNECTION .....49

FILLING INLETS, TEMPORARY.....49

FORM LINER TEXTURED SURFACE, SPECIAL.....49

STAINING CONCRETE STRUCTURES .....49

RETAINING WALL REMOVAL .....55

TEMPORARY ACCESS.....56

PIPE HANDRAIL, SPECIAL.....58

TEMPORARY STORM SEWERS, CLASS A, TYPE 2 – 18” .....58

ABANDON AND FILL EXISTING STORM SEWER .....59

MANHOLES, TYPE A, 10' DIAMETER, TYPE 1 FRAME, CLOSED LID .....59

MANHOLES, SANITARY .....60

INLETS, SPECIAL .....61

CLASS SI CONCRETE (OUTLET), SPECIAL.....61

CONCRETE MEDIAN, TYPE SM (SPECIAL) .....62

CONCRETE GUTTER, TYPE A (SPECIAL) .....62

TRAFFIC CONTROL AND PROTECTION, (SPECIAL).....62

TEMPORARY FLASHING BEACON INSTALLATION.....66

RETAINING WALL, SPECIAL.....67

HANDRAIL REMOVAL .....71

BUILDING REMOVAL.....71

CONCRETE STEPS .....71

FILLING EXISTING CULVERTS .....72

REMOVE AND RESET ORNAMENTAL FENCE.....72

REMOVING AND RESETTING POSTS.....73

SANITARY SEWER.....73

WOOD FENCE TO BE REMOVED AND RE-ERECTED .....74

JUNCTION CHAMBER.....75

MANHOLES, TYPE A .....75

MANHOLES, TYPE A, 8'-DIAMETER WITH INLET SPECIAL NO. 5 LID.....76

MANHOLES, TYPE A, 9'-DIAMETER WITH INLET SPECIAL NO. 5 LID.....76

MANHOLES, TYPE A, 10'-DIAMETER WITH INLET SPECIAL NO. 5 LID.....76

WATER MAIN QUALITY CASING PIPE .....76

PRESSURE REDUCING VALVE VAULT.....77

SANITARY SEWER SERVICE, COMPLETE .....79

SANITARY SEWER CASING PIPE .....81

AGGREGATE SUBGRADE IMPROVEMENT 30" .....82

SANITARY SEWER REMOVAL.....82

WATER MAIN REMOVAL.....83

CONCRETE COLOR ADDITIVE.....83

AGGREGATE SUBGRADE IMPROVEMENT (BDE).....83

BLENDED FINELY DIVIDED MINERALS (BDE).....85

BUILDING REMOVAL - CASE II (NON-FRIABLE ASBESTOS ABATEMENT) (BDE).....86

BUILDING REMOVAL - CASE IV (NO ASBESTOS) (BDE) .....98

COMPENSABLE DELAY COSTS (BDE) .....99

CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE) .....	102
CORRUGATED PLASTIC PIPE (CULVERT AND STORM SEWER) (BDE) .....	104
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE) .....	115
FUEL COST ADJUSTMENT (BDE) .....	123
HOT-MIX ASPHALT – START OF PRODUCTION (BDE).....	125
PERFORMANCE GRADED ASPHALT BINDER (BDE) .....	126
PORTLAND CEMENT CONCRETE – HAUL TIME (BDE) .....	130
STEEL COST ADJUSTMENT (BDE) .....	131
SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE) .....	134
SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE).....	135
TRAINING SPECIAL PROVISIONS (BDE) .....	135
IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION.	138
TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS (BDE) .....	140
VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE).....	141
WEEKLY DBE TRUCKING REPORTS (BDE).....	141
WORK ZONE TRAFFIC CONTROL DEVICES (BDE).....	141
WORKING DAYS (BDE).....	143
PROJECT LABOR AGREEMENT .....	144
SWPPP.....	163

## 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 for Materials" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein which apply to and govern the construction of FAP Route 301 (US 20), Project COVD-IH44(562), Section 29R-1, Jo Daviess County, Contract No. 64880 and 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 US 20 / IL 84 (Spring Street) in Galena in Jo Daviess County.

The project measures approximately 6,490 feet (1.23 miles) along the centerline of FAP Route 301.

#### DESCRIPTION OF PROJECT

This project consists of the reconstruction of US 20/ IL 84, Spring Street in Galena from Main Street to Gear Street. The project will include pavement widths to accommodate a 3-lane section, new curb and gutter, new storm sewer, shared use path, relocated water and sanitary facilities, and retaining walls.

#### PRECAUTIONS FOR UTILITIES

The Contractor shall take whatever precautions which may be necessary to protect the property of the various public utilities which may be located underground or above ground, at or adjacent to the site of these improvements. If so required, the respective utility companies will make the needed adjustments of these facilities. These facilities shall be saved and care shall be exercised so as not to disrupt or destroy the services provided by these utilities. The Contractor will be required to repair or replace any utility property, which has been damaged through his/her efforts. The procedure and specifications of repair will be in accordance with the regulations and/or policy of the utility.

THE CONTRACTOR SHALL CONTACT AND COORDINATE HIS/HER ACTIVITIES BY CONTACTING J.U.L.I.E. AT (800) 892-0123.

## **GRANULAR BACKFILL FOR STRUCTURES**

Effective: April 19, 2012

Revised: September 27, 2016

Revise the third sentence of the first paragraph of Article 586.03 of the Supplemental Specifications to read:

“The backfill volume shall be placed in convenient lifts for the full width to be backfilled and shall be compacted to not less than 95 percent of the standard laboratory density.”

Delete the fourth sentence of the first paragraph of Article 586.03 of the Supplemental Specifications.

## **PRE-SPLITTING OF ROCK EXCAVATION**

Effective: July 1, 1994

This special provision covers the requirements of the drilling and blasting of any formation conducive to pre-splitting. Unless otherwise directed by the Engineer, all rock excavation which requires blasting operations shall be pre-split according to the provisions contained herein. Pre-splitting is defined as the establishment of a free surface of shear plane by the controlled usage of explosives and blasting accessories in appropriately aligned and spaced drill holes. Drilling and blasting for pre-splitting shall be done well in advance of normal blasting operations.

Drill holes for pre-splitting shall be made along the slope stake lines established by the Engineer, and the Contractor shall exercise sufficient care to ensure that the holes conform to the slope as established. The holes may be from 2½ inches to 4 inches in diameter and shall be drilled to the full depth of the cut or to the bench elevation, provided that the depth to the ditch or bench does not exceed a safe depth for accurate drilling. Unless otherwise permitted by the Engineer, the maximum depth of the drill holes shall be limited to 30 feet to 35 feet. If the depth of the cut to be pre-split is greater than the maximum permissible depth of the holes, the blasting shall be done in two or more lifts. When such conditions exist, the first line of drill holes shall be set at a sufficient distance outside the ditch line to allow a 1-foot offset for each succeeding line of drill holes.

Unless otherwise directed, the intervals between the drill holes shall be from 2 feet to 3 feet, depending on the character of the formation being pre-split. When it is deemed necessary by the Engineer to produce a relatively smooth face tolerably free of loose materials, the Contractor shall vary the spacing and size of the holes to suit the formation encountered. The Engineer may order short lines of test holes to determine the optimum size and spacing of drill holes and charges. No additional compensation will be allowed for test holes, drilling extra holes, or for using extra charges of dynamite.

The explosive shall be a 40% extra strength dynamite or other approved explosives that will produce equally satisfactory results. The charges shall be prepared by taping fractional portions of standard explosive cartridges to a length of detonating fuse equal to the depth of the drill holes. Unless otherwise directed, the charges shall be spaced at intervals of approximately 12 inches center-to-center of charges. The size and spacing of the individual charges may be varied, with the approval of the Engineer, to suit subsurface conditions encountered during construction.

After a charge is prepared, it shall be lowered into the hole and stemmed completely with lime dust, passing a 3/8-inch standard sieve. Stemming shall be worked around the taped charges by holding the end of the detonating fuse in the center of the hole and working it up and down. The Contractor, with the Engineer's approval, may place the charges with the aid of a measured loading pole by alternately placing the charges and the stemming material at the required intervals. All loaded holes shall be detonated simultaneously by the use of a trunk line.

The pre-split face shall not deviate more than 6 inches either side of the line of drill holes, except where the character of the formation being pre-split (badly broken rock, vertical seams, etc.) will unavoidably result in irregularities.

The Engineer may order the discontinuance of the pre-splitting operations when the formation is of such character that no apparent advantage is gained.

All primary blasting holes shall be drilled not less than three 3 feet from the pre-split face or at a wider interval, if necessary, to avoid overbreakage.

The cost of pre-splitting will be considered included in the contract unit price bid for ROCK EXCAVATION.

## **PROPERTY MARKERS**

Effective: July 1, 1994

Revised: January 30, 2008

This work shall consist of locating, protecting, preserving and relocating property markers, monuments or pins which are discovered and which will be disturbed in the normal course of construction. An Illinois Registered Land Surveyor will relocate the markers, monuments or pins to the new or relocated right-of-way line in such a location as to legally define the location of the new or reestablished property corner(s). The Contractor shall be required to furnish one copy of the final plat or plats to the State upon completion of the work.

The Surveyor shall place as a minimum a 3/4" x 3/4" round iron pin for the property marker. This work will be paid for at the contract unit price Each for PROPERTY MARKERS.

## **ROCK EMBANKMENT**

Effective: October 1, 1997

This work shall be done according to Section 205 of the Standard Specifications and as follows. Rock excavation used to construct embankments shall be placed in layers that extend full width to the foreslopes. Layering rock and soil will be allowed; however, compaction of the rock and/or broken pavement fill will be required. When a soil layer has been placed on top of rock fill and/or broken pavement, the layer shall not exceed 8 inches and will conform to embankment placement where passing density and moisture content will be required prior to any further embankment lifts being placed. Mixing wet soil and rock will not be allowed.

The cohesive soil which is to be placed on the foreslope to support vegetation should be a minimum of 2 feet, but not to exceed 3 feet in thickness. If the cohesive soil layer exceeds 3 feet in thickness, French Drains constructed and installed as shown on the District Standard for Subbase Drains will be required at the locations designated by the Resident Engineer.

This work shall not be paid for separately but shall be considered as included in the various items of excavation.

## **GUARDRAIL REMOVAL**

Effective: August 20, 1990

Revised: April 10, 2014

This work shall be done according to Section 632 of the Standard Specifications except that all removed guardrail will become the property of the Contractor.

This work will be paid for at the contract unit price per Foot for GUARDRAIL REMOVAL, measured from center-to-center of end posts.

## **MOWING**

Effective: January 1, 2002

Revised: April 12, 2016

This work consists of mowing all Seeding Class 1A and Class 2A at the completion of the project or before winter shut down. The vegetation must be at least 6" long before mowing. The vegetation shall be mowed to obtain a height of not more than 3 inches. All debris must be cleared from the right-of-way immediately after the mowing.

This work will be paid for at the contract unit price per Acre for MOWING.

## **REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PROJECT SPECIFIC)**

**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.

### **Site 1556V4-4 - Galena Chrysler Preowned, 10840 W. US 20, Galena, Jo Daviess County, Illinois**

- Station 1246+88 to Station 1248+23 (US 20), 0 to 85 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 1248+23 to Station 1250+00 (US 20), 0 to 46 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

### **Site 1556V4-6 - Commercial buildings, 1015-1017 Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1244+61 to Station 1245+61 (US 20), 0 to 55 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). COC sampling parameter: benzo(a)pyrene.

### **Site 1556V4-8 - Vacant land, 900-1000 blocks of Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1230+54 to Station 1232+89 (US 20), 0 to 74 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 1234+33 to Station 1236+75 (US 20), 0 to 72 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

- Station 1238+90 to Station 1241+00 (US 20), 0 to 83 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 1243+00 to Station 1245+05 (US 20), 0 to 92 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

**Site 1556V4-10 - Molitor's Garage, 905 Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1229+47 to Station 1230+10 (US 20), 0 to 61 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: manganese, lead (T/S), zinc (T/S).
- Station 1230+10 to Station 1230+53 (US 20), 0 to 90 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.
- Station 1230+10 to Station 1231+18 (US 20), 85 to 190 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: arsenic, cadmium, copper, lead, manganese.

**Site 1556V4-13 - O'Connor, Brooks & Co., 901 Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1228+80 to Station 1229+47 (US 20), 0 to 65 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: manganese, lead.
- Station 1229+28 to Station 1230+10 (US 20), 60 to 145 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

**Site 1556V4-20 - Vacant land, 603 Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1216+33 to Station 1218+65 (US 20), 0 to 58 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: benzo(b)fluoranthene, benzo(a)pyrene, benzo(a)anthracene, dibenzo(a,h)anthracene, lead, manganese.
- Station 1216+47 to Station 1217+46 (US 20), 58 to 108 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

**Site 1556V4-32 - Commercial building, 336-338 Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1202+95 to Station 1203+66 (US 20), 0 to 34 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). COC sampling parameters: benzo(a)pyrene, lead.

**Site 1556V4-34 - Parking lot, 300 block of Spring Street, Galena, Jo Daviess County, Illinois**

- Station 1200+00 to Station 1200+71 (US 20), 0 to 76 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: pH, lead, VOCs.
- Station 1200+71 to Station 1201+26 (US 20), 0 to 75 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameter: manganese.

- Station 1201+26 to Station 1201+86 (US 20), 0 to 73 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: VOCs, benzo(a)pyrene.
- Station 1201+86 to Station 1202+51 (US 20), 0 to 72 feet RT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). COC sampling parameters: manganese, pH.

**Site 1556V4-41 - Residence, 701 S. Bench Street, Galena, Jo Daviess County, Illinois**

- Station 1195+85 to Station 1196+73 (US 20), 0 to 88 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: VOCs, pH.
- Station 1196+73 to Station 1197+64 (US 20), 0 to 76 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). COC sampling parameter: lead.
- Station 1197+64 to Station 1198+87 (US 20), 0 to 73 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: benzene, ethylbenzene, toluene, xylenes, naphthalene, benzo(a)pyrene pH, VOCs.

**Site 1556V4-43 - Park, 600 block of S. Main Street, Galena, Jo Daviess County, Illinois**

- Station 1195+00 to Station 1195+47 (US 20), 0 to 94 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). COC sampling parameters: iron, lead, manganese, VOCs.
- Station 1195+47 to Station 1195+85 (US 20), 0 to 90 feet LT: The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). COC sampling parameters: lead, benzo(a)pyrene, cadmium, zinc.

**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: **2667V4-10 (Molitor Garage) Lead, and 2667V4-41 (Residence) Benzene, Ethylbenzene, Naphthalene and Total Xylenes.**

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).

**TEMPORARY PAVEMENT**

Effective: October 17, 2007

Revised: July 20, 2016

This work shall consist of placing a Hot-Mix Asphalt Surface Course or Portland Cement Concrete Base Course and aggregate base to serve as a temporary widening or a runaround at the locations shown on the plans. The choice of material to be used for this item is left to the Contractor to choose from the following options:

#### HOT-MIX ASPHALT OPTION

This work shall consist of placing and compacting 12 inches of Sub-base Granular Material, Type B and constructing 7.5 inches of Hot-Mix Asphalt Surface Course to serve as a temporary pavement at the location shown on the plans. If the thickness is 3 inches or more, it should be placed in 2 lifts.

Description: This work shall consist of designing, producing and constructing a HMA Surface

Course on a prepared base, according to Sections 311, 406, 1030 and 1102 of the Standard Specifications, except as follows.

Materials: Surface Mixture 9.5 Mix C, N50 shall be used.

Required Field Tests: Density Acceptance at 95% - 102% of growth curve at the frequency indicated in Article 1030.05(d)(3).

All work and materials required to complete the work listed above shall be included in the contract unit cost per Square Yard for TEMPORARY PAVEMENT.

The hot-mix asphalt and subbase shall be removed after the final stage is completed. Removal shall be paid for separately at the contract unit price per Square Yard for TEMPORARY PAVEMENT REMOVAL.

#### PORTLAND CEMENT CONCRETE OPTION

This work shall consist of placing and compacting 4 inches of Subbase Granular Material, Type B and constructing an 8-inch-thick Portland Cement Concrete Base Course to serve as a temporary runaround at the location shown on the plans. The minimum width shall be 3 feet. This work shall be completed according to Sections 311 and 353 of the Standard Specifications.

Welded wire reinforcement shall not be utilized in the base course.

The Contractor shall saw longitudinal joints in base courses wider than 16 feet, according to

Standard 420001, except that uncoated steel tie bars may be used instead of epoxy coated tie bars. These joints shall not be sealed.

The Contractor shall saw transverse joints in the base course at 20' centers according to the detail for Sawed Construction Joints in Standard 420001, except that dowel bars are not required. These joints shall not be sealed.

All work as listed above, including tie bars, sawed joints and all other required materials shall be included in the contract unit price per Square Yard for TEMPORARY PAVEMENT.

The base course and sub-base shall be removed after the final stage is completed. Removal shall be paid for separately at the contract unit price per Square Yard for TEMPORARY PAVEMENT REMOVAL.

**GEOTECHNICAL REINFORCEMENT**

Effective: November 30, 2010

Revised: April 10, 2014

This work consists of furnishing and installing an integrally-formed polypropylene geotechnical grid reinforcement material. The geogrid shall have an aperture, rib and junction cross section sufficient to permit significant mechanical interlock with the material being reinforced. There shall be a high continuity of tensile strength through all ribs and junctions of the grid material to reinforce the subbase or subgrade as shown on the plans and specifications.

MATERIAL CHARACTERISTICS	TEST METHOD	DATA
polymer type		polypropylene
carbon black content	ASTM D 4218	0.50% (min.)

DIMENSIONAL CHARACTERISTICS	TEST METHOD	UNIT	DATA
open area	CW 02215	%	75 (max.)
unit weight	ASTM D 5261	oz/yd <sup>2</sup>	5.0 (min.)

TECHNICAL CHARACTERISTICS	TEST METHOD	UNIT	DATA
junction efficiency	GRI-GG2	%	90 (min.)

The supplier should provide a certification that their product meets the above requirements.

The geotechnical reinforcement shall be placed as described herein or as shown on the cross sections.

Geogrid shall be delivered to the jobsite in such a manner as to facilitate handling and incorporation into the work without damage. Material shall be stored in such a manner as to prevent exposure to direct sunlight and damage by other construction activities.

Prior to the installation of the geogrid, the application surface shall be cleared of debris, sharp objects and trees. Tree stumps shall be cut to the level of the ground surface. If the stumps cannot be cut to the ground level, they shall be completely removed. In the case of subgrades, all wheel tracks or ruts in excess of 3 inches in depth shall be graded smooth or otherwise filled with soil to provide a reasonably smooth surface.

The geotechnical reinforcement shall be placed with the “roll length” parallel to the pavement.

Fabric of insufficient width or length to fully cover the specified area shall be lapped a minimum of

24 inches. The geogrid should be secured in place.

Installation:

The granular blanket shall be constructed to the width and depth required on the plans. Unless otherwise specified, the material shall be back-dumped on the Geogrid in a sequence of operations beginning at the outer edges of the treatment area with subsequent placement towards the middle.

Placement of material on the Geogrid shall be accomplished by spreading dumped material off of previously placed material with a bulldozer blade or end loader, in such a manner as to prevent tearing or shoving of the Geogrid. Dumping of material directly on the Geogrid will only be permitted to establish an initial working platform. No construction equipment shall be allowed on the Geogrid prior to placement of the granular blanket. If the geogrid develops wrinkles or moves significantly, an alternative method of securing it shall be used.

Unless otherwise specified in the plans or Special Provisions, the granular material, shall be placed to the full required thickness and compacted to the satisfaction of the Engineer.

Geogrid which is damaged during installation or subsequent placement of granular material, due to failure of the Contractor to comply with these provisions, shall be repaired or replaced at his expense, including costs of removal and replacement of the granular material.

Torn Geogrid may be patched in-place by cutting and placing a piece of the same Geogrid over the tear. The dimensions of the patch shall be at least 2 feet larger than the largest dimension of the tear and it shall be weighted or otherwise secured to prevent the granular material from causing lap separation.

Method of Measurement: Geotechnical Reinforcement will be measured in square yards for the surface area placed. The excavation, replacement and compaction of the granular layer shall be paid for separately.

Basis of Payment: This work will be measured in place and the area computed in square yards. The work will be paid for at the contract unit price per Square Yard for GEOTECHNICAL REINFORCEMENT.

**HOT-MIX ASPHALT SURFACE COURSE, LEVEL BINDER, AND BINDER**

Effective: June 15, 2010

Revised: June 23, 2014

The maximum allowed average bulk specific gravity for the approved mix design (Gmb) will be:

2.460 for Mixture C

2.470 for Mixture D

2.610 for Mixture E

2.710 for Mixture F

The maximum allowed average bulk specific gravity for the approved mix design (Gmb) for all other uses will be 2.470.

## **PAVEMENT BREAKING**

Effective: June 1, 1994

Revised: January 6, 1997

This work shall consist of breaking the existing pavement according to Article 205.03(b)(1) of the Standard Specifications, except that all pavement that is not removed, but has greater than or equal to 3" fall from the bottom of the subbase to the existing pavement shall be broken.

All costs incurred in complying with the provisions shall be considered included in the contract unit price per Square Yard for PAVEMENT BREAKING.

## **MAINTENANCE OF ROADWAYS**

Effective: June 26, 2003

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work such as patching, intermittent resurfacing, and shoulder work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

## **PCC AUTOMATIC BATCHING EQUIPMENT**

Effective: January 1, 2015

Revised: April 12, 2016

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.

Plants shall have computerized batching interfaced with a printer. Batch weights, aggregate mixtures, water added, amount of each admixture or additive, and percent variance from design shall be printed for each batch. Tickets shall 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 are still required as per Article 1020.11(a)(7) of the Standard Specifications.

### **PCC QC/QA ELECTRONIC REPORTS SUBMITTAL**

Effective: January 1, 2015

Revised: April 12, 2016

The Contractor's QC personnel shall be responsible for electronically submitting BMPR MI654 "Concrete Air, Slump, and Quantity," BMPR MI655 "P.C. Concrete Strength," and BMPR MI504 "Aggregate Gradation" reports to the Department. The format for the electronic submittals shall be the QC/QA package reporting program, which will be provided by the Department. Microsoft Excel 2007 or newer and Microsoft Outlook is required for this program which shall be provided b Contractor.

### **CRITICAL PATH SCHEDULE**

Effective: February 10, 1995

Revised: December 29, 2015

The construction of this project will be planned and recorded with a conventional Critical Path Method (CPM) as specified in Article 108.02 of the Standard Specifications and the following:

The Contractor is responsible for preparing the initial schedule in the form of an activity on arrow diagram which shall include activity description and duration, two copies shall be submitted to the Engineer at the preconstruction meeting. The construction time, as determined by the schedule shall not exceed the specified contract time. The schedule shall be updated the first of each month, when there is a delay in completion of any critical activity, or when the contract is modified causing additions, deletion or revision of activities required.

As determined by CPM analysis, only delays in activities which affect milestone dates or contract completion dates will be considered for a time extension.

If the Contractor does seek a time extension of any milestone or contract completion date, he/she shall furnish documentation as required by the Engineer to enable him to determine whether a time extension is appropriate under the terms of the contract.

**BOX CULVERT END SECTIONS**

Effective: June 1, 2014

Revised: April 12, 2016

Description. This work shall consist of constructing cast-in-place concrete and precast concrete end sections for box culverts. These end sections are shown on the details in the plans. This work shall be according to Section 540 of the Standard Specifications except as modified herein.

Materials. Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item				Article/Section
(a) Portland Cement Concrete			(Note 1)	1)
.....			1020	
(b) Precast Concrete End Sections (Note 2)				
(c) Coarse Aggregate			(Note 3)	3)
.....			1004.05	
(d) Structural Steel			(Note 4)	4)
.....			1006.04	
(e) Anchor Bolts and Rods			(Note 5)	5)
.....			1006.09	
(f) Reinforcement				Bars
.....			1006.10(a)	
(g) Nonshrink				Grout
.....			1024.02	
(h) Chemical Adhesive Resin				System
.....			1027	
(i) Mastic Joint Sealer for				Pipe
.....			1055	
(j) Handling Hole Plugs				
.....			1042.16	

Note 1. Cast-in-place concrete end sections shall be Class SI, except the 14-day mix design shall have a compressive strength of 5000 psi (34,500 kPa) or a flexural strength of (800 psi) 5500 kPa and a minimum cement factor of 6.65 cwt/cu yd (395 kg/cu m).

Note 2. Precast concrete end sections shall be according to Articles 1042.02 and 1042.03(b)(c)(d)(e) of the Standard Specifications. The concrete shall be Class PC according to Section 1020, and shall have a minimum compressive strength of 5000 psi (34,000 kPa) at 28 days.

Joints between precast sections shall be produced with reinforced tongue and groove ends according to the requirements of ASTM C 1577.

Note 3. The granular bedding placed below a precast concrete end section shall be gradation CA 7, CA 11 or CA 18.

Note 4. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

Note 5. The anchor rods for the culvert ties shall be according to the requirements of ASTM F 1554, Grade 105 (Grade 725).

### **CONSTRUCTION REQUIREMENTS**

The concrete end sections may be precast or cast-in-place construction. Toe walls shall be either precast or cast-in-place, and shall be in proper position and backfilled according to the applicable paragraphs of Article 502.10 of the Standard Specifications prior to the installation of the concrete end sections. If soil conditions permit, cast-in-place toe walls may be poured directly against the soil. When poured directly against the soil, the clear cover of the sides and bottom of the toe wall shall be increased to 3 in. (75 mm) by increasing the thickness of the toe wall.

- (a) Cast-In-Place Concrete End Sections. Cast-in-place concrete end sections shall be constructed according to the requirements of Section 503 of the Standard Specifications and as shown on the plans.
- (b) Precast Concrete End Sections. When the concrete end sections will be precast, shop drawings detailing the slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval.

The excavation and backfilling for precast concrete end sections shall be according to the requirements of Section 502 of the Standard Specifications, except a layer of granular bedding at least 6 in. (150 mm) in thickness shall be placed below the elevation of the bottom of the end section. The granular bedding shall extend a minimum of 2 ft (600 mm) beyond each side of the end section.

Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

When individual, precast end sections are placed side-by-side for a multi-cell culvert installation, a 3 in. (75 mm) space shall be left between adjacent end section walls and the space(s) filled with Class SI concrete.

Method of Measurement. This work will be measured for payment as each, with each end of each culvert being one each.

Basis of Payment. This work will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS of the culvert number specified.

## **STORM SEWER WATER MAIN REQUIREMENT**

Effective: June 12, 1997

Description: This work shall consist of furnishing and installing water main quality pipe at the locations shown on the plans.

Materials:

- a) Ductile iron water main Class 52

Joints for Ductile Iron pipe shall be:

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

- b) Polyvinyl Chloride (PVC) Class 12454B (PVC 1120) or Class 12454C (PVC 1220).  
Schedule 40 is required for 8" diameter and schedule 80 for larger sizes.

## **CONSTRUCTION REQUIREMENTS**

The storm sewer water main shall be installed according to the applicable portions of Section 550 and 561 of the Standard Specifications and the Standard Specifications for Water and Sewer Main Construction. In case of conflict between the Standard Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois shall take precedence and shall govern.

No testing or disinfections of the newly laid storm sewer water main will be required. A water-tight connection is required between the storm sewer water main and the storm sewer. Method of Measurement: Storm sewer water main of the various diameters will be measured for payment in feet, measured in place.

Basis of Payment: This work will be paid for at the contract unit price per Foot for STORM SEWER WATER MAIN REQUIREMENT, of the diameter specified.

### **IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE)**

Effective: June 1, 2006

Revised: July 21, 2015

This work shall consist of installing Temporary Impact Attenuators according to Section 706 and the following.

Temporary sand module systems that are not located on pavement or a hot-mix asphalt shoulder shall be placed on a 6" base. The base can be either hot-mix asphalt or concrete. The hot-mix asphalt base shall be constructed with incidental hot-mix asphalt surfacing according to Section 408 of the specifications book. The concrete base shall be constructed using class SI concrete.

The temporary impact attenuator and base shall be removed after the completion of work. The area under the base shall be restored to the original condition.

The cost of the base will be included in the contract unit price per Each for IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) of the test level specified.

### **WORK ZONE PAVEMENT MARKING AND REMOVAL**

Effective: December 29, 2008

Revised: January 5, 2018

This work shall consist of installing and removing temporary pavement marking according to Section 703 of the Standard Specifications and the following:

All temporary paint on the final wearing surface shall be removed according to Article 1101.12 Water Blaster with Vacuum Recovery and the applicable portions of Sections 703 and 783 of the Standard Specifications and as described herein.

Add the following paragraph to Article 1101.12 of the Standard Specifications.

For the high-pressure water spray, the pressure at the nozzle shall be approximately 25,000 psi with maximum flow rate of 15 gal/min. The nozzle shall be in close proximity to the pavement surface.

**REMOVAL OF EXISTING STRUCTURES**

This work shall be done in accordance with Section 501 of the Standard Specifications. The work shall consist of removing and disposing of existing box culverts or portions of existing box culverts and other items as specified. Removal of existing drop boxes shall be included in the cost of Removal of Existing Structure for that location.

No.	Station	Description
1	RT 1203+77	72" Concrete End Section with Handrail
2	RT 1204+62	21'x22' Bridge
3	1205+80	43' - 2' X 1' Box
4	RT 1206+05 to 1206+59	56' - 8' X 3' Box
5	RT 1220+65 to LT 1222+00	158' - 10' X 5' Box
6	LT 1223+45	14' X 16.5' Bridge
7	LT 1227+96 to 1228+45	49' - 6.5' X 4' Box
8	1229+37	34' - 6' X 4' Box
9	1235+57	44' - 1.5' X 1.5' Box
10	71+65	14' X 11.5' Bridge

This work shall be paid for at the contract unit price per Each for REMOVAL OF EXISTING STRUCTURES of the number specified.

**HOT-MIX ASPHALT MIXTURE IL-9.5FG (CBM)**

Effective: July 1, 2005

Revised: March 6, 2019

Description. This work shall consist of constructing fine graded hot-mix asphalt (HMA) surface course or leveling binder with an IL-9.5FG mixture. Work shall be according to Sections 406, 407 and 1030 of the Standard Specifications, except as modified herein.

Materials. Add the following after the second paragraph of Article 1003.03(c) of the Standard Specifications:

“For mixture IL-9.5FG, the fine aggregate fraction shall consist of at least 67 percent manufactured sand meeting FA 20 gradation. The manufactured sand shall be stone sand, slag sand, steel slag sand, or combinations thereof.”

Mixture Design. Add the following to the table in Article 1030.04(a)(1):

“High ESAL, MIXTURE COMPOSITION (% PASSING) <sup>1/</sup>		
Sieve Size	IL-9.5FG	
	min	max
1 1/2 in (37.5 mm)		
1 in. (25 mm)		
3/4 in. (19 mm)		
1/2 in. (12.5 mm)		100
3/8 in. (9.5 mm)	90	100
#4 (4.75 mm)	60 <sup>6/</sup>	75 <sup>6/</sup>
#8 (2.36 mm)	45 <sup>6/</sup>	60 <sup>6/</sup>
#16 (1.18 mm)	25	40
#30 (600 $\mu$ m)	15	30
#50 (300 $\mu$ m)	8	15
#100 (150 $\mu$ m)	6	10
#200 (75 $\mu$ m)	4	6.5
Ratio Dust/Asphalt Binder		1.0

6/ When used as level binder placed less than 1 in. (25 mm) thick, the min and max percent passing shall each be increased 5%.”

Revise the table in Article 1030.04(b)(1) of the Standard Specifications to read:

“VOLUMETRIC REQUIREMENTS High ESAL				
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
	IL-19.0	IL-9.5 IL-9.5FG	IL-4.75 <sup>1/</sup>	
50	13.5	15.0	18.5	65 - 78 <sup>2/</sup>
70			65 – 75 <sup>3/</sup>	
90				

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent.

2/ VFA for IL-4.75 shall be 76-83 percent.

3/ VFA for IL-9.5FG shall be 65-78 percent”

Quality Control/Quality Assurance (QC/QA). Revise the second table in Article 1030.05(d)(4) to read:

DENSITY CONTROL LIMITS			
Mixture Composition		Parameter	Individual Test
IL-4.75		Ndesign = 50	93.0 – 97.4 % <sup>1/</sup>
IL-9.5FG	Lifts ≥ 1.25 in. (32 mm)	Ndesign = 50 - 90	93.0 – 97.4 % <sup>1/</sup>
	Lifts < 1.25 in. (32 mm)	Ndesign = 50 - 90	91.0 – 96.0
IL-9.5		Ndesign = 90	92.0 – 96.0 %
IL-9.5, IL-9.5L,		Ndesign < 90	92.5 – 97.4 %
IL-19.0		Ndesign = 90	93.0 – 96.0 %
IL-19.0, IL-19.0L		Ndesign < 90	93.0 <sup>2/</sup> – 97.4 %
SMA		Ndesign = 50 & 80	93.5 – 97.4 %

1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.

2/ 92.0 % when placed as first lift on an unimproved subgrade.

#### CONSTRUCTION REQUIREMENTS

Leveling Binder. Revise the table and second paragraph of Article 406.05(c) of the Standard Specifications to read:

"Leveling Binder		
Nominal, Compacted, Leveling Binder Thickness, in. (mm)		Mixture Composition
≤ 1 1/4 (32)		IL-4.75, IL-9.5, IL-9.5 FG, or IL-9.5L
> 1 1/4 to 2 (32 to 50)		IL-9.5, IL-9.5FG, or IL-9.5L

The density requirements of Article 406.07(c) shall apply for leveling binder, machine method, when the nominal, compacted thickness is: 3/4 in. (19 mm) or greater for IL 4.75 and IL-9.5FG mixtures; 1 1/4 in. (32 mm) or greater for IL-9.5 and IL-9.5L mixtures.”

Basis of Payment. Add the following two paragraphs after the third paragraph of Article 406.14 of the Standard Specifications:

"Mixture IL-9.5FG will be paid for at the contract unit price per ton (metric ton) for LEVELING BINDER (HAND METHOD), IL-9.5FG, of the Ndesign specified; LEVELING BINDER (MACHINE METHOD), IL-9.5FG, of the Ndesign specified; or HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, of the Ndesign specified.

Mixture IL-9.5FG in which polymer modified asphalt binders are required will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED LEVELING BINDER (HAND METHOD), IL-9.5FG, of the Ndesign specified; POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-9.5FG, of the Ndesign specified; or POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, of the Ndesign specified."

#### **MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION**

This item shall be as described in Section 850 of the current "Standard Specifications for Road and Bridge Construction".

The contractor will be responsible in protecting the existing traffic signal installation and equipment; this work shall be included in the cost of MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, including any temporary signals and equipment required to keep the install operational at no additional cost.

Basis of Payment: This work will be paid for at the contract unit price EACH for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, which price shall be payment in full for maintaining all existing equipment and labor needed to perform the work.

#### **PCC PAVEMENT PCC DRIVEWAY PAVEMENT PCC SIDEWALK COMBINATION CONCRETE CURB AND GUTTER**

This work shall be done in accordance with the applicable portions of Sections 420, 423, 424, and 606 of the Standard Specifications for Road and Bridge Construction and as specified herein.

Concrete used on the road and west sidewalk cannot be tinted white and must be tinted light to medium gray. Representative job site samples shall be produced and approved prior to installation. A sample shall be submitted to Mr. Mark Nardini, IDOT District 2 Environmental studies Manager (815-284-5460) to secure the required approval from the Illinois Historic Preservation Agency.

This work shall be included in the unit cost of each pay item.

**PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER**

This item shall be have a black housing to match the existing traffic signal equipment.

This work will be paid for at the contract unit price EACH for PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER which price shall be payment in full.

**RELOCATE EXISTING TRAFFIC SIGNAL POST**

This work shall be in accordance with Section 895 of the current “Standard Specifications for Road and Bridge Construction”. This will include the existing traffic signal post, signal heads, pedestrian heads, pushbuttons, and any signage from the existing concrete foundation to a new concrete foundation as shown on the plans.

The Contractor shall provide any additional material and labor required to reconnect the relocated signal equipment into the existing signal system.

The work shall be paid for at the contract unit price each for RELOCATE EXISTING TRAFFIC SIGNAL POST, which price shall be payment in full for removing and reinstalling the signal post with the associated equipment and material on a new concrete foundation. New anchor bolts, nuts and washers shall be provided as incidental to this item. The new concrete foundation shall be paid for separately.

**RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE**

This work shall be in accordance with Section 895 of the current “Standard Specifications for Road and Bridge Construction”. This will include the existing combination mast arm assembly, signal heads, pedestrian heads, pushbuttons and any signage from the existing concrete foundation to a new concrete foundation as shown on the plans.

The Contractor shall provide any additional material and labor required to reconnect the relocated signal equipment into the existing signal system.

The work shall be paid for at the contract unit price each for RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE, which price shall be payment in full for removing and reinstalling the combination mast arm assembly and pole with the associated equipment and material on a new concrete foundation. New anchor bolts, nuts and washers shall be provided as incidental to this item. The new concrete foundation shall be paid for separately.

### **CABLE SPLICE SPECIAL**

This item consists of furnishing the material to splice 17 signal electric cables at two different handholes locations to accommodate the relocation of the existing mast arm assembly and signal posts as shown on the plans.

The splice shall be as directed by resident engineer and approved by the City Public Works Director, Jim Rigdon 815-777-1050.

This work shall be in accordance with Section 817 and Article 1066.06 of the current Standard Specifications for Road and Bridge Construction Manual.

Basis of Payment: This work shall be paid for at the contract unit price each for CABLE SPLICE, SPECIAL, which price shall be payment in full for furnishing and installing the splice described above.

### **INTERCEPT EXISTING CONDUIT**

This item consists of furnishing the material to intercept and connect the existing conduit for the mast arm assembly to the proposed handhole in the southeast quadrant of the intersection of US 20 with Main St

The connection shall be as directed by the resident engineer and approved by the City Public Works Director, Jim Rigdon 815-777-1050.

Basis of Payment: This work shall be paid for at the contract unit price each for INTERCEPT EXISTING CONDUIT, which price shall be payment in full for furnishing and installing the splice described above.

### **HANDHOLE TO BE ADJUSTED**

This work shall be in accordance with applicable portions of Section 814 of the Standard Specifications for Road and Bridge Construction.

This work shall consist of rebuilding and adjusting handhole lids and castings to match the proposed finished grade. Care shall be taken to protect existing conduits. Any modifications which may be required to the existing conduits entering the handhole shall be included in this work.

This work shall be paid for at the contract unit price per EACH for HANDHOLE TO BE ADJUSTED, which price shall include all necessary labor, material, and equipment necessary to complete the work.

## **PAINT TRAFFIC SIGNAL EQUIPMENT**

Description: This work shall include surface preparations, black powder type painted finish application and packaging of new galvanized steel traffic signal post, pedestrian signal post and the lighting controller cabinet. All work associated with applying the painted finish shall be performed at the manufacturing 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 post the color of any traffic signal posts, pushbuttons, hardware, polycarbonate vehicle and pedestrian heads, including exposed conduits for the bracket mounted signal heads shall match the color finish of the mast arm assemblies.

### **Materials**

Galvanizing: All materials to powder coated shall be galvanized in accordance with ASTM A 123. Only the dry-kettle (pre-fluxing) process shall be used. The material shall not be water or chromate quenched. Galvanized materials to be powder coated shall be air cooled only. An American Galvanizer Association trained Master Galvanizer shall be on the premises during the hot dipped galvanized process.

Powder: Powder coating material shall be thermosetting, durable, TGIC polyester powder of a degassing grade. Such coating powder must be recommended by its manufacturer for use over hot dipped galvanizing. The coating powder's particle size distribution shall be recommended by its manufacturer to produce the best results for powder coating components under this specification.

### **Surface Preparation**

The zinc surface shall be prepared for powder coat application using a multistage system employing appropriate cleaners and imparting a phosphate conversion coat to provide an appropriate substrate for the powder coat material. During the cleaning process, water rinses shall be used as appropriate between stages to clean the items and prepare them for the subsequent stages. Water for the rinses, unless specified elsewhere shall be potable with a hardness not to be more than 250 ppm as CaCO<sub>3</sub> and a combined chloride and sulfate level less than 100 ppm.

Surface Defects: All weld flux and other contaminates shall be mechanically removed. All drainage spikes, tears, high spots, protrusions or other surface defects shall be removed using hand or power tools in accordance with the manufacturer's specifications. Such operations shall not remove the galvanized coating below the thickness allowed by ASTM A 123. Thickness of the galvanizing shall be verified using a properly calibrated magnetic thickness gauge as per ASTM E 376. Any item falling below the required zinc thickness, before or after removal of any high spots, shall be repaired in accordance with Practice A 780.

Surface Cleaning: the galvanized surface shall be clean and free of oils and grease before they are powder coated. These shall be removed by use of aqueous alkaline solution and /or hand or power tool cleaning. Subsequent to alkaline/power cleaning, trace zinc oxide will be removed by a mild acidic solution.

- An alkaline solution, pH in the range of 11 to 12 may be used to remove traces of oil, grease, or dirt. The alkaline solution shall not have a pH exceeding 13. After cleaning the piece shall be rinsed thoroughly in water under pressure
- Hand or power tool cleaning may be used to clean light deposits of zinc reaction products such as wet storage stain, as specified to SSPC Surface Preparation Specification 2 or 3 as appropriated.
- An acidic solution with a pH of 3.5 to 4.5 shall be sprayed onto the item to remove residual zinc oxide.

Surface Profiling: The galvanized surface shall be profiled to promote proper powder coating adhesion. This shall be accomplished by applying a phosphate treatment to create a protective crystalline phosphate conversion coating on the zinc surface. the coating shall have a coating weight between 20 to 70 mg/ft<sup>2</sup>.

Final Rinse: to ensure the most optimum performance possible, a final rinse of de-mineralized water shall be applied as a final rinse prior to pre-baking. This stage will remove any un-reacted phosphate and other contaminants.

#### Powder Coat Application

The finish color shall be one of the manufacturer's standard colors and shall be as selected by the local agency responsible for paint cost. 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.

Pre-baking: Following phosphating all items to be powder coated shall be placed in an oven capable of maintaining a temperature of 500° F. Specimens shall be baked at a temperature 25°F above the normal cure temperature for the powder that will be employed. The specimens shall remain in the oven for minimum of 20 minutes after having equalized to the temperature of the oven to remove any residual moisture from the preparation phase, and issue expulsion of any entrapped gases or moisture. Typically, specimens are pre-baked for one hour.

Powder Coat Application: Polyester powder shall be applied through electrostatic/tribomatic application guns. The powder shall be applied in multiple coats. The first coat shall have a thickness of 1.5 to 3 mils. Each intermediate coat shall be partially cured at a temperature of 350°F to insure adhesion. Subsequent coats shall be then applied in 1.5 to 3 mil increments to bring the specimen to its final (cured) thickness as required by the customer specification. In no case will the final (cured) thickness be less than 5 mils.

Cure: the powder coating shall be cured by heating the coated specimens to a temperature and duration specified by the powder coat material manufacturer to ensure sufficient curing of the powder coat material manufacturer to insure sufficient curing of the powder coating material. The resulting coating shall be uniform in color and free of pinholes. Blisters and other surface defects. Correct sure shall be checked by a solvent rub test.

Properties of Cured Coating:

Minimum film thickness TGIC 5.0 mils (120µm)  
Direct impact ASTM D 2794 160 in./lb (9.0 m/kg)  
Reverse impact ASTM D 2794 160 in./lb (9.0m/kg)  
Pencil hardness (scratch/gouge)A ASTM D 383 2H  
Flexibility (Mandrel test) ASTM D 522 1/8in. (3m mm)  
Minimum adhesion ASTM D 3359 5A, 5B (100% crosshatch)  
Salt spray ASTM B 117 + 1000 hrs < 2mm

Repair of Powder

Coated Material:

- Damage shall be defined as exposed galvanized coating.
- Damage coating less than ½ of 1% of the surface area shall be acceptable for repair. Damage greater than that amount shall be recoated. Final finish shall be damaged free FOB the plant.
- Coating to be repaired shall be touched up as recommended by the galvanizer and the powder coating supplier. Touch up and/or field repair can be accomplished using either powder coating material or paint. Typically, acrylic based paint as recommended by the powder coating material manufacturer. Applied either by spray or brushed on liquid is used for touch-up and repair of the powder coating.

Any damages to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method approvable by the Engineer and manufacturer. If while at the manufacturer's facility the finish is damaged, the finish shall be re-applied.

Warranty: the contractor shall furnish in writing to the Engineer, the paint manufacturer's standard warranty and certification that the paint system has been properly applied.

Basis of Payment: This work shall be paid for at the contract unit price per EACH for PAINT NEW COMBINATION MAST ARM AND POLE UNDER 40 FOOT, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts as described above including all shrouds, bases, appurtenances, and as described in this specification.

## **PEDESTRIAN PUSH BUTTON POST**

This work shall consist of constructing a concrete foundation and furnishing and installing a pedestrian push-button post in accordance with section 876 of the current Standard Specifications for Road and Bridge Construction and as described as follows.

This work shall consist of construction a concrete foundation and furnishing and install a pedestrian push-button post.

The pedestrian Push-button posts shall comply with the current AASHTO breakaway support requirements. An acceptance letter will be required from the manufacturer.

The push-button shall be located a maximum horizontal reach <10" and button of height <42".

Basis of Payment: This work will be paid for at the contract unit price EACH for PEDESTRIAN PUSH-BUTTON POST and shall be payment in full for all labor, equipment, and materials required to install.

### **CONCRETE FOUNDATIONS (SPECIAL)**

This item shall consist of modifying Type "E" and Type "A" foundations with the proper bolt pattern to accommodate the relocation of the equipment at the locations shown on the plans, the foundation detail sheet and as directed by the Engineer.

This work shall be paid for at the contract unit price each for CONCRETE FOUNDATIONS (SPECIAL), which price shall be payment in full for all labor, materials, equipment, and excavation necessary to complete the work described above and as indicated on the plans.

### **PEDESTRIAN PUSH-BUTTON, SPECIAL**

This work shall consist of constructing of furnishing and installing a pedestrian push-button and an appropriate traffic signal instruction sign in accordance with section 888 of the current Standard Specifications for Road and Bridge, File 80099 of the IDOT'S Bureau of Design and Environment Construction, and as described as follows.

The push-button shall be located a maximum horizontal reach <10" and button of height <42".

Basis of Payment: This work will be paid for at the contract unit price EACH for PEDESTRIAN PUSH-BUTTON, SPECIAL and shall be payment in full for all labor, equipment, and materials required to install.

### **VIDEO VEHICLE DETECTION**

The following video vehicle detection systems meet the specifications outlined in this section and are currently approved for use in District 2:

Iteris Vantage Next (7 Camera System)

Autoscope Vision (7 Camera System)

The quantity and type of cable that will be required to complete the installation will vary depending on the equipment manufacturer.

The Contractor shall be responsible for determining the cable type and quantities of cable required for the video detection installations. All cable used shall meet current Department specifications, manufacturer's recommendations, and shall be subject to approval by the Engineer.

Each system to be installed shall be the latest model. Each intersection shall include seven (7) cameras plus one (1) spare to be delivered to the Resident Engineer, the processor unit, connectors, software, and all cabling necessary back to the controller. All the equipment shall be compatible with the controller to be installed on this project. All equipment shall be installed according to manufacturer's recommendations. The video detection cameras shall be capable of being zoomed and focused from a connection in the controller cabinet.

The video vehicle detection system shall include all necessary cables, electrical junction boxes, electrical and coaxial surge suppression, hardware, software, programming, and any camera brackets that are required for installation. These items should be taken into consideration and shall be included in the bid price 5 camera system and 1 spare camera for the VIDEO VEHICLE DETECTOR SYSTEM.

If the unit requires the use of a power strip, the power strip/surge suppressor shall conform to the following minimum specifications:

- Let Through Voltage: <85 Volts
- Operating Voltage: 120VAC, 50/60H
- UL Suppressed Voltage Rating: 330V
- Energy Rating: 320J
- Peak Current NM/CM: 13k Amps NM, 13k Amps CM
- EMI/RFI Noise Filtration: >25-60dB

A total of one 12" color video monitor and trackball with USB connect shall be included in the 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.

The video vehicle system shall be configured and installed to NEMA TS2 Standards.

The Contractor shall be responsible for furnishing and installing all necessary camera brackets that are required for the camera installation. The camera mounting brackets shall be of aluminum or steel construction with a natural or white powder coated finish. All brackets shall be submitted to the Department for approval prior to installation. The material and installation shall be completed to the satisfaction of the Engineer.

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. All video detection systems must be approved by the Department. Currently, only Iteris Vantage Next and Autoscope Vision video detection systems are approved for use within District 2.

## 1.1 System Hardware

The system shall consist of four video cameras, one spare camera 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) video sources. The video shall be digitized and analyzed at a rate of a minimum 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 be coordinated with the signal phases. Each detection zone shall provide a minimum of two kinds of detection (extend, delay, presence or counting) as each phase may require. The type of detection provided by the detection zone is to be determined by the active status of the zone's governing phase.

#### 3.2 Optimal Detection

The video detection system shall reliably detect vehicle presence when the image sensor is mounted 30 feet (10 m) 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, however, extension poles shall be included in the cost when the mounting location requires the proper height adjustment for sight and lane coverage. 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 7.25" x 19" x 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 an RS-232 serial port. A 9-pin "D" subminiature connector on the front of the ACU shall be used for serial communications.

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 RS-170 (B&W)/NTSC (color) composite video inputs for coaxial camera connections so that signals from four image sensors can be processed in real-time.
- 5.6 The ACU shall be equipped with a port to provide communications to a computer running the 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 medium resolution, color, image sensors as the video source for real-time vehicle detection. As a minimum, each image sensor shall provide the following capabilities:

- a. Images shall be produced with a CCD sensing element with horizontal resolution of at least 500 lines and vertical resolution of at least 350 lines.
- b. 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.
- c. 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.
- d. Automatic gain, automatic iris, and absolute black reference controls shall be furnished.
- e. 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.
- 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. The enclosure shall include a provision at the rear of the enclosure for connection of power and video signal cables fabricated at the factory. Input power to the environmental enclosure shall be either 115 VAC 60 Hertz or 24 VAC/DC 60 Hertz.

e. 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 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.

6.4 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.

6.5 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.

6.6 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 coaxial cables from the image sensor and from the ACU.

6.7 A video interface panel shall be included for installation inside of the traffic cabinet. The panel shall provide coaxial cable / twisted pair connection points and an Edco RMCXI-06 or approved equal transient suppressor for each image sensor. The shield side of the coaxial cable connection at the transient suppressor shall be connected to earth ground via the transient suppressor.

If the coaxial cable / twisted pair used to connect the video signal from the image sensor to the ACU are to be routed through a conduit containing unbundled AC power cables, a video isolation amplifier shall be installed in addition to the video interface panel if interference is present. There will be no additional compensation for providing the video isolation amplifier if necessitated by the presence of video interference. The isolation amplifier shall buffer the video signal and provide transient suppression. The isolation amplifier shall have a minimum common mode rejection ratio at 60 Hz of 100 dB.

6.8 The image sensor shall be connected to the ACU such that the video signal originating from the image sensor is not attenuated more than 3 dB when measured at the ACU. When the connection between the image sensor and the ACU is coaxial cable, the coaxial cable used shall be a low loss 75 ohm precision video cable suited for outdoor installation, such as Belden 8281, West Penn P806, or approved equal.

#### 7.0 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.

8.2 Training shall be available upon request.

#### 9.0 Warranty, Maintenance, and Support

9.1 The video detection system shall be warranted by its supplier for a minimum of two (2) 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:

The above work will be paid for at the contract unit price EACH for **VIDEO VEHICLE DETECTION** which price will be payment in full for all labor, equipment, and materials required to supply, install, configure, and test the video vehicle detection system described above, complete.

## CONSTRUCTION LAYOUT SPECIAL UTILIZING GPS EQUIPMENT

Effective: April 1, 2017

If the Contractor opts to utilize GPS equipment for Construction Layout, the Contractor shall be required to complete the following in addition to the requirements of the Recurring Special Provision Check Sheet #9 of the Standard Specifications and as directed by the Engineer.

1. Submit 3D drawings or show the Engineer the digital terrain model (or proof of some type) that the Contractor has generated all proposed information correctly for all parts of the job (mainline, ramps, side roads, entrances, etc.) before starting any grading, structures or paving work. This does not relieve the Contractor of responsibility of any possible errors made in the modeling.
2. The Contractor shall also submit a written QC/QA plan that they must follow to provide quality control on the actual layout and quality assurance checks of the layout during and after construction. This shall be submitted prior to the start of construction and shall meet the approval of the Engineer.
3. The Engineer may perform spot checks of the machine control grading results, surveying calculations, records, field procedures, and actual staking. If the Engineer determines the work is not being performed in a manner that will provide accurate results, the Engineer may order such work to be redone, to the requirements of the contract documents, at no additional cost to the Department.
4. The Contractor shall check and recalibrate their GPS rover system as needed.
5. The Contractor shall establish secondary control points at appropriate intervals and at locations along the length of the project and outside the project limits and/or where work is performed beyond the project limits as required at intervals not to exceed 1000 feet (300 m). Determine the horizontal position of these points using static GPS sessions or by traverse connection from the original baseline control points. Establish the elevation of these control points using differential leveling from the project benchmarks, forming closed loops. Provide a copy of all new control point information to the Engineer prior to construction activities. The Contractor is responsible for all errors resulting from their efforts. Correct all deficiencies to the satisfaction of the Engineer at no additional cost to the Department.
6. The Contractor shall preserve all reference points and monuments that are established by the Engineer within the project limits. Any reference points that have not been preserved shall be reestablished at no additional cost to the Department.

### Construction Layout Equipment

General. The Contractor shall furnish articles of survey equipment to be used by the Department for independent monitoring and verification of construction layout stakes, reference points, and any other horizontal and vertical control set by the Contractor. All equipment will be for the exclusive use of the Department throughout the duration of the contract and will be returned to the Contractor at the end of the contract.

Equipment. The equipment to be furnished by the Contractor shall consist of one precision GNSS rover and a secondary GPS handheld controller. The precision GNSS rover must meet or exceed the capabilities of, and be compatible with the Contractor's equipment and meet the approval of the Engineer. The secondary GPS handheld controller shall also meet or exceed the capabilities of, and be compatible with the Contractor's equipment and meet the approval of the Engineer. The equipment provided shall include all software, data and any additional equipment (base station, repeaters, etc.) necessary to find any point on the project in station, offset and elevation with precision. The Contractor will be required to supply the Department Windows-based software capable of downloading project data from the GPS handheld controller. The project data included in the equipment will be consistent with the data used by the Contractor for layout and grading. Any data revisions or software updates to the Contractor's equipment will also be applied to the Department's equipment by the Contractor.

The Contractor will be responsible for providing training for three members of the Department's staff on use of the equipment and software. The Contractor shall provide one person to the Engineer who will be able to answer any questions and offer any necessary technical support at any point of the project.

Basis of Payment. This work will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT (SPECIAL). If the Contractor elects not to utilize GPS equipment for the use of construction layout, this will not be paid for.

## **AVAILABILITY OF ELECTRONIC FILES**

Effective: October 2016

Revised: February 10, 2017

2D MicroStation and GEOPAK files of this project will be made available to the Contractor after contract award. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files ONLY. If data is required in other formats, it will be your responsibility to make these conversions. Contractor shall coordinate obtaining electronic files through the Project Engineer. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the sole responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

## STORM SEWERS

This work shall be constructed in accordance with the applicable portions of Section 550 of the Standard Specifications, and as specified herein.

At the construction staging line, the storm sewer shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

This work will be paid for at the contract unit price per foot for STORM SEWERS, of the class, type, and diameter specified.

Excavation in rock will be paid for according to Article 502.13.

Trench backfill will be paid for according to Article 208.04.

## WATER MAIN

**Description.** This work shall consist of constructing new water mains and related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for water main construction will be according to the following:

- (a) Water Main Pipe: Polyvinyl chloride (PVC) pipe meeting the requirements of ANSI/AWWA C900 or C909, DR 18 (Class 235) with push-on joints meeting ASTM D3139 with elastomeric seals (gaskets) meeting ASTM F477.
- (b) Water Main Pipe Fittings: Fittings (tees, bends, cutting-in sleeves, etc.) shall be mechanical joint, ductile iron meeting the requirements of ANSI/AWWA C153 and ANSI/AWWA C111. Fittings shall be asphalt coated and shall be provided with a double thickness of cement mortar lining meeting the requirements of ANSI/AWWA C104.
- (c) Water Main Polywrap: Ductile iron fittings, pipe, valves, etc. shall be encased in polyethylene encasement meeting the requirements of ANSI/AWWA C105.
- (d) Water Valves: Resilient wedge gate valves meeting the requirements of ANSI/AWWA C509 and rated at 350 psi working pressure. Valves shall be mechanical joint, have non-rising stems, have epoxy coating meeting ANSI/AWWA C550, and shall have a 2" square wrench nut. Valve shall open clockwise be per the requirements of the City of Galena Water Department.
- (e) Water Valve Boxes: Two-piece, screw adjustable box constructed out of cast/ductile iron. Box shall be asphalt coated for corrosion protection. Box riser shall have a minimum inside diameter of 5-1/4". Box access lid shall be marked "WATER". Valve boxes shall be provided with a rubber centering adapter to center the operating nut in the center of the box.
- (f) Mechanical Joint Restraining Glands: Mechanical joints shall be provided with wedge-type restraining glands meeting the requirements of ANSI/AWWA C151 and ANSI/AWWA C111. Gland body, wedges, and wedge actuating

components shall be cast from ductile iron meeting ASTM A536. Glands shall have a working pressure rating of 350 psi.

- (g) Concrete Thrust Blocks: Thrust blocking shall be Class SI concrete meeting the requirements of Section 1020 of the Standard Specification for Road and Bridge Construction or precast cement block meeting the requirements of Section 1042.15 of the Standard Specification for Road and Bridge Construction.
- (h) Tracer Wire: No. 12 stranded copper wire with a 30-mil high molecular weight high density blue polyethylene jacket.
- (i) Tracer Wire Terminal/Access Box: Terminal box shall be constructed out of high-grade ABS rigid plastic meeting ASTM D1788, Type 1 with a cast iron collar. Lid shall be a noncorrosive, injection molded resin meeting ISO 178. Lid shall be provided with an anodized aluminum pentagon head bolt and brass terminals and jumper. Lid shall be lockable.
- (j) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** In addition to the construction requirements outlined in Section 561.03 of the

Standard Specifications for Water and Sewer Construction, the following will apply: The static system pressure at various points in the system are as follows:

Bench/Main/Prospect Street:	112 +/- psi
High Street:	109 +/- psi
Dodge Street:	102 +/- psi
West Street:	97 +/- psi
Hickory Street (downstream of PRV):	87 +/- psi
Summit Street (upstream of PRV):	109 +/- psi

This information is provided to the contract for the purpose of determining appropriate pressure/leakage testing requirements as outlined in the Standard Specifications for Water & Sewer Main Construction in Illinois”.

Prior to placing the water main into service, the contractor shall work with the City of Galena Water

Department and the Illinois Environmental Protection Agency in obtaining operating permits. Operating permits will require that passing bacteriology tests be obtained from every 1,200 feet of water main and the ends of any dead-end lines or points of connection to the existing system. Passing test must be obtained on subsequent days taken a minimum of 24-hours apart. The contractor shall provide the resident engineer with a testing and sampling procedure outlining the locations for sampling, testing, and the methods for performing the work prior to commencement. To obtain said samples, the contractor will be required to install testing and sampling “whips” at various locations.

The contractor shall follow the requirements of ANSI/AWWA 605 and the manufacturer’s recommendations when installing pipe and fittings outlined in this section. All ductile iron fittings and valves shall be incased in a polyethylene encasement (polywrap) meeting the requirements of ANSI/AWWA C105 and shall be installed per the manufacturer’s recommendations. Polywrap shall be installed as to not limit the access to or operation of water valves.

Water mains shall be installed with a tracer wire adhered to the pipe with electrical tape at the 12 o'clock position on the pipe at 8 to 10-foot intervals. Tracer wire shall be routed through all casing pipes. Tracer wires shall terminate in a tracer wire terminal/access box to be located adjacent to all fire hydrants. A 2" diameter PVC pipe shall be installed from the bottom of the terminal box to the water main depth through which the tracer wires shall be routed for protection. Three-way, direct bury, waterproof connectors shall be provided at all water main branches and for water service laterals. New tracer wire shall be spliced to existing wires at point of connection via, large, waterproof, twist-on connectors. The system shall be tested for conductivity before final acceptance.

At points of reconnection to the existing water mains, line stops shall be provided on either side of the connection point to ensure existing customers are provided with continuous service without the need for boils orders or extended shut down durations. To the extent possible, final connections shall be made after the installed water main has been disinfected, pressure tested, and IEPA operating permit has been issued. Connections to the existing water mains may require omni-type couplings in lieu of cutting-in sleeves due to the existence of over-sized cast iron water main in the existing system.

At the construction staging line, the water main shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

**Method of Measurement.** This work will be measured for payment as outlined in Article 561.04 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for WATER MAIN, of the diameter specified.

Excavation in rock will be paid for according to Article 502.13.

Trench backfill will be paid for according to Article 208.04.

## **WATER SERVICE LINE**

**Description.** This work shall consist of constructing new water service lines and related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for water service line construction will be according to the following:

- (a) Water Service Pipe/Tubing: Copper water tube, Type K or greater soft temper for underground service and conforming to ASTM B88 and ASTM B251. All service pipe/tubing shall be 1" diameter unless noted otherwise on the Drawings.
- (b) Water Service Pipe Fittings: Fittings (bends, couplers, etc.) shall be lead free brass meeting the requirements of ANSI/AWWA C800 and NSF 61. Fittings shall have compression-type connections.
- (c) Corporation Stops: Full port, ground key type valve with AWWA taper threaded inlet and pack joint outlet connection for CTS pipe. Stop body shall be

- constructed out of lead-free brass. Stops shall meet the requirements of ANSI/AWWA C800 and NSF 61. Stops shall be rated for 300 psi working pressure.
- (d) Service Saddles: Service saddles shall be provided with all corporation stops. Saddle body shall be ductile iron meeting ASTM A536 with a fusion bonded epoxy coating. Bales and straps shall be Type 304 stainless steel with stainless steel hardware. Strap shall be provided with a Buna-N gasket. Saddle shall be drilled to accept AWWA taper threads.
  - (e) Curb Stops: Full port, plug-style, ¼-turn valve with pack joint inlet and outlet connections for CTS pipe. Stop body shall be constructed out of lead-free brass. Stops shall meet the requirements of ANSI/AWWA C800 and NSF 61. Stops shall be rated for 300 psi working pressure.
  - (f) Curb Stop Boxes: Two-piece, telescoping, adjustable type with arch pattern base. Box riser shall have a minimum inside diameter of 1-1/2". Box lid shall be provided with a pentagon style plug and shall be marked "WATER".
  - (g) Concrete Thrust Blocks: Thrust blocking shall be Class SI concrete meeting the requirements of Section 1020 of the Standard Specification for Road and Bridge Construction or precast cement block meeting the requirements of Section 1042.15 of the Standard Specification for Road and Bridge Construction.
  - (h) Water Main Quality Casing Pipe: Polyvinyl chloride (PVC) pipe meeting the requirements of ANSI/AWWA C900 or C909, DR 18 (Class 235) with push-on joints meeting ASTM D3139 with elastomeric seals (gaskets) meeting ASTM F477. All casing pipes shall be 3" diameter unless noted otherwise on the Drawings.
  - (i) Tracer Wire: No. 12 stranded copper wire with a 30-mil high molecular weight high density blue polyethylene jacket.
  - (j) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** In addition to the construction requirements outlined in Section 562.03 of the Standard Specifications for Water and Sewer Construction, the following will apply:

In addition to the requirements of the Illinois Plumbing Code and the requirements of the City of Galena Water Department, the water service lines and appurtenances shall be installed meeting the requirements of Sections 40 and 41 of the Standard Specifications for Water and Sewer Construction in Illinois and the manufacturer's recommended installation instructions.

To the extent possible, all water services shall be installed over the top of the proposed storm sewer system with a minimum of 5' of cover over the proposed service and 18" of vertical separation provided between the storm sewer and water service. If these criteria cannot be met, the water service shall be installed in a water main quality casing pipe when above the storm sewer and less than 18" of vertical separation is provided. When 5' of cover cannot be provided without routing the service line beneath the storm sewer, the proposed service line shall be installed in a water main quality casing pipe a minimum of 18" beneath the storm sewer as shown in the Details provided on the plans. Casing spacers will not be required for service lines, and the casing pipe ends may be sealed with non-shrink grout.

Water services shall be installed with a tracer wire adhered to the pipe with electrical tape at the 12 o'clock position on the pipe at 8 to 10-foot intervals. Tracer wire shall be routed through all casing pipes. Three-way, direct bury, waterproof connectors shall be provided at all water main branches. New tracer wire shall be spliced to existing wires at point of connection via, large, waterproof, twiston connectors. The system shall be tested for conductivity before final acceptance.

At the construction staging line, the water service line shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

**Method of Measurement.** This work will be measured for payment as outlined in Article 562.04 of the Standard Specifications for Road and Bridge Construction. Casing pipes and casing end seals for water service lines will not be paid for separately and shall be included in the Water Service Line pay item.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for WATER SERVICE LINE, of the internal diameter specified.

Excavation in rock will be paid for according to Article 502.13.

Trench backfill will be paid for according to Article 208.04.

## **FIRE HYDRANTS FIRE HYDRANTS (SPECIAL)**

**Description.** This work shall consist of constructing new fire hydrants and related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for fire hydrant construction will be according to the following:

- (a) Fire Hydrants: Dry-barrel post type meeting the requirements of ANSI/AWWA 502 and UL 246. Hydrants shall be provided with two (2) hose nozzles and one (1) pumper nozzle meeting the requirements of the City of Galena Water Department and Galena Fire Department District. Hydrants shall have a 5-1/4" main valve opening in the direction meeting the requirements of the City of Galena Water Department and Galena Fire Department District. Hydrants shall be provided with a 6" mechanical joint shoe. Standard hydrants shall be provided with a minimum 6' burial and Special hydrants shall be provided with a minimum 11' burial. Hydrants shall be rated for 250 psi working pressure.
- (b) Water Main Polywrap: Ductile iron fittings, pipe, valves, etc. shall be encased in polyethylene encasement meeting the requirements of ANSI/AWWA C105.
- (c) Mechanical Joint Restraining Glands: Mechanical joints shall be provided with wedge-type restraining glands meeting the requirements of ANSI/AWWA C151 and ANSI/AWWA C111. Gland body, wedges, and wedge actuating components shall be cast from ductile iron meeting ASTM A536. Glands shall have a working pressure rating of 350 psi.

- (d) Concrete Thrust Blocks: Thrust blocking shall be Class SI concrete meeting the requirements of Section 1020 of the Standard Specification for Road and Bridge Construction or precast cement block meeting the requirements of Section 1042.15 of the Standard Specification for Road and Bridge Construction.
- (e) Aggregate Drain Field: Aggregate for drain field shall be porous granular backfill consisting of coarse aggregate having a gradation of CA-7 and meeting the requirements of Section 1004 of the Standard Specifications for Road and Bridge Construction.
- (f) Filter Fabric for Drain Field: Filter fabric to be installed around the hydrant drain field shall be a non-woven geotextile fabric meeting the requirements of Article 1080.03 of the Standard Specifications for Road and Bridge Construction. Fabric weight shall be 6 oz/sq. yd, as measured by ASTM D3776.

**Construction.** This work will be constructed per the requirements of Section 45 of the Standard Specifications for Water and Sewer Construction in Illinois, ANSI/AWWA C600, and the manufacturer's recommended installation procedures.

Below grade portions of the hydrant will be encased with polyethylene encasement (polywrap) meeting the requirements of ANSI/AWWA C105 and shall be installed per the manufacturer's recommendations. Polywrap shall be installed as to not block the drain outlets in the hydrant shoe.

Hydrant and drain field will be installed as shown in the details provided in the Drawings.

**Basis of Payment.** This work will be paid for at the contract unit price per each for FIRE HYDRANTS and FIRE HYDRANTS (SPECIAL) and will include the hydrant, retaining gland, polyethylene encasement, and drain field.

Excavation in rock will be paid for according to Article 502.13.

Trench backfill will be paid for according to Article 208.04.

## **TEMPORARY DRAINAGE CONNECTION**

This work shall be constructed in accordance with the applicable portions of Section 550 of the Standard Specifications and the temporary connection details shown in the plans.

This will shall consist of temporarily connecting existing storm sewer lateral pipes into the proposed box culvert in Stage ID as shown in the plan details.

These temporary connections will be abandoned and filled in Stage IE. This work will be paid for separately as ABANDON AND FILL EXISTING STORM SEWER.

This work will be paid for at the contract unit price per EACH for TEMPORARY DRAINAGE CONNECTION, which price shall include all necessary labor, material, and equipment necessary to complete the work.

## **TRAFFIC BARRIER TERMINAL, TYPE 1**

This work shall consist of the furnishing and erecting Type 1 traffic barrier terminals as shown on the plans. The work shall be performed in accordance with the applicable portions of Section 631 of the Standard Specifications and as shown on Highway Standard BLR 23-4 included in the plans.

This work will be paid for at the contract unit price per EACH for TRAFFIC BARRIER TERMINAL, TYPE 1, which price shall include all necessary labor, material, and equipment necessary to complete the work.

## **FLAGSTONE SIDEWALK**

Description. This work shall consist of furnishing, delivering, and constructing the natural flagstone sidewalk on a prepared subgrade, as specified and dimensioned on the plans, and as directed by the Engineer.

### Materials.

Mortar shall be according to the requirements of Article 1017 of the Standard Specifications. Mortar shall be tinted to match stone color.

Natural Flagstone: The type of stone used shall be either historic salvaged flagstone from within the limits of this construction contract, or newly acquired flagstone from a local quarry. All stone proposed to be used within the length of a given sidewalk shall be consistent in color and exposed surface finish, and shall closely resemble the color and exposed surface finish of any flagstone sidewalks to remain in place located within 25 ft of the sidewalk. When the proposed sidewalk is not within the specified distance from an existing sidewalk which it is required to resemble, the top exposed surface shall have a natural bed texture. Samples of the stone shall be submitted for approval to the Engineer prior to delivery and placement.

(a) Salvaged Flagstone. Salvaged limestone shall be obtained through the removal of existing sidewalks or stone lined ditches within the contract limits, and cleaned as deemed necessary by the Engineer. Salvaged Flagstone shall have a consistent appearance within the length of the proposed sidewalk, such that stone taken from one existing source is indistinguishable from another.

(b) Newly Acquired Flagstone. Limestone shall be locally sourced from a quarry within a 50-mile radius of the project site, and meet the following requirements.

Specific Gravity = 2.5  
(minimum)  
Density = 155 lb/ft<sup>3</sup>  
(minimum)  
Absorption = 2.0% (maximum)  
Compressive Strength = 10,000 psi (minimum)

General. The sidewalk shall consist of natural flagstone, an aggregate base course, a fine aggregate bedding material, and grouted joints.

Installation Requirements. Installation Requirements shall be according to the following.

(a) Protection.

- (1) Store and handle stone to prevent damage due to moisture, contaminants, breakage, chipping or other causes.
- (2) Lift with wide belt-type slings where possible; do not lift with wire ropes.
- (3) Do not use pinch bars or wrecking bars to handle stone. Do not use equipment that contains substances that might stain.
- (4) Store stone on wood skids or pallets, covered with non-staining, waterproof membrane.
- (5) Protect stored stone from weather with waterproof non-staining covers or enclosures.

(b) Construction. Prior to placement the flagstone shall be cleaned of all loose debris so as to provide a uniform surface once in place. Cleaning shall be to the satisfaction of the Engineer. Preparation of the bedding shall involve excavation and placement of 4" of aggregate base course, type B. The aggregate base course shall conform to Section 351 of the Standard Specifications. A 1" to 1.5" thick layer of fine aggregate bedding material shall then be placed over the aggregate base course. The fine aggregate shall conform to Section 1003 of the Standard Specifications with gradation meeting the approval of the Engineer. Spacing between adjacent stones shall be no more than 2". Once placed in their final position, the flagstone shall be backfilled with joint grouting material. Earth material shall then be carefully backfilled along the outside perimeter to provide a smooth vertical transition between the flagstone sidewalk and the adjacent property. When the sidewalk is located immediately adjacent to a structure, the sidewalk shall be sloped to drain away from the structure.

Failure to meet these requirements may require modifications to the sidewalk, up to and including removal and reinstallation of the affected portions of the sidewalk.

Method of Measurement. FLAGSTONE SIDEWALK will be measured for payment in square feet of sidewalk as shown on the plans.

Basis of Payment. This work will be paid for at the contract unit price per square foot for FLAGSTONE SIDEWALK. The contract unit price for FLAGSTONE SIDEWALK shall include furnishing, delivering, and constructing the natural flagstone sidewalk of Salvaged Flagstone or Newly Acquired Flagstone; all excavation necessary to the depth of the bottom of the base course; aggregate base course and bedding materials; and joint grouting material.

### **REMOVE AND RELOCATE SIGN (SPECIAL)**

This work shall consist of removing, storing, and resetting/relocating signs, sign hardware and sign supports at locations shown in the plans in accordance with Section 724 of the Standard Specifications.

The signs and sign support shall be stored at a location approved by the Engineer. Any sign, sign hardware or sign support lost or damaged shall be replaced at no additional cost.

This work will be paid for at the contract unit price per EACH for REMOVE AND RELOCATE SIGN (SPECIAL), at locations as specified in the plans.

### **CONSTRUCTION VIBRATION MONITORING**

This special provision identifies the Contractor's responsibilities for protecting the properties listed below. The Contractor shall develop a plan which minimizes the potential for possible cracking damage due to the construction activities near the identified structures. The contractor is also required to perform pre and post crack monitoring. The Contractor will be responsible for any damage caused by his/her activities.

601 S. Prospect Street (Chicago Athenaeum)  
324 Spring Street (Galena Renaissance Suites)  
328 Spring Street (Riverboat Suites)  
334 Spring Street (Farmers Guest House)  
336 Spring Street (Old Fire House)  
338 Spring Street (Commercial Building)  
345 Spring Street (Greenbriar Country Inn & Suites)  
402 Spring Street (Old Red Brick Building)  
407 Spring Street (Melody Campbell)  
418 Spring Street (Stone House Pottery)

#### Pre-Construction Survey.

No information is available concerning the condition of these properties.

The Contractor shall perform a pre-construction condition survey for the interior and exterior of these structures, and provide a copy of survey reports to the Engineer no later than 30 calendar days prior to starting work. The survey shall be performed by a Structural Engineer licensed in the State of Illinois and experienced in evaluating structural vulnerabilities and vibration monitoring.

At a minimum the survey shall document all aspects of the structural condition through observations, actual measurements, plan sketches, photographs, and any other data the preparer may deem appropriate. The survey reports, signed and sealed by the structural engineer, shall be submitted to the Engineer.

The Contractor shall perform a pre-construction condition survey that includes photos and plan sketches indicating existing vulnerabilities and an evaluation of the risk from construction vibration. The Contractor shall determine the construction methods required to protect the properties listed above based on the pre-construction survey and the safe vibration threshold.

The Contractor is responsible for arranging with the property owner the rights-of-entry to the property in order to engage in condition surveys, vibration monitoring, and crack monitoring.

### Pre-Construction Site Preparation

#### Crack Monitoring

The Contractor shall mark existing cracks in such a way that future observations would clearly indicate whether cracks remained unchanged, opened, closed, or propagated. The appropriate location, number and type of crack monitoring devices will be established by the Contractor and approved by the Engineer. The Contractor shall monitor and log all cracks and immediately notify the Engineer of any observed change.

#### Construction Requirements

The Contractor shall periodically check to ensure that the monitoring system(s) are continuously operating within manufacturer's specifications during the project.

#### Post-Construction Survey

The Contractor shall perform a post-construction survey and analysis at the designated structures to determine if any structural changes are the result of the construction activity. The Contractor shall provide the Engineer with a copy of all post construction survey reports, and analysis documents comparing pre and post construction structural condition. The survey shall be performed, and the reports signed and sealed, by a Structural Engineer licensed in the State of Illinois.

### Method of Measurement

The item Construction Vibration Monitoring will be measured as each unit of work.

### Basis of Payment

The item CONSTRUCTION VIBRATION MONITORING will be paid for at the contract each unit price. This price shall be full payment for pre-construction surveys; furnishing, installing, monitoring, and removing crack monitoring gauges; preparing and providing a report documenting crack monitoring during this project; preparing and providing a report documenting cracking data collected during this project; post construction surveys; reports; and all labor, equipment and materials necessary to complete the work as described. There will be no compensation for delays as the result of faulty or damaged monitoring equipment.

**REMOVE AND REINSTALL BRICK PAVER  
 REMOVE AND REINSTALL STONE PAVER**

Description. This work shall consist of the removal and reinstallation of existing brick paver sidewalk or stone paver sidewalk on a prepared subgrade, subbase, or base at locations shown on the plans in accordance with the applicable portions of Section 424 of the Standard Specifications and as described herein.

This item shall include the complete removal and storage of the existing pavers, reinstallation of the existing pavers, leveling and jointing sand, and compacted aggregate base.

Materials. Materials shall be according to the following Articles of Division 1000 - Materials of the Standard Specifications.

Item	Article/Section
(a) Fine Aggregate (Note 1) .....	1003.01, 1003.02(d)
(b) Edge Restraints (Note 2)	
(c) Paving Brick (Note 3) .....	1041.03
(d) Concrete Pavers (Note 3) .....	1042

Note 1. The fine aggregate used for the bedding course and joint filling shall be sand, silica sand, or slag sand. It shall also be Class A quality and dry. For the bedding course, the gradation shall be FA 1 or FA 2. For joint filling, the gradation shall be FA 9.

Note 2. For sidewalk, the edge restraints shall conform to the manufacturer's recommendations. Existing edge restraints shall be reused when suitable as directed by the Engineer.

Note 3. The dimensions of the bricks and/or pavers shall match the existing paver layout, pattern, and joint width.

Equipment. Equipment shall conform to the following Articles of Division 1100 - Equipment of the Standard Specifications.

Item	Article/Section
(a) Pneumatic-Tired Rollers .....	1101.01(a)
(b) Masonry Saw (Note 1)	
(c) Vibrator/Compactor (Note 2)	

Note 1. The masonry saw shall be a wet or dry saw capable of clean and accurate cuts.

Note 2. The vibrator/compactor shall be either a plate compactor with a high frequency, low amplitude plate or a rubber-roller mechanical vibrator.

Aesthetic Mockup, Review, and Approval. Full scale mock-ups shall not be required.

## CONSTRUCTION REQUIREMENTS

Preparation of Subgrade. The subgrade shall be prepared according to Section 301 of the Standard Specifications, except Articles 301.05 and 301.06 will not apply.

Edge Restraints. Edge restraints shall be placed to a depth of at least the bottom of the bedding course.

Bedding Course. The fine aggregate for bedding shall be placed and screeded, without compaction, to a uniform thickness of 1 to 1.5 in. Prepared areas shall not be left overnight, unless they are protected from disturbance and moisture. Stockpiled material shall be kept covered. Any saturated bedding aggregate shall be removed and replaced.

Installation. The bricks or pavers shall be laid to match the existing paver layout, pattern, and joint width. Whole bricks or pavers shall be laid first, starting from an exact edge or from the centerline of the pavement, followed by cut bricks or pavers. Cut bricks or pavers shall be at least 33 percent of the whole unit size.

After the entire sidewalk has been laid, it shall be set into the bedding course by one pass of the vibrator/compactor. Vibration/compaction shall stop within 3 ft of any unrestrained edge.

Joint Filling. The fine aggregate for joint filling shall be spread over the sidewalk and hand broomed into the joints. The aggregate shall then be worked down into the joints with multiple passes of the vibrator/compactor. Each pass shall be alternated 90 degrees from the previous pass. This process shall be repeated until the joints are completely filled.

Excess fine aggregate shall be removed by hand brooming.

All bricks and pavers within 6 ft of the laying face shall be compacted and the joints completely filled with sand at the end of each workday.

Method of Measurement. This work will be measured for payment as follows:

(a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a) of the Standard Specifications.

(b) Measured Quantities. This work will be measured for payment in place and the area computed in square feet. Measurements will not include the edge restraints.

Basis of Payment. This work will be paid for at the contract unit price per square foot for REMOVE AND REINSTALL BRICK PAVER or REMOVE AND REINSTALL STONE PAVER, which price shall include all necessary labor, material, and equipment necessary to complete the work.

### **VANE DRAIN**

**Description:** This work shall consist of supplying and constructing slotted vane drains at the locations as shown on the Plans. This work shall be completed in accordance with the applicable portions of Section 602 of the Standard Specifications and the Detail provided in the Drawings.

Trench drains shall be constructed of 12" PVC sewer pipes, ASTM D3034, DR 35, and grates shall be a Neenah #R-3599B Slotted Vane Drain or approved equal.

Trench drains may be obtained from any manufacturer which provides a product meeting H-20 loading requirement. Grate may be welded steel or cast-iron slotted drain encased in concrete with an end cap and sloped to meet the outlined roadway cross slopes, minimum 1.00%. Trench drain must be flush with proposed pavement.

Trench drain shall be able to accommodate a minimum intake capacity of 15 GPM/ft.

**Method of Measurement:** This work will be measured for payment per FOOT for VANE DRAINS.

**Basis of Payment:** This work will be paid for at the contract unit price per FOOT for VANE DRAINS. Unit price shall include all required excavation, pipe, pipe connections, pipe-to-manhole connections, encasement concrete, reinforcement bars, expansion joints, grates, frames, materials, equipment, and all necessary incidental work to complete installation.

## **SLOTTED DRAIN REMOVAL**

This work shall consist of the removal and disposal of existing slotted drains at the locations shown on the plans or as directed by the Engineer, in accordance with Sections 440 and 551 of the Standard Specifications.

Removal shall include all existing concrete and metal, including grates, associated with the slotted drain. Care must be taken to prevent damaging any elements designed to be incorporated into the proposed work. Any damage to elements beyond the specified limits or surrounding area caused by the Contractor in prosecution of this work shall be repaired or replaced by the Contractor, the cost of which is the responsibility of the Contractor.

This work will be measured for payment in place in feet, measured along the slotted drain grate. This work will be paid for at the contract unit price per foot for SLOTTED DRAIN REMOVAL, which payment shall constitute full compensation for all removal, disposal, and incidentals necessary to complete the work as specified.

## **SLOTTED DRAINS**

This work consists of furnishing and installing slotted drains including Fine Aggregate for bedding and Class SI concrete at the locations shown in the plans or as directed by the Engineer, in accordance with Sections 602 and 606 of the Standard Specifications and as described herein.

Slotted drains shall be PVC sewer pipes, ASTM D3034, DR 35. The pipe shall be cut along the longitudinal axis and reinforced with a grate of solid spacer bars. The grate assembly shall be made from structural steel suitably welded to form the open slot and shall be hot-dip galvanized to meet the provisions of AASHTO M 111. The slot depth

shall be as 2-1/2 inches. The slot width shall be 1-3/4 inches. Spacer bars shall be 3/16 inch solid web spacers on 6 inch centers for the full depth of the grating.

Joints and couplers for slotted drain shall provide ring compression capability across the full width of the joint. The band coupler shall butt up against the grating. A single band bolt shall be provided for band tensioning.

Fine Aggregate for Bedding shall meet the requirements of Article 1003.04 of the Standard Specifications. The aggregate shall extend from a depth of four inches below the slotted drain pipe to the centerline of the pipe.

Class SI concrete meeting the requirements of Article 1020.04 of the Standard Specifications shall be used to construct the concrete gutter or concrete island on either side of the slotted drain pipe at the thickness matching the adjacent existing gutter or island.

The slotted drain shall be installed in a trench excavated to the required grade, wide enough to accommodate the drain pipe and to a depth four inches below the pipe. If the trench is excavated too deep, the additional depth shall be filled with approved fine aggregate and compacted to the satisfaction of the Engineer. The slotted drain must be properly positioned in the trench prior to backfilling. The upper end of the drain shall be capped as directed by the Engineer or connected to another drainage structure.

After the slotted drain and bedding have been leveled to grade, the concrete gutter shall be placed. The slotted opening shall be covered to prevent intrusion of foreign material during the concrete placement.

This work will be paid for at the contract price per foot for SLOTTED DRAIN 12" WITH 2½" SLOT, which price shall include Fine Aggregate Bedding, Class SI Concrete and all accessories required for connecting the slotted drain pipes and connections to drainage structures where necessary.

## **DRAINAGE WEIR**

This work shall be constructed in accordance with the applicable portions of Section 602 of the Standard Specifications and the temporary connection details shown in the plans.

This work shall consist of constructing a temporary drainage weir inside the existing box culvert at Sta. 1221+00 in order temporarily redirect existing drainage from the box culvert into the proposed storm sewer system between Stages IE and IIB.

This work shall also include the removal of the temporary weir when the remainder of the existing box culvert is removed in Stage IIB.

This work shall be paid for at the contract unit price per EACH for DRAINAGE WEIR, which price shall include all labor, materials, and equipment necessary to complete the work.

## **SANITARY MANHOLE AND PIPE CONNECTION**

This work shall be constructed per the requirements of Section 32 of the Standard Specifications for Water and Sewer Construction in Illinois, the manufacturer's recommendations, and the temporary sanitary sewer connection details shown in the plan.

This work shall consist of furnishing and installing a temporary 4' sanitary sewer manhole and temporary 10" sanitary sewer pipe necessary to connect the existing sanitary sewer at Sta. 1219+77 into the proposed sanitary sewer between Stages IE and IIA.

This work shall also include the removal of both the temporary manhole and temporary sanitary sewer in Stage IIA.

This work shall be paid for at the contract unit price per LUMP SUM for SANITARY MANHOLE AND PIPE CONNECTION, which price shall include all labor, materials, and equipment necessary to complete the work.

## **FILLING INLETS, TEMPORARY**

DESCRIPTION. This work consists of filling inlets, as designated on the plans or as directed by the Engineer, with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications. Existing storm sewer end sections and associated pipe runners and grates at the end of the storm sewer to be filled should be removed unless otherwise indicated, and pipe ends shall be securely sealed as described in section 605.03.

Existing Inlets that have had outlet pipes removed will be filled, temporarily in Stage IIB and then permanently removed in Stage IIC.

MATERIALS. The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

BASIS OF PAYMENT. This work will be measured and paid for at the contract unit price per each for FILLING INLETS, TEMPORARY at locations shown in the plans, as specified herein, and as directed by the Engineer.

## **FORM LINER TEXTURED SURFACE, SPECIAL STAINING CONCRETE STRUCTURES**

Description. This work shall consist of designing, developing, furnishing and installing form liners and forming concrete using reusable, high-strength urethane form liners to achieve the various concrete treatments as shown in the plans. This work also consists of providing and applying a concrete stain to the textured surface to replicate actual stone. Form lined surfaces shall include areas of cast-in-place concrete wall facings, where shown in the plans. The form liner pattern used at each location shall be as

specified herein. This work shall also be performed in accordance with applicable portions of Section 503 of the Standard Specifications.

Form liners shall be installed 12" below the proposed ground line at front face of wall, up to the top of concrete facing, as indicated on the plans. The form liner shall match the exact size of concrete units and adhere to the provisions listed herein and in the Plans. The form liner stone module is to be integrated into the specified surfaces such that there are no joints crossing the stone modules.

Fabricator Requirements. The form liner patterns included herein have been pre-approved by the State Historic Preservation Office (SHPO) for the specified locations. Other manufacturer's products will be considered, provided sufficient information is submitted 30-days prior to use to allow SHPO to determine that products proposed are equivalent to those named. All manufacturers of form liners shall adhere to the provisions listed herein and in the Plans.

Shop Drawings. Shop drawings of the concrete facing patterns shall be submitted for each area of textured concrete. Shop drawing submittals shall include:

- (a) Individual form liner pattern descriptions, dimensions, and sequencing of form liner sections. Include details showing typical cross sections, joints, corners, steps in the concrete facing, stone relief, stone size, pitch/working line, mortar joint and bed depths, joint locations, edge treatments, and any other special conditions.
- (b) Elevation views of the form liner panel layouts for the texture showing the full length and height of the structures with each form liner panel outlined. The arrangement of the form liner panels shall provide a continuous pattern of desired textures and colors with no interruption of the pattern made at the panel joints.
- (c) Color samples for stain color selection by the Engineer.

To minimize the possibility of preparing an unsatisfactory Cast Concrete Mockup as described herein, the Contractor may elect to provide shop drawings for the Mockups.

Materials. Form liners shall be high quality, highly reusable and capable of withstanding anticipated concrete pour pressures without causing leakage or causing physical defects. Form liners shall attach easily to pour-in-place forms and be removable without causing concrete surface damage or weakness in the substrate. Liners used for the texture shall be made from high-strength elastomeric urethane material which shall not compress more than 0.02 feet when poured at a rate of 10 vertical feet per hour. Form release agents shall be non-staining, non-residual, non-reactive and shall not contribute to the degradation of the form liner material. Forms for smooth faced surfaces shall be plastic coated or metal to provide a smooth surface free of any impression or pattern. If the contractor elects to use form ties for concrete forming, only fiberglass form ties will be permitted. Use of removable metallic form ties will not be allowed.

Store concrete stain materials in an area where temperatures will not be less than 50°F (10°C) or more than 100°F (38°C) and in accordance with OSHA and local Fire Code Requirements.

Deliver materials in original and sealed containers, clearly marked with the manufacturer's name, brand name, type of material, batch number, and date of manufacture.

Form Liner Mockup. The Contractor shall provide a cast concrete mockup containing the form liner surface. The form liner manufacturer's technical representative shall be on-site for technical supervision during the installation and removal operations.

Purpose of the mockup is to select and verify the pattern and concrete stain color to be used.

- (a) Locate mockup on site as directed by the Engineer.
- (b) The cast-in-place mockup shall be a minimum 3 ft x 3 ft x 6 in. thick. Size shall be varied as required to demonstrate patterning.
- (c) Using the same substrate and application techniques that will occur in the final structure, apply the concrete stain to the front face of the mock-up wall located on the jobsite. Stain shall be of type and color which will be used on actual walls. Application procedures and absorption rates shall be as hereinafter specified, unless otherwise recommended by the manufacturer in writing to achieve color uniformity.
  - (1) Acceptance by the Engineer shall serve as a standard of comparison with respect to color and overall appearance.
  - (2) General application to actual surfaces on the retaining wall shall not proceed until jobsite mockup has been approved in writing by the Engineer.
- (d) Include examples of each condition required for construction i.e., liner joints, construction joints, expansion joints, steps, corners, and special conditions due to topography or man-made elements, etc.
- (e) Upon receipt of comments from inspection of the mockup, adjustments or corrections shall be made to the molds where imperfections are found. If required, additional mockups shall be prepared when the initial mockup is found to be unsatisfactory.
- (f) After concrete work on mockup is completed and cured and after surface is determined to be acceptable for coloring, apply color stain system.
- (g) After coloring is determined to be acceptable by the Engineer, construction of project may proceed, using mockup as quality standard.

Qualifications of Contractor. The concrete stain applicator shall have a minimum of five (5) years demonstrated experience in applying stains to simulate rock. The Contractor shall submit evidence of appropriate experience, job listings, and project photographs from previous work.

Cast-in-Place Concrete. The following form liner manufacturers have been pre-approved to provide the listed pattern for the limestone surface form liner for use with the cast-in-place concrete units.

Location	Manufacturer	Pattern
S.N. 043-7009	Fitzgerald Formliners 1500 East Chestnut Ave. Santa Ana, CA 92701 Phone: (800) 547-7760	17007 Random Field Stone Graylastic <a href="https://formliners.com/17007-2/">https://formliners.com/17007-2/</a>
S.N. 043-7010	Custom Rock Formliner 2020 West 7th Street St. Paul, MN 55116 Phone: (800) 637-2447	1206 Royalite Stone <a href="https://customrock.com/pattern/1206-royalite/">https://customrock.com/pattern/1206-royalite/</a>
S.N. 043-7011	Fast Formliners Co. 1005 Miller Drive St. Clair, MO 63077 Phone: (714) 429-9500	15067 <a href="https://www.fastformliners.com/patterns/15067.html">https://www.fastformliners.com/patterns/15067.html</a>

Other manufacturer's products will be considered, provided sufficient information is submitted 30 days prior to use to allow SHPO to determine that products proposed are equivalent to those named. The concrete facing panel thicknesses shown on the plans provide a minimum 12" structural concrete thickness, and have been increased to allow for the maximum relief anticipated based on the pre-approved patterns specified in the table above. The submittal of other manufacturer's products for consideration shall illustrate that a minimum 12" structural concrete thickness has been maintained, and shall specify the proposed overall concrete panel thickness.

All manufacturers of form liners shall fabricate form liners to match the provisions listed herein and in the Plans. The form liner stone module is to be integrated into the face panel such that there are no joints crossing the stone modules.

**Concrete Stain.** Special penetrating stain mix as provided by manufacturer, shall achieve color variations present in the natural limestone being simulated for this project, as required by the Engineer. Submit manufacturer's literature, certificates and color samples to the Engineer. The stain color shall be selected by the Engineer from the stain manufacturer's standard colors after viewing the mock-up.

Stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight or weathering. Stain mix shall be a water borne, low V.O.C. material, less than 1.5 lbs./gal, and shall meet requirements for weathering resistance of 2000 hours accelerated exposure.

**Installation.** Form liners shall be installed in accordance with the manufacturer's recommendations to achieve the highest quality concrete appearance possible. Form liners shall withstand concrete placement pressures without leakage causing physical or visual defects. A form release agent shall be applied to all surfaces of the liner which will come in contact with concrete as per the manufacturer's recommendations. After

each use, liners shall be cleaned and made free of build-up prior to the next placement, and visually inspected for blemishes or tears. If necessary, the form liners shall be repaired in accordance with the manufacturer's recommendations. All form liner panels that will not perform as intended or are no longer repairable shall be replaced at no additional cost to the Department. An on-site inventory of each panel type shall be established based on the approved form liner shop drawings and anticipated useful life for each form liner type.

The liner shall be securely attached to the forms according to the manufacturer's recommendations. Liners shall be attached to each other with flush seams and seams filled as necessary to eliminate visible evidence of seams in cast concrete. Liner butt joints shall be blended into the pattern so as to create no visible vertical or horizontal seams or conspicuous form butt joint marks. Liner joints must fall within pattern joints. Finished textures shall be continuous without visual disruption and properly aligned over adjacent and multiple liner panels. Continuous or single liner panels shall be used where liner joints may interrupt the intended pattern. Panel remnants shall not be pieced together.

The Contractor shall coordinate concrete pours to prevent visible differences between individual pours or batches. Concrete pours shall be continuous between construction or expansion joints. Cold joints shall not occur within continuous form liner pattern fields. Wall ties shall be coordinated with the liner and form to achieve the least visible result. Liners shall be stripped between 12 and 24 hours as recommended by the manufacturer. Curing methods shall be compatible with the desired aesthetic result. Use of curing compounds will not be allowed. Concrete slump requirements shall meet the form liner manufacturer's recommendations for optimizing the concrete finish, as well as the Department's material specifications and special provisions.

With the use of standard Portland cement concrete mixtures, the Contractor shall employ proper consolidation methods to ensure the highest quality finish. Internal vibration shall be achieved with a vibrator of appropriate size, the highest frequency and low to moderate amplitude. Concrete placement shall be in lifts not to exceed 1.5 feet. Internal vibrator operation shall be at appropriate intervals and depths and withdrawn slowly enough to assure a minimal amount of surface air voids and the best possible finish without causing segregation. External form vibrators may be required to assure the proper results. Any use of external form vibrators must be approved by the form liner manufacturer and the Engineer. The use of internal or external vibratory action shall not be allowed with the use of self-consolidating concrete mixtures. It is the intention of this specification that no rubbing of flat areas or other repairs shall be required after form removal. The finished exposed formed concrete surfaces shall be free of visible vertical seams, horizontal seams, and butt joint marks. Grinding and chipping of finished formed surfaces shall be avoided.

Applying Color Stain. Clean surface prior to application of stain materials to assure that surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's instructions for surface preparation. Do not sandblast. Preferred method to remove latency is pressure washing with water, minimum 3000 psi (a rate of three to four gallons per minute), using fan nozzle perpendicular to and at a distance of one or two feet from surface. Completed surface shall be free of blemishes, discoloration, surface voids and unnatural form marks.

Surfaces to receive stain shall be structurally sound, clean, dry, fully cured, and free from dust, curing agents or form release agents, efflorescence, scale, or other foreign materials. Methods and materials used for cleaning of substrate shall be as recommended by the manufacturer of the water-repellent stain. Concrete shall be at least 30 days old prior to concrete stain application. Curing agents must be removed a minimum of 14 days prior to coating to allow the concrete to dry out.

The stain shall be thoroughly mixed in accordance with the manufacturer's directions using an air driven or other explosion-proof power mixer. Mix all containers thoroughly prior to application. Do not thin the material.

Materials shall be applied at the rate as recommended by the manufacturer. Absorption rates could be increased or decreased depending upon surface texture and porosity of the substrate so as to achieve even staining.

Temperature and relative humidity conditions during time of concrete stain application shall be per manufacturer's application instructions. Do not apply materials under rainy conditions or within three (3) days after surfaces become wet from rainfall or other moisture. Do not apply when weather is foggy or overcast. Take precaution to ensure that workmen and work areas are adequately protected from fire and health hazards resulting from handling, mixing and application of materials. Furnish all the necessary equipment to complete the work. Provide drop cloths and other forms of protection necessary to protect all adjoining work and surfaces to render them completely free of overspray and splash from the concrete stain work. Any surfaces, which have been damaged or splattered, shall be cleaned, restored, or replaced to the satisfaction of the Engineer.

Avoid staining the "mortar joints" by providing suitable protection over the joints during the staining process.

Sequencing: Schedule color stain application with earthwork and back-filling of any wall areas making sure that all simulated stone texture is colored to the minimum distance below grade. Delay adjacent plantings until color application is completed. Coordinate work to permit coloring applications without interference from other trades.

Where exposed soil or pavement is adjacent which may spatter dirt or soil from rainfall, or where surface may be subject to over-spray from other processes, provide temporary cover of completed work.

Guidelines for Use of Form Liners. Form liners are being used on this project to achieve very specific architectural results. The Contractor shall not deviate from the guidelines contained herein unless authorized by the Engineer in writing.

Method of Measurement. Form Liner Textured Surface, Special and Staining Concrete Structures will be measured from the top of the cast-in-place concrete facing to 1'-0" below the proposed ground line at front face of wall as shown on the plans.

Cast concrete form liner mockups with finished stain surfaces will not be measured for payment.

Basis of Payment. Form lined surfaces will be paid for at the contract unit price per square foot for FORM LINER TEXTURED SURFACE, SPECIAL. The contract unit price for FORM LINER TEXTURED SURFACE, SPECIAL shall include all labor and materials required for designing, developing, furnishing, installing, and disposal of form liners and forming concrete to achieve the various concrete treatments as shown in the plans; and all materials and labor required to provide a form liner mockup for each different pattern used.

The staining of the form lined surfaces will be paid for at the contract unit price per square foot for STAINING CONCRETE STRUCTURES. The contract unit price for STAINING CONCRETE STRUCTURES shall include all materials and labor required to apply a concrete stain to the textured surface to replicate actual stone; and all materials and labor required to stain the form liner mockup for each different pattern used.

Required adjustments or corrections needed to address mockup comments and the cost of additional mockups, if required, will not be paid for separately, but shall be included in the cost of these items.

Protective coat will be paid for according to Section 503 of the Standard Specifications.

## **RETAINING WALL REMOVAL**

Description. This work shall consist of removing a mortared natural stone or mortared concrete masonry unit wall within the limits specified on the plans.

General. The Contractor shall remove the existing wall in a manner that will not damage or disturb nearby structures or adjacent sections of the wall to remain in place, in accordance with Section 501 of the Standard Specifications.

All-natural stone is considered to be of historic significance, and shall be salvaged for reuse. The stone wall shall be carefully deconstructed into stable, transportable sections. The following precautions shall be taken in order to minimize aesthetic surficial damage to the stone.

- (a) Store and handle stone to prevent damage due to moisture, contaminants, breakage, chipping or other causes.
- (b) Lift with wide belt-type slings where possible; do not lift with wire ropes.
- (c) Do not use pinch bars or wrecking bars to handle stone. Do not use equipment that contains substances that might stain.
- (d) Store stone on wood skids or pallets, covered with non-staining, waterproof membrane.
- (e) Protect stored stone from weather with waterproof non-staining covers or enclosures.

Mortar shall be removed from individual stone blocks and subsequently cleaned, when intended for reuse within this contract. If the Engineer deems any stone as unfit for reuse, through no fault of the Contractor, the material shall be disposed of according to Article 202.03. When the Contractor damages or destroys such material, the Contractor shall repair or replace the material in a manner satisfactory to the Engineer.

Salvaged material will become the property of the City of Galena. The Contractor shall deliver salvaged stone that will not be reused within this contract to the City, at a time and location to be coordinated with:

Andy Lewis  
City  
Engineer  
(815)  
777-  
1050

[alewis@cityofgalena.org](mailto:alewis@cityofgalena.org)

Concrete masonry units and mortar are not to be salvaged. These items shall be removed and disposed of according to Article 202.03.

Method of Measurement. This work shall be measured for payment in feet along the face of wall of the stone or masonry removed. The length measured for payment will be the average length of wall removed.

Basis of Payment. This work will be paid for at the contract unit price per foot for RETAINING WALL REMOVAL. The contract unit price for RETAINING WALL REMOVAL shall include all equipment and labor necessary to deconstruct the wall; cleaning and removal of mortar from salvaged stone blocks that will be reused within this contract; loading, transport, and unloading of salvaged materials that will be reused within this contract; coordination with the City Engineer for delivery of salvaged materials; loading, transport, and unloading of salvaged materials that will not be reused within this contract; and disposal of materials not required to be salvaged.

## TEMPORARY ACCESS

### Description:

Revise Article 402.10 of the Standard Specifications to read:

**“402.10 For Temporary Access.** The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and roads according to Article 402.07 and as directed by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.

- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface course for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

Prior to any winter shutdown period or the end of construction, if required by the Engineer, the aggregate surface course shall be paved with 2" of Hot-Mix Asphalt Base Course in accordance with Section 406 of the Standard Specifications.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03."

Add the following to Article 402.12 of the Standard Specifications:

"Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified."

Revise the second paragraph of Article 402.13 of the Standard Specifications to read:

Basis of Payment: "Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE) or TEMPORARY ACCESS (ROAD).

Partial payment of each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access."

## **PIPE HANDRAIL, SPECIAL**

Description: This item shall consist of furnishing and erecting decorative steel railing in accordance with Section 509 of the Standard Specifications, Pipe Handrail, Special Details included in the plans. This work shall also include furnishing, installing, and required adjustments to all miscellaneous steel shapes, plates, and connection hardware.

General: This work shall be according to the details shown in the plans and meet ADA requirements. Handrails installed along steps shall be to the dimensions shown on District 2 Standard Drawing 63.2 and Handrails along retaining walls shall be to the dimensions shown on the structural detail sheets.

General: All welds facing pedestrian areas shall be ground smooth in the shop. The rails shall be straight and true to line, without kinks, bends, or warps and straightened as necessary before shipment.

Material: Hollow structural steel tubing shall conform to the requirements of ASTM A 500, Grade

B. All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

Fabrication, inspection, storage, and erection of steel railings shall be according to Section 505 of the Standard Specifications. The Contractor shall submit sample finish color textures to the Engineer for approval prior to fabrication.

Method of Measurement: This work will be measured for payment in place in Feet. The length measured will be the overall length along the top longitudinal railing member through all posts and gaps.

Basis of Payment: This work will be paid for at the contract unit price per FOOT for PIPE HANDRAIL, SPECIAL. and shall include all labor, materials, and equipment necessary to complete the work.

## **TEMPORARY STORM SEWERS, CLASS A, TYPE 2 – 18”**

This work shall be constructed in accordance with the applicable portions of Section 550 of the Standard Specifications and the temporary connection details shown in the plans.

This work shall consist of constructing a section of temporary storm sewer to connect the existing box culvert at Sta. 1221+00 to the proposed storm sewer system between Stages IE and IIB. The connection of this pipe to both the existing box culvert and proposed storm manhole shall be included in this item.

This work shall also include the removal of the temporary storm sewer when the remainder of the existing box culvert is removed in Stage IIB.

This work shall be paid for at the contract unit price per FOOT for TEMPORARY STORM SEWERS, CLASS A, TYPE 2 18” which price shall include all labor, materials, and equipment necessary to complete the work.

## **ABANDON AND FILL EXISTING STORM SEWER**

DESCRIPTION. This work consists of filling storm sewers to be abandoned, as designated on the plans or as directed by the Engineer, with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications. Existing storm sewer end sections and associated pipe runners and grates at the end of the storm sewer to be filled should be removed unless otherwise indicated, and pipe ends shall be securely sealed as described in section 605.03.

MATERIALS. The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

CONSTRUCTION REQUIREMENTS. The storm sewer pipe shall be plugged on both ends with Class SI concrete or brick and mortar. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during construction, the Contractor shall be responsible for the cost of repairing the pipe plugs and filling the remainder of the storm sewer.

Storm sewer end sections that are removed must be disposed of in accordance with article 605.05 of the Standard Specifications.

METHOD OF MEASUREMENT. ABANDON AND FILL EXISTING STORM SEWER will be measured in place and the length computed in feet. Storm sewer end sections that are removed at the end of the sewer sections will not be measured for payment.

BASIS OF PAYMENT. This work will be paid for at the contract unit price per foot for ABANDON AND FILL EXISTING STORM SEWER at locations shown in the plans, as specified herein, and as directed by the Engineer.

## **MANHOLES, TYPE A, 10' DIAMETER, TYPE 1 FRAME, CLOSED LID**

This work shall be done in accordance with Sections 602 of the Standard Specifications for Road and Bridge Construction and Highway Standards 602426 and 604001.

This work shall consist of furnishing and installing manholes with a Type 1 Frame and Closed Lid. Temporary manhole plating required between construction stages will not be paid for separately and shall be included in The Manholes, Type A, 10' Diameter, Type 1 Frame, Closed Lid.

This work shall be paid for at the contract unit price per EACH for MANHOLES, TYPE A, 10' DIAMETER, TYPE 1 FRAME, CLOSED LID, which price shall include all labor, materials, and equipment necessary to complete the work.

## MANHOLES, SANITARY

**Description.** This work shall consist of constructing new sanitary manholes with frames and lids and the related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for sanitary manhole construction will be according to the following:

- (a) Precast Manhole: Precast concrete manhole and related appurtenances for sanitary manholes shall be according to the requirements of Section 602.02 of the Standard Specifications for Road and Bridge Construction.
- (b) Sanitary Manhole Frame and Lid: Casting shall be a round frame gray iron frame with round lid having enclosed pick holes and self-sealing gasket meeting the requirements of Article 1006.14 of the Standard Specifications for Road and Bridge Construction. Frame shall have a 9" rise, measure 34" in diameter at the base and have a minimum 21" diameter clear opening. Lid shall be 22-3/4" in diameter and shall be marked "SANITARY".
- (c) Manhole Steps: Manholes shall be provided with plastic manhole steps meeting the requirements of Section 602.02 of the Standard Specifications for Road and Bridge Construction. Cast or ductile iron steps will not be allowed in sanitary manholes.
- (d) Chimney Seal: Chimney seals shall be the internal type and shall be a pleated, rubber sleeve type with stainless steel expansion bands. Rubber sleeve shall be pleated for adjustment to the chimney length and shall be constructed out of 3/16" thick rubber meeting ASTM C923 standards. Expansion bands shall be 16-gauge Type 304 stainless steel meeting the requirements of ASTM C923 and have a width of not less than 1-3/4".
- (e) Pipe to Manhole Connector: Pipe to manhole connectors shall be the cast-in type molded from an EPDM compound and having stainless steel hardware in accordance with ASTM C923 standards.

**Construction.** This work shall be constructed per the requirements of Section 32 of the Standard Specifications for Water and Sewer Construction in Illinois, the manufacturer's recommendations, and the details provided in the Drawings.

All sanitary manholes shall have the following appurtenances, manhole frame and lid, manhole steps, chimney seal, flexible pipe to manhole connector (boot), preformed flexible joint sealant, and external sealing bands.

All sanitary manholes shall have precast or cast-in-place flow line fillets poured into the manhole base as outlined in the details provided in the Drawings.

Drop manhole connections for sanitary manholes will be constructed as indicated in the details provided in the Drawings.

All sanitary manholes shall be tested for infiltration and exfiltration via the Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test outlined in ASTM C1244. Testing shall be performed in the presence of the Engineer.

**Basis of Payment.** This work will be paid for at the contract unit price per each for MANHOLES, SANITARY, of the diameter specified, and with the type of frame and lid specified. Drop manhole connections will not be paid for separately and shall be included in the Manholes, Sanitary pay item. Temporary manhole plating required between construction stages will not be paid for separately and shall be included in the Manholes, Sanitary pay item.

Excavation in rock will be measured and paid for according to Section 502 of the Standard Specifications for Road and Bridge Construction.

### **INLETS, SPECIAL**

This work shall consist of constructing inlets in accordance with the applicable portions of Section 602 of the Standard Specifications, District 2 Standard Drawings, and as specified herein.

The following District 2 Standard Drawings for the specified type of "Inlet Special" shall be used to construct the inlets: 79.4a, 79.4b, 79.4g, and 10.2, 12.2.

At Sta. 1255+10.4 RT and Sta. 1255+18.3 RT, this work shall also include the removal of the necessary length of existing storm sewer and slotted drain to properly connect the proposed inlets to the existing storm sewer pipe and slotted drain.

This work will be paid for at the contract unit price EACH for INLETS, SPECIAL, WITH SPECIAL FRAME AND GRATE; INLETS, SPECIAL; INLETS, SPECIAL, NO. 3; INLETS, SPECIAL, NO. 5; INLETS, SPECIAL, NO. 7; and DOUBLE INLET, SPECIAL.

### **CLASS SI CONCRETE (OUTLET), SPECIAL**

This work shall be constructed in accordance with Section 606 of the Standard Specifications and District 2 Standard Drawing 21.2 shown in the plans.

This work will be paid for at the contract unit price per CU YD for CLASS SI CONCRETE (OUTLET), SPECIAL, which price shall include all labor, materials, and equipment necessary to complete the work.

**CONCRETE MEDIAN, TYPE SM (SPECIAL)**

This work shall consist of constructing concrete medians with various types of mountable curbs according to Section 606 of the Standard Specifications, Standard 606301, and as shown in the plans.

This work will be measured for payment per Article 606.14 of the Standard Specifications.

This work will be paid for at the contract unit price per SQ FT for CONCRETE MEDIAN, TYPE SM (SPECIAL).

**CONCRETE GUTTER, TYPE A (SPECIAL)**

This work shall be constructed in accordance with Section 606 of the Standard Specifications and District 2 Standard Drawing 36.4 shown in the plans.

This work will be paid for at the contract unit price per FOOT for CONCRETE GUTTER, TYPE A (SPECIAL), which price shall include all labor, materials, and equipment necessary to complete the work.

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

Traffic Control shall be according to the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the National Manual on Uniform Traffic Control Devices for Streets and Highways, Illinois Supplement to the National Manual on Uniform Traffic Control Devices, 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 of the Standard Specifications for Road and Bridge Construction and the following Highway Standards relating to traffic control.

Standards:

701001      701106      701301      701311      701427      701501

701601      701606      701701      701801      701901      704001

BLR-23

Details:

Detour Plans

Staging Plans

District 2 Detail 34.1 – Work Zone Sign Details

District 2 Detail 40.1 – Traffic Control for Road Closure

District 2 Detail 40.1a – Traffic Control for Road Closure with Side Road Within 150' of Closure

This work shall consist of furnishing, installing, and maintaining all signs, signals, temporary pavement markings, other required traffic control markings, barricades, warning lights, and other devices which are to be used to regulate, warn, or guide traffic during construction of this improvement.

General:

The Contractor shall be liable if they fail to open all traffic lanes on US Route 20 in accordance with the requirements specified. The Contractor shall be substantially completed in a given section of US Route 20 to have all traffic lanes open prior to winter shutdown without the need of traffic control devices. Prior to the commencement of work on any new stages, the Contractor shall determine that both directions of travel for the section of US Route 20 in question will be completed prior to winter shutdown. Uneven lanes will not be allowed for winter shutdown periods. The Contractor shall provide the Resident Engineer a schedule of work for those stages within that section which demonstrates the work can be completed in the time available prior to winter shutdown. Stages may be broken into further sub-stages to facilitate this goal with prior approval by the Engineer. The Contractor shall note the contract working days are based on an expedited work schedule. The Contractor shall be liable to the Department in the amount of \$5,000 for each calendar day past November 30<sup>th</sup> the requirements are not met, unless a later date is approved by the Engineer. Such damages may be deducted by the Department from any monies due to the Contractor. These damages shall apply during the contract time and any extensions of the contract time.

During construction, Southbound traffic will be detoured onto Gear Street while Northbound traffic is maintained on US Route 20. Existing pavement markings will be temporarily restriped for one-way traffic on Gear Street. During winter shutdown, the Gear Street detour shall be removed and Southbound traffic will be returned to US Route 20.

Where construction activities involve sidewalks on both sides of the street, the work shall be staged so that both sidewalks are not out of service at the same time.

Signs:

No bracing shall be allowed on post-mounted signs.

Post-mounted signs shall be installed using standard 720011, 728001, 729001, on 4"x4" wood posts, or on any other "break away" connection if accepted by the FHWA and corresponding letter is provided to the resident.

All signs are required on both sides of the road when the median is greater than 10 feet and on one-way roadways.

The "WORKERS" (W21-1a(O)-48) signs shall be replaced with symbol "Right or Left Lane Closed Ahead" (W4-2R or L(O)-48) signs on multilane roadways.  
"BUMP" (W8-1(O)48) signs shall be installed as directed by the Engineer.

When covering existing Department signs, no tape shall be used on the reflective portion of the sign.

Contact the District sign shop for covering techniques.

All regulatory signs shall be maintained at a 5-foot minimum bottom (rural), 7 foot minimum (urban).

Any plates or direct applied sheeting used to alter signs shall have the same sheeting as the base sign.

No more than one kind of alteration shall be used to alter a sign.

Any post stubs without a sign in place and visible shall have a reflector placed on each post.

#### Devices:

Raised reflector pavement markers in conflict with the temporary pavement marking lines shall be covered or removed/reinstalled. This work will not be measured or paid for separately.

Cones or reflectorized cones shall not be used during hours of darkness.

A minimum of 3 drums spaced at 4 feet shall be placed at each return when the sideroad is open.

On all standards, and the devices listed in Section 701 of the Standard Specifications, the device spacing shall be revised to the following dimensions:

Where the spacing shown on the standard is 25 feet, the devices shall be placed at 20 feet. Where the spacing shown on the standard is 50 feet, the devices shall be placed at 40 feet.

Where the spacing shown on the standard is 100 feet, the devices shall be placed at 80 feet.

#### Lights:

Steady burn mono-directional lights are required on devices delineating a widening trench.

#### Flaggers:

##### Flagger at Sideroads and Commercial Entrances:

Flaggers shall comply with all requirements and signaling methods contained in the Department's "Traffic Control Field Manual" current at the time of letting. The flagger equipment listed for flaggers employed by the Illinois Department of Transportation shall apply to all flaggers

All workers and flaggers shall wear ANSI Class E pants and an ANSI Class 2 vest that in combination meet the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 3 garments during hours of darkness.

In addition to the flaggers shown on applicable standards, on major side roads flaggers shall be required on all legs of the intersection. Major side roads for this project shall be Bench Street and Gear Street (East Leg).

When the mainline flagger is within 200 feet of an intersection, the sideroad flagger shall be required.

When the road is closed to through traffic and it is necessary to provide access for local traffic, all flaggers as shown on the applicable standards will be required. No reduction in the number of flaggers shall be allowed.

Revise Article 701.20(i) of the Standard Specifications to read:

“Signs, barricades, other traffic control devices, or flaggers required by the Engineer, over and above those shown in the contract documents, will be paid for according to Article 109.04.”

#### Pavement Marking:

All temporary pavement markings that will be operational during the winter months (December through March) shall be paint.

Short term pavement markings on a milled surface shall be paint.

Temporary pavement markings shall not be included in the cost of the standard rather it shall be paid for separately at the contract unit prices of specified temporary pavement marking items.

Traffic Control for Narrow Travel Lanes: The contractor shall provide information warning signs for oversized loads regarding the road closure. These signs shall be 4' X 8' as shown on the sign design and shall read “ROAD CLOSED TO OVERSIZED LOADS XX MILES AHEAD” and the distance from the crossroads as noted. The contractor shall erect these signs near the intersections of:

US 20 and IL 84 (northwest junction) (2 MILES AHEAD)  
US 20 at state line (13 MILES AHEAD)

The Contractor shall notify the Department via email at [DOT.D2.TrafficNotice@illinois.gov](mailto:DOT.D2.TrafficNotice@illinois.gov). **This request shall be submitted a minimum of three weeks (21 days) and no earlier than four weeks (28 days) prior to the anticipated closure date to allow the State adequate time to reroute oversized loads.**

The contractor shall be responsible for providing, erecting, maintaining, and removing these signs. All cost involved in conforming with this provision shall be considered a part of TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Maintenance of Traffic: The traffic shall be maintained using Gear Street for southbound traffic and US 20 for the northbound traffic as shown in the plans.

The mainline shall be kept open to one-way traffic at all times.

The Contractor shall be required to notify the Jo Daviess County Highway Department, the corresponding Township Commissioner, Galena Department of Public Works, emergency response agencies (i.e.: fire, ambulance, police), school bus companies and the Department of Transportation (Bureau of Project Implementation) regarding any changes in traffic control.

The Contractor shall submit a maintenance of local traffic plan to the Engineer at the preconstruction meeting telling how local access will be maintained at each access location. It will show which locations will be completely closed, and which locations will be constructed in stages and remain open. This traffic plan will need to be approved by the Engineer before the roadway is closed to traffic.

The Contractor shall be responsible for providing a weekly article and map to the news media (Galena Gazette) describing work being performed and stages closed to traffic.

Placing and removing pavement marking shall be completed using Traffic Control and Protection Standard 701311.

This work shall be paid for at the contract unit LUMP SUM price for TRAFFIC CONTROL AND PROTECTION (SPECIAL), which price shall be payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices as indicated on the Plans or in these Specifications and as directed by the Engineer.

## **TEMPORARY FLASHING BEACON INSTALLATION**

This work shall consist of furnishing, installing, and removing at the end of the project a solar-powered flashing beacon assembly mounted on a 4" x 6" wood sign post.

The flashing beacon assembly shall have the ability to be installed on the top of a 4" X 6" wood post sign support. The beacon shall consist of a 12" amber LED indication as indicated on the plans and shall be flashed at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall not be less than one-half and not more than two-thirds of the total cycle.

The LED module shall be in accordance with Section 1078.01(c)(1). of the Standard Specifications for Road and Bridge Construction. The signal housing shall be a yellow polycarbonate head with a black visor. The beacon assembly shall be a one piece self-contained, cabinet-free unit with a self-contained light engine containing all electronics, batteries, and solar panels to allow the beacon to operate continuously without electric power.

This work will be paid for at the contract unit price EACH for TEMPORARY FLASHING BEACON INSTALLATION, which price shall include all labor, materials, and equipment necessary to complete the work.

## RETAINING WALL, SPECIAL

Description. This work shall consist of furnishing, delivering, and constructing the natural stone retaining wall system(s), as specified to the lines, grades, and dimensions shown on the plans and as directed by the Engineer. This work also includes the preparation of design computations and shop drawings.

Materials. Materials shall be according to Article 522.02 of the Standard Specifications, except as modified herein.

Mortar shall be according to the requirements of Article 1017 of the Standard Specifications. Mortar shall be tinted to match stone color.

Natural Stone Block: The type of stone used shall be either historic salvaged stone from walls identified as being removed as part of this construction contract, or newly acquired stone from a local quarry, as specifically identified on the plans. All stone proposed to be used within the length of a given wall shall be consistent in color and exposed surface finish, and shall closely resemble the color and surface finish of any existing walls to remain in place located within 25 ft of the proposed wall. Exposed stone faces shall be sized proportionally for the maximum retained height of a given wall. When the proposed wall is not within the specified distance from an existing wall which it is required to resemble, the vertical exposed surfaces shall have a split stone texture and top exposed surface shall have a natural bed texture. Samples of the stone shall be submitted for approval to the Engineer prior to delivery and placement.

(a) Salvaged Stone. Salvaged limestone shall be obtained through the removal of existing walls within the contract limits, at the locations shown on the plans. Salvaged stone shall have a consistent appearance within the length of the proposed wall, such that stone taken from one existing wall source is indistinguishable from another.

(b) Newly Acquired Stone. Dolomitic Limestone shall be locally sourced from a quarry within a 50mile radius of the project site, and meet the following requirements.

Specific Gravity = 2.5  
(minimum)  
Density = 155 lb/ft<sup>3</sup>  
(minimum)  
Absorption = 2.0% (maximum)  
Compressive Strength = 10,000 psi (minimum)

General. The wall shall consist of natural stone blocks, select fill, a concrete or aggregate leveling pad, and, if required by the design, soil reinforcement. The wall shall be designed and constructed according to the lines, grades, and dimensions shown on the plans and approved shop drawings.

Structure excavation shall be according to Section 502, cast-in-place concrete work shall be according to Section 503.

Design Criteria. Design computations and shop drawings shall be submitted according to Article 522.05. The design shall be according to the AASHTO LRFD Bridge Design Specifications for Prefabricated Modular Walls, except as modified herein. The Contractor shall be responsible for internal and external stability aspects of the natural stone block wall design (including sliding, overturning, and bearing pressure). The Department will be responsible for the analysis of settlement, bearing capacity, and overall slope stability.

If required by design, soil reinforcement shall be utilized and the loading at the natural stone block/soil reinforcement connection as well as at the failure surface shall be indicated. The calculations to determine the resistance of the soil reinforcement including pullout shall also be included. External loads such as those applied through structure foundations, from traffic or railroads, slope surcharge, etc., shall be accounted for in the internal stability design. The presence of all appurtenances behind, in front of, mounted upon, or passing through the wall volume such as drainage structures, utilities, structure foundation elements, or other items shall be accounted for in the internal stability design of the wall.

All details of the block and/or soil reinforcement placement around all appurtenances located behind, on top of, or passing through the wall shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular design arrangement shall also be submitted.

All details of the blocks, including texture, shall be shown. The exterior face shall be straight and a split stone texture. All block types (standard, cap, corner, and radius turning blocks) shall be detailed showing all dimensions. If determined to be necessary by the design, the blocks shall have connection devices such as shear keys, leading/trailing lips, or pins. The details for the connection devices between adjacent blocks and the block to soil reinforcement shall be shown. The block set back or face batter shall be limited to 2.5 degrees from vertical.

Installation Requirements. Installation Requirements shall be according to the following.

(a) Protection.

- (1) Store and handle stone to prevent damage due to moisture, contaminants, breakage, chipping or other causes.
- (2) Lift with wide belt-type slings where possible; do not lift with wire ropes.
- (3) Do not use pinch bars or wrecking bars to handle stone. Do not use equipment that contains substances that might stain.
- (4) Store stone on wood skids or pallets, covered with non-staining, waterproof membrane.
- (5) Protect stored stone from weather with waterproof non-staining covers or enclosures.

(b) General. The foundation material for the leveling pad and select fill shall be graded to the design elevation and compacted according to Section 205, except the minimum required compaction shall be 95 percent of maximum density as determined by Illinois Modified AASHTO T 99. Any foundation soils found to be unsuitable shall be removed and replaced as directed by the Engineer. Unsuitable material shall be disposed of according to Article 202.03.

The concrete leveling pads may be precast or cast-in-place and shall have a minimum thickness of 6 in. and shall be placed according to Section 503. Aggregate leveling pads shall be compacted coarse aggregate with a gradation of CA 6 or CA 10.

The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the plans. The theoretical top of leveling pad line shall be 1'-6" below finished grade line at the front face of the wall. When rock is encountered above the theoretical top of leveling pad line shown on the plans, the depth to the theoretical top of leveling pad shall be reduced in order to minimize the amount of rock excavation. In no case will the theoretical top of leveling pad be permitted to be located above the deeper of 3 inches below the bottom of sidewalk immediately in front of the wall, or 6 inches below the finished grade line at the front face of the wall.

The wall shall be constructed with dry joints and the individual stones shall be lapped with the joints staggered to provide structural stability. The cost to move/relocate/rearrange the stones to meet the satisfaction of the Engineer shall be included in the cost of this work. Cap stone shall be a minimum of 4" thick and mortared onto top of wall. The face of the mortared joint shall be raked back 1/2" to conceal seam. The top course of blocks shall be stepped to satisfy the top of block line shown on the contract plans. Stone shall be thoroughly cleaned of all mortar residue and effects of construction, and the surrounding areas shall be flushed with water and cleaned of residues and solutions.

The select fill lift placement shall closely follow the erection of each course of natural stone blocks. The top of the blocks shall be clean prior to placing the next block lift. If soil reinforcement is used, the select fill material shall be leveled and compacted before placing and attaching the soil reinforcement to the natural stone blocks. The soil reinforcement shall be pulled taut, staked in place, and select fill placed from the rear face of the blocks outward. The lift thickness shall be the lesser of 10 in. loose measurement or the proposed block height.

The select fill shall be compacted according to Section 205, except the minimum required compaction shall be 95 percent of maximum density as determined by Illinois Modified AASHTO T 99, except select fill gradations CA 7, 8, 11, 13, 14, 15, and 16 shall be compacted, using a growth curve or other method, to a density acceptable to the Engineer. For fine aggregates, the minimum percent of maximum density, as determined by Illinois Modified AASHTO T 99, may be increased as specified by the Engineer if needed to achieve the required friction angle. Compaction shall be achieved using a lightweight mechanical tamper, roller, or vibratory system. The top 12 in. of backfill shall be topsoil according to Section 211, capable of supporting vegetation.

When a fine aggregate is selected, the rear of all block joints shall be covered by a non-woven needle punch geotextile filter material. All fabric overlaps shall be 6 in. and non-sewn. As an alternative to the geotextile, a coarse aggregate shall be placed against the back face of the blocks to create a minimum 12 in. wide continuous gradation filter to prevent the select fill material from passing through the block joints.

(c) Construction Tolerances. Construction Tolerances shall be as follows.

(1) Vertical and horizontal alignment shall not exceed 1/2 in. when measured along a 10 ft straight edge.

(2) The overall conformance to the specified batter from top to bottom shall not exceed 1/2 in. per 10 ft of wall height.

Failure to meet these tolerances may require modifications to the wall, up to and including removal and reinstallation of the affected portions of the wall.

#### Method of Measurement.

(a) Contract quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

(b) Measured quantities.

RETAINING WALL, SPECIAL will be measured for payment in the square feet of wall face from the top of block line to the theoretical top of the leveling pad for the length of the wall in a vertical plane as shown on the plans.

Removal and disposal of unstable and/or unsuitable material will be measured for payment according to Article 502.12(b).

Structure excavation will not be measured for payment.

The additional excavation necessary to construct the soil reinforcement, if required, will not be measured for payment.

Rock excavation will be measured for payment according to Article 502.12(b).

Salvaged Stone material and delivery will be measured according to the special provision for RETAINING WALL REMOVAL.

Newly Acquired Stone material and delivery will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per square foot for RETAINING WALL, SPECIAL. The contract unit price for RETAINING WALL, SPECIAL shall include furnishing, delivering, and constructing the natural stone retaining wall system(s); and the preparation of design computations and shop drawings.

Geocomposite wall drains will be paid for according to Section 591.

Removal and disposal of unstable and/or unsuitable material will be paid for according to Article 502.13.

Rock excavation will be paid for according to Article 502.13.

Salvaged stone material and delivery will be paid for according to the special provision  
RETAINING  
WALL REMOVAL.

### **HANDRAIL REMOVAL**

This work shall consist of removing and disposing of existing handrails shown on the plans in accordance with Section 509 of the Standard Specifications. The rails and any hardware, anchor plates or pins shall be disposed of off-site at a suitable location.

This work shall be paid for at the contract unit price per FOOT for HANDRAIL REMOVAL. The price shall include all labor and equipment necessary to perform the work herein including disposal of the materials.

### **BUILDING REMOVAL**

This work shall be done according to the BDE Special Provision and as specified herein. Any and all above ground appurtenances on the property including fences, abandoned sign posts, trees, shrubs and vegetation shall be removed and included in this work.

This work will be paid for at the contract unit price per LUMP SUM for BUILDING REMOVAL of the number specified, and shall include all labor and equipment necessary to perform the work herein including disposal of the materials.

### **CONCRETE STEPS**

This item shall be constructed in accordance with Section 602 of the Standard Specifications for Road and Bridge Construction and District 2 Standard 71.4 included in the plans.

This item includes all materials concrete, labor and equipment necessary to construct to the lines and grades shown within the plans.

Reinforcement bars will be paid for separately per POUND for REINFORCEMENT BARS.

Basis of payment shall be at the contract unit price per CU YD for CONCRETE STEPS.

## **FILLING EXISTING CULVERTS**

DESCRIPTION. This work consists of filling culverts to be abandoned, as designated on the plans or as directed by the Engineer, with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications. Existing culvert end sections and associated pipe runners and grates at the end of the culvert to be filled should be removed unless otherwise indicated, and pipe ends shall be securely sealed as described in section 605.03.

MATERIALS. The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

CONSTRUCTION REQUIREMENTS. The culvert pipe shall be plugged on both ends with Class SI concrete or brick and mortar. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during construction, the Contractor shall be responsible for the cost of repairing the pipe plugs and filling the remainder of the culvert.

Culvert end sections that are removed must be disposed of in accordance with article 605.05 of the Standard Specifications.

BASIS OF PAYMENT. This work, including the cost of plugging the pipe ends, will be paid for at the contract unit price EACH for FILLING EXISTING CULVERTS at locations shown in the plans, as specified herein, and as directed by the Engineer.

## **REMOVE AND RESET ORNAMENTAL FENCE**

This work shall be done in accordance with the applicable portions of Sections 664 and 665 of the Standard Specifications for Road and Bridge Construction and as specified herein.

This work shall include the removal, storage during construction, and reinstallation of sections of existing ornamental fence at locations shown in the plans to the proposed finish grade.

Concrete for construction of the post foundations shall be according to Section 503 of the IDOT Standard Specifications for Road and Bridge Construction.

This work shall be paid for at the contract unit price per FOOT for REMOVE AND RESET ORNAMENTAL FENCE, which price shall include all labor, materials, and equipment necessary to complete the work.

## REMOVING AND RESETTING POSTS

This work shall include removal, storage during construction, and reinstallation of existing historic cast iron hitching posts in proximity to their original locations.

This work shall be paid for at the contract unit price per EACH for REMOVING AND RESETTING POSTS, which price shall include all labor, materials, and equipment necessary to complete the work.

## SANITARY SEWER

**Description.** This work shall consist of constructing new sanitary sewers and related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for sanitary sewer construction will be according to the following:

- (a) Sanitary Sewer Pipe 4" to 15" Diameter: Polyvinyl chloride (PVC) Type PSM pipe meeting the requirements of ASTM D3034, SDR 26 (PS 115) with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477.
- (b) Sanitary Sewer Pipe 18" Diameter and Greater: Polyvinyl chloride (PVC) pipe meeting the requirements of ASTM F679, Pipe Stiffness 115 with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477.
- (c) Flexible Sewer Pipe Coupling/Adapter: Coupling body shall be constructed out of elastomeric polyvinyl chloride (PVC) and provided with stainless steel clamping bands. Couplings shall meet the requirements of ASTM C1173.
- (d) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** This work shall be performed according to Sections 30 and 31 of the Standard Specifications for Water and Sewer Construction in Illinois, the manufacturer's recommended installation instructions, and the details provided in the Drawings.

The contractor shall perform leakage and infiltration and deflection testing of the sanitary sewer prior to placing into service. Leakage and infiltration testing shall consist of the Air Testing Method outlined in Article 31-1.13, C of the Standard Specifications for Water and Sewer Construction in Illinois. Deflection testing shall be performed as outlined in Article 31-1.13, D of the Standard Specifications for Water and Sewer Construction in Illinois. Due to staging and necessity for opening sections of sanitary sewer to flow before leakage and infiltration testing and deflection testing can be performed, the contract shall, at a minimum, perform closed circuit televising (CCTV) inspection of the installed sanitary sewers to inspect for deflection and leakage prior to final acceptance of the sanitary sewer installation. All testing shall be performed in the presence of the Engineer.

Connection of proposed sanitary sewers to existing sanitary sewer shall be via flexible pipe coupling/adapter, no exceptions. Adapters shall be specifically chosen for connection of the in place and propose materials.

At the construction staging line, the sanitary sewer shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

Excavation and foundation construction shall be performed according to the applications requirements of Article 550.04 of the Standard Specifications for Road and Bridge Construction.

Backfilling shall be performed according to Article 550.07, except backfilling shall not be made with frozen material.

**Method of Measurement.** This work will be measured for payment in place in feet from center of manhole to center of manhole. The length measured will include any fittings.

Excavation in rock will be measured for payment according to Article 502.12 of the Standard Specifications for Road and Bridge Construction.

Trench backfill will be measured for payment according to Article 208.03 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for SANITARY SEWERS, of the diameter specified.

Excavation in rock will be paid for according to Article 502.13 of the Standard Specifications for Road and Bridge Construction.

Trench backfill will be paid for according to Article 208.04 of the Standard Specifications for Road and Bridge Construction.

## **WOOD FENCE TO BE REMOVED AND RE-ERECTED**

This work shall consist of removing existing wood fences, storing the removed if necessary, and re-erecting the fences at the locations shown on the plans.

If any posts are damaged, they shall be replaced with similar treated posts of equal or better quality. The existing post design and style is to be duplicated for any new posts required. Posts shall be set vertical and true in alignment and post spacing shall match existing fence spacing as closely as possible. If more fencing is required in the new location, the Contractor shall furnish similar materials and posts for approval by the Engineer. Surplus material will be offered to the property owner before disposal.

This work shall be paid for at the contract unit price per FOOT for WOOD FENCE TO BE REMOVED AND RE-ERECTED, which price shall include all labor, materials, and equipment necessary to complete the work.

**JUNCTION CHAMBER**

The work shall be performed in accordance with applicable portions of Section 602 of the Standard Specifications for Road and Bridge Construction and the drainage details in the plans.

These items shall consist of furnishing and installing precast junction chambers of the minimum dimensions as shown on the plan details and summarized below. This item shall also include supplying and installing the type and size of frame, grate, or lid specified.

No.	Station	Struct #	Nominal Inside Dim. (h x w)	Approx. Depth	Lid/Frame Type
1	LT 1194+83.5	2	13.5'x11.4'	17.2'	Cast in Lid Frame & Grate Spl
2	LT 1199+65.2	6	6.6'x11.3'	11.7'	Type 1, Closed Lid
3	1205+96.9	17	10.6'x9.2'	15.5'	Type 1, Closed Lid
4	LT 1208+75	21	7'x9.2'	9'	Type 1, Closed Lid
5	LT 1215+58.7	32	11.5'x9.2'	15.5'	Type 1, Closed Lid
6	RT 1196+95.5	44	8.7'x17'	19.5'	Inlet, Special Top Section
7	RT 1199+64.8	48	7.9'x14.6'	12.8'	Inlet, Special Top Section
8	RT 1206+49.4	56	11.3'x11.7'	14.8'	Type 1, Closed Lid
9	RT 1211+48.6	60	11.8'x11.3'	14.1'	Type 1, Closed Lid
10	RT 1216+58.2	64	13.9'x11.3'	17.5'	Type 1, Closed Lid
11	RT 1220+66.0	67	9.3'x11.3'	13.4'	Inlet Special No. 5 Top
12	RT 1224+47.3	72	9.5'x11.3'	13.7'	Type 1, Open Lid

This work shall be paid for at the contract unit price per Each for JUNCTION CHAMBER of the number specified, with the type of inlet, frame and grate, or frame and lid shown on the plans, which price shall include all labor, materials, and equipment necessary to complete the work.

**MANHOLES, TYPE A**

The work shall be performed in accordance with applicable portions of Section 602 of the Standard Specifications for Road and Bridge Construction and Highway Standards included in the plans.

Temporary manhole plating required between construction stages will not be paid for separately and shall be included in the Manholes, Type A, of the diameter, frame, and lid specified.

This work shall be paid for at the contract unit price per EACH for MANHOLES, TYPE A, of the diameter, frame, and lid specified.

**MANHOLES, TYPE A, 8'-DIAMETER WITH INLET SPECIAL NO. 5 LID**  
**MANHOLES, TYPE A, 9'-DIAMETER WITH INLET SPECIAL NO. 5 LID**  
**MANHOLES, TYPE A, 10'-DIAMETER WITH INLET SPECIAL NO. 5 LID**

The work shall be performed in accordance with applicable portions of Section 602 of the Standard Specifications for Road and Bridge Construction and Storm Sewer Details included in the plans.

These items shall consist of furnishing and installing precast manholes of the minimum dimensions as shown on the plan details. This item shall also include supplying and installing the Inlet Special No. 5 lid specified. Temporary manhole plating required between construction stages will not be paid for separately and shall be included in the Manholes, Type A, of the diameter specified, with Inlet Special No. 5 Lid pay items.

This work shall be paid for at the contract unit price per EACH for MANHOLES, TYPE A, of the diameter specified, WITH INLET SPECIAL NO. 5 LID, which price shall include all labor, materials, and equipment necessary to complete the work.

**WATER MAIN QUALITY CASING PIPE**

**Description.** This work shall consist of the supply and installation of water main quality casing pipes, casing spacers, and casing pipe end seals around water main pipe in the locations indicated on the Drawings.

**Materials.** Materials for water main quality casing pipe construction will be as follows:

- (a) Water Main Quality Casing Pipe: Polyvinyl chloride (PVC) pipe meeting the requirements of ANSI/AWWA C900 or C909, DR 18 (Class 235) with push-on joints meeting ASTM D3139 with elastomeric seals (gaskets) meeting ASTM F477.
- (b) Casing Spacers: Casing spacers shell shall be 14-gauge T-304 stainless steel with all surfaces fully chemically passivated. Risers shall be 10-gauge T-304 stainless steel. Liner shall be PVC, .090 thick, 85-90 durometer meeting ASTM D1706. Runners shall be ultra-high molecular weight polyethylene. Fasteners and hardware shall be T-304 stainless steel.
- (c) Casing Pipe End Seals: End seals shall be pull-over type construction and made from neoprene rubber with a thickness between 3/32 and 1/8-inch. End seals shall have T-304 stainless steel bands for securing each end to the casing pipe and carrier pipe.
- (d) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** This work will be constructed meeting the requirements of Section 561 of the Standard Specification for Road and Bridge Construction, Sections 40 and 41 of the Standard Specifications for Water and Sewer Construction in Illinois, ANSI/AWWA C605, the manufacturer's recommended installation instructions, and the details provided in the Drawings.

Carrier pipe joints located within the casing pipe should be avoided. If carrier pipe joints within the casing pipe are required due to overall casing pipe length, the contractor shall install casing spacers on either side of the joints connected with restraining rods to prevent joint separation during pipe installation or removal. Joints in the casing pipe and carrier pipe shall be offset by a minimum of 5 feet.

The number and spacing of casing spacers per section of carrier pipe shall be per the manufacturer's recommendations.

At the construction staging line, the carrier pipe shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

**Method of Measurement.** This work will be measured for payment in place in feet. The length shall be measured at the crown of the casing pipe. Casing spacers and casing pipe end seals will not be measured for payment separately and shall be included in the Water Main Quality Casing Pipe pay items.

Water main carrier pipe will be measured for payment according to Section 561.04 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for WATER MAIN QUALITY CASING PIPE, of the diameter specified. Water main carrier pipe will be paid for according to the Special Provision provided in the contract.

## **PRESSURE REDUCING VALVE VAULT**

**Description.** This work shall consist of the construction of valve vault to house a pressure reducing valve on the water main system in the location indicated on the Drawings.

**Materials.** Materials for pressure reducing valve vault construction will be as follows:

- (a) Precast manhole for valve vault and appurtenances shall be according to the requirements of Section 602.02 of the Standard Specifications for Road and Bridge Construction.
- (b) Vault Lid: Casting shall be a square, gray iron frame with solid lid and enclosed pick holes meeting the requirements of Section 1006.14 of the Standard Specifications for Road and Bridge Construction. Frame shall have a 6" rise, measure 36"x36" at the frame base and have a minimum 30"x30" clear opening. Lid shall have outside dimensions of 32"x32" and shall be marked "WATER".

- (c) Water Main Pipe: Ductile iron pipe meeting the requirements of ANSI/AWW C151, Pressure Class 350 with plain ends. Adapter flanges shall be faced and drilled in accordance with ANSI Class 125, B16.1 and rated for water pressure up to 250 psi. Pipe and fittings shall be asphalt coated and shall be provided with a double thickness of cement mortar lining meeting the requirements of ANSI/AWWA C104.
- (d) Mechanical Joint Restraining Glands: Mechanical joints shall be provided with wedge-type restraining glands meeting the requirements of ANSI/AWWA C151 and ANSI/AWWA C111. Gland body, wedges, and wedge actuating components shall be cast from ductile iron meeting ASTM A536. Glands shall have a working pressure rating of 350 psi.
- (e) Pressure Reducing and Sustaining Valve: Pressure reducing valve shall be a hydraulically operated, diaphragm actuated, 6" globe pattern valve. Valve shall be provided with flanged joints that shall be faced and drilled in accordance with ANSI Class 125, B16.1. Valve body shall be ductile iron meeting ASTM A536. Disc retainer and diaphragm washer shall be cast iron. Trim shall be bronze. Disc shall be Buna-N rubber. Diaphragm shall be nylon reinforced Buna-N Rubber. Stem, nut & spring shall be stainless steel. The valve shall be provided with a pilot control system which will hydraulically control the pressure and flow rate through the valve.
- (f) Pressure Gauge Assembly: Pressure gauge assemblies shall consist of a tapping saddle, small diameter ball valve, brass nipples, and pressure gauge.
  - 1. Tapping saddle shall of a two-strap design. Saddle body shall be ductile iron meeting ASTM A536 with a fusion bonded epoxy coating. Bales and straps shall be Type 304 stainless steel with stainless steel hardware. Strap shall be provided with a Buna-N gasket. Saddle shall be drilled to accept National Pipe Thread fittings.
  - 2. Ball valve shall be a full-port, lead-free brass ball valve with NPT threaded female inlet and outlet. Valve shall be provided with a blow-out proof stem, PTFE seats, and quarter turn lever with handle. Ball shall be chrome plated or stainless steel. Valve shall be rated for 600 psi working pressure.
  - 3. Pressure gauges shall be a 4 or 4-1/2" diameter glycol filled gauge with 316 stainless steel construction throughout and 1/4" NPT threaded connection (male). Gauges will be provided with two (2) scales. One scale shall read 0 to 200 psi and a second shall read 0 to 462 feet of water.
  - 4. Brass nipples and gauge snubber will be of lead-free brass construction and meeting NSF 61 standards.
- (g) Pipe Supports: Pipe support stands shall be a saddle support type with neoprene lined saddle, threaded adjustable, galvanized steel finish, and provided with base plate for floor anchorage.

**Construction.** This work shall be performed according to the requirements of ANSI/AWW C600, the requirements of ASME/ANSI B16.5, the manufacturer's recommended installation instructions, and the details provided in the Drawings.

The contractor shall provide a factory technician for a minimum of one day of start-up and testing service for each pressure reducing valve vault location. Until start-up service has been performed, the isolation valves on either side of the valve and any bypass lines

shall remain closed. Valves shall only be opened as approved and directed by the technician. The technician shall also be responsible for the training of the appointed personnel of the City of Galena Water Department in the operation and maintenance of the pressure reducing valve.

**Basis of Payment.** This work will be paid for at the contract unit price per each for PRESSURE REDUCING VALVE VAULT.

## **SANITARY SEWER SERVICE, COMPLETE**

**Description.** This work shall consist of constructing new sanitary service lines and related appurtenances in the locations indicated on the Drawings.

**Materials.** Materials for sanitary sewer construction will be according to the following:

- (a) Sanitary Sewer Service Pipe: Polyvinyl chloride (PVC) Type PSM pipe meeting the requirements of ASTM D3034, SDR 26 (PS 115) with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477 or solvent cemented joints per ASTM D2855. All sanitary service line shall be 6" diameter unless noted otherwise on the Drawings.
- (b) Sanitary Sewer Service Pipe Fittings: Polyvinyl chloride (PVC) Type PSM pipe meeting the requirements of ASTM D3034, SDR 26 (PS 115) with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477 or solvent cemented joints per ASTM D2855.
- (c) Sanitary Sewer Casing Pipe: Polyvinyl chloride (PVC) Type PSM pipe meeting the requirements of ASTM D3034, SDR 26 (PS 115) with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477.
- (d) Casing Spacers: Casing spacers shell shall be 14-gauge T-304 stainless steel with all surfaces fully chemically passivated. Risers shall be 10-gauge T-304 stainless steel. Liner shall be PVC, .090 thick, 85-90 durometer meeting ASTM D1706. Runners shall be ultra-high molecular weight polyethylene. Fasteners and hardware shall be T-304 stainless steel.
- (e) Casing Pipe End Seals: End seals shall be pull-over type construction and made from neoprene rubber with a thickness between 3/32 and 1/8-inch. End seals shall have T-304 stainless steel bands for securing each end to the casing pipe and carrier pipe.
- (f) Flexible Sewer Pipe Coupling/Adapter: Coupling body shall be constructed out of elastomeric polyvinyl chloride (PVC) and provided with stainless steel clamping bands. Couplings shall meet the requirements of ASTM C1173.
- (g) Cleanout Frame and Lid: Casting shall be a round frame gray iron frame with round lid having enclosed pick holes meeting the requirements of Article 1006.14 of the Standard Specifications for Road and Bridge Construction. Frame shall have an 8" rise, measure 20" in diameter at the base and have a minimum 10" diameter clear opening. Lid shall be 11-1/4" in diameter and shall be marked "SANITARY", "CLEANOUT", or "CO".
- (h) Reinforced Concrete Pipe: Reinforced concrete pipe meeting the requirements of Section 1042 of the Standard Specifications for Road and Bridge Construction.

- (i) Cast-In-Place Concrete: Class SI concrete meeting the requirements of Section 1020 of the Standard Specifications for Road and Bridge Construction.
- (j) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** This work shall be performed according to Section 331 of the Standard Specifications for Water and Sewer Construction in Illinois, the requirements of the Illinois Plumbing Code, the manufacturer's recommended installation instructions, and the details provided in the Drawings. The locations of the proposed sanitary sewer service lines indicated on the Drawings is the anticipated locations of said sewer lines; however, these locations should not be considered exact. As part of the preliminary phases of the project, the contractor will be required to televise the existing sanitary sewers within the work zone via closed circuit television (CCTV) inspection equipment. The purpose of this CCTV inspection is to provide guidance regarding the locations of existing sanitary sewer service lines and their connection points to the existing sewers. This work will provide the contractor with guidance for the locating work during the early phases of the construction that can be connected to and/or used in later stages. The use of service locating equipment beyond the CCTV inspections may be required to provide additional information. These services shall be included in the Sanitary Sewer Service, Complete pay item.

Connection of proposed sanitary sewer service line to the existing sanitary sewer service drains shall be via flexible pipe coupling/adaptor, no exceptions. Adaptors shall be specifically chosen for connection of the in place and propose materials.

All sanitary sewer service lines to be constructed beneath the main-line storm sewers shall installed in a casing pipe with casing spacers and casing end seals as indicated in the details provided in the Drawings. The casing pipe shall be laid to the same grade as the proposed sanitary sewer service line and shall be no less than 1%.

At the construction staging line, the sanitary sewer service line shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

Excavation and foundation construction shall be performed according to the applications requirements of Article 550.04 of the Standard Specifications for Road and Bridge Construction.

Backfilling shall be performed according to Article 550.07, except backfilling shall not be made with frozen material.

**Method of Measurement.** This work will be measured for payment in place in feet at the crown of the pipe. The length measured will include any fittings and the cleanout risers to the cleanout cap. Casing pipes, casing spacers, and casing end seals for sanitary sewer service lines will not be paid for separately and shall be included in the Sanitary Sewer Service, Complete pay item.

Excavation in rock will be measured for payment according to Article 502.12 of the Standard Specifications for Road and Bridge Construction.

Trench backfill will be measured for payment according to Article 208.03 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for SANITARY SEWER SERVICE, COMPLETE, of the diameter specified.

Excavation in rock will be paid for according to Article 502.13 of the Standard Specifications for Road and Bridge Construction.

Trench backfill will be paid for according to Article 208.04 of the Standard Specifications for Road and Bridge Construction.

### **SANITARY SEWER CASING PIPE**

**Description.** This work shall consist of the supply and installation of sanitary sewer casing pipes, casing spacers, and casing pipe end seals around water main pipe in the locations indicated on the Drawings.

**Materials.** Materials for water main quality casing pipe construction will be as follows:

- (a) Sanitary Sewer Casing Pipe: Polyvinyl chloride (PVC) Type PSM pipe meeting the requirements of ASTM D3034, SDR 26 (PS 115) with push-on joints meeting ASTM D3212 with elastomeric seals (gaskets) meeting ASTM F477.
- (b) Casing Spacers: Casing spacers shell shall be 14-gauge T-304 stainless steel with all surfaces fully chemically passivated. Risers shall be 10-gauge T-304 stainless steel. Liner shall be PVC, .090 thick, 85-90 durometer meeting ASTM D1706. Runners shall be ultra-high molecular weight polyethylene. Fasteners and hardware shall be T-304 stainless steel.
- (c) Casing Pipe End Seals: End seals shall be pull-over type construction and made from neoprene rubber with a thickness between 3/32 and 1/8-inch. End seals shall have T-304 stainless steel bands for securing each end to the casing pipe and carrier pipe.
- (d) The CLSM shall meet the requirements of Section 1019 of the Standard Specifications.

**Construction.** This work will be constructed meeting the requirements Sections 30 and 31 of the Standard Specifications for Water and Sewer Construction in Illinois, the manufacturer's recommended installation instructions, and the details provided in the Drawings.

Casing pipes shall be laid to the same grade as the carrier pipe. Grade shall be uniform to avoid sags or "humps" in the line Carrier pipe joints located within the casing pipe should be avoided. If carrier pipe joints within the casing pipe are required due to overall casing pipe length, the contractor shall install casing spacers on either side of the joints connected with restraining rods to prevent joint separation during pipe installation or removal. Joints in the casing pipe and carrier pipe shall be offset by a minimum of 5-feet.

The number and spacing of casing spacers per section of carrier pipe shall be per the manufacturer's recommendations.

At the construction staging line, the carrier pipe shall be bored and extended four feet beyond the staging line. These locations, and any other locations as needed or as directed by the Engineer, shall be backfilled with Controlled Low Strength Material (CLSM) meeting the requirements of Articles 593.02, 593.03, and 593.04 and Section 1019 of the Standard Specifications.

**Method of Measurement.** This work will be measured for payment in place in feet. The length shall be measured at the crown of the casing pipe. Casing spacers and casing pipe end seals will not be measured for payment separately and shall be included in the Sanitary Sewer Casing Pipe pay items.

Sanitary sewer carrier pipe will be measured for payment according to the Special Provisions provided in the Contract.

**Basis of Payment.** This work will be paid for at the contract unit price per foot for SANITARY SEWER CASING PIPE, of the diameter specified.

Sanitary sewer carrier pipe will be paid for according to the Special Provision provided in the contract.

### **AGGREGATE SUBGRADE IMPROVEMENT 30"**

This work shall consist of constructing a 30" aggregate subgrade in accordance with Section 303 of the Standard Specifications and the BDE Special Provision.

This work will be paid for at the contract unit price per SQ YD for AGGREGATE SUBGRADE IMPROVEMENT 30", which price shall include all necessary labor, material, and equipment necessary to complete the work.

### **SANITARY SEWER REMOVAL**

This work shall be completed in accordance with applicable sections of the Standard Specifications for Water and Sewer Construction and the details in the plans.

This work shall include the removal of existing sanitary sewers as shown on the plans and shall include disconnecting from the existing system.

All backfill material required after removing the sanitary sewer facilities shall be included in the cost of this item.

This work will be paid for at the contract unit price per FOOT for SANITARY SEWER REMOVAL, which price shall include all necessary labor, material, and equipment necessary to complete the work.

## **WATER MAIN REMOVAL**

This work shall be completed in accordance with applicable sections of the Standard Specifications for Water and Sewer Construction and the details in the plans.

This work shall include the removal of existing water mains as shown on the plans and shall include disconnecting from the existing system and removal of valves and water service shut-off boxes.

All backfill material required after removing the water main facilities shall be included in the cost of this item.

This work will be paid for at the contract unit price per FOOT for WATER MAIN REMOVAL, which price shall include all necessary labor, material, and equipment necessary to complete the work.

## **CONCRETE COLOR ADDITIVE**

This work shall be done in accordance with the applicable portions of Section 420, 423, 424, and 606 of the Standard Specifications for Road and Bridge Construction and as specified herein.

This work shall include coloring the concrete at the locations specified in the plans. The concrete shall be integrally colored to match, as closely as possible, the existing concrete. Representative job site samples will be produced and approved prior to installation. A sample must be submitted to Mr. Mark Nardini, IDOT District 2 Environmental studies Manager (815-284-5460) to secure the required approval from the Illinois Historic Preservation Agency.

This work shall be paid for at the contract unit price per CU YD for CONCRETE COLOR ADDITIVE, which price shall include all labor, materials, and equipment necessary to color the concrete.

## **AGGREGATE SUBGRADE IMPROVEMENT (BDE)**

Effective: April 1, 2012

Revised: April 1, 2016

Add the following Section to the Standard Specifications:

### **“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

**303.01 Description.** This work shall consist of constructing an aggregate subgrade improvement.

**303.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate .....	1004.07
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3) .....	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01, CS 02, and RR 01 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

**303.03 Equipment.** The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

**303.04 Soil Preparation.** The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.

**303.05 Placing Aggregate.** The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

**303.06 Capping Aggregate.** The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

**303.07 Compaction.** All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

**303.08 Finishing and Maintenance of Aggregate Subgrade Improvement.** The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

**303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.

**303.10 Basis of Payment.** This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

**“1004.07 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. In applications where greater than 24 in. (600 mm) of subgrade material is required, gravel may be used below the first 12 in (300 mm) of subgrade.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
  - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01 or CS 02 as shown below or RR 01 according to Article 1005.01(c).

COARSE AGGREGATE SUBGRADE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

- (2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.”

**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.”

**BUILDING REMOVAL - CASE II (NON-FRIABLE ASBESTOS ABATEMENT) (BDE)**

Effective: September 1, 1990                      Revised: April 1, 2010

**BUILDING REMOVAL:** This work shall consist of the removal and disposal of 1 building(s), together with all foundations, retaining walls, and piers, down to a plane 1 ft (300 mm) below the ultimate or existing grade in the area and also all incidental and collateral work necessary to complete the removal of the building(s) in a manner approved by the Engineer. Any holes, such as basements, shall be filled with a suitable granular material. The building(s) are identified as follows:

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
1	2010531	905 Spring St, Galena, IL 61036	Main Office

**Discontinuance of Utilities:** The Contractor shall arrange for the discontinuance of all utility services and the removal of the metering devices that serve the building(s) according to the respective requirements and regulations of the City, County, or utility companies involved. The Contractor shall disconnect and seal, in an approved manner, all service outlets that serve any building(s) he/she is to remove.

**Signs:** Immediately upon execution of the contract and prior to the wrecking of any structures, the Contractor shall be required to paint or stencil, in contrasting colors of an oil base paint, on all four sides of each residence and two opposite sides of other structures, the following sign:

PROPERTY ACQUIRED FOR  
HIGHWAY CONSTRUCTION  
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

The signs shall be positioned in a prominent location on the structure so that they can be easily seen and read and at a sufficient height to prevent defacing. The Contractor shall not paint signs nor start demolition of any building(s) prior to the time that the State becomes the owner of the respective building(s).

The Contractor has the option of removing the non-friable asbestos prior to demolition or demolishing the building(s) with the non-friable asbestos in place. Refer to the Special Provisions titled "Asbestos Abatement (General Conditions)" and "Removal and Disposal of Non-Friable Asbestos Building No. 1" contained herein.

**Basis of Payment:** This work will be paid for at the contract lump sum unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein. The lump sum unit price(s) for this work shall represent the cost of demolition and disposal assuming all non-friable asbestos is removed prior to demolition. Any salvage value shall be reflected in the contract unit price for this item.

**EXPLANATION OF BIDDING TERMS:** Two separate contract unit price items have been established for the removal of each building. They are:

1. BUILDING REMOVAL NO. 1
2. REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1

The Contractor shall have two options available for the removal and disposal of the non-friable asbestos.

The pay item for removal and disposal of non-friable asbestos will not be deleted regardless of the option chosen by the Contractor.

**ASBESTOS ABATEMENT (GENERAL CONDITIONS):** This work consists of the removal and disposal of non-friable asbestos from the building(s) to be demolished. All work shall be done according to the requirements of the U.S. Environmental Protection Agency (USEPA), the Illinois Environmental Protection Agency (IEPA), the Occupational Safety and Health Administration (OSHA), the Special Provision for "Removal and Disposal of Non-Friable Asbestos, Building No. 1," and as outlined herein.

Sketches indicating the location of Asbestos Containing Material (ACM) are included in the proposal on page 92. Also refer to the Materials Description Table on page 93 for a brief description and location of the various materials. Also included is a Materials Quantities Table on page 94. This table states the ACM is non-friable and gives the approximate quantity. The quantities are given only for information and it shall be the Contractor's responsibility to determine the exact quantities prior to submitting his/her bid.

The work involved in the removal and disposal of non-friable asbestos if done prior to demolition, shall be performed by a Contractor or Sub-Contractor prequalified with the Illinois Capital Development Board.

The Contractor shall provide a shipping manifest, similar to the one shown on page 95, to the Engineer for the disposal of all ACM wastes.

**Permits:** The Contractor shall apply for permit(s) in compliance with applicable regulations of the Illinois Environmental Protection Agency. Any and all other permits required by other federal, state, or local agencies for carrying on the work shall be the responsibility of the Contractor. Copies of the permit(s) shall be sent to the district office and the Engineer.

Notifications: The "Demolition/Renovation Notice" form, which can be obtained from the IEPA office, shall be completed and submitted to the address listed below at least ten days prior to commencement of any asbestos removal or demolition activity. Separate notices shall be sent for the asbestos removal work and the building demolition if they are done as separate operations.

Asbestos Demolition/Renovation Coordinator  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
P. O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 785-1743

Notices shall be updated if there is a change in the starting date or the amount of asbestos changes by more than 20 percent.

Submittals:

- A. All submittals and notices shall be made to the Engineer except where otherwise specified herein.
- B. Submittals that shall be made prior to start of work:
  1. Submittals required under Asbestos Abatement Experience.
  2. Submit documentation indicating that all employees have had medical examinations and instruction on the hazards of asbestos exposure, on use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures as specified in Worker Protection Procedures.
  3. Submit manufacturer's certification stating that vacuums, ventilation equipment, and other equipment required to contain airborne fibers conform to ANSI 29.2.
  4. Submit to the Engineer the brand name, manufacturer, and specification of all sealants or surfactants to be used. Testing under existing conditions will be required at the direction of the Engineer.
  5. Submit proof that all required permits, site locations, and arrangements for transport and disposal of asbestos-containing or asbestos-contaminated materials, supplies, and the like have been obtained (i.e., a letter of authorization to utilize designated landfill).
  6. Submit a list of penalties, including liquidated damages, incurred through non-compliance with asbestos abatement project specifications.
  7. Submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the plan the location and layout of decontamination units, the sequencing of work, the respiratory protection plan to be used during this work, a site safety plan, a disposal plan including the location of an approved disposal site, and a detailed description of the methods to be used to control pollution. The plan shall be submitted to the Engineer prior to the start of work.

8. Submit proof of written notification and compliance with the "Notifications" paragraph.
- C. Submittals that shall be made upon completion of abatement work:
1. Submit copies of all waste chain-of-custodies, trip tickets, and disposal receipts for all asbestos waste materials removed from the work area;
  2. Submit daily copies of work site entry logbooks with information on worker and visitor access;
  3. Submit logs documenting filter changes on respirators, HEPA vacuums, negative pressure ventilation units, and other engineering controls; and
  4. Submit results of any bulk material analysis and air sampling data collected during the course of the abatement including results of any on-site testing by any federal, state, or local agency.

Certificate of Insurance:

- A. The Contractor shall document general liability insurance for personal injury, occupational disease and sickness or death, and property damage.
- B. The Contractor shall document current Workmen's Compensation Insurance coverage.
- C. The Contractor shall supply insurance certificates as specified by the Department.

Asbestos Abatement Experience:

- A. Company Experience. Prior to starting work, the Contractor shall supply evidence that he/she has been prequalified with the Illinois Capital Development Board and that he/she has been included on the Illinois Department of Public Health's list of approved Contractors.
- B. Personnel Experience:
  1. For Superintendent, the Contractor shall supply:
    - a. Evidence of knowledge of applicable regulations in safety and environmental protection is required as well as training in asbestos abatement as evidenced by the successful completion of a training course in supervision of asbestos abatement as specified in 40 CFR 763, Subpart E, Appendix C, EPA Model Contractor Accreditation Plan. A copy of the certificate of successful completion shall be provided to the Engineer prior to the start of work.
    - b. Documentation of experience with abatement work in a supervisory position as evidenced through supervising at least two asbestos abatement projects; provide names, contact, phone number, and locations of two projects in which the individual(s) has worked in a supervisory capacity.
  2. For workers involved in the removal of asbestos, the Contractor shall provide training as evidenced by the participation and successful completion of an accredited training course for asbestos abatement workers as specified in 40 CFR 763, Subpart E,

Appendix C, EPA Model Contractor Accreditation Plan. A copy of the certificate of successful completion shall be provided to all employees who will be working on this project.

**ABATEMENT AIR MONITORING:** The Contractor shall comply with the following:

- A. Personal Monitoring. All personal monitoring shall be conducted per specifications listed in OSHA regulation, Title 29, Code of Federal Regulation 1926.58. All area sampling shall be conducted according to 40 CFR Part 763.90. All air monitoring equipment shall be calibrated and maintained in proper operating condition. Excursion limits shall be monitored daily. Personal monitoring is the responsibility of the Contractor. Additional personal samples may be required by the Engineer at any time during the project.
- B. Interior Non-Friable Asbestos-Containing Materials. The Contractor shall perform personal air monitoring during removal of all non-friable Transite and floor tile removal operations. The Engineer will also have the option to require additional personal samples and/or clearance samples during this type of work.
- C. Exterior Non-Friable Asbestos-Containing Materials. The Contractor shall perform personal air monitoring during removal of all non-friable cementitious panels, piping, roofing felts, and built up roofing materials that contain asbestos.

The Contractor shall conduct down wind area sampling to monitor airborne fiber levels at a frequency of no less than three per day.

- D. Air Monitoring Professional
  1. All air sampling shall be conducted by a qualified Air Sampling Professional supplied by the Contractor. The Air Sampling Professional shall submit documentation of successful completion of the National Institute for Occupational Safety and Health (NIOSH) course #582 - "Sampling and Evaluating Airborne Asbestos Dust".
  2. Air sampling shall be conducted according to NIOSH Method 7400. The results of these tests shall be provided to the Engineer within 24 hours of the collection of air samples.

**REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1:** The Contractor has the option of removing and disposing of the non-friable asbestos prior to demolition of the building(s) or demolishing the building(s) with the non-friable asbestos in place.

Option #1 - If the Contractor chooses to remove all non-friable asbestos prior to demolition, the work shall be done according to the Special Provision titled "Asbestos Abatement (General Conditions)".

Option #2 - If the Contractor chooses to demolish the building(s) with the non-friable asbestos in place, the following provisions shall apply:

1. Continuously wet all non-friable ACM and other building debris with water during demolition.
2. Dispose of all demolition debris as asbestos containing material by placing it in lined, covered transport haulers and placing it in an approved landfill.

This work will be paid for at the contract unit price per lump sum for REMOVAL AND DISPOSAL OF NON-FRIABLE ASBESTOS, BUILDING NO. 1, as shown.

The cost for this work shall be determined as follows:

Option #1 - Actual cost of removal and disposal of non-friable asbestos.

Option #2 - The difference in cost between removing and disposing of the building if all non-friable asbestos is left in place and removing and disposing of the building assuming all non-friable asbestos is removed prior to demolition.

The cost of removing and disposing of the building(s), assuming all non-friable asbestos is removed first, shall be represented by the pay item "BUILDING REMOVAL NO. 1".

Regardless of the option chosen by the Contractor, this pay item will not be deleted, nor will the pay item BUILDING REMOVAL NO. 1 be deleted.



**FIGURE 1**  
**SAMPLE LOCATIONS MAP**  
 DOT JOB #.: R-92-001-05  
 CONTRACT NO.: 64880  
 SERVICE GROUP/Service Year  
 800 Spring Street, Galena, IL

**WORK ORDER 41**

4322 N. BROADWAY/WE INC  
 1000 W. 11TH ST  
 PEORIA, IL 61603 9164  
 PH (309) 662-4422  
 FX (309) 662-3394

**wood.**

DESIGNED:           .XSL  
 DRAWN:           .DWG  
 CHECKED:           .XSL  
 DATE: 11/02/2021

**Legend**

- Roofing Shingles
- Window Grout
- Wall Board
- Ceiling Tiles
- Fire Brick

D:\E11\22\2021\_201906-LOCATIONS\Loc\3110110101\COVD\Task-11\Append\0101010101\_01.dwg

APPENDIX B



ACM Survey Results:

Parcel No. 2010531  
 Service Garage/Salvage Yard  
 905 Spring Street  
 Galena, Illinois 61036

The following homogenous building materials were sampled as part of this survey and results are summarized below:

Sample Numbers	Material Description	Location	Friable/ Non Friable	Condition	% Asbestos	# of Samples	Estimated Quantity
01A, 01B, 01C	Roofing Shingles	Front office	Non Friable	Good	None Detected	3	1,400 sq ft
01A, 01B	Felt Paper	Front office	Non Friable	Good	None Detected	2	1,400 sq ft
01C	Tar	Front office	Non Friable Category I	Good	10% Chrysotile	1	1,400 sq ft
02A, 02B, 02C	Window Caulk	Front office	Non Friable Category II	Poor	3% Chrysotile	3	50 linear ft
03A, 03B, 03C	Drywall	Front office	Non Friable	Good	None Detected	3	400 sq ft plus 17 additional 4x8 sheets on pallet
03A, 03B, 03C	Joint Compound	Front office	Non Friable	Good	None Detected	3	400 sq ft
04A, 04B, 04C	Ceiling Tile	Front office	Non Friable	Good	None Detected	3	220 sq ft
05	Fire Brick	Front office	Non Friable	Good	None Detected	1	1 sq ft
Total Estimated Quantity of ACM							1,400 sq ft 50 linear ft
Estimated Abatement Cost							\$2,800

See Section 3.0 for discussion of Friable, Non-Friable Category I and Non-Friable Category II

Wood Environment and Infrastructure Solutions, Inc.



APPENDIX C

**5.0 ABATEMENT ESTIMATE**

Wood was tasked to include an estimate of costs to complete abatement of asbestos materials identified in this survey.

The cost estimates are based on our recent experience with quotes from abatement contractors performing work in this locale and are estimates only. Different projects and clients have different requirements and this can result in changes to estimated costs.

Because of the hidden nature of many building components, it may be impossible to determine if all building components have been located and subsequently tested. Destructive testing in some instances is not a viable option. Wood does not, therefore, guarantee that all potential asbestos containing materials have been located. For the same reasons, estimates of quantities are subject to readily apparent situations. We do warrant, however, that the investigations and methodology reflect our best efforts based upon prevailing local standard of care in the environmental field.

As the roof tar is a Category I non-friable material which is not likely to be come friable during demolition, it does not need to be removed prior to demolition and no extra cost should be incurred. The window caulk is a Category II non friable material. The caulk is old and dried and may become friable during demolition. It therefore should be removed prior to demolition.

Budgetary Cost Estimate - Abatement				
905 Spring Street				
Galena, Illinois				
Material/Activity	Quantity	Unit	Unit Price	Cost
1) ACM abatement of window caulk	50	LF	\$50.00 LF	\$2,500.00
<b><u>Abatement Subtotal:</u></b>				<b><u>\$2,500.00</u></b>
Contingency (approx. 10 % of Subtotal)				\$300.00
Total of Items plus Contingency				\$2,800.00
<b>Recommended Budget (rounded off to Nearest \$100)</b>				<b><u>\$2,800.00</u></b>
ACM= asbestos containing materials				

Wood Environment and Infrastructure Solutions, Inc.

APPENDIX D  
 SHIPPING  
 MANIFEST Generator

1. Work Site Name and Mailing Address		Owner's Name		Owner's Telephone No.	
2. Operator's Name and Address				Operator's Telephone No	
3. Waste Disposal Site (WDS) Name Mailing Address, and Physical Site Location				WDS Telephone No.	
4. Name and Address of Responsible Agency					
5. Description of Materials					
6. Containers		No.	Type		
7. Total Quantity		M <sup>3</sup>	(Yd <sup>3</sup> )		
8. Special Handling Instructions and Additional Information					
9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.					
Printed/Typed Name & Title		Signature		Month Day Year	
Transporter					
10. Transporter 1 (Acknowledgement of Receipt of Materials)					
Printed/Typed Name & Title		Signature		Month Day Year	
Address and Telephone No.					
11. Transporter 2 (Acknowledgement of Receipt of Materials)					
Printed/Typed Name & Title		Signature		Month Day Year	
Address and Telephone No.					
Disposal Site					
12. Discrepancy Indication Space					
13. Waste Disposal Site Owner or Operator: Certification of Receipt of Asbestos Materials Covered By This Manifest Except As Noted in Item 12					
Printed/Typed Name & Title		Signature		Month Day Year	

APPENDIX D

INSTRUCTIONS

Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the Company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA Regional Office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
  - Friable asbestos material
  - Nonfriable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):
  - DM - Metal drums, barrels
  - DP - Plastic drums, barrels
  - BA - 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator shall read and then sign and date this certification. The date is the date of receipt by transporter.

NOTE: The waste generator shall retain a copy of this form.

APPENDIX D

INSTRUCTIONS

Transporter Section (Items 10 & 11)

10. & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport.

NOTE: The transporter shall retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS shall note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.

13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in Item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS shall retain a completed copy of this form. The WDS shall also send a completed copy to the operator listed in Item 2.

**BUILDING REMOVAL - CASE IV (NO ASBESTOS) (BDE)**

Effective: September 1, 1990

Revised: April 1, 2010

**BUILDING REMOVAL:** This work shall consist of the removal and disposal of 2 building(s), together with all foundations, retaining walls, and piers, down to a plane 1 ft (300 mm) below the ultimate or existing grade in the area and also all incidental and collateral work necessary to complete the removal of the building(s) in a manner approved by the Engineer. Any holes, such as basements, shall be filled with a suitable granular material. The building(s) are identified as follows:

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
2	2010531	905 Spring St, Galena, IL 61036	Repair Shop
3	2010531	905 Spring St, Galena, IL 61036	Unfinished Storage Shed

**Discontinuance of Utilities:** The Contractor shall arrange for the discontinuance of all utility services and the removal of the metering devices that serve the building(s) according to the respective requirements and regulations of the City, County, or utility companies involved. The Contractor shall disconnect and seal, in an approved manner, all service outlets that serve any building(s) he/she is to remove.

**Signs:** Immediately upon execution of the contract and prior to the wrecking of any structures, the Contractor shall be required to paint or stencil, in contrasting colors of an oil base paint, on all four sides of each residence and two opposite sides of other structures, the following sign:

PROPERTY ACQUIRED FOR  
HIGHWAY CONSTRUCTION  
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

The signs shall be positioned in a prominent location on the structure so that they can be easily seen and read and at a sufficient height to prevent defacing. The Contractor shall not paint signs nor start demolition of any building(s) prior to the time that the State becomes the owner of the respective building(s).

**Basis of Payment:** This work will be paid for at the contract lump sum unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein. The lump sum unit price(s) for this work shall represent the cost of demolition. Any salvage value shall be reflected in the contract unit price for this item.

**Notifications:** The "Demolition/Renovation Notice" form, which can be obtained from the IEPA office, shall be completed and submitted to the address listed below at least ten days prior to commencement of any demolition activity.

Asbestos Demolition/Renovation Coordinator  
Illinois Environmental Protection Agency  
Division of Air Pollution Control

P. O. Box 19276  
Springfield, Illinois 62794-9276  
(217)785-1743

Notices shall be updated if there is a change in the starting date or the amount of asbestos changes by more than 20 percent.

Submittals:

- A. All submittals and notices shall be made to the Engineer except where otherwise specified herein.
- B. Prior to starting work, the Contractor shall submit proof of written notification and compliance with the "Notifications" paragraph.

### **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."

**CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE)**

Effective: January 1, 2013

Revised: April 1, 2016

**Description.** This work shall consist of constructing cast-in-place concrete and precast concrete end sections for pipe culverts. These end sections are shown on the plans as Highway Standard 542001 or 542011. This work shall be according to Section 542 of the Standard Specifications except as modified herein.

**Materials.** Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1) .....	1020
(b) Precast Concrete End Sections (Note 2)	
(c) Coarse Aggregate (Note 3) .....	1004.05
(d) Structural Steel (Note 4) .....	1006.04
(e) Anchor Bolts and Rods (Note 5) .....	1006.09
(f) Reinforcement Bars .....	1006.10(a)
(g) Nonshrink Grout .....	1024.02
(h) Chemical Adhesive Resin System .....	1027
(i) Mastic Joint Sealer for Pipe .....	1055
(j) Hand Hole Plugs .....	1042.16

Note 1. Cast-in-place concrete end sections shall be Class SI, except the 14 day mix design shall have a compressive strength of 5000 psi (34,500 kPa) or a flexural strength of (800 psi) 5500 kPa and a minimum cement factor of 6.65 cwt/cu yd (395 kg/cu m).

Note 2. Precast concrete end sections shall be according to Articles 1042.02 and 1042.03(b)(c)(d)(e) of the Standard Specifications. The concrete shall be Class PC according to Section 1020, and shall have a minimum compressive strength of 5000 psi (34,000 kPa) at 28 days.

Joints between precast sections shall be produced with reinforced tongue and groove ends according to the requirements of ASTM C 1577.

Note 3. The granular bedding placed below a precast concrete end section shall be gradation CA 6, CA 9, CA 10, CA 12, CA 17, CA 18, or CA 19.

Note 4. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

Note 5. The anchor rods for the culvert ties shall be according to the requirements of ASTM F 1554, Grade 105 (Grade 725).

### **CONSTRUCTION REQUIREMENTS**

The concrete end sections may be precast or cast-in-place construction. Toe walls shall be either precast or cast-in-place, and shall be in proper position and backfilled according to the applicable paragraphs of Article 502.10 of the Standard Specifications prior to the installation of the concrete end sections. If soil conditions permit, cast-in-place toe walls may be poured directly against the soil. When poured directly against the soil, the clear cover of the sides and bottom of the toe wall shall be increased to 3 in. (75 mm) by increasing the thickness of the toe wall.

- (a) Cast-In-Place Concrete End Sections. Cast-in-place concrete end sections shall be constructed according to the requirements of Section 503 of the Standard Specifications and as shown on the plans.

- (b) Precast Concrete End Sections. When the concrete end sections will be precast, shop drawings detailing the slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval.

The excavation and backfilling for precast concrete end sections shall be according to the requirements of Section 502 of the Standard Specifications, except a layer of granular bedding at least 6 in. (150 mm) in thickness shall be placed below the elevation of the bottom of the end section. The granular bedding shall extend a minimum of 2 ft (600 mm) beyond each side of the end section.

Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

When individual, precast end sections are placed side-by-side for a multi-pipe culvert installation, a 3 in. (75 mm) space shall be left between adjacent end section walls and the space(s) filled with Class SI concrete.

**Method of Measurement.** This work will be measured for payment as each, with each end of each culvert being one each.

**Basis of Payment.** This work will be paid for at the contract unit price per each for CONCRETE END SECTION, STANDARD 542001 or CONCRETE END SECTION, 542011, of the pipe diameter and slope specified.

## **CORRUGATED PLASTIC PIPE (CULVERT AND STORM SEWER) (BDE)**

Effective: January 1, 2021

Revise Tables IIIA and IIIB of Article 542.03 and the storm sewers tables of Article 550.03 of the Standard Specifications to read:

*(SEE TABLES ON NEXT 10 PAGES)*

"PIPE CULVERTS TABLE IIIA: PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE																				
Nominal Diameter (in.)	Type 1					Type 2					Type 3					Type 4				
	Fill Height: 3' and less, with 1' min					Fill Height: Greater than 3', not exceeding 10'					Fill Height: Greater than 10', not exceeding 15'					Fill Height: Greater than 15', not exceeding 20'				
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP
10	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA
12	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
15	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL
18	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
21	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	NA	NA
24	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
27	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA
30	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
36	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
42	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
48	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	NA	NA	NA	QPL	QPL	NA	NA	NA	QPL	QPL	NA	NA	NA	NA	QPL	NA	NA	NA	NA	NA

- Notes: PVC Polyvinyl Chloride Pipe  
 CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior  
 PE Polyethylene Pipe  
 CPE Corrugated Polyethylene Pipe with a Smooth Interior  
 CPP Corrugated Polypropylene Pipe with a Smooth Interior  
 X Permitted  
 QPL Permitted for the producers approved for that diameter in the Department's qualified product list  
 NA Not Acceptable

PIPE CULVERTS (metric)																				
TABLE IIIA: PLASTIC PIPE PERMITTED																				
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE																				
Nominal Diameter (mm)	Type 1					Type 2					Type 3					Type 4				
	Fill Height: 1 m and less, with 0.3 m min. cover					Fill Height: Greater than 1 m, not exceeding 3 m					Fill Height: Greater than 3 m, not exceeding 4.5 m					Fill Height: Greater than 4.5 m, not exceeding 6 m				
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	CPE	CPP
250	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA	X	QPL	X	QPL	NA
300	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
375	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL	X	QPL	NA	QPL	QPL
450	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL
525	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	QPL	NA	X	QPL	NA	NA	NA
600	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
675	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	NA	NA
750	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
900	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	QPL	QPL	X	QPL	X	NA	QPL
1050	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
1200	X	NA	X	QPL	QPL	X	NA	X	QPL	QPL	X	NA	X	NA	QPL	X	NA	X	NA	NA
1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	NA	NA	NA	QPL	QPL	NA	NA	NA	QPL	QPL	NA	NA	NA	NA	QPL	NA	NA	NA	NA	NA

- Notes:
- PVC Polyvinyl Chloride Pipe
  - CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
  - PE Polyethylene Pipe
  - CPE Corrugated Polyethylene Pipe with a Smooth Interior
  - CPP Corrugated Polypropylene Pipe with a Smooth Interior
  - X Permitted
  - QPL Permitted for the producers approved for that diameter in the Department's qualified product list
  - NA Not Acceptable

PIPE CULVERTS											
TABLE IIIB: PLASTIC PIPE PERMITTED											
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE											
Nominal Diameter (in.)	Type 5					Type 6			Type 7		
	Fill Height: Greater than 20', not exceeding 25'					Fill Height: Greater than 25', not exceeding 30'			Fill Height: Greater than 30', not exceeding 35'		
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	PVC	CPVC	PE
10	X	QPL	X	QPL	NA	X	QPL	X	X	QPL	X
12	X	QPL	X	QPL	QPL	X	QPL	X	X	QPL	X
15	X	QPL	NA	NA	QPL	X	QPL	NA	X	QPL	NA
18	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
21	X	QPL	NA	NA	NA	X	QPL	NA	X	QPL	NA
24	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
27	X	NA	NA	NA	NA	X	NA	NA	X	NA	NA
30	X	QPL	X	NA	QPL	X	QPL	X	X	QPL	X
36	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
42	X	NA	X	NA	NA	X	NA	X	X	NA	X
48	X	NA	X	NA	NA	X	NA	X	X	NA	X
54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

- Notes:
- PVC Polyvinyl Chloride Pipe
  - CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
  - CPP Corrugated Polypropylene Pipe with a Smooth Interior
  - X Permitted
  - QPL Permitted for the producers approved for that diameter in the Department's qualified product list
  - NA Not Acceptable

PIPE CULVERTS (metric)											
TABLE IIIB: PLASTIC PIPE PERMITTED											
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE											
Nominal Diameter (mm)	Type 5					Type 6			Type 7		
	Fill Height: Greater than 6 m, not exceeding 7.5 m					Fill Height: Greater than 7.5 m, not exceeding 9 m			Fill Height: Greater than 9 m, not exceeding 10.5 m		
	PVC	CPVC	PE	CPE	CPP	PVC	CPVC	PE	PVC	CPVC	PE
250	X	QPL	X	QPL	NA	X	QPL	X	X	QPL	X
300	X	QPL	X	QPL	QPL	X	QPL	X	X	QPL	X
375	X	QPL	NA	NA	QPL	X	QPL	NA	X	QPL	NA
450	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
525	X	QPL	NA	NA	NA	X	QPL	NA	X	QPL	NA
600	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
675	X	NA	NA	NA	NA	X	NA	NA	X	NA	NA
750	X	QPL	X	NA	QPL	X	QPL	X	X	QPL	X
900	X	QPL	X	NA	NA	X	QPL	X	X	QPL	X
1000	X	NA	X	NA	NA	X	NA	X	X	NA	X
1200	X	NA	X	NA	NA	X	NA	X	X	NA	X
1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

- Notes: PVC Polyvinyl Chloride Pipe  
 CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior  
 CPP Corrugated Polypropylene Pipe with a Smooth Interior  
 X Permitted  
 QPL Permitted for the producers approved for that diameter in the Department's qualified product list  
 NA Not Acceptable

STORM SEWERS																
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED																
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE																
Nominal Diameter in.	Type 1								Type 2							
	Fill Height: 3' and less, with 1' min.								Fill Height: Greater than 3', not exceeding 10'							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	3	X	X	QPL	X	QPL	NA	NA	1	*X	X	QPL	X	QPL	NA
12	IV	NA	X	X	QPL	X	QPL	QPL	II	1	*X	X	QPL	X	QPL	QPL
15	IV	NA	NA	X	QPL	NA	QPL	QPL	II	1	*X	X	QPL	NA	QPL	QPL
18	IV	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
21	III	NA	NA	X	QPL	NA	QPL	NA	II	2	X	X	QPL	NA	QPL	NA
24	III	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
27	III	NA	NA	X	NA	NA	NA	NA	II	3	X	X	NA	NA	NA	NA
30	IV	NA	NA	X	QPL	X	QPL	QPL	II	3	X	X	QPL	X	QPL	QPL
33	III	NA	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA
36	III	NA	NA	X	QPL	X	QPL	QPL	II	NA	X	X	QPL	X	QPL	QPL
42	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
48	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
54	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
60	II	NA	NA	NA	NA	NA	QPL	QPL	II	NA	NA	NA	NA	NA	QPL	QPL
66	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
72	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
78	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
84	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
90	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
96	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
102	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
108	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- PE Polyethylene Pipe
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable
- \* May also use Standard Strength Clay Pipe

STORM SEWERS (metric)																
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED																
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE																
Nominal Diameter mm	Type 1								Type 2							
	Fill Height: 1 m and less, with 300 mm min.								Fill Height: Greater than 1 m, not exceeding 3 m							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
250	NA	3	X	X	QPL	X	QPL	NA	NA	1	*X	X	QPL	X	QPL	NA
300	IV	NA	X	X	QPL	X	QPL	QPL	II	1	*X	X	QPL	X	QPL	QPL
375	IV	NA	NA	X	QPL	NA	QPL	QPL	II	1	*X	X	QPL	NA	QPL	QPL
450	IV	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
525	III	NA	NA	X	QPL	NA	QPL	NA	II	2	X	X	QPL	NA	QPL	NA
600	III	NA	NA	X	QPL	X	QPL	QPL	II	2	X	X	QPL	X	QPL	QPL
675	III	NA	NA	X	NA	NA	NA	NA	II	3	X	X	NA	NA	NA	NA
750	IV	NA	NA	X	QPL	X	QPL	QPL	II	3	X	X	QPL	X	QPL	QPL
825	III	NA	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA
900	III	NA	NA	X	QPL	X	QPL	QPL	II	NA	X	X	QPL	X	QPL	QPL
1050	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
1200	II	NA	X	X	NA	X	QPL	QPL	II	NA	X	X	NA	X	QPL	QPL
1350	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1500	II	NA	NA	NA	NA	NA	QPL	QPL	II	NA	NA	NA	NA	NA	QPL	QPL
1650	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1800	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
1950	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2100	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2250	II	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA
2400	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
2550	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA
2700	II	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- PE Polyethylene Pipe
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable
- \* May also use Standard Strength Clay Pipe

STORM SEWERS																
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED																
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE																
Nominal Diameter in.	Type 3								Type 4							
	Fill Height: Greater than 10' not exceeding 15'								Fill Height: Greater than 15' not exceeding 20'							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	2	X	X	QPL	X	QPL	NA	NA	3	X	X	QPL	X	QPL	NA
12	III	2	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
15	III	3	X	X	QPL	NA	QPL	QPL	IV	NA	NA	X	QPL	NA	QPL	QPL
18	III	NA	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
21	III	NA	NA	X	QPL	NA	QPL	NA	IV	NA	NA	X	QPL	NA	NA	NA
24	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
27	III	NA	NA	X	NA	NA	NA	NA	IV	NA	NA	X	NA	NA	NA	NA
30	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
33	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
36	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
42	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
48	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
54	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
60	III	NA	NA	NA	NA	NA	NA	QPL	IV	NA	NA	NA	NA	NA	NA	NA
66	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
72	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
78	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
84	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
90	III	NA	NA	NA	NA	NA	NA	NA	1680	NA	NA	NA	NA	NA	NA	NA
96	III	NA	NA	NA	NA	NA	NA	NA	1690	NA	NA	NA	NA	NA	NA	NA
102	III	NA	NA	NA	NA	NA	NA	NA	1700	NA	NA	NA	NA	NA	NA	NA
108	1360	NA	NA	NA	NA	NA	NA	NA	1710	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.)

- CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- PE Polyethylene Pipe
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable

STORM SEWERS (metric)																
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED																
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE																
Nominal Diameter mm	Type 3								Type 4							
	Fill Height: Greater than 3 m, not exceeding 4.5 m								Fill Height: Greater than 4.5 m, not exceeding 6 m							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
250	NA	2	X	X	QPL	X	QPL	NA	NA	3	X	X	QPL	X	QPL	NA
300	III	2	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
375	III	3	X	X	QPL	NA	QPL	QPL	IV	NA	NA	X	QPL	NA	QPL	QPL
450	III	NA	X	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	QPL	QPL
525	III	NA	NA	X	QPL	NA	QPL	NA	IV	NA	NA	X	QPL	NA	NA	NA
600	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
675	III	NA	NA	X	NA	NA	NA	NA	IV	NA	NA	X	NA	NA	NA	NA
750	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
825	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
900	III	NA	NA	X	QPL	X	QPL	QPL	IV	NA	NA	X	QPL	X	NA	QPL
1050	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
1200	III	NA	NA	X	NA	X	NA	QPL	IV	NA	NA	X	NA	X	NA	NA
1350	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1500	III	NA	NA	NA	NA	NA	NA	QPL	IV	NA	NA	NA	NA	NA	NA	NA
1650	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1800	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
1950	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
2100	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA	NA
2250	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2400	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2550	III	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA
2700	70	NA	NA	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 25.4 micro-meter crack.)
- CSP Concrete Sewer, Storm drain, and Culvert Pipe (number in column indicates strength class)
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride Pipe
- CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior
- PE Polyethylene Pipe
- CPE Corrugated Polyethylene Pipe with a Smooth Interior
- CPP Corrugated Polypropylene Pipe with a Smooth Interior
- X Permitted
- QPL Permitted for the producers approved for that diameter in the Department's qualified product list
- NA Not Acceptable

STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE														
Nominal Diameter in.	Type 5						Type 6				Type 7			
	Fill Height: Greater than 20', not exceeding 25'						Fill Height: Greater than 25', not exceeding 30'				Fill Height: Greater than 30', not exceeding 35'			
	RCCP	PVC	CPVC	PE	CPE	CPP	RCCP	PVC	CPVC	PE	RCCP	PVC	CPVC	PE
10	NA	X	QPL	X	QPL	NA	NA	X	QPL	X	NA	X	QPL	X
12	IV	X	QPL	X	QPL	QPL	V	X	QPL	X	V	X	QPL	X
15	IV	X	QPL	NA	NA	QPL	V	X	QPL	NA	V	X	QPL	NA
18	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
21	IV	X	QPL	NA	NA	NA	V	X	QPL	NA	V	X	QPL	NA
24	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
27	IV	X	NA	NA	NA	NA	V	X	NA	NA	V	X	NA	NA
30	IV	X	QPL	X	NA	QPL	V	X	QPL	X	V	X	QPL	X
33	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
36	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
42	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
48	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
54	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
60	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
66	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
72	V	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
78	2020	NA	NA	NA	NA	NA	2370	NA	NA	NA	2730	NA	NA	NA
84	2020	NA	NA	NA	NA	NA	2380	NA	NA	NA	2740	NA	NA	NA
90	2030	NA	NA	NA	NA	NA	2390	NA	NA	NA	2750	NA	NA	NA
96	2040	NA	NA	NA	NA	NA	2400	NA	NA	NA	2750	NA	NA	NA
102	2050	NA	NA	NA	NA	NA	2410	NA	NA	NA	2760	NA	NA	NA
108	2060	NA	NA	NA	NA	NA	2410	NA	NA	NA	2770	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.)

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior

PE Polyethylene Pipe

CPE Corrugated Polyethylene Pipe with a Smooth Interior

CPP Corrugated Polypropylene Pipe with a Smooth Interior

X Permitted

QPL Permitted for the producers approved for that diameter in the Department's qualified product list

NA Not Acceptable

STORM SEWERS (metric) KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE														
Nominal Diameter mm	Type 5						Type 6				Type 7			
	Fill Height: Greater than 6 m, not exceeding 7.5 m						Fill Height: Greater than 7.5 m, not exceeding 9 m				Fill Height: Greater than 9 m, not exceeding 10.5 m			
	RCCP	PVC	CPVC	PE	CPE	CPP	RCCP	PVC	CPVC	PE	RCCP	PVC	CPVC	PE
250	NA	X	QPL	X	QPL	NA	NA	X	QPL	X	NA	X	QPL	X
300	IV	X	QPL	X	QPL	QPL	V	X	QPL	X	V	X	QPL	X
375	IV	X	QPL	NA	NA	QPL	V	X	QPL	NA	V	X	QPL	NA
450	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
525	IV	X	QPL	NA	NA	NA	V	X	QPL	NA	V	X	QPL	NA
600	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
675	IV	X	NA	NA	NA	NA	V	X	NA	NA	V	X	NA	NA
750	IV	X	QPL	X	NA	QPL	V	X	QPL	X	V	X	QPL	X
825	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
900	IV	X	QPL	X	NA	NA	V	X	QPL	X	V	X	QPL	X
1050	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
1200	IV	X	NA	X	NA	NA	V	X	NA	X	V	X	NA	X
1350	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1500	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1650	IV	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1800	V	NA	NA	NA	NA	NA	V	NA	NA	NA	V	NA	NA	NA
1950	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2100	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2250	100	NA	NA	NA	NA	NA	110	NA	NA	NA	130	NA	NA	NA
2400	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA
2550	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA
2700	100	NA	NA	NA	NA	NA	120	NA	NA	NA	130	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 25.4 micro-meter crack.)

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe with a Smooth Interior

PE Polyethylene Pipe

CPE Corrugated Polyethylene Pipe with a Smooth Interior

CPP Corrugated Polypropylene Pipe with a Smooth Interior

X Permitted

QPL Permitted for the producers approved for that diameter in the Department's qualified product list

NA Not Acceptable"

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

**“1040.03 Polyvinyl Chloride (PVC) Pipe.** Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The pipe shall meet the following additional requirements.”

Revise Article 1040.04(b) of the Standard Specifications to read:

“(b) Corrugated PE Pipe with a Smooth Interior. The manufacturer shall be listed as compliant through the NTPEP program and the pipe shall be according to AASHTO M 294 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.”

Revise the first paragraph of Article 1040.04(d) of the Standard Specifications to read:

“(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350.”

Revise the first paragraph of Article 1040.08 of the Standard Specifications to read:

**“1040.08 Polypropylene (PP) Pipe.** Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The pipe shall meet the following additional requirements.”

## **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 **2.00%** 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.DB.E.UP@illinois.gov](mailto:DOT.DB.E.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.

## **FUEL COST ADJUSTMENT (BDE)**

Effective: April 1, 2009

Revised: August 1, 2017

**Description.** Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

**General.** The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

- (a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

**Method of Adjustment.** Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

- Where: CA = Cost Adjustment, \$  
 FPI<sub>P</sub> = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)  
 FPI<sub>L</sub> = Fuel 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, \$/gal (\$/liter)  
 FUF = Fuel Usage Factor in the pay item(s) being adjusted  
 Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

**Basis of Payment.** Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI<sub>L</sub> and FPI<sub>P</sub> in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

**HOT-MIX ASPHALT – START OF PRODUCTION (BDE)**

Effective: January 1, 2022

Add the following paragraph between the third and four paragraphs of Article 1030.10 of the Standard Specifications:

“When a test strip is not required, each HMA mixture with a quantity of 3,000 tons (2,750 metric tons) or more shall still be sampled on the first day of production: I-FIT and Hamburg wheel testing for High ESAL; I-FIT testing for Low ESAL. Within two working days after sampling the mixture, the Contractor shall deliver gyratory cylinders to the District laboratory for Department verification testing. The High ESAL mixture test results shall meet the requirements of Articles 1030.05(d)(3) and 1030.05(d)(4). The Low ESAL mixture test results shall meet the requirements of Article 1030.05(d)(4).”

**PERFORMANCE GRADED ASPHALT BINDER (BDE)**

Effective: January 1, 2022

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.

Table 4 - Requirements for Softener Modified Asphalt Binders	
Test	Asphalt Grade
Small Strain Parameter (AASHTO PP 113) BBR, $\Delta T_c$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs) <sup>1/</sup>	-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) <sup>1/</sup>	Results (%) shall be reported to the Central Bureau of Materials

1/ Frequency of the testing will be determined by the Bureau of Materials Policy Memorandum, "Performance Graded Asphalt Binder Qualification Procedure."

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.

HMA Mixtures - RAP/RAS Maximum ABR % <sup>1/2/</sup>			
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 – HAUL TIME (BDE)**

Effective: July 1, 2020

Revise Article 1020.11(a)(7) of the Standard Specifications to read:

“(7) Haul Time. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work. The maximum haul time shall be as follows.

Concrete Temperature at Point of Discharge, °F (°C)	Maximum Haul Time <sup>1/</sup> (minutes)	
	Truck Mixer or Truck Agitator	Nonagitator Truck
50 - 64 (10 - 17.5)	90	45
> 64 (> 17.5) - without retarder	60	30
> 64 (> 17.5) - with retarder	90	45

1/ To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.”

## **STEEL COST ADJUSTMENT (BDE)**

Effective: April 2, 2004

Revised: January 1, 2022

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate “Yes” for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars  
Q = quantity of steel incorporated into the work, in lb (kg)  
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where:  $MPI_M$  = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

$MPI_L$  = The Materials Cost Index for steel as published by the Engineering News-Record 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,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the  $MPI_M$  will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the  $MPI_L$  and  $MPI_M$  in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

**Attachment**

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Welded Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

**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.”

**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%”

**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.

## **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.

**TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS (BDE)**

Effective: January 1, 2013

Revised: January 1, 2018

**Description.** This work shall consist of constructing a traversable pipe grate on a concrete end section.

**Materials.** Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item	Article/Section
(a) Traversable Pipe Grate Components (Note 1)	
(b) Chemical Adhesive Resin System .....	1027
(c) High Strength Steel Bolts, Nuts, and Washers (Note 2).....	1006.08

Note 1. All steel pipe shall be according to ASTM A 53 (Type E or S), Grade B, or ASTM A 500 Grade B, standard weight (SCH. 40). Structural steel shapes and plates shall be according to AASHTO M270 Grade 50 (M 270M Grade 345) and the requirements of Article 1006.04 of the Standard Specifications. All steel components of the grating system shall be galvanized according to AASHTO M 111 or ASTM F 2329 as applicable.

Anchor rods shall be according to ASTM F 1554, Grade 36 (Grade 250).

Note 2. Threaded rods conforming to the requirements of ASTM F 1554, Grade 105 (Grade 725) may be used for the thru bolts.

**CONSTRUCTION REQUIREMENTS**

Fabrication of the traversable pipe grate shall be according to the requirements of Section 505 of the Standard Specifications and as shown on the plans.

Anchor rods shall be set according to Article 509.06 of the Standard Specifications. Bolts and anchor rods shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Thru bolts shall be snug tightened and shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

Splicing of pipes shall be made by utilizing full penetration butt welds according to Article 505.04(q) of the Standard Specifications. In lieu of welding, bolted or sleeve type splices may be utilized, provided the splices are located over intermediate supports with no more than one splice per pipe run with the exception that no splice may occur in pipe runs under 30 ft (9 m) in length.

**Method of Measurement.** This work will be measured for payment in place in feet (meters). The length measured shall be along the pipe grate elements from end to end for both longitudinal and intermediate support pipes.

**Basis of Payment.** This work will be paid for at the contract unit price per foot (meter) for TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION.

**VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)**

Effective: November 1, 2021

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. The lights shall be in operation while the vehicle or equipment is engaged in construction operations.”

**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.

**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.”

**WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within **330** working days.

## PROJECT LABOR AGREEMENT

Effective: May 18, 2007

Revised: August 1, 2019

**Description.** The Illinois Project Labor Agreements Act, 30 ILCS 571, states that the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost. A project labor agreement (PLA) is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project that is intended to support this compelling interest. It has been determined by the Department that a PLA is appropriate for the project that is the subject of this contract. The PLA document, provided below, only applies to the construction site for this contract. It is the policy of the Department on this contract, and all construction projects, to allow all contractors and subcontractors to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.

**Execution of Letter of Assent.** A copy of the PLA applicable to this project is included as part of this special provision. As a condition of the award of the contract, the successful bidder and each of its subcontractors shall execute a "Contractor Letter of Assent", in the form attached to the PLA as Exhibit A. The successful bidder shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the subcontractor's performance of work on the project. Upon request, copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization at the pre-job conference.

**Quarterly Reporting.** Section 37 of the Illinois Project Labor Agreements Act requires the Department to submit quarterly reports regarding the number of minorities and females employed under PLAs. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the PLA of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <http://www.idot.illinois.gov/Assets/uploads/files/IDOT-Forms/BC/BC%20820.docx>.

The report shall be submitted no later than the 15th of the month following the end of each quarter (i.e., April 15 for the January – March reporting period). The form shall be emailed to [DOT.PLA.Reporting@illinois.gov](mailto:DOT.PLA.Reporting@illinois.gov) or faxed to (217) 524-4922.

Any costs associated with complying with this provision 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.

Illinois Department of Transportation  
**PROJECT LABOR AGREEMENT**

This Project Labor Agreement (“PLA” or “Agreement”) is entered into this \_\_\_\_\_ day of

\_\_\_\_\_, 2021, by and between the Illinois Department of Transportation (“IDOT” or “Department”) in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the “Unions”). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT’s Prime Contractor and each of its subcontractors of whatever tier (“Subcontractor” or “Subcontractors”) on Contract No. (hereinafter, the “Project”).

**ARTICLE I - INTENT AND PURPOSES**

- 1.1 This PLA is entered into in accordance with the Project Labor Agreement Act (“Act”, 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act’s goals and objectives.
- 1.2 As a condition of the award of the contract for performance of work on the Project, IDOT’s Prime Contractor and each of its Subcontractors shall execute a “Contractor Letter of Assent”, in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor’s Contractor Letter of Assent to the Department prior to the Subcontractor’s performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.

- 1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.
- 1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.
- 1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

- 1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.
- 1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

**ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS**

- 2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.

- 2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together "Project Employment Objectives"). IDOT shall provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

- 2.9 The parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.
- 2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

**ARTICLE III - ADMINISTRATION OF AGREEMENT**

- 3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

**ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS**

- 4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.
- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

**ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT**

- 5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.
- 5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.

- 5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

#### **ARTICLE VI –DISPUTES: GENERAL PRINCIPLES**

- 6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.
- 6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.

The arbitrator is not authorized to award back pay or any other damages for a miss assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

- 6.3 The PLA Jurisdictional Dispute Resolution Process (“Process”) sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

#### **DISPUTE PROCESS**

- 6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL- CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.
- 6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor (“Federation”) from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.

- 6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:
- (a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)
  - (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
  - (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.
- 6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

- 6.8 Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a “bench” decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a “short form” decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union’s General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

- 6.9 In rendering a decision, the Arbitrator shall determine:
- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
  - (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,

(c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

(d) The arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.

6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

6.12 The Order of Presentation in all Hearings before an Arbitrator shall be

- I. Identification and Stipulation of the Parties
- II. Unions(s) claiming the disputed work presents its case
- III. Union(s) assigned the disputed work presents its case
- IV. Employer assigning the disputed work presents its case
- V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
- VI. Rebuttal by union(s) claiming the disputed work
- VII. Additional submissions permitted and requested by Arbitrator
- VIII. Closing arguments by the parties

- 6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.
- 6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.
- 6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

#### **ARTICLE VII - WORK STOPPAGES AND LOCKOUTS**

- 7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

- 7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.
- 7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.
- 7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

- 7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.
- 7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

- 7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:
- 7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.
  - 7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.
  - 7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.
  - 7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.
  - 7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- 7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.
- 7.7 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- 7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

### **ARTICLE VIII – TERMS OF AGREEMENT**

- 8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.
- 8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.
- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.
- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

[The Balance of This Page Intentionally Left Blank]

Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

**Execution Page**

***Illinois Department of Transportation***

---

Director of Highways Project Implementation

---

Director of Finance & Administration

---

Yangu Kim, Chief Counsel

---

Omer Osman, Secretary

(Date)

***Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the Unions listed below:***

---

(Date)

List Unions:

Exhibit A - Contractor Letter of Assent

(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No. ], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

(Authorized Company Officer)

(Company)

SWPPP



Storm Water Pollution Prevention Plan



Route	Marked Route	Section Number
FAP 301	US 20	29R-1
Project Number	County	Contract Number
NHPP-IH44(562)	Jo Daviess	64880

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	Date
	10/15/2021

Print Name	Title	Agency
Masood Ahmad	Region Two Engineer	IDOT / District 2

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:

The project is located on US 20 / IL 84 (Spring Street) in Galena in Jo Daviess County at the North half of Section 24 and the Southwest quarter of Section 13, Township 28 North, Range 1 West of the 4th Principal Meridian. 42.416 N, 90.439 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:

This project consists of the reconstruction of US 20/ IL 84 (Spring Street) in Galena from Main Street to Gear Street. The project will include pavement widths to accommodate a 3-lane section, new curb and gutter, new storm sewer, multi-use path, relocated water and sanitary facilities, and retaining walls, and landscaping

C. Provide the estimated duration of this project:

3 years

D. The total area of the construction site is estimated to be 18.5 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 18.5 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:

0.60

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:

Based on the USDA "Soil Survey of Jo Daviess County, Illinois" the mapped soil association within the job limits

is designated:

Fayette Silt Loams, 5-10% slopes, moderately eroded, 10-18% slopes, moderately eroded, & 18-35% slopes, moderately eroded, Erosion Factor (k) = 0.43 for water & assigned to Group 6 for susceptibility to wind erosion  
Dunbarton-Dubuque Silt Loam, 15-25% slopes, moderately eroded, Erosion Factor (k) = 0.49 & Group 6 for wind  
Lacrescent Cobbly Silt Loam, 35-60% slopes, well drained, Erosion Factor (k) = 0.10 & Group 7 for wind  
Medary Silty Clay Loam, 6-12% slopes, moderately eroded, Erosion Factor (k) = 0.49 & Group 6 for wind  
Lawson Silt Loam, 0-2% slopes, frequently flooded, Erosion Factor (k) = 0.37 for water & Group 5 for wind

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report.

No wetlands exist in the project limits.

H. Provide a description of potentially erosive areas associated with this project:

Potentially erosive areas are locations of earth excavation and stock piling, underground drainage utility excavation, and retaining wall excavation.

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.):

Soil disturbing activities include roadway pavement removal and widening, building removal, underground drainage utility removal and installation, retaining wall removal and installation, and landscape restoration. Temporary soil retention systems and geotextile retaining walls will be used during construction near existing buildings and the staging line. Side slopes are typically 1:4 in the clear zone and 1:3 outside the clear zone.

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:

Illinois Department of Transportation (IDOT)

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located:

Jo Daviess County

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:

The receiving water is the IDOT storm sewer system with the ultimate receiving water being the Galena River. There are no Biologically Significant Streams located in this area.

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.

All disturbed areas will be protected with erosion control measures, which are mostly on the ditch bottoms, inlet and outlet areas of the end sections, foreslopes, and backslopes areas. A temporary cofferdam, and riprap with filter fabric will be utilized at the box culvert at station 1194+28 LT.

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:

- Applicable Federal, Tribal, State, or Local Programs

- Floodplain

- Historic Preservation

The project is located in the Galena Historic District.

- 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:

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:

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:

- Threatened and Endangered Species/Illinois Natural Areas (INA)/Nature Preserves

- Other

- Wetland

P. The following pollutants of concern will be associated with this construction project:

- Antifreeze / Coolants                       Solid Waste Debris

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Concrete   | <input checked="" type="checkbox"/> Solvents  |
| <input checked="" type="checkbox"/> Concrete Curing Compounds                                      | <input checked="" type="checkbox"/> Waste water from cleaning construction equipments |
| <input checked="" type="checkbox"/> Concrete Truck Waste   | <input type="checkbox"/> Other (Specify) _____  |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides                                       | <input type="checkbox"/> Other (Specify) _____  |
| <input checked="" type="checkbox"/> Paints   | <input type="checkbox"/> Other (Specify) _____  |
| <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) | <input type="checkbox"/> Other (Specify) _____  |
| <input checked="" type="checkbox"/> Soil Sediment  | <input type="checkbox"/> 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 checked="" type="checkbox"/> Erosion Control Blanket / Mulching | <input type="checkbox"/> Temporary Turf (Seeding, Class 7) |
| <input checked="" type="checkbox"/> Geotextiles                        | <input type="checkbox"/> Temporary Mulching                |
| <input checked="" type="checkbox"/> Permanent Seeding                  | <input type="checkbox"/> Vegetated Buffer Strips           |
| <input checked="" type="checkbox"/> Preservation of Mature Seeding     | <input type="checkbox"/> Other (Specify) _____             |
| <input type="checkbox"/> Protection of Trees                           | <input type="checkbox"/> Other (Specify) _____             |
| <input checked="" type="checkbox"/> Sodding                            | <input type="checkbox"/> Other (Specify) _____             |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding  | <input type="checkbox"/> Other (Specify) _____             |

Describe how the stabilization practices listed above will be utilized during construction:

Preservation of mature vegetation will act as both a soil erosion prevention and a sediment control measure in areas that see runoff from disturbed soil. Temporary erosion control seeding will be used in disturbed areas where no construction is planned for seven days. Geotextiles will be used for ground stabilization for the aggregate subgrade.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Once final grading is complete, all disturbed areas shall be permanently seeded/sodded and covered with erosion control blanket / mulch as soon as possible to prevent erosion on newly graded soil.

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 checked="" 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 checked="" type="checkbox"/> Perimeter Erosion Barrier    | <input checked="" type="checkbox"/> Other (Specify)       | Cofferdam (Type 1) |
| <input type="checkbox"/> Permanent Sediment Basin                | <input checked="" type="checkbox"/> Other (Specify)       | Inlet Filters      |
| <input checked="" type="checkbox"/> Retaining Walls              | <input checked="" type="checkbox"/> Other (Specify)       | _____              |
| <input checked="" 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:

Perimeter Erosion Barrier shall be installed, prior to commencement of any grading activities, to intercept sheet flow of waterborne silt and sediment and prevent it from leaving the construction site. The locations requiring Perimeter Erosion Barrier are designated on the Erosion Control Plans. A fully enclosed perimeter erosion barrier shall be placed around any soil stockpiles on site in accordance with the the Standard Specifications. Locations of stockpiles are to be determined by the Contractor and approved by the Engineer.

Temporary Ditch Checks shall be placed in disturbed or newly graded swales at the spacing such that the low point in the center of the ditch check is at the same elevation as the base of the ditch check immediately upstream, or as directed by the Engineer. The ditch checks will prevent siltation, scour, and downstream erosion of newly graded swales and drainage ways. Temporary Ditch Check locations are designated on the Erosion Control Plans.

Storm Drain Inlet Protection will be comprised of a combination of temporary ditch checks, erosion control blanket (heavy duty), and temporary seeding. Straw bales and silt fence shall not be utilized for this purpose as these measures result in flooding. Locations requiring storm drain inlet protection are designated on the Erosion Control Plans.

Inlet Filters will be placed in all open grate inlets and catch basins within the roadway limits as designated on the Erosion Control Plans.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Temporary measures will be removed once they are no longer needed. Riprap will remain in place at storm sewer outlets to prevent erosion. A temporary cofferdam, and riprap with filter fabric will be utilized at the box culvert at station 1194+28 LT. Retaining walls will remain in place after construction.

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.

1. 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.

2. 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:

Permanent storm water management features include the proposed seeding/sodding and erosion control blanket for disturbed areas. The seeding/sodding and erosion control blanket will provide permanent vegetation within the construction limits to protect the area from erosion during storm discharges.

**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:

All management practices, controls and other practices provided herein are in accordance with the IDOT Standard Specifications for Road and Bridge Construction (January 1, 2022), IDOT Supplemental Specifications and Recurring Special Provisions (January 1, 2022).

**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.

Maintenance shall be in accordance with the IDOT Erosion and Sediment Control Field Guide for Construction Inspection.

Maintenance includes inspection of erosion and sediment control devices on a regular basis. Perimeter erosion barrier should be checked and replaced when necessary. Inlet filters need to be checked if they are clogged and cleaned on a regular basis.

The temporary erosion control systems shall remain in place with proper maintenance until the permanent erosion controls are in place, working properly, and seeding has been established. Once the permanent erosion control systems have taken hold and are functional, the temporary items shall be removed along with any trapped sediment and any disturbed areas shall be reseeded.

### 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	Marked Route	Section Number
FAP 301	US 20	29R-1
Project Number	County	Contract Number
NHPP-IH44(562)	Jo Daviess	64880

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		
<input style="width: 100%; height: 30px;" type="text"/>	<input style="width: 80%; height: 30px;" type="text"/>		
Print Name	Title		
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>		
Name of Firm	Phone		
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>		
Street Address	City	State	Zip Code
<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

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

**ATTACHMENTS**

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

**I. GENERAL**

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

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

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

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

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

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

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor

performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

**II. NONDISCRIMINATION**

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

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

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

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

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

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

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

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

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

for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **6. Training and Promotion:**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

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

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

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

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

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

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#).

The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### **III. NONSEGREGATED FACILITIES**

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

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

### **IV. DAVIS-BACON AND RELATED ACT PROVISIONS**

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

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

#### **1. Minimum wages**

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

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

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

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

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

separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding

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

## 3. Payrolls and basic records

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

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee ( e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

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

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

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

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

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

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

#### 4. Apprentices and trainees

##### a. Apprentices (programs of the USDOL).

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

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice

performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

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

##### b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

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

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

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

#### **10. Certification of eligibility.**

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

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

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

### **V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

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

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

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the 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.

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

### **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

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

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

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

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

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

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

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

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

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

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

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

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

## VII. SAFETY: ACCIDENT PREVENTION

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

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

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

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

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

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

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

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

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

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

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

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

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

### 1. Instructions for Certification – First Tier Participants:

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

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

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

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

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

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

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

\* \* \* \* \*

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

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

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

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

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

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

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

## **2. Instructions for Certification - Lower Tier Participants:**

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

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

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general 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 grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

\* \* \* \* \*

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

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

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

\* \* \* \* \*

#### **XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

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

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

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor 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.

(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 Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

