

46

Letting July 31, 2026

Notice to Bidders, Specifications and Proposal



**Contract No. 70G29
CHAMPAIGN County
Section RA 2023-1
Route FAI 57
Project STP-ICS6(598)
District 5 Construction Funds**

Prepared by

F

Checked by

(Printed by authority of the State of Illinois)



NOTICE TO BIDDERS

- 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. July 31, 2026 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. 70G29
CHAMPAIGN County
Section RA 2023-1
Project STP-ICS6(598)
Route FAI 57
District 5 Construction Funds**

0.72 mile of sanitary sewer at Illini Prairie Rest Areas.

- 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

Gia Biagi,
Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2026

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-22) (Revised 1-1-26)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
109 Measurement and Payment	1
202 Earth and Rock Excavation	2
204 Borrow and Furnished Excavation	3
207 Porous Granular Embankment	4
211 Topsoil and Compost	5
214 Grading and Shaping Ditches	6
406 Hot-Mix Asphalt Binder and Surface Course	7
407 Hot-Mix Asphalt Pavement (Full-Depth)	9
420 Portland Cement Concrete Pavement	10
502 Excavation for Structures	11
504 Precast Concrete Structures	12
509 Metal Railings	13
522 Retaining Walls	14
540 Box Culverts	15
542 Pipe Culverts	35
550 Storm Sewers	44
586 Granular Backfill for Structures	51
601 Pipe Drains, Pipe Underdrains, and French Drains	52
630 Steel Plate Beam Guardrail	53
632 Guardrail and Cable Road Guard Removal	54
644 High Tension Cable Median Barrier	55
665 Woven Wire Fence	56
701 Work Zone Traffic Control and Protection	57
781 Raised Reflective Pavement Markers	59
782 Reflectors	60
801 Electrical Requirements	62
821 Roadway Luminaires	65
1003 Fine Aggregates	66
1004 Coarse Aggregates	67
1010 Finely Divided Minerals	69
1020 Portland Cement Concrete	70
1030 Hot-Mix Asphalt	73
1040 Drain Pipe, Tile, and Wall Drain	74
1042 Precast Concrete Products	75
1061 Waterproofing Membrane System	76
1067 Luminaire	77
1097 Reflectors	84
1102 Hot-Mix Asphalt Equipment	85

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	87
2	X	Subletting of Contracts (Federal-Aid Contracts)	90
3	X	EEO	91
4		Specific EEO Responsibilities Nonfederal-Aid Contracts	101
5		Required Provisions - State Contracts	106
6		Asbestos Bearing Pad Removal	112
7		Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal	113
8		Temporary Stream Crossings and In-Stream Work Pads	114
9	X	Construction Layout Stakes	115
10		Use of Geotextile Fabric for Railroad Crossing	118
11		Subsealing of Concrete Pavements	120
12		Hot-Mix Asphalt Surface Correction	124
13		Pavement and Shoulder Resurfacing	126
14		Patching with Hot-Mix Asphalt Overlay Removal	127
15		Polymer Concrete	129
16		Reserved	131
17		Bicycle Racks	132
18		Temporary Portable Bridge Traffic Signals	134
19		Nighttime Inspection of Roadway Lighting	136
20		English Substitution of Metric Bolts	137
21	X	Calcium Chloride Accelerator for Portland Cement Concrete	138
22		Quality Control of Concrete Mixtures at the Plant	139
23	X	Quality Control/Quality Assurance of Concrete Mixtures	147
24		Reserved	163
25		Reserved	164
26		Temporary Raised Pavement Markers	165
27		Restoring Bridge Approach Pavements Using High-Density Foam	166
28		Portland Cement Concrete Inlay or Overlay	169
29		Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	173
30		Longitudinal Joint and Crack Patching	176
31		Concrete Mix Design – Department Provided	178
32		Station Numbers in Pavements or Overlays	179

TABLE OF CONTENTS

LOCATION OF PROJECT	1
INTENT OF PROJECT	1
DESCRIPTION OF WORK.....	1
TRAFFIC CONTROL PLAN	2
TRAFFIC CONTROL AND PROTECTION STANDARD 701201	4
TRAFFIC CONTROL AND PROTECTION STANDARD 701406.....	4
TRAFFIC CONTROL AND PROTECTION STANDARD 701422.....	5
TRAFFIC CONTROL AND PROTECTION STANDARD 701451.....	5
TRAFFIC CONTROL AND PROTECTION STANDARD 701801.....	5
TRAFFIC CONTROL AND PROTECTION (SPECIAL).....	5
REST AREA CLOSURE	6
NOTIFICATION PRIOR TO LANE CLOSURES	6
TRAFFIC CONTROL REMOVAL	7
CONTRACTOR ACCESS	7
MAINTENANCE OF CROSSEOVERS	7
COOPERATION BETWEEN CONTRACTORS.....	7
EXISTING STATE-OWNED UTILITIES.....	8
STATUS OF UTILITIES	8
ALARM DIALER.....	10
EXCESS MATERIAL.....	12
CONCRETE PAD	12
DRAINAGE FIELD SYSTEM.....	12
DUCTILE IRON WATER MAIN FITTINGS	17
FLUSH HYDRANTS.....	17
MANHOLES, TYPE A, SANITARY.....	18
PACKAGE LIFT STATION	18
PATCH FINISHING.....	31
PAVEMENT MARKINGS	31
PIPE DRAINS 4" (SPECIAL).....	31
PRESSURE TESTING AND DISINFECTION	32
REMOVAL OF EXISTING INTERIOR PLUMBING.....	33
REMOVAL OF EXISTING SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION	34

REMOVE EXISTING SANITARY SEPTIC SYSTEM	37
SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION	37
SANITARY MANHOLES TO BE REMOVED	40
SANITARY SEPTIC TANK	40
SANITARY SEWER REMOVAL	50
SANITARY SEWERS	51
SEALING ABANDONED WATER WELLS	52
CASING PIPE, BORED AND JACKED	52
STEEL CASINGS	53
STORM SEWERS, WATER MAIN QUALITY PIPE	54
TAPPING VALVES AND SLEEVES	54
VERTICAL DUAL AUGER SCREEN	56
WATER MAIN	67
WATER SERVICE METER AND VAULT	69
WATER SERVICE INTERIOR PLUMBING	70
WATER SERVICE	70
WATER VALVES	72
COMPLETION DATE PLUS WORKING DAYS	73
AGGREGATE SUBGRADE IMPROVEMENT (BDE)	74
CEMENT, FINELY DIVIDED MINERALS, ADMIXTURES, CONCRETE, AND MORTAR (BDE)	76
COMPENSABLE DELAY COSTS (BDE)	92
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)	95
EROSION CONTROL BLANKET (BDE)	98
FUEL COST ADJUSTMENT (BDE)	100
INLET FILTERS	103
PAVEMENT MARKING (BDE)	105
PAVEMENT PATCHING (BDE)	105
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)	106
SEEDING (BDE)	107
SIGN PANELS AND APPURTENANCES (BDE)	112
SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)	113
SPEED DISPLAY TRAILER (BDE)	114
STEEL COST ADJUSTMENT (BDE)	115

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)	117
SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE).....	118
SUBMISSION OF BIDDERS LIST INFORMATION (BDE)	118
SUBMISSION OF PAYROLL RECORDS – FEDERAL AID CONTRACT (BDE)	118
SURVEYING SERVICES (BDE)	120
VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE).....	120
WEEKLY DBE TRUCKING REPORTS (BDE).....	121
WOOD SIGN SUPPORT (BDE).....	121
WORK ZONE TRAFFIC CONTROL DEVICES (BDE).....	121
WORK ZONE WIDTH RESTRICTION (BDE).....	123
STORM WATER POLLUTION PREVENTION PLAN	124
IEPA PUBLIC WATER SUPPLY CONSTRUCTION PERMIT	135
IEPA WATER POLLUTION CONTROL PERMIT	136

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction, Adopted April 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 FAI Route 57 (I-57), Project STP-ICS6(598), Section RA 2023-1, Champaign County, Contract No. 70G29 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

This project is located at the Illini Prairie Rest Areas along I-57 (north bound and south bound), near Pesotum, in Champaign County.

INTENT OF PROJECT

The intent of this project is to replace the existing on site sanitary Wisconsin Mounds treatment system with new onsite sanitary sewer septic tank and leach field system and construct water mains to provide treated potable water to both rest areas.

This work shall be completed utilizing partial closure of the rest area parking (truck parking to remain open) and full closure of the restroom facilities. The Contractor will utilize methods necessary to protect and preserve the surrounding environment and properties during construction of this project.

DESCRIPTION OF WORK

The work included in this section consists primarily of:

Sanitary

1. Removal of the existing treatment systems
2. Sanitary septic systems and leach fields
3. Packaged lift stations
4. Vertical dual auger screens
5. Manholes
6. Gravity sanitary sewer
7. Pipe drains
8. Electrical supply and distribution
9. Pavement patching
10. Site grading
11. Seeding
12. Fencing
13. Aggregate surface course
14. Miscellaneous site work
15. All other items necessary to complete construction of the sanitary improvements.

Water

1. Tapping sleeve and valve
2. PVC/DI water main
3. Gate valves & flush hydrants
4. DI fittings
5. Meter vault
6. Steel casings, trenched
7. Steel casings, jack and bore
8. Interior plumbing improvements
9. Sealing abandoned water well
10. Pavement patching
11. Site grading
12. Seeding
13. All other items necessary to complete construction of the water main and service improvements.

TRAFFIC CONTROL PLAN

Eff. 09-11-1990

Rev. 01-01-2024

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

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications, the following Highway Standards relating to Traffic Control, and the listed Supplemental Specifications and Recurring Special Provisions.

Highway Standards: 701001 701006 701101 701106 701201 701400 701406 701422
701428 701451 701801 701901

Special Provisions:

Traffic Control and Protection Standard 701201
Traffic Control and Protection Standard 701406
Traffic Control and Protection Standard 701422
Traffic Control and Protection Standard 701451
Traffic Control and Protection Standard 701801
Traffic Control and Protection (Special)
Rest Area Closure
Notification Prior to Lane Closures
Traffic Control Removal
Contractor Access
Maintenance of Crossovers
Cooperation Between Contractors
Vehicle and Equipment Warning Lights (BDE)
Work Zone Traffic Control Devices (BDE)

Plan Details:

Special attention is called to the Rest Area MOT plans as Truck Parking Lots will remain open for truck parking only as directed by the ENGINEER. No facilities at the rest stop building will be open to the public. Further details are provided in the Rest Area Closure special provision.

Traffic: It is the intention of the Department that I-57 and County Road 300N be kept open to traffic at all times during the construction of this section. One-way traffic on County Road 300N will be permitted in the immediate work areas during construction. At all other times, two-way traffic shall be maintained throughout the project. The Rest Areas will be closed except for truck parking.

During periods when material or equipment is being hauled to or from the project site, all haul trucks shall have at least one (1) flashing amber light or one (1) set of dual emergency flashers, operating when within the lane closure. In addition, "WORK TRUCK DO NOT FOLLOW" shall be displayed on the rear of all haul trucks. Displays shall be 36 inch x 18 inch (0.91 m x 0.46 m) made of Fluorescent Orange reflective material as specified in Article 1106.01. This work shall be considered as included in the contract unit prices for the construction items involved and no additional compensation will be allowed.

Parking of personal vehicles within the right-of-way will be strictly prohibited. Off-site parking and transportation arrangements shall be the responsibility of the Contractor.

The following traffic control standards shall be utilized during, but not limited to, the listed construction operations: 701001, 701006, 701101, 701106, 701201, 701400, 701406, 01422, 701428, 51, 701801 and 701901.

TRAFFIC CONTROL AND PROTECTION STANDARD 701001

Traffic Control and Protection, Standard 701001 shall be used on County Road 300N for off-road operations. Those operations may include but are not necessarily limited to water main installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701006

Traffic Control and Protection, Standard 701006 shall be used on County Road 300N for off-road operations. Those operations may include but are not necessarily limited to water main installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701101

Traffic Control and Protection, Standard 701101 shall be used on FAI Route I-57 for off-road operations. Those operations may include but are not necessarily limited to water main installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701106

Traffic Control and Protection, Standard 701106 shall be used on FAI Route I-57 for off-road operations. Those operations may include but not necessarily limited to water main installation, Landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701400

Traffic Control and Protection, Standard 701400 shall be used on FAI Route I-57 for approaches to work zones requiring a lane closure on I-57.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701428

Traffic Control and Protection, Standard 701428 shall be used on FAI Route I-57 for setup and removal of lane closures on I-57.

This work will not be measured for payment separately in accordance with Article 701.19 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701201

Traffic Control and Protection, Standard 701201 shall be used on County Road 300N for road operations that require a one lane closure. Those operations may include but are not necessarily limited to offloading material for water main installation, water main installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will be measured for payment in accordance with Article 701.19 (c) of the Standard Specifications. The basis of payment for this work will be in accordance with Article 701.20 (b) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701406

Traffic Control and Protection, Standard 701406 shall be used on FAI Route I-57 for road operations that require a one lane closure of I-57 during Day Operations. Those operations may include but are not necessarily limited to offloading material for water main installation, water main installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will be measured for payment in accordance with Article 701.19 (c) of the Standard Specifications. The basis of payment for this work will be in accordance with Article 701.20 (b) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701422

Traffic Control and Protection, Standard 701422 shall be used on FAI Route I-57 for single lane closures each side of I-57 for Steel Casing Pipe, Jack and Bore operations lasting more than 1 day. Those operations may include but are not necessarily limited to offloading material for water

main installation, steel casing pipe installation by jack and bore, watermain installation, landscaping and grading work, punch list items, and miscellaneous clean-up.

This work will be measured for payment in accordance with Article 701.19 (b) of the Standard Specifications. The basis of payment for this work will be in accordance with Article 701.20 (a) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION STANDARD 701451

This work shall conform to the applicable portions of Division 700 of the Standard Specifications, the details as shown on the plans, and as specified herein.

Traffic control and protection to close the exit ramps to each rest area will be according to TRAFFIC CONTROL AND PROTECTION STANDARD 701451 except as modified in the contract plans with additional warning signs shall be placed as shown on the plans. The Contractor shall keep the truck rest area parking open for truck parking except during the Southbound rest area jack and bore operations and resulting patching operation at the boring pit in the truck parking area. The Contractor shall resume truck parking access to the Southbound rest area after that operation is completed as directed by the Engineer.

This work shall be measured according to Article 701.19(c) of the Standard Specifications.

This work will be paid for according to Article 701.20(b) at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION STANDARD 701451.

TRAFFIC CONTROL AND PROTECTION STANDARD 701801

Traffic Control and Protection, Standard 701801 shall be used at all sidewalks in the Rest Area where work will necessitate closure of the sidewalk, corner, or crosswalk for a period.

This work will be measured for payment in accordance with Article 701.19 (c) of the Standard Specifications. The basis of payment for this work will be in accordance with Article 701.20 (b) of the Standard Specifications.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

This work shall consist of furnishing, erecting, maintaining, relocating, and removing all traffic control items as shown in the Maintenance of Traffic Notes and Maintenance of Traffic Plans, and the traffic control standards listed in the plans. Items shall include temporary and permanent signs, changeable message signs, drums, barricades, and all other equipment, hardware, and labor necessary to maintain the closures. This shall include any special signs as shown on the Maintenance of Traffic Control Plan. The Contractor will be required to install, maintain, and remove items as shown on the Maintenance of Traffic Control Plan or as directed by the Engineer. The Rest Area Exist Ramp closures will be measured and paid for separately under Traffic Control Standard 701451.

Traffic Control and Protection shall be paid for at the contract LUMP SUM price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

REST AREA CLOSURE

Truck area parking, including access to and from the highway, shall remain open at all times. The south bound rest area may be closed to all traffic for a maximum of fifteen (15) continuous calendar days to install water main, casing jack and bore and restore pavement.

Personal vehicle parking, including access to and from the highway, shall be closed for a maximum of 120 calendar days. Calendar days for closure shall be continuous from the first closure day to the last day of closure.

Restroom facilities shall be closed for a maximum of 120 calendar days. calendar days for closure shall be continuous from the first closure day to the last day of closure.

The Contractor shall coordinate the timing of the closure of the rest area facilities (truck parking, personal vehicle parking restroom facilities, etc.) with the Engineer and follow the procedures for NOTIFICATION PRIOR TO LANE CLOSURE.

Temporary closure of entire rest area for any other construction related activities will only be allowed with authorization from the Engineer.

NOTIFICATION PRIOR TO LANE CLOSURES

Eff. 01-01-2024

The Contractor shall notify the Department's Bureau of Operations and the individuals and organizations listed below at least two (2) weeks prior to the start of the project and two (2) weeks prior to any lane closures.

Name	Organization	Phone Number
Robert Hodgson	IDOT District 5 Traffic Operations Engineer	(217) 712-9018
Dan DeWitt	IDOT District 5 Maintenance Field Engineer	(217) 843-0344
	Champaign County Sheriff	(217) 384-1204
	Champaign County EMS	(217) 384-3826
	IL State Police (Troop 7)	(217) 867-2050

The Contractor shall also notify David Burkybile, Traffic Signal System Engineer (District 5) at (217) 465-4181 two weeks prior to start of the project to allow time to give advance overhead sign warnings of the upcoming project.

These agencies, organizations, and individuals shall also be notified when the project is complete.

TRAFFIC CONTROL REMOVAL

Eff. 10/13/2011

Per the requirements of Article 701 of the Standard Specifications:

All lanes shall be open to traffic, and all lane closure traffic control shall be removed during non-work hours, unless required by the Contractor's operation or authorized by the Engineer. Failure to open all lanes to traffic during non-work hours will result in a traffic control deficiency, per Article 105.03 of the Standard Specifications.

CONTRACTOR ACCESS

Eff. 09-11-1990

Rev. 01-01-2014

At road closures locations, where Type III barricades are installed in a manner that will not allow contractor access to the project without relocation of one or more of the barricades, the arrangement of the barricades at the beginning of each work day may be relocated, when approved by the Engineer, in the manner shown on Highway Standard 701901 for Road Closed to Through Traffic. ' Road Closed ' signs (R11-2), supplemented by ' Except Authorized Vehicles ' signs (R3-1101), shall be mounted on both the near-right and the far-left barricade(s). At the end of each work day the barricades shall be returned to their in-line positions. This work will be considered to be included in the cost of the various traffic control items and no extra compensation will be allowed.

MAINTENANCE OF CROSSOVERS

The Contractor shall be responsible for the maintenance and/or repair of any median crossover used by construction traffic for the duration of the contract. Maintenance and/or repairs of the median crossovers damaged by the Contractor's operations shall be performed as directed by the Engineer at his/her discretion. The cost of equipment, labor, and materials involved shall be included in the contract cost for EARTH EXCAVATION, and no additional compensation will be allowed.

COOPERATION BETWEEN CONTRACTORS

Eff. 01-01-2024

There is a possibility that other Contractor's operations may be ongoing within the proposed project limit at the same time as the work included in this contract is being performed. The Contractor for this section shall cooperate with any other Contractors performing work adjacent to this project in accordance with Article 105.08 of the Standard Specifications. Any inconveniences or delays caused the Contractor in complying with this requirement shall be considered incidental to the contract and no additional compensation will be allowed.

EXISTING STATE-OWNED UTILITIES

Eff. 04-01-2020

Existing state-owned and maintained underground utilities exist with the right of way. The Department is not a member of JULIE and does not locate its own facilities. The Contractor shall be responsible for securing an approved locating firm to locate all existing Department underground facilities prior to commencing any excavation, per the requirements of Article 803 of the Standard Specifications. Utility locates may be also required outside the project limits for traffic control signing and other items. The Contractor may obtain, on request, plans of existing electrical facilities from the Department. For further information, the contractor may contact the District Traffic Operations Engineer, Robert Hodgson, at 217-712-9018.

This work shall not be paid for separately but shall be considered included in the various pay items for which JULIE locations are required.

STATUS OF UTILITIES

The following utilities are involved in this project. The utility companies have provided the estimated dates.		
Name & Address of Utility	Type & Location	Estimated Date/ Relocation Completed
*Arcola Tuscola Joint Water Line Agency J. Drew Hoel dhoel@tuscola.org 214 N. Main St. Tuscola, IL 61953 (217)253-2112 x123	Watermain on 900 E (Duncan Rd)	Not required
*Eastern Illini Electric Cooperative Graham Schmid graham.schmid@eiec.coop 330 W. Ottawa PO Box 96 Paxton, IL 60957 217-379-0413 (800) 824-5102	Electric poles on north of CR 300 N. Buried electric lines -- transformer 7200 Kv and buried to building 120/240 V line.	Not required

*Frontier Communications Derek Van Gundy derek.vangundy@ftr.com 225 East Chestnut St. Olney, IL 62450 (618) 395-6191	Fiber/ cable underground lines north of CR 300 N, on the east side of the NB car parking lot, and on edge of east ROW of I-57. In NB & SB Rest Areas, near garages to building.	Not required.
*IL Century Network / DoIT Steve Creasey Steve.Creasey@Illinois.gov 120 West Jefferson Springfield, Illinois 62702 217-558-1176 217-299-9312 (Cell)	Fiber line on the east side of I-57 ROW	Not required
*Marathon Pipeline Kendal Bruner khbruner@marathonpetroleum.com 5825 E Cumberland Road Martinsville, IL 62442 (217) 508-5401	12" Steel gas main under CR 300 N going NW SE direction just west of the intersection of CR 300m N and 900 E (Duncan Rd)	Not required
Illinois Department of Transportation - District 5 David Burkybile David.Burkybile@illinois.gov 13473 IL Hwy 133 P.O. Box 610 Paris, IL 61944-0610 (217) 466-7383 Mob: (217) 836-8236	Interchange lighting Interstate 57 Gas- None (Electric heat) Water- (Wells) Sewer- (Leach fields)	Not required

* = J.U.L.I.E. Member

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 102, 103, and Articles 105.07, 107.20, 107.37-.40, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the contractor. If any utility adjustments or relocations have not been completed by the above dates specified and when required by the contractor's operations after these dates, the contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's critical path schedule is affected.

Toll Free J.U.L.I.E. Telephone Number (800) 892-0123 or 811

ALARM DIALER

This work shall consist of furnishing and installing an alarm dialer at locations shown on the plans and as specified herein.

WORK SUMMARY

SUMMARY

- A. Furnish all labor and materials required and installed complete as shown on the Drawings and as specified herein.
- B. This Section covers the furnishing, installation, and services for the field mounted instruments as detailed on the Drawings.
- C. New Units
 - 1. Northbound
 - a. Provide the NEMA 4X enclosure.
 - 2. Southbound
 - a. Provide the NEMA 4X enclosure.

RELATED SECTIONS

- A. See the drawings for additional requirements, the operational description and input/output schedule.

MAINTENANCE

- B. Accessories
 - 1. All mounting hardware required for pipe stand, surface, or other mounting shall be provided.

PRODUCTS

ALARM DIALER

- A. Manufacturer
 - 1. Omni-Site Crystal Ball

- B. A cellular auto-alarm dialer shall be installed within its own enclosure to monitor, control and transmit alarm signals to the Owner.
- C. Provide the NEMA 4X enclosure.
- D. Provide battery backup
- E. Provide minimum one (1) year service plan.

ACCESSORIES

- F. Provide a NEMA 4 painted steel junction box as required for power transformers or other miscellaneous equipment required for a complete installation.

EXECUTION

INSTALLATION

- A. Alarm dialer and accessory equipment shall be installed in accordance with the manufacturer's instructions. The locations of equipment and similar devices indicated are approximate only. Exact locations of all devices shall be as approved by the Engineer during construction. Obtain in the field, all information relevant to the placing of process control equipment and in case of any interference with other work, proceed as directed by the Engineer and furnish all labor and materials necessary to complete the work in an approved manner at no additional cost to the Owner.
- B. Brackets and hangers required for mounting of equipment shall be provided. They shall be installed as shown and not interfere with any other equipment.

START-UP & TRAINING

- C. A service technician shall be made available on the jobsite to check installation and electrical wiring connection before any start-up of the unit is attempted by any one.
- D. The manufacturer shall provide the Owner personnel with a minimum of one (1), six (6) hour training sessions covering the operation and controls of the system. Training shall be scheduled at a time determined mutually agreeable by the customer and the contractor and after startup is substantially complete. A copy of the training program outline shall be submitted to the owner and their Engineer as part of the equipment submittal package. A start-up report shall be filled out and submitted to Owner, and Engineer by the trainer upon completion of successful startup.

This work will be included in SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION, at the location designated which price shall include all equipment labor for the installation of electrical equipment, controllers, wires, conduits (if required) to satisfactorily complete the work.

EXCESS MATERIAL

All excavated soil generated from the work shall remain on or be incorporated within the IDOT ROW for the project. No offsite transport will be allowed.

CONCRETE PAD

Description: This work shall consist of excavating and providing a PCC pad on a prepared aggregate base course at locations and dimensions shown and detailed in the plans. Earth excavation shall be in accordance with Section 201 and 202 of the Standard Specifications. The concrete pad and aggregate base course shall be in accordance with the applicable portions of Section 424 and 351, respectively, of the Standard Specifications. The concrete pads shall be constructed near the proposed septic fields as shown in the plans.

The prepared aggregate base course shall be type B, 4" thick, and be an IDOT gradation CA-6.

The concrete pad shall be 6" thick and have 10 gauge 4"x4" wire mesh installed. The wire mesh shall be epoxy coated. The mesh shall meet the requirements of Section 1006 of the Standard Specifications, ASTM A 884, and the following. The epoxy coating applicator shall be certified according to the Bureau of Materials Policy memorandum, "Epoxy Coating Plant Certification Procedure". IDOT maintains a qualified producer list.

Basis of Payment: This work shall be paid for at the contract unit price per SQUARE YARD for CONCRETE PAD, which price includes clearing, excavation, subgrade improvement, concrete, form work, and all other materials, labor, tools, and equipment necessary to complete the work.

DRAINAGE FIELD SYSTEM

This work shall consist of furnishing and installing a fully operational absorption field system complete using materials for gravel-less type disposal field with chambers to disperse septic tank effluent to meet Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) regulations including inlet and outlet pipes, valves, fittings, chambers, testing and other accessories at the locations specified in accordance with the plans and specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area.
Location 2	South Bound I-55 Rest Area.

SUMMARY

D. Summary of Work

1. Furnish, deliver, and install a new and fully operational absorption field system complete using materials for gravel-less type disposal field with chambers to disperse septic tank effluent to meet Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) permit requirements.

2. The installer of the absorption field system shall furnish a complete and fully operational absorption field system, consisting of sewer transfer box, PVC gravity piping from sewer transfer box to distribution boxes with associated piping to infiltration chambers. The installer shall supply detailed installation, operation, and maintenance (O&M) instructions and manuals.
3. The system shall also include a curtain drain system as detailed in the contract drawings.
4. The installer of the gravel-less absorption field system shall demonstrate a record of at least 3 absorption field gravel-less systems of similar type each in successful service for not less than 10 years. Additionally, the installer of the absorption field gravel-less system shall demonstrate 2 successful operating installations within the Champaign County Department of Public Health jurisdiction. The absorption field gravel-less system shall be installed using components manufactured by Infiltrator Water Technologies, LLC or other pre-approved equal. The Owner shall determine whether the other manufacturer will meet the requirements for preapproved equal.
5. The Owner shall require a minimum of 30 calendar days to review and respond in writing to the manufacturer's pre-approval submittal. For any submittal determined to not meet this specification for pre-approval, the Owner shall provide a letter reporting the submittal deficiencies. For any submittal determined to meet this specification for pre-approval, the Owner shall provide a letter acknowledging pre-approval that must be included with the final Contractor bid.

E. Related Special Provisions

1. Packaged Lift Stations
2. Sanitary Septic Tanks
3. Pipe Drains 4" (Special)

REFERENCES

A. Publications

1. American National Standard - Uniform Plumbing Code - Appendix H (2021)

B. Regulations

1. Illinois Administrative Code Title 77 Part 905
2. Champaign County Health Ordinance No. 969 Part 6

SUBMITTALS

The manufacturer will provide submittal for review by the Engineer

- A. Manufacturer's product data for all components comprising the absorption field system.

B. Manufacturer's installation instructions or guide for the following items:

1. Chambers
2. Distribution boxes
3. Inspection and access boxes
4. Piping

QUALITY ASSURANCE

- A. The chambers shall be INFILTRATOR Quick4 Plus Standard Low Profile (LP) chamber as manufactured by Infiltrator Water Technologies, or equal as defined.
- B. Chamber manufacturing facility shall be ISO 9002 certified. Proof of certification shall be required as part of the submittals.
- C. If the plant is not ISO 9002 certified then the contractor shall submit material testing as defined in the submittals.

DELIVERY, STORAGE & HANDLING

- A. Delivery: Handle pipe, and appurtenances carefully to ensure delivery at the project site in sound, undamaged condition. The Owner will reject damaged pipes, and appurtenances on site. The contractor shall replace the damaged pipe, and appurtenances at no additional expense to the Owner.
 1. Do not deliver chambers to job site earlier than one week prior to scheduled date of commencing installation.
- B. Storage: Do not store materials directly on the ground. Adequately support piping, and appurtenances to prevent warpage or damage. Use protective covers where pipes, and appurtenances may be damaged by direct sunlight.
 1. All storage and handling of the chambers at job site shall not in any way impair or damage the product.

PRODUCTS

- A. Manufacturers
 1. Infiltrator Water Technologies, LLC Q4 PLUS STND LP, or other pre-approved equal.
- B. Distribution Boxes, Piping, Chambers, Inspection Port Piping, and Associated Components
 1. Treated Effluent PVC Pipe
 - a. Material shall be 4" PVC schedule 40 between Septic Tank, Manhole, and distribution box and 4" PVC schedule 40 between distribution box and chambers.

2. Distribution Boxes: Distribution for individual runs capable of providing multiple run gravity distribution legs.
 - a. Boxes are manufactured using HDPE or fiberglass with inspection
 - b. All fittings, schedule 40 PVC per ASTM specification.
3. Unions, schedule 40 PVC per ASTM specifications

C. Absorption Field Chambers

1. The chambers shall be manufactured of polypropylene by an injection molding process. If the chambers are to be manufactured with other than the Environmental Stress Crack Resistance testing is required per the submittals.
2. The chambers shall be arch shaped and of open bottom construction with provisions for side exit of effluent. Side exit openings shall be louvered so as not to allow entry of backfill materials into the chamber. The sidewall louver height shall be no less than 6.3 inches. The use of filter fabric or stone is allowed, but not required.
3. The chamber shall have center structural columns not exceeding 7.0" at the base to allow for lateral transmission of effluent. If the chamber exceeds this limit then dual piping shall be installed on each side of the column.
4. The chambers shall achieve an axle loading of 16,000 lbs/axle (AASHTO rating of H-10) with 12" of compacted backfill, and installed according to manufacturer's specifications.
5. The chamber shall be injection molded in units not exceeding 4.5 feet in length, by 2.83 feet in width, by 8.0 (+/-) inches in height. When interlocked the effective length shall be 4 feet. If the chamber is not 4 feet in length then the contractor may be required to cut the chambers to meet the required trench length per the plans. The chamber shall allow for pressure or gravity distribution.
6. The chamber endplates shall accommodate a 3.3" invert height and come with a pre-molded splash pad to prevent trench erosion. If there is no splash pad provided then the contractor shall provide other means for trench erosion protection such as concrete patio blocks or other method to be approved by the design Engineer.
7. Individual units shall be constructed in a manner that allows interlocking from one to the next. Each joint shall allow a minimum deflection of 10 degrees.
8. Chambers shall have interior drip ledges to prevent pressure dosed effluent from traveling down the inside walls, thereby preventing fill from entering the chamber. If the chamber does not have a drip ledge then orifice shields shall be required.

D. Inspection Boxes

1. Inspection boxes shall be made of HDPE with covers and capable of providing adequate housing for inspection piping as shown on the construction drawings.
2. Pre-approved Inspection Box:

- a. Infiltrator Water Technologies, LLC or Owner approved equal.

EXECUTION

A. Gravel-less Type Absorption Field Installation

1. Install chambers, pipe fittings, accessories, and bedding materials in strict accordance with plans and instructions by the manufacturer.
2. Refer to Earthwork Section for soil/fill material requirements or specifications. Fill Soil used at the drainage field site shall comply with Illinois Administrative Code Title 77, Part 905.60(A)(9), and shall be classified as Design Group II as defined by Appendix A Illustration M. Care should be taken for backfilling and access for equipment above drainage field. No Equipment larger than 6 psi bearing pressure shall be used above drainage field in accordance with Illinois Administrative Code Title 77, Part 905.
3. Excavate to lines and depths as shown on the construction drawings. A pre-construction conference is required to establish the responsibilities and duties among the parties associated with the installation and operation of the absorption field system and its associated components. Conference attendees should include appropriate representatives from the IDOT (Owner) and or Engineer, the construction contractor, and the manufacturers of the components of the absorption field system.
4. The contractor shall coordinate with the Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) regarding the proper installation and to inspect the proper installation and field testing of each absorption field run per the permit requirements.
 - a. Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) inspector shall provide quality control by inspecting and certifying the installation of the absorption field gravel-less system and its associated components comply with Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) permit requirements.
 - b. Note the contractor shall provide all equipment necessary to complete the inspection and field-testing program.
5. The contractor shall conduct a system performance evaluation to demonstrate system compliance under Illinois Environmental Protection Agency (IEPA) and Champaign County Department of Public Health (IDPH) permit requirements. The contractor is responsible for all testing demonstration costs.

This work shall be paid at the contract unit price per LUMP SUM for DRAINAGE FIELD SYSTEM at the location designated for which price shall be payment in full for performing the work as specified herein.

The curtain drain system will be paid for separately as PIPE DRAINS 4" (SPECIAL).

DUCTILE IRON WATER MAIN FITTINGS

This work shall consist of furnishing and installing ductile iron fittings (tees, bends, etc.) of the size as shown on the plans in accordance with Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

Water main fittings shall be ductile iron compact, mechanical joint for buried mains, with pressure rating of 350 psi for 24 inch and smaller piping. Fittings shall meet the requirements of AWWA C110 or AWWA C153 as applicable.

All fittings shall have retainer glands.

All fasteners shall be 304 stainless steel or Core-Blue.

Ductile iron fittings shall have a cement mortar lining in accordance with AWWA C104.

Thrust blocks shall be furnished and installed by the Contractor as detailed on the plans. Thrust blocks shall be concrete composed. Concrete shall be Class "SI" in accordance with the "Standard Specifications".

The following weights for the various types of fittings will be used for payment purposes:

<u>FITTING</u>	<u>WEIGHT</u>
6"x6"x6" Tee	66 Pound
6" 90° Bend	49 Pound
6" 45° Bend	39 Pound
6" 22.5° Bend	31 Pound
6" Solid Sleeve	28 Pound

This work will be paid for at the contract unit price per POUND for DUCTILE IRON WATER MAIN FITTINGS, which price shall include ductile iron fittings, glands, bolts, grips, thrust blocking, restraints, all labor, materials and equipment to satisfactorily complete the work.

FLUSH HYDRANTS

This work shall consist of furnishing and installing new flush hydrants as indicated and detailed on the plans and in accordance with Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

Hydrants shall be dry barrel type conforming to the requirements of AWWA C502. Hydrants shall be designed such that the hydrant valve closes with line pressure preventing loss of water and consequent flooding in the event of damage.

Hydrants shall have 6 inch mechanical joint inlet connections, shall be 2-way 4½" valves with two 2½" inch hose connections. Threads for the hose and pumper connections shall be in accordance with National Standard Thread. Hydrants shall be Mueller Super Centurion 250, or equal and red in color.

Any additional bury depth required on a hydrant will not be paid for separately. Costs associated with added depth should be included in the contract unit price.

This work will be paid for at the contract unit price per EACH for FLUSH HYDRANTS, which price shall include flush hydrant, excavation necessary to install fire hydrant, gravel backfill around hydrant, concrete thrust block and all labor, materials and equipment to satisfactorily complete the work.

MANHOLES, TYPE A, SANITARY

This work shall include furnishing and installing precast concrete sanitary manholes in accordance with the applicable portions of Section 602 in the Standard Specifications and Section 32 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The Contractor shall confirm in the field the depth of the existing manholes or sewer prior to ordering manholes. The Contractor shall inform the Engineer of any depths that differ from the plans.

Pre-cast manholes shall conform to ASTM C 478 and the details on the plans. Pre-cast components shall be substantially free from fractures.

Joints between pre-cast sections shall be designed for preformed flexible gaskets, rubber gaskets, butyl rope or other equivalent material to ensure a watertight joint.

All manholes shall be tested for watertightness in accordance with ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test", prior to placing into service

This work shall be paid at the contract unit price per EACH for MANHOLES, TYPE A, SANITARY, of diameter specified and frame and lid specified. The price shall be payment in full for performing the work as specified herein. Costs for all materials and labor to install manhole and make all necessary pipe connections, excavation, and perform vacuum testing shall be included in the contract unit price.

PACKAGE LIFT STATION

This work shall consist of furnishing and installing a packaged lift station of the specified type including inlet and outlet pipes, valves, fittings, pumps, controllers, testing and other accessories at the locations specified in accordance with the plans and specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area.
Location 2	South Bound I-55 Rest Area.

SUMMARY

A. Summary of Work

1. This section includes pumping systems at Northbound and Southbound sites.
2. Each site includes a duplex system for the sanitary sewer system and a simplex for the perimeter curtain drain pumping system.
3. All pumps shall be of the same make and model for ease of operation, maintenance, and redundancy.
4. Force main connecting the Lift Station to the new septic tank.
5. Force main connecting the Lift Station to existing curtain drain

B. The lift station shall be a package fully assembled system, including as a minimum the following material and equipment:

1. 48" diameter reinforced basin assembly with cover
2. Grinder pumps and motors
3. Internal PVC discharge piping
4. Check valves
5. Shut-off valves
6. Slide rail pump removal systems
7. Stainless steel pump lifting chains
8. (4) Liquid Level Sensing Floats
9. Junction Box
10. Inlet fitting
11. Remote pump control panel

C. All equipment shall be factory installed except for the grinder pump, inlet fitting, remote-mounted control panel, and liquid level sensing floats.

D. The contractor shall install a manufacture furnished, complete factory-built and tested grinder pump assemblies, each consisting of an electrical alarm assembly and all necessary internal wiring and controls. For ease of serviceability, all pump motor/grinder units shall be of like type and horsepower throughout the system.

OPERATING CONDITIONS

- A. The pumps shall be capable of delivering 60 GPM at a total head of 28 feet and shall use a maximum of 2.5 HP motor operating at 3450 RPM. The pump(s) must also be capable of operating at negative total dynamic head without overloading the motor(s). Under no conditions shall in-line piping or valving be allowed to create a false apparent head.

SUBMITTALS

- A. Submit shop drawings, product data, materials of construction, and details of installation.
- B. Testing Reports.
- C. Manufacturer warranty information.
- D. The Manufacturer shall supply copies of Operation and Maintenance Manuals to the OWNER.

WARRANTY

- A. The pump manufacturer shall warrant the units being supplied to the owner against defects in workmanship and material for a period of five years or 10,000 hours, whichever shall occur first. The warranty shall cover both parts and labor and shall apply to all other similar products as manufactured by the pump manufacturer. The warranty shall cover 100% of all parts and labor during the first 18 months of operation after startup. During the next 24 months, parts and labor shall be covered at a 50% rate. During the last 18 months, both parts and labor shall be covered at a rate of 25%. During the entire five-year period, IDOT shall be responsible for removing and replacing the pump from the tubes. However, during the entire five-year period, the manufacturer shall be responsible for freight.

DELIVERY, STORAGE AND HANDLING

- A. Store components in accordance with the manufacturer's written instructions, protect from damage, and protect after installation until final acceptance.

PRODUCTS

Manufacturers

- A. Grinder pump stations, complete with all appurtenances, form an integral system, and as such, shall be supplied by one pump station manufacturer. The CONTRACTOR shall be responsible for the satisfactory operation of the entire system. The equipment specified shall be a product of a company experienced in the design and manufacture of grinder pumps for specific use in sewage systems. The company shall submit detailed installation and user instructions for its product,

submit evidence of an established service program including complete parts and service manuals, and be responsible for maintaining a continuing inventory of grinder pump replacement parts. The MANUFACTURER shall provide, upon request, a reference and contact list from ten of its largest contiguous grinder pump installations of the type of grinder pumps described within this specification.

- B. The MANUFACTURER of the grinder pump station shall be Keen Model KG2-21SL, Liberty Pumps Model (X)LGV02, or equivalent
- C. Attention is directed to the fact that the drawings and overall system design are based on a particular piece of equipment from a particular manufacturer. These specifications are intended to provide guidelines for standard equipment of a recognized manufacturer who already meets all the requirements of this specification.

Basin Assembly

- A. The fiberglass basin shall be made of a polyester resin saturated glass filament wound process to obtain maximum axial and hoop modulus strength. The placement of E-Type continuous glass fiber shall be computer controlled under constant tension during the manufacturing process. The finished resin saturated filament tank wall shall have 65% glass content and be inert and acceptable to the environment. The basin shall be watertight.
- B. The inner surface shall be smooth and resin rich, free of cracks, exposed fibers, porosity and crazing.
- C. The exterior surface shall be relatively smooth with no exposed fibers or sharp projections. If a pigment is added, color should be relatively equal throughout. Foreign inclusions, dry spots, pinholes or pits, delaminations, large dimples not meeting thickness requirements, and air bubbles are not acceptable.
- D. The inner layer shall be resin saturated continuous E-type glass fiber.
- E. The tank wall consisting of the inner surface, inner layer, and exterior surface should not have a minimum wall thickness of less than .10 inches. The tank wall thickness may increase as the depth or diameter changes to meet design and test requirements. The tank must be designed to withstand wall collapse or cracking, based on an assumption of saturated soil, hydrostatic pressure of 120 lbs. per cu. foot. The tank must be designed to withstand or exceed two (2) times the assumed loading on any depth of basin. Length of tank (depth to bury) to be specified on purchase order with wall thickness approval calculations to be supplied by manufacturer upon request.
- F. The basin bottom shall be of sufficient thickness to withstand applicable hydrostatic uplift pressure with a safety factor of two (2). In saturated conditions, the center deflection of the empty basin bottom shall be less than 3/8" (elastic deflection) and shall not interfere with bottom pump mounting requirements. Any mounting studs,

plates, cap screws into tank bottom should be stainless steel and resin covered except for threads. Any inserts should be stainless steel or brass and resin covered except for threads.

- G. A means to counteract buoyancy forces shall be provided on the tank bottom in the form of a ring, and shall extend a minimum of 3" beyond the O.D. of the basin wall. Thickness shall be uniform, but increased as needed to prevent cracking or failure, assuming two times applied load as tank dimensions increase. Wall and collar should be blended with a radius not to exceed 1½" beyond wall O.D. Tank manufacturer to provide approval calculations showing acceptable stress/thickness verification upon request.
- H. The top flange should be parallel to the tank bottom/collar and perpendicular to the tank wall. Corrosion resistant nuts shall be embedded in the top flange for securing the basin cover. The nuts shall be totally encapsulated to prevent turning (minimum turning torque should not be less than 30 foot/lbs.), pullout and corrosion.
- I. Basin shall have valve vault attached to wet well in a keyhole configuration
- J. Consult the contract drawings for station tank sizes (diameter and height).

Pumps & Motors

- A. Pumps shall be of the centrifugal type Keen Model KG2-21SL, Liberty Pumps Model (X)LGV02, or equivalent with an integrally built in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage including reasonable amounts of foreign objects such as small wood, sticks, plastic, thin rubber, sanitary napkins, disposable diapers and the like to a fine slurry that will pass freely through the pump and discharge pipe.
- B. Pump motor shall be of the submersible type rated for a maximum of 2.5 horsepower at 3450 RPM. Motor shall be for single phase 230 volts. Single phase motors shall be of capacitor start, capacitor run. NEMA L type. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings and rotor to outer shell. Motor shall have two heavy-duty ball bearings to support pump shaft and take radial and thrust loads. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be pressed into motor housing. Single-phase motors shall have a heat sensor thermostat and overload attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200° F. The high temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall reset automatically when the motor cools to a safe operating temperature. The common motor pump and grinder shaft shall be of #416 stainless steel threaded to take pump impeller and grinder impeller.

- C. Motor shall be protected by dual mechanical seals mounted in tandem with a seal chamber between the seals. Single Mechanical Seals or Lip Seals shall be considered unacceptable. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell. Lower Seal and Upper Seal shall both be Silicon Carbide. An electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor but shall act as a warning only, indicating service is required.
- D. The pump impeller shall be of the recessed type to provide an open unobstructed passage through the volute for the ground solids. Impeller shall be cast iron and shall be threaded onto stainless steel shaft. Minimum impeller diameter is 3¾".
- E. Grinder assembly shall consist of grinder impeller and shredding ring and shall be mounted directly below the volute passage. Grinder impeller to be threaded onto stainless shaft and shall be locked with screw and washer. The shredding ring shall be pressed into iron holding flange for easy removal. Flange shall be provided with tapped back-off holes so that screws can be used to push the shredding ring from housing. All grinding of solids shall be from action of the impeller against the shredding ring. Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C.
- F. All iron castings shall be pre-treated with phosphate and chromic rinse and to be painted before machining and all machined surfaces exposed to the sewage water to be re-painted. All fasteners to be 302 stainless steel.
- G. The motor power cord shall be SOOW and shall be fastened by means of a cord grip in the top of the pump. The top of the pump shall contain a waterproof junction box which will provide space to connect the power cord to the motor leads. The motor leads shall seal between the motor housing and junction box by means of a rubber compression fitting around each wire. Power cord shall have a green carrier ground conductor that attaches to motor frame.

Piping and Valves

- A. Discharge piping shall extend from the discharge base lift assembly and terminate at a discharge flange mounted in the basin wall at the height indicated by the contract drawings. The discharge flange shall have a solvent weld socket type hub for attaching external discharge piping.
- B. Check valve shall be an integral removable ball check valve as part of the discharge internal discharge piping.
- C. The shut-off valve shall be a brass gate valve. If the valve is located greater than 2'-0" below the top of the basin, an extension handle must be provided.

D. The sewer inlet fitting shall be provided separate of the basin for field installation by the installer. The fitting shall provide a watertight connection of the inlet piping to the basin.

E. See Contract Drawings for material and sizes

Sump Pump Control Panel (Simplex Pump Station)

A. A NEMA 4X stainless steel wall mounted control panel shall be furnished for the simplex pump station as shown on the plans. The enclosure shall be provided with a deadfront door and back panel mounting provisions. The cover shall be lockable.

B. The panel shall include a main disconnect breaker, motor breakers, power breakers, power supplies, control circuit fuse, FVNR motor starter, pump hand-off-auto switch, pump run light, pump fault light, seal leak light, start and run capacitors, start relay, relays, terminal blocks, motor temp/leak monitor relay, condensation heater, elapsed time meters, surge protective device, corrosion inhibitor, intrinsically safe barriers, ground lug and all necessary wiring and brackets.

C. The control panel shall be fitted with a NEMA 4X, red lexan (polycarbonate) alarm light. The globe shall be mounted on side of the enclosure with a neoprene gasket. The illuminator shall be LED type. The alarm shall flash during high water conditions. The alarm light will stay latched on until the reset button is pressed.

D. All internal wiring shall be neat and color coded. Each wire shall be a different color or stripe (except for ground), and all incoming wires shall terminate into a box clamp type terminal block (except incoming power). All wires shall be 14GA. type TEW rated for 105 degrees Celsius.

E. A schematic diagram (showing wire color) shall be permanently fastened to the inside of the enclosure. An Installation and Service Manual shall also be included with each control panel. The control panel shall be U.L. listed as an assembly.

F. Operational Description

1. General: The pumps shall primarily be controlled with FVNR starters, automatically with (3) floats switches.

2. Control:

a. Local:

i. OFF: In this position, the pump will not run under any circumstance.

ii. HAND: In this position, the pump shall run without regard for the level sensing commands and will rely on operator discipline to run and stop.

iii. AUTO: In this position, pump shall be controlled by the level sensors and control system.

- b. Pump Sequence: When water level in pump pit reaches float level 2 (pump start sensor) pump contactor will be energized until water level drops to float level 1 (pump stop). If water level reaches float level 4, alarm circuit is to be energized.
 - i. LEVEL 3 (Float): High Level Alarm; Pump Running
 - ii. LEVEL 2 (Float): Pump On
 - iii. LEVEL 1 (Float): Pump Stop
- c. If at any time the wet well level initiates "high level alarm" level, a high level alarm will be indicated locally with an alarm strobe light. The pump control panel shall be designed to allow for automatic restart after power fail without a manual reset. Pump elapsed run-time in hours, run status, fault status, high level alarm, seal and temperature sensor status, shall be independently indicated on the control panel. If called to run pump initiates a fault, along with stopping the pump and requiring a reset to re-start, an alarm shall be indicated locally on the control panel. If a called to run pump returns a discrete seal fail signal, a "seal fail" alarm shall be indicated locally on the control panel. The pump will be immediately stopped and a manual reset will be required to re-start the pump. If a called to run pump returns a discrete over-temp signal, an "over temp" alarm shall be indicated locally on the control panel. The pump will be immediately stopped and a manual reset will be required to re-start the pump.

3. Alarm / Monitoring

- a. Local: The following minimum local pilot lights shall be provided:
 - i. Pump Run – Green
 - ii. Pump Fault – Red
 - iii. Pump Seal Fail
 - iv. Pump Overtemp
 - v. High Level Alarm – Red Strobe Beacon
- b. Remote: Provide the following dry-contact outputs:
 - i. Pump Run
 - ii. Pump Fault
 - iii. Pump Not-In-Auto
 - iv. Pump Seal / Overtemp Alarm
 - v. High Level Alarm

Sump Pump Control Panel (Duplex Pump Station)

- E. A NEMA 4X stainless steel wall mounted control panel shall be furnished for the duplex pump station as shown on the plans. The enclosure shall be provided with a deadfront door and back panel mounting provisions. The cover shall be lockable.
- F. The panel shall include a main disconnect breaker, motor breakers, power breakers, power supplies, control circuit fuse, FVNR motor starter, pump hand-off-auto switch, pump run light, pump fault light, seal leak light, start and run capacitors, start relay, relays, terminal blocks, motor temp/leak monitor relay, alternator, condensation heater, elapsed time meters, surge protective device, corrosion inhibitor, intrinsically safe barriers, ground lug and all necessary wiring and brackets.
- G. The control panel shall be fitted with a NEMA 4X, red lexan (polycarbonate) alarm light. The globe shall be mounted on side of the enclosure with a neoprene gasket. The illuminator shall be LED type. The alarm shall flash during high water conditions. The alarm light will stay latched on until the reset button is pressed.
- H. All internal wiring shall be neat and color coded. Each wire shall be a different color or stripe (except for ground), and all incoming wires shall terminate into a box clamp type terminal block (except incoming power). All wires shall be 14GA. type TEW rated for 105 degrees Celsius.
- I. A schematic diagram (showing wire color) shall be permanently fastened to the inside of the enclosure. An Installation and Service Manual shall also be included with each control panel. The control panel shall be U.L. listed as an assembly.
- J. Operational Description
 - 1. General: The pumps shall primarily be controlled with FVNR starters, automatically with (4) floats switches and a duplex alternator, lead-lag function.
 - 2. Control:
 - a. Local:
 - i. OFF: In this position, the applicable pump will not run under any circumstance.
 - ii. HAND: In this position, the applicable pump shall run without regard for the level sensing commands and will rely on operator discipline to run and stop.
 - iii. AUTO: In this position, all pumps shall be controlled by the level sensors and control system.
 - b. Pump Sequence: When water level in pump pit reaches float level 2 (lead pump start sensor) the alternator provided for changing pump 1 and pump 2 duty (lead - lag alternating) will change its state and lead pump contactor will be energized. If water level continues to rise and reaches float level 3

(lag pump start sensor) the lag pump contactor will be energized until water level drops to float level 1 (pumps stop). If water level reaches float level 4, alarm circuit is to be energized.

- i. LEVEL 4 (Float): High Level Alarm; Both Pumps Running
 - ii. LEVEL 3 (Float): Lag Pump On, Both Pumps Running
 - iii. LEVEL 2 (Float): Lead Pump On, Shall Alternate on Each Call
 - iv. LEVEL 1 (Float): All Pumps Stop
- c. If at any time the wet well level initiates "high level alarm" level, in addition to starting the determined lead and lag pumps, a high level alarm will be indicated locally with an alarm strobe light. The pump control panel shall be designed to allow for automatic restart after power fail without a manual reset. All pump elapsed run-time in hours, run status, fault status, high level alarm, seal and temperature sensor status, shall be independently indicated on the control panel. If any called to run pump initiates a fault, along with stopping the pump and requiring a reset to re-start, an alarm shall be indicated locally on the control panel. If a called to run pump returns a discrete seal fail signal, a "seal fail" alarm shall be indicated locally on the control panel. The pump will be immediately stopped and a manual reset will be required to re-start the pump. If a called to run pump returns a discrete over-temp signal, an "over temp" alarm shall be indicated locally on the control panel. The pump will be immediately stopped and a manual reset will be required to re-start the pump.

3. Alarm / Monitoring

- a. Local: The following minimum local pilot lights shall be provided:
 - i. Pump 1 Run – Green
 - ii. Pump 2 Run – Green
 - iii. Pump 1 Fault – Red
 - iv. Pump 2 Fault – Red
 - v. Pump 1 Seal Fail
 - vi. Pump 2 Seal Fail
 - vii. Pump 1 Overtemp
 - viii. Pump 2 Overtemp
 - ix. High Level Alarm – Red Strobe Beacon
- b. Remote: Provide the following dry-contact outputs:

- i. Pump 1 Run
- ii. Pump 2 Run
- iii. Pump 1 Fault
- iv. Pump 2 Fault
- v. Pump 1 Not-In-Auto
- vi. Pump 2 Not-In-Auto
- vii. Pump 1 Seal / Overtemp Alarm
- viii. Pump 2 Seal / Overtemp Alarm
- ix. High Level Alarm

Float Switches

A. Manufacturer

- 1. ITT Flygt Model ENM-10 or equivalent
 - a. The float switch shall consist of a mechanically activated SPDT microswitch encased in a polypropylene float. Mercury activated switches shall not be allowed. The interrupting capacity of the switch shall be 250VAC 10A resistive load, 250VAC 3A inductive load, or 30VDC 5A. The plastic components shall be screwed or welded together. Plastic casings joined by adhesives shall not be allowed. The cable shall consist of 3 conductors in a PVC sheath. The float switch shall operate in media temperatures of 0 to +60° C, and in media densities of 0.65 to 1.5 g/cm³. Cables shall be continuous and long enough to reach the control panel.

Additional Equipment

A. The MANUFACTURER will supply:

- 1. One (1) additional grinder pump
- 2. Two (2) additional Floats
- 3. One(1) additional check valve

Force Main

- A. Polyvinyl Chloride (PVC) sewer forcemain: 1.5"-12" shall conform to ASTM D-1785, for SCH-40 wall thickness. The joints shall meet the requirements of ASTM D-3139, with elastomeric ring seals or gaskets per ASTM F-477 or solvent weld meeting ASTM D-2466.

EXECUTION

Examination

- A. Verification of existing conditions before starting work.

Factory Test

- A. Each grinder pump shall be manufactured certified. Test results shall be available upon request showing the operation of each grinder pump at two different points on its curve.
- B. The ENGINEER reserves the right to inspect such testing procedures with representatives of the OWNER, at the GRINDER PUMP MANUFACTURER'S facility.
- C. All basins shall be factory leak tested to assure the integrity of all joints, seams and penetrations. All necessary penetrations such as inlets, discharge fittings and cable connectors shall be included in this test along with their respective sealing means (grommets, gaskets etc.).

Delivery

- A. All grinder pump assemblies will be delivered to the job site assembled, including testing, ready for installation. Grinder pumps will be shipped separately from the tanks.

Installation

- A. Earth excavation and backfill are to be done as a part of the work under this section, including any necessary sheeting and bracing.
- B. The CONTRACTOR shall be responsible for handling ground water to provide a firm, dry subgrade for the structure, and shall guard against flotation or other damage resulting from general water or flooding.
- C. The grinder pump stations shall not be set into the excavation until the installation procedures and excavation have been approved by the ENGINEER.
- D. Remove packing material. User instructions MUST be given to the OWNER. Hardware supplied with the unit, if required, will be used at installation. The basin will be supplied with a standard 8" inlet grommet for connecting the incoming sewer line. Appropriate inlet piping must be used. The basin may not be dropped, rolled or laid on its side for any reason.
- E. The finished grade shall slope away from the unit. The diameter of the excavated hole must be large enough to allow adequate clearance for field connections, backfill installation and compaction.
- F. A 6" (minimum) layer of aggregate, (CA6) shall be used as bedding material under each unit.

- G. Connect lift station to inlet pipe from dual auger lift station screen (if required).
- H. Connect lift station to septic tank with 2" PVC force main (if required).
- I. Connect lift station to perimeter pipe drain collection system (if required)

Backfill Requirements

- A. Proper backfill is essential to the long-term reliability of any underground structure. Several methods of backfill are available to produce favorable results with different native soil conditions. The most highly recommended method of backfilling is to surround the unit to grade using Class I or Class II backfill material as defined in ASTM 2321.
- B. If the native soil condition consists of clean compactible soil, with less than 12% fines, free of ice, rocks, roots and organic material, it may be an acceptable backfill. Such soil must be compacted in lifts not to exceed one foot to reach a final Proctor Density of between 85% and 90%. Non-compactible clays and silts are not suitable backfill for this or any underground structure such as inlet or discharge lines. If you are unsure of the consistency of the native soil, it is recommended that a geotechnical evaluation of the material is obtained before specifying backfill.

Startup and Field Testing

- A. The MANUFACTURER shall provide the services of qualified factory trained technician(s) who shall inspect the placement and wiring of each station, perform field tests as specified herein, and instruct the OWNER'S personnel in the operation and maintenance of the equipment before the stations are accepted by the OWNER.
- B. All equipment and materials necessary to perform testing shall be the responsibility of the INSTALLING CONTRACTOR. This includes, as a minimum, a portable generator and power cable (if temporary power is required), water in each basin (filled to a depth sufficient to verify the high level alarm is operating), and opening of all valves in the system. These steps shall be completed prior to the qualified factory trained technician(s) arrival on site.
- C. Upon completion of the installation, the authorized factory technician(s) will perform the following test on each station:
 - 1. Make certain the discharge shut-off valve in the station is fully open.
 - 2. Turn ON the alarm power circuit and verify the alarm is functioning properly.
 - 3. Turn ON the pump power circuit. Initiate the pump operation to verify automatic "on/off" controls are operative. The pump should immediately turn ON.
 - 4. Consult the Manufacturer's Service Manual for detailed start-up procedures.
- D. Upon completion of the start-up and testing, the MANUFACTURER shall submit to the ENGINEER the start-up authorization form describing the results of the tests

performed for each grinder pump station. Final acceptance of the system will not occur until authorization forms have been received for each pump station installed and any installation deficiencies corrected.

Cleaning

- A. Thoroughly clean all new precast structures of all silt, debris and foreign matter of any kind, prior to final inspections.

This work shall be paid at the contract unit price per LUMP SUM for PACKAGE LIFT STATION of the type specified and at the location designated which price shall be payment in full for performing the work as specified herein.

PATCH FINISHING

Eff. 01-01-24

The surface of the patch shall be hand tined in accordance with article 420.09(e) of the Standard Specifications for Road and Bridge Construction. This work shall be included in the cost of the various pavement patching pay items.

PAVEMENT MARKINGS

Eff. 01-01-2024

Final pavement markings for this project are to be completed by others. The Engineer shall contact Ron Maulding at (217) 251-6044 prior to the start of the contract to coordinate placement of pavement markings that are obliterated by the improvement operations.

PIPE DRAINS 4" (SPECIAL)

This work shall consist of the furnishing and installing pipe drains as shown in the plans, details and in accordance with Section 601 of the "Standard Specifications" and specified herein.

Pipe drain material shall be as called off on the plans and specified here:

"Standard Specifications" Section 601.02 (b) (3)
Perforated Corrugated Polyethylene (PE) Pipe with a Smooth Interior according to Section 1040.03 of the "Standard Specifications".

Fabric encasement according to Section 1080.01 of the "Standard Specifications".

Geotextile fabric according to Section 1080.05 of the "Standard Specifications".

Method of Measurement: This work will be measured in feet as measured along the top of the pipe installed through all fittings and valves.

This work shall be paid at the contract unit price per FOOT for PIPE DRAINS 4" (SPECIAL) for which price shall include trenching, pipe drains, fabric encasement, fittings, aggregate, geotextile fabric, labor and accessories to satisfactorily complete the work.

PRESSURE TESTING AND DISINFECTION

This work shall consist of Pressure and Leak testing, Disinfection and assisting the Illinois Department of Transportation in acquiring Bacteriological samples to acquire an operating permit being issued to the Illinois Department of Transportation by the Illinois Environmental Protection Agency for the new water main and in accordance with Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

Pressure testing and leak testing of the installed water main shall be in accordance with section 41-2.14 the "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", current edition. Minimum testing pressures shall be 105 psi..

Before being placed into service, all new mains and repaired portions of, or extensions to existing mains shall be chlorinated so that the initial chlorine residual is not less than 50 mg/l and that a chlorine residual of not less than twenty-five (25 mg/l) remains in the water after standing twenty-four (24) hours in the pipe.

The distribution system, pipe connections and the entire piping system shall be disinfected by the Contractor, by any one of the following two treatments, stated in order of preference:

A chlorine gas-water mixture: After a preliminary flushing of the newly constructed water main a chlorine gas-water mixture is applied at the beginning of the pipeline extension, or any valved section of it, at such a rate that with a slow flow of water into the pipe the chlorine dose shall not be less than 50 PPM. The treated water is to remain in the pipe at least 24 hours and preferably longer. At the end of the period the chlorine residual is not to be less than 25 PPM. Following chlorination, the pipe is thoroughly flushed, tested, and if necessary, re-chlorinated until a satisfactory bacteriological test is obtained.

A solution of calcium hydrochloride or such commercial products as HTH, perchlorine gas: After the pipe has been subjected to a preliminary flushing, a 5 per cent solution of any of the aforementioned powders should be injected into the pipe in a manner similar to that required for the addition of the liquid chlorine. This treated water shall be retained in the pipes for a period of at least twenty-four (24) hours, after which the chlorine residual at the pipe extremity and at other representative points shall be at least 25 PPM.

Following chlorination, all treated water shall be thoroughly flushed to waste from the newly laid pipe at its extremities. Replacement water throughout its length shall be tested to prove the water comparable to the quality of water served the existing customers. Newly constructed water main shall not be connected to the existing water distribution system until the water samples taken from the water main have been approved by the State Agency having jurisdiction. Connection through valves shall be acceptable provided the valves remain closed except to fill the line. Services to be connected to the new water main shall remain in service from the existing source until after the water samples from the new water main have been collected and approved by the State Agency having jurisdiction.

If the Contractor desires to use water from hydrants, he shall make application to the proper authorities, and shall conform to the applicable ordinances, rules, or regulations concerning their use.

Existing fire hydrants shall always be accessible to the Fire Department. No material or other obstructions shall be placed close to a hydrant. All newly installed hydrants shall be covered with plastic until they are placed into service.

Water for flushing the water line will be furnished by the Arcola-Tuscola Joint Water Agency as follows. All water used by the Contractor for filling, flushing, testing or disinfection of the water main and its appurtenances or subsequent repairs or corrections to the water main and its appurtenances shall be charged to the Contractor by the Arcola-Tuscola Joint Water Agency at the current billing rate for the volume used.

The Contractor, shall take Bacteriological samples of the water delivered and shall be approved by the authorities having jurisdiction. The quality of the water delivered by the new main should continue for a period of at least two days. Should it fail to do so, the disinfection procedure shall be repeated until satisfactory results are obtained. The Owner shall collect and deliver samples to the State Laboratories for testing.

Including the above demonstration for sampling, additional samples will be required as per the enclosed Governing Agency Construction Permit.

This work will be paid for at the contract unit price per LUMP SUM for PRESSURE TESTING AND DISINFECTION, which price shall include all water, testing, disinfection, flushing, and all labor, materials and equipment to satisfactorily complete the work.

REMOVAL OF EXISTING INTERIOR PLUMBING

This work shall consist of removal, and disposal of the existing water service piping, equipment, fittings, and the restoration of the service area utility room within the service building at locations shown on the plans and as specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area restroom facility building.
Location 2	South Bound I-55 Rest Area restroom facility building.

The contractor shall remove and dispose of all the existing service piping, equipment and fittings as shown in the plans within the rest area facility at detailed in the plans.

Contractor shall fill all holes in the walls and floors with similar material as existing walls and floors.

This work will be paid for at the contract unit price per EACH for REMOVAL OF EXISTING INTERIOR PLUMBING, at the location designated which price shall include all labor for the removal and disposal of all water service piping, equipment, fittings, restoration of the service area utility room within the service building to satisfactorily complete the work.

REMOVAL OF EXISTING SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION

This work shall consist of removal and disposal of the existing electrical equipment, controllers, wires, conduits (if required), pull boxes that are to be abandoned within the service building and within the site serving the existing sanitary septic system and the restoration of the service area utility room within the service building at locations shown on the plans and as specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area restroom facility building and site.
Location 2	South Bound I-55 Rest Area restroom facility building and site.

WORK SUMMARY

- F. The work under this section includes electrical demolition requirements.

GENERAL

A. EXAMINATION

1. Verify that abandoned wiring and equipment serve only abandoned facilities.
2. Modification and demolition drawings are based on casual field observation and/or existing record documents. Report discrepancies to the Architect/Engineer before disturbing existing installation.
3. Beginning of modifications demolition means installer accepts existing conditions.

B. PREPARATION

1. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
2. Coordinate utility service outages with the Owner, General Contractor, and Architect/Engineer. Also, coordinate utility service outages with the local Utility Company.
3. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations and follow the safe working practice requirements of NFPA 70E.
4. Existing Control and Monitoring Systems: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from the Owner and Engineer at least one week before partially or completely disabling system. Minimize outage duration. If required, make temporary connections to maintain service in areas adjacent to work area.

C. MODIFICATIONS TO EXISTING EQUIPMENT

1. Modifications apply to all existing electrical equipment or equipment with electrical sections which has to be refurbished, modified, disconnected & reconnected or reworked. The Contractor shall not make any modifications until the following has been done:
 - a. The Owner/Contractor shall witness and record the condition of the existing equipment. The Contractor shall note down any defects or deficiencies.
 - b. The Owner shall operate the equipment to demonstrate the current conditions. The Contractor shall note down any defects or deficiencies.
 - c. The Contractor shall be responsible to furnish and install material or equipment if damaged during the course of his work.
 - d. After the changes are made, the equipment shall be inspected and re-tested to demonstrate that it functions correctly.
 - e. No portion of existing conductors shall be spliced to new conductors for re-use without specific approval from the Owner/Engineer on a case-by-case basis.

D. DEMOLITION

1. Survey the existing electrical systems and equipment identified for removal with representatives from the other trades prior to performing any demolition work. Identify all conduit and equipment to be removed with tags or paint.
2. Where a piece of equipment is to be removed all associated ancillary components (e.g. solenoid valves, pressure switches, etc) and associated wiring and conduit shall also be removed.
3. Equipment, building or structures scheduled for complete demolition shall be made safe from electrical shock hazard prior to demolition. Disconnect all electrical power, communications, alarm and signal system.
4. Remove electrical work associated with equipment scheduled for demolition except those portions indicated to remain or be reused.
5. Unless otherwise specifically noted, remove unused exposed conduit and support systems back to point of concealment including abandoned conduit above accessible ceiling finishes. Remove unused wiring back to source (or nearest point of usage).
6. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned or being removed. Provide blank covers for abandoned outlets which are not removed.

7. Disconnect and remove abandoned panelboards, disconnect switches, control stations, distribution equipment, etc.
8. Disconnect and remove abandoned luminaries. Remove brackets, stems, hangers and other accessories.
9. Repair adjacent construction and finishes damaged during demolition and extension work.
10. Where electrical systems pass through the demolition areas to serve other portions of the premises, they shall remain or be suitably relocated and the system restored to normal operation.
11. Coordinate electrical power outages to the electrical systems and equipment with the Owner. Where duration of proposed outage cannot be allowed by the Owner, phase the retrofit work to allow the system or equipment to be re-connected to the electrical power system within the time frame allowed by the Owner or provide temporary power connections as required to maintain service to the systems or equipment. The temporary power can be from a generator or another part of the facility not affected by the outage provided there is sufficient spare capacity.
12. Continuous service is required on all circuits and outlets affected by these changes, except where the Owner will permit an outage for a specific time. Obtain Owner's consent before removing any circuit from continuous service.
13. The electrical and process equipment to be removed or relocated under this contract has been identified on the Drawings. The removal and or relocation of existing conduit, wire and equipment have not been detailed on the Drawings. Survey the affected equipment and building areas before submitting bid proposal.
14. Trace out existing wiring that is to be relocated, or removed and perform the relocation or removal work as required for a complete operating and safe system.
15. Remove exposed conduits, wireways, outlet boxes, pull boxes and hangers made obsolete by the alterations, unless specifically designated to remain. Patch surfaces and provide blank covers for abandoned outlets which are removed.
16. All equipment, materials, controls, motor starters, branch and feeder breakers, panelboards, transformers, wiring, raceways, etc, furnished and installed to temporarily keep circuits energized shall be removed when the permanent installation is fully operational.
17. The contractor is to remove all electrical equipment not required for other portions of the project, if encountered.

Contractor shall fill all holes in the walls and floors with similar material as existing walls and floors.

This work will be paid for at the contract unit price per EACH for REMOVAL OF EXISTING SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION, at the location designated which price shall include all equipment and labor to satisfactorily complete the work.

REMOVE EXISTING SANITARY SEPTIC SYSTEM

This work shall consist of the complete removal and disposal of existing underground septic tank including inlet and outlet pipes, leach field including Wisconsin Mounds, piping to leach fields, pump systems, valves, fittings, associated structures and piping, and other accessories in accordance with Section 605 of the "Standard Specifications", as direct by the Engineer and specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area.
Location 2	South Bound I-55 Rest Area.

The septic tank and its contents shall be removed according to the methods approved by the Champaign County Health Department and the Engineer. The contractor shall also comply with the applicable provisions of the Private Sewage Disposal Code 905.40(f). The contractor shall notify the Champaign County Health Department at least five business days prior to removal. Any fees associated in removal shall be included in the unit price of the removal. The tank shall be disposed of by a professional licensed septic tank removal company/contractor at a location approved by the Engineer.

The work area shall be backfilled with materials approved by the Engineer. The backfill materials shall be compacted as directed by the Engineer. The furnishing, placement and compaction of the backfill material shall not be paid for separately but shall be included in the contract unit price for Removing Existing Sanitary Septic System.

This work shall be paid at the contract unit price per LUMP SUM for REMOVING EXISTING SANITARY SYSTEM at the location designated, which price shall be payment in full for performing the work as specified herein.

SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION

This work shall consist of furnishing and installing electrical equipment, controllers, wires, conduits (if required), pull boxes, etc. that are within the service building and within the site serving the sanitary pumping and septic system and the restoration of the service area utility room within the service building at locations shown on the plans and as specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area restroom facility building and site.
Location 2	South Bound I-55 Rest Area restroom facility building and site.

WORK SUMMARY

- A. The work under this section includes basic electrical requirements.

GENERAL

- A. It is the responsibility of the contractor to furnish and install all electrical equipment
- B. All electrical shall conform with the current National Electrical Code.
- C. All electrical work shall comply with applicable state and/or local laws, ordinances, and regulations of local utility companies, the National Electric Code, and all other authorities having jurisdiction.
- D. Contractor shall coordinate with other trades prior to installation in an effort to prevent interference's and relocations.
- E. The contractor shall be responsible for his work until its completion and final acceptance, and shall replace any of the same which may be damaged, lost or stolen.
- F. The contractor shall put his work in place as rapidly and as responsibly as possible and shall promptly remove any debris, caused by his work, from the premises.
- G. Nothing contained in the specifications or indicated on the drawings shall be construed to conflict with applicable portions of any laws, ordinances, rules or regulations.
- H. Furnish and install all equipment shown on drawings and of manufacturer, model, and size noted.
- I. Manufacturer's recommended application and installation methods and best current practices shall be applied to all work and materials.
- J. Coordinate electrical characteristics of all equipment with other trades to assure compatibility of service and equipment.
- K. Protect equipment against mortar, dust, weather, etc., during construction and leave all equipment clean. Remove from premises all debris and unused material and leave premises in a clean and neat condition.
- L. Inspect all items thoroughly. Repair any items dented, scratched or otherwise damaged in any manner and paint to match original finish. All items so repaired and refinished shall be brought to the attention of the owner for inspection and approval.
- M. Any apparatus, appliance, material, or service not specified but necessary to make the system work completely and perfectly in all respects and ready for operations, shall be provided and installed under this contract.
- N. The drawings are generally diagrammatic, intended to convey the scope of the work and indicate the general arrangement of equipment, wiring, devices and location of equipment.
- O. All equipment, fixtures, devices, and other work provided under this contract, shall be thoroughly cleaned before owner's acceptance.

- P. All conduits shall be provided with an insulated copper equipment grounding conductor sized in accordance with the current NEC.
- Q. Power, instrumentation and control wiring shall be installed in separate conduits. Shielded conductors shall not be installed in the same conduit as any unshielded conductors.
- R. Remove all unused conduit and wire back to source associated with equipment being removed or relocated. Concealed conduit below floor or underground may remain in place.
- S. Conduit runs shall be routed to avoid, and never run below, steam, water or other pipe which may have an adverse effect due to heat or leaks. Where conduit parallels or crosses such pipes, a minimum separation of 12" shall be maintained.
- T. Junction boxes, cabinets, switches and other electrical equipment shall be solidly attached prior to installation of conduit.
- U. Conduit shall not be fastened to other equipment or so installed as to prevent the ready removal of other equipment for repairs. Installation of conduits must not interfere with access ways or ladders.
- V. Only pullboxes specifically required by the Engineer in locations shown are identified. Contractor shall provide all pullboxes required to meet applicable codes.
- W. Ground rods shall be as specified. Connections to grounding electrode conductors shall be with exothermic welds.
- X. Conductors shall be continuous from point of origin to the termination. No cable shall be spliced except as shown on the drawings or on explicit instructions of the owner.
- Y. Terminals on terminal blocks shall be plainly and permanently marked to correspond with the identification numbers on the diagrams, panel legends, etc.
- Z. Contractor shall provide and install all cables and wire from control/instrumentation devices back to associated control panels.
- AA. In wet and/or dusty areas and exterior locations, conduit attachment to boxes shall be made with a watertight conduit hub as mfr by Efco Co or equal.
- BB. Contractor shall leave slack in all cable in all boxes.
- CC. All wires/cables within boxes shall bear a cable identification tag in accordance with the specifications. All wiring/cable shall be identified by permanent wire markers at each termination and shall correspond with the identification number on the drawings.
- DD. Coordinate all locations of instrumentation, control devices and process equipment with mechanical drawings.

Contractor shall fill all holes in the walls and floors with similar material as existing walls and floors.

This work will be paid for at the contract unit price per EACH for SANITARY ELECTRICAL SUPPLY AND DISTRIBUTION, at the location designated which price shall include all labor for the installation of electrical equipment, controllers, wires, conduits (if required), pull boxes that are to be abandoned within the service building and within the site serving the sanitary pumping and septic system and the restoration of the service area utility room within the service building to satisfactorily complete the work.

SANITARY MANHOLES TO BE REMOVED

This work shall consist of the removal and disposal of existing sanitary sewer manholes indicated in the plans in accordance with Section 605 of the "Standard Specifications", as direct by the Engineer and specified herein.

This work includes furnishing all materials, equipment and labor necessary for the removal and disposal of existing sanitary manhole, backfilling the removed structure excavation with trench backfill, which shall be considered incidental to this item, and plugging the existing sewer at the existing sanitary manhole connection if required.

The existing sewer shall be plugged with brick and Portland Cement mortar for a depth of 12 inches, or the diameter of the pipe, whichever is greater and to the satisfaction of the Engineer. This work shall be considered mandatory to the manhole to be removed, and no payment will be allowed until all portions are completed.

This work shall be paid at the contract unit price per EACH for SANITARY MANHOLES TO BE REMOVED. The price shall be payment in full for performing the work as specified herein

SANITARY SEPTIC TANK

This work shall consist of furnishing and installing a sanitary septic tank including inlet and outlet pipes, valves, fittings and other accessories in accordance with Illinois Administration Code Title 77 Part 905.40, as direct by the Engineer and specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area.
Location 2	South Bound I-55 Rest Area.

SCOPE OF WORK

- A. Furnish all labor, materials and equipment required and install a 15,000 gallon precast concrete septic tanks and appurtenances as shown on the Drawings and as specified herein. Septic Tanks shall comply with Illinois Administrative Code Title 77 Part 905.40
- B. Installation of the Septic Tank System shall be conducted by a qualified licensed system installation Contractor. The Contractor shall comply with the requirements of all laws, ordinances, rules and regulations of federal, state and local authorities.

- C. The septic tank installer shall provide documentation, which is acceptable to the Engineer, that they are experienced and qualified in Septic Tank System installation. All personnel shall be trained and experienced in the system installation practices and safety precautions.

SUBMITTALS

- A. Submit shop drawings, product data, materials of construction, and details of installation. Submittals shall include the following:
1. Base sections, riser sections, top sections, flat slab tops, grade rings, including notarized certificate indicating compliance with ASTM C1227.
 2. Pipe connections to precast concrete elements.
 3. Inlet Baffle Piping
 4. Tank Effluent Filter
 5. Frame and cover with certification of compliance with the specified ASTM standard and Class designation.
 6. Method of repair for minor damage to precast concrete sections.
 7. Buoyancy calculations.
- B. Design Data
1. Precast concrete boxes:
 - a. Sectional plan(s) and elevations showing dimensions and reinforcing steel placement.
 - b. Structural calculations including assumptions.
 - c. Concrete design mix.
- C. Test Reports
1. Precast concrete:
 - a. Concrete test cylinder reports from an approved testing laboratory certifying conformance with this Section.
 2. Results of leakage tests.

MANUFACTURER

- A. Crest Precast, Inc of La Crescent, MN & Barneveld, WI or equivalent.

REFERENCE STANDARDS

- A. Illinois Administrative Code Title 77 Part 905.40
- B. Champaign County Health Ordinance No. 969 Part 6
- C. American Society for Testing and Materials (ASTM)
 - 1. ASTM A48 - Standard Specification for Gray Iron Castings.
 - 2. ASTM A615 – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 3. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 4. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
 - 5. ASTM C150 - Standard Specification for Portland Cement
 - 6. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes
 - 7. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
 - 8. ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes and Precast Box Sections Using Preformed Flexible Joint Sealant.
 - 9. ASTM D4101 - Standard Specification for Propylene Plastic Injection and Extrusion Materials.
- D. American Concrete Institute (ACI)
 - 1. ACI 318 - Building Code Requirements for Structural Concrete
 - 2. ACI 350 - Code Requirements for Environmental Engineering Concrete Structures
- E. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. Standard Specifications for Highway Bridges
- F. Illinois Department of Transportation Standard Specifications for Highway and Bridge Construction
- G. Standard Specifications for Water and Sewer Construction, in Illinois.
- H. Occupational Safety and Health Administration (OSHA)
- I. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

QUALITY ASSURANCE

- A. The manufacturer shall have a minimum of 2 years of experience in precast structural concrete work of quality and scope required on this project.
- B. The erector shall have regularly engaged for at least 2 years in erection of precast structural concrete similar to requirements of this project.
- C. Allowable Tolerances
 - 1. Width or thickness
 - a. Under 7 in (178 mm): plus/minus 1/8-in (3.2 mm).
 - b. From 7 in (178 mm) to 16 in (406 mm) plus/minus 3/16 in (4.8 mm).
 - 2. Length
 - a. From 40-ft (12.2 m) to 50-ft (15.2 m): plus/minus 5/8 in (15.9 mm).
 - b. Over 50-ft (15.2 m): plus/minus 3/4 in (19 mm).
 - c. Camber: Positive upward camber under full dead load.
- D. The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Owner's Representative, or other representative of the Owner. Such inspection may be made at the place of manufacture, or on the work after delivery, or at both places and the materials shall be subject to rejection at any time on account of failure to meet any of the requirements specified herein; even though samples may have been accepted as satisfactory at the place of manufacture. Material rejected after delivery to the job shall be marked for identification and shall be removed from the job at once. All materials which have been damaged after delivery will be rejected, and if already installed, shall be acceptably repaired, if permitted, or removed and replaced, entirely at the Contractor's expense.
- E. At the time of inspection, the materials will be carefully examined for compliance with the ASTM standard specified below and this Section and with the approved manufacturer's drawings. All structure sections shall be inspected for general appearance, dimension, "scratch strength", blisters, cracks, roughness, soundness, etc. The surface shall be dense and close textured.
- F. Imperfections in structure sections may be repaired, subject to the approval of the Owner's Representative, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final approval. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at 7 days and 5,000 psi at 28 days, when tested in 3 in by 6 in cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs subject to the approval of the Owner's Representative

DELIVERY, STORAGE AND HANDLING

A. Delivery and Handling

1. Transport and handle precast concrete units with equipment to protect from dirt and damage.
2. Do not place units in position which will cause overstress, warp, or twist.
3. Handle by means of lifting inserts.

B. Storage

1. Store units off ground.
2. Place stored units so that identification marks are discernible.
3. Separate stacked members by battens across full width of each bearing point.
4. Stack so that lifting devices are accessible and undamaged.
5. Do not use upper member of stacked tier as storage area for shorter members or heavy equipment.

PRODUCTS

GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. Provide lifting lugs or holes in each precast section for proper handling.
- D. Cement shall conform to ASTM C150, Type II cement or equal.
- E. Precast concrete sections shall be properly cured prior to shipping. Precast concrete sections shall not be shipped before concrete has attained 6,000 psi compressive strength.
- F. Mark date of manufacture, name and trademark of manufacturer on the inside of each precast section.

PRECAST CONCRETE SECTIONS

- A. Precast concrete sections and transition top sections, shall conform to ASTM C1227 and meet the following requirements

1. Design precast concrete base and flat slab top for their own weight, weight of soil at 130 pcf, and a live load equal to AASHTO HS-20 truck 300 psf loading applied at finished grade.
2. The wall thickness shall not be less than 5 in for 48 in diameter reinforced barrel sections, 6 in for 60 in diameter reinforced barrel sections, 7 in for 72 in diameter reinforced barrel sections, and 8 in for 96 in diameter reinforced barrel sections.
3. Base, riser and transition top sections shall have tongue and groove joints.
4. All sections shall be cured by an approved method and shall not be shipped nor subjected to loading until the concrete compressive strength has attained 3,000 psi and not before 5 days after fabrication and/or repair, whichever is longer.
5. Mark date of manufacturing, name and trademark of manufacturer on the inside of each precast section.
6. Construct and install precast bases as shown on the Contract Drawings. The thickness of the bottom slab of the precast bases shall not be less than the structure barrel sections or top slab whichever is greater.
7. Knock out panels shall be provided in precast structure sections at the locations shown on the Drawings. They shall be integrally cast with the section, 2 1/2 in thick and shall be sized as shown on the Drawings. There shall be no steel reinforcing in knock out panels.

PRECAST CONCRETE SEPTIC TANKS

- A. Refer to Drawings for required inside dimensions and minimum thickness of concrete.
- B. Manufacturer shall notify Engineer at least 5 working days prior to placing concrete during manufacturing process. Engineer may review reinforcing steel placement prior to placing concrete.
- C. Structural design calculations and fabrication drawings shall be prepared and stamped by a structural Engineer licensed in the State of the project.
- D. Design Criteria
 1. Precast concrete
 - a. Minimum compressive strength shall be 6000 psi at 28 days.
 - b. Maximum water-to-cement ratio shall be 0.371 by weight.
 - c. Minimum cement content shall be 725 lbs of cement per cubic yard of concrete.

2. Manufactured products

- a. Conform to ACI 350 for liquid-containing structures and to ACI 318 for other structures.
- b. Analyze walls and slabs using accepted engineering principals. Design walls for internal fluid pressures and external soil pressures independently.
- c. At liquid-containing structures, when "fy" exceeds 40,000 psi, "z" (per ACI 350-01, Chapter 10) shall not exceed 95 kips/in, and "fs" shall be computed and shall not exceed 50 percent of "fy".
- d. Design products to support their own weight, weight of soil at 130 pcf, and a live load equal to AASHTO HS-20 truck loading applied to top slab.
- e. Design walls of the precast structures for the governing case from the following load conditions:
 - i. an external lateral pressure based on an equivalent fluid with a unit weight of 90 pounds per cubic foot (pcf). Originate the pressure diagram at the finished ground surface or top of pavement surface, as applicable. When designing by the Strength Design Method, environmental durability factors, as defined in ACI 350-01, need not be included for this load condition. When designing by the Alternate Design Method (Service Loads), allowable stresses may be increased by one-third for this load condition.
 - ii. an external lateral pressure based on an equivalent fluid with a unit weight of 60 pcf. Include a live load surcharge pressure equal to 2 feet of earth above the finished ground surface or top of pavement surface, as applicable.
 - iii. an internal lateral pressure based on a fluid with a unit weight of 63 pcf. Assume internal fluid to the bottom surface of the top slab, unless otherwise noted or shown. Design of walls shall account for effects of tension due to internal fluid pressure.
- f. Prevent flotation, with ground water level at finished ground surface, by dead weight of structure and of soil directly above structure. Do not consider skin friction, soil friction, or weight of equipment in structure.
- g. Locate access openings, wall sleeves and pipe penetrations as shown on Drawings.
- h. Locate horizontal wall joints 8-in minimum from edge of wall openings unless otherwise approved by the Engineer.

- i. Consider discontinuities in structure produced by openings and joints. Provide additional reinforcing around openings. Frame openings to carry full design loads to support walls.
- j. Design structure with a minimum number of joints. Maximum number of structure sections, including top slab, shall be four.
- k. Cast base slab and walls together to form a monolithic base section.
- l. Provide lifting hooks for top slab, where slab is required to be removed.
- m. Wall sleeves shall be provided by the precast concrete manufacturer.
- n. If the design of the box structure requires a concrete pad to prevent flotation, the cost of designing, furnishing and installing a reinforced concrete pad shall be included in the price for the structure. Details of the design of the concrete pad (if required) shall be submitted to the Engineer for review.
- o. All walls and slabs shall be analyzed by accepted engineering principles. Openings shall be completely framed as required to carry the full design loads to support walls. All slabs and walls shall be fully reinforced on both faces and the minimum reinforcing shall be as detailed on the Contract Drawings. Additional reinforcing shall be provided around all openings as detailed on the Contract Drawings.

FRAME AND COVER, INLET FRAME AND GRATE

- A. Frames and covers and Inlet frame and grate shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind which render them unfit for the service for which they are intended. Structure frame and cover seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30 as a minimum.
- B. Covers shall have a diamond pattern, concealed pickholes and the word water, sanitary, sewer, storm sewer, electrical (as required), etc. cast in 3-in letters. Structure frame and covers and Inlet frame and grate shall be as shown on the drawings.
- C. Frames and covers and Inlet frame and grate shall be suitable for highway traffic, including H20 wheel loads.
- D. Frame and/or precast concrete grade rings shall be rigidly attached to the top of structure. Use 3-1/2-inch diameter expansion stainless steel threaded studs with stainless steel hex head nuts and washers inserted through 5/8-inch diameter holes through frame and/or grade ring. Holes shall be spaced at 120 degrees and 2-inches from outside edge of frame. Embed studs a minimum of 4-inches.

JOINTING PRECAST SECTIONS

- A. Seal tongue and groove joints of precast sections with either rubber O-ring gasket or preformed flexible joint sealant. O-ring rubber gaskets shall conform to ASTM C443. Preformed flexible joint sealant shall conform to ASTM C990 and shall be Kent Seal No. 2 or equal.
- B. Completed joint shall withstand 15 psi internal water pressure without leakage or displacement of gasket or sealant.

PIPE CONNECTIONS

- A. Pipe connections may be accomplished in the following ways:
 - 1. Sanitary Sewers
 - a. The "A-Lok Premium" connector or equal shall be cast in the precast structure base. The cast-in-place connector shall meet or exceed all material and test requirements outlined in ASTM C-923 "Resilient Connectors Between Reinforced Concrete Manhole Structures and Laterals". The rubber connector is engineered to conform to the requirements of ASTM C-923.
 - b. Connection into an existing structure shall utilize WS Series Waterstop by Press-Seal or Equal and non-shrink grout.

DAMPPROOFING

- A. Brushed damp-proofing shall be an asphalt emulsion reinforced with fibers conforming to ASTM D1227, Type II, Class 1. The damp-proofing shall be Hydrocide 700B by Sonneborn Building Products, Division of ChemRex Inc., Minneapolis, MN; Karnak 220 Asphalt Emulsion by Karnak Corporation, Clark, NJ or equal. Application rate shall be 30-60 square feet per gallon, and in accordance with manufacturer's instructions.

EXECUTION

INSTALLATION

- A. Septic Tank.
 - 1. Place septic tank on a bed of 12-in thick screened gravel (IDOT CA-6) as shown on the Drawings. Set septic tank grade so that a maximum grade adjustment of 8-in is required to bring the structure to final grade.
 - 2. Set precast concrete sections plumb with a 1/4-in maximum out of plumb tolerance allowed. Seal joints of precast sections with either a rubber O-ring set in a recess or preformed flexible joint sealant in sufficient quantity to fill 75 percent of the joint cavity. Fill the outside and inside joint with non-shrink mortar

and finish flush with the adjoining surfaces. Caulk the inside of any leaking joints with lead wool or non-shrink grout to the satisfaction of the Engineer.

3. Plug holes in the concrete sections required for handling with a non-shrink grout or non-shrink grout in combination with concrete plugs. Finish flush on the inside.
4. Cut holes in precast sections to accommodate pipes prior to setting precast sections in place to prevent jarring that may loosen the mortar joints.
5. Backfill carefully and evenly around manholes and precast boxes.

B. Pipe Connections

1. Structure pipe connections shall be accomplished in the ways specified herein. Pipe stubs for future extensions shall also be connected and the stub end closed by a suitable watertight plug.
2. Provide piping stub lengths at connections to manholes and/or structures in accordance with the Contract Drawings.
3. Pipe connections into existing structure shall include saw cutting and removal of a side portion of the existing structure and/or pipe as needed to place the new sewer main into the existing structure, including the removal of any concrete fillet or formed flow line in the existing structure necessary to construct plan elevations. The cut shall start at the invert specified on the drawings and be no greater than 2" (two inches) from the outside of the new sewer main. The waterstop will be applied around the new sewer pipe, positioned in such a way that the portion required lie within the structure wall. Placement of non-shrink grout in and around the void between the new sewer pipe exterior and the existing structure wall, making a watertight seal. The inside of the existing structure shall be left smooth with rounded edges if any and including any adaptation that may be necessary for proper connection or as determined by the Engineer.

C. Setting Frame and Cover

1. Set frames in a full mortar bed. Utilize precast concrete grade rings, a maximum of 8-in thick, to assure frame and cover are set to the finished grade. Set frame and cover to final grade prior to placement of permanent paving.

D. Damp-proofing

1. Outer surfaces of precast and cast in place structures shall damp-proofed at the rate of 30 to 60 sq. ft. per gallon as directed by the Owner's Representative and in accordance with manufacturer's instructions.
2. Damp-proofing will not be required. In lieu of damp-proofing all joints and/or joining surfaces shall be sealed with a butyl-rubber-based tape. The butyl

component of the tape shall consist of 50% (min.) butyl rubber, shall contain 2% or less volatile matter, and shall be .050" (1.3 mm) thick. The backing component shall be high-density polyethylene film. A release paper may be utilized. The tape width shall be 6" (150 mm) wide. The tape shall be overlapped at least twice its width. The tape shall not be stretched during application. Primer and/or adhesive as recommended by the tape supplier shall be employed for adverse, critical, or other applications.

LEAKAGE TESTS

- A. Test each liquid-containing structure for leakage. Engineer shall observe each test. Perform exfiltration test as described below:
- B. Sanitary sewer septic tanks shall be leak tested in accordance with EPA Title 35, Section 370.333,(e) 2) which refers to leak testing to be in accordance with ASTM C1244-93 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test."
- C. Regardless of whether leakage testing is required, visible leaks which occur after backfilling shall be sealed by approved means.

CLEANING

- A. Thoroughly clean all new precast structures of all silt, debris and foreign matter of any kind, prior to final inspections.

This work shall be paid at the contract unit price per LUMP SUM for SANITARY SEPTIC TANK at the location designated which price shall be payment in full for performing the work as specified herein.

SANITARY SEWER REMOVAL

This work shall consist of the removal and disposal of existing sanitary sewers indicated in the plans in accordance with Section 551 of the "Standard Specifications", as direct by the Engineer and specified herein.

This work includes furnishing all materials, equipment and labor necessary for the removal and disposal of existing sanitary sewers, backfilling the removed excavation with backfill, which shall be considered incidental to this item, and plugging the existing sewer if required.

Method of Measurement: This work will be measured in feet as measured along the top of the pipe being removed through all fittings, valves and casings, to the interior wall of structures.

This work shall be paid at the contract unit price per FOOT for SANITARY SEWER REMOVAL of the diameter specified. The price shall be payment in full for performing the work as specified herein.

SANITARY SEWERS

This work shall consist of furnishing and installing sanitary sewers complete in place (trenched, bored, within casings, etc) of the size as shown on the plans and in accordance with Section 208 and 550 of the "Standard Specifications" and Division III of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

All sanitary sewer pipe material shall be as called off on the plans and specified here:

PVC: Polyvinyl Chloride (PVC) shall conform to Section 30-4.04 of the Standard Specifications for Water and Sewer Construction in Illinois.

Polyvinyl Chloride (PVC) pipe shall conform to the latest ASTM D1784 standards for PVC. Sewer pipe and fittings shall conform to ASTM D3034, SDR-26, PS-115, w/push-on joints (ASTM D3212) with gaskets per ASTM F-477

All sanitary sewers shall use CA-7 for bedding, haunching and one (1) foot of initial backfill and shall be considered part of this item for payment purposes.

All sanitary sewers shall be kept clean during the course of the work. A tapered wood plug or other approved device shall be placed inside the end of the last pipe installed while excavation is made for the next pipe or at the end of the day's work.

The trench shall be backfilled as detailed on the plans. Compaction of earth/granular backfill shall be by method 1 (ramming or tamping) or 3 (CLSM) of Section 20-4.06 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition

All sanitary sewer shall be tested in accordance with the Standard Specifications for "Water and Sewer Construction in Illinois". All flexible sanitary sewer pipe shall be tested by Method D and either Method A, B or C as outlined in Section 31-1.12. Testing shall be included in the cost of the sanitary sewer.

Contractor shall comply with the terms and conditions of all applicable permits.

Method of Measurement: This work will be measured in feet as measured along the top of the pipe installed through all fittings, valves and casings, to the interior wall of structures and the point of connection to an existing sewer.

This work will be paid for at the contract unit price per FOOT for SANITARY SEWERS, of the specified size and material for which price shall include all material, backfilling, installation, testing and all labor, materials and equipment to satisfactorily complete the work.

Trench backfill when required and shown on the plans will be measured and paid for separately in accordance with Section 208 of the Standards Specifications.

SEALING ABANDONED WATER WELLS

This work shall consist of removal, and disposal of the existing water service piping, equipment, fittings, and sealing the existing water well in accordance with Section 672 of the Standard Specifications and shown on the plans and as specified herein.

The contractor shall remove and dispose of all the existing service piping, equipment and fittings as shown in the plans within the water well.

Contractor shall seal the existing water well according to the "Illinois Water Well Construction Code".

This work will be paid for at the contract unit price per EACH for SEALING ABANDONED WATER WELLS which price shall include all labor for the removal and disposal of all water service piping, equipment, fittings, and sealing the existing water well to satisfactorily complete the work.

CASING PIPE, BORED AND JACKED

The work shall consist of installing steel casing pipe complete in place of the size shown on the plans for water service to Illinois Department of Transportation requirements for highway crossings, by the jack and bore method according to Articles 552.02 through 552.06 of the Standard Specifications.

Work includes saw cutting, and removal and disposal of existing pavements (if applicable); excavation of bore and receiving pits; removal and disposal of waste excavated materials; protection, repair or replacement of utilities; trench dewatering, including erosion and sedimentation control methods and devices to provide protection to environment from all pumping operations; installation of casing; casing spacers; installation and support of carrier pipe within casing and end seals.

All water main casing pipe material shall be as called off on the plans and specified herein:

12 inch Diameter

0.250 inch thick minimum meeting ASTM A139, Grade B

The exterior of the casing pipe shall be coated with coal tar epoxy.

Each end of the casing pipe shall be sealed with a rubber end seal as manufactured by Pipeline Seal & Insulator, Inc. Model-C or Equal

Manufactured non-metallic or non-corrosive casing spacers shall be used to support the pipe in the casing and shall be installed per manufacturer's recommendations. Casing Spacers must provide electrical transmission insulation between the casing pipe and water main pipe. A minimum of two supports shall be used per joint of pipe for lengths up to 12.5 feet, and a minimum of three supports shall be used per joint for lengths greater than 12.5 feet.

CONSTRUCTION REQUIREMENTS: The nearest edge of all boring or jacking pits shall be located a minimum of 30 feet from the edge of pavement on fully access controlled highways and at a minimum distance of 10 feet plus the depth of the pit without shoring on conventional highways. If sheeting or shoring is used, the pits shall be located a minimum of 10 feet from the edge of pavement on conventional highways. The shoring shall be installed immediately during excavation of the pit, and it shall be designed,

erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads that may be imposed upon it during the boring or jacking operation. Design calculations and construction details, signed and sealed by an Illinois Professional Structural Engineer, must be submitted by the Contractor and approved by the Engineer prior to use.

Pits for boring or jacking shall be excavated no more than 48 hours in advance of boring or jacking operations and backfilled within 48 hours after boring or jacking operations are completed. While pits are open, they shall be clearly marked and enclosed by temporary snow fencing or other method approved by the Engineer. Upon completion of the boring or jacking operations the pits shall be backfilled and brought up to match the surrounding grade. Backfill materials shall be deposited in uniform lifts not exceeding 12-inches in depth and each lift shall be mechanically compacted to the satisfaction of the Engineer.

Method of Measurement: This work will be measured in feet as measured from end of casing pipe to end of casing pipe.

This work will be paid for at the contract unit price per FOOT for CASING PIPE, BORED AND JACKED, of the specified size, which price shall include any spacers, end seals all labor, materials and equipment to satisfactorily complete the work. Water Main installed within the casing pipe will be paid for separately.

STEEL CASINGS

This work shall consist of installing steel casing pipe complete in place of the size as shown on the plans and in accordance with Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

Steel casings shall be trenched in place. Support for all utilities within the trenched area shall be included in the cost of installing the steel casings.

All water main casing pipe material shall be as called off on the plans and specified herein:

10 inch Diameter

0.250 inch thick meeting ASTM A139, Grade B

The exterior of the casing pipe shall be coated with coal tar epoxy.

Each end of the casing pipe shall be sealed with a rubber end seal as manufactured by Pipeline Seal & Insulator, Inc. Model-C or Equal

Manufactured non-metallic or non-corrosive casing spacers shall be used to support the pipe in the casing and shall be installed per manufacturer's recommendations. Casing Spacers must provide electrical transmission insulation between the casing pipe and water main pipe. A minimum of two supports shall be used per joint of pipe for lengths up to 12.5 feet, and a minimum of three supports shall be used per joint for lengths greater than 12.5 feet.

Method of Measurement: This work will be measured in feet as measured from end of casing pipe to end of casing pipe.

This work will be paid for at the contract unit price per FOOT for STEEL CASINGS, of the specified size, which price shall include any spacers, end seals all labor, materials and equipment to satisfactorily complete the work. Water Main installed within the casing pipe will be paid for separately.

STORM SEWERS, WATER MAIN QUALITY PIPE

Description: This item is intended to satisfy the EPA requirements for horizontal and vertical separation of sewer and water mains outlined in Section 41 of the Standard Specifications for Water and Sewer Construction in Illinois. This work shall consist of constructing storm sewers of the required inside diameter with the necessary fittings or joints in accordance with Section 550 of the Standard Specifications and the following additions or exceptions.

Materials: The materials allowed for the water main quality storm sewer pipe shall be PVC pipe SDR 21, reinforced concrete pressure pipe, or ductile iron pipe Class 52 (see Ductile Iron pay items for additional requirements), and of the size and type indicated on the plans. The materials shall be in accordance with Articles 40-2.01A, 40-2.01B, 40-2.01C, 40-2.02, 40-2.05A, and 40-2.05B of the "Standard Specifications for Water and Sewer Construction in Illinois". Joints between different pipe material types shall be watertight and made with concrete collars as detailed on the plans and as approved by the Engineer. The water main quality pipe joints shall be of the type approved by the Illinois Environmental Protection Agency for storm sewer lines crossing above water mains.

Measurement and Payment: This work will be measured and paid for at the contract unit price per foot for STORM SEWERS, WATER MAIN QUALITY PIPE of the type and size indicated, which price shall include all labor, equipment, and materials required, except for the concrete collars. The concrete collars will be paid for as specified herein. The pipe types shown on the plans refer to the fill heights over the pipe as indicated in Article 550.03 of the Standard Specifications.

TAPPING VALVES AND SLEEVES

Work shall consist of furnishing and installing mechanical Joint Tapping Sleeves and Resilient Seat Valves and shall be Manufactured by Mueller and as shown on the plans and valve box in accordance with the applicable portions of Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The tapping sleeve shall be stainless steel have a complete circle repair clamp gasket permanently attached to the sleeve at the factory. The complete circle gasket shall give complete 360-degree pipe coverage. The tapping sleeve may have integral bolts welded to the sleeve, or loose stainless bolts. All welding shall be chemically treated and the residue removed (passivation) so as to return the welded stainless steel to its original corrosion resistant state.

The shell, flange, armor plate, lugs, nuts and bolts shall be 304 (18-8) stainless steel. Bolts shall be 5/8" dia. (min.) NC thread, and the nuts shall be lubricated to prevent galling or seizing. The flange shall have an ANSI 125 lb. drilling.

The Contractor shall insure that no tapping sleeve is installed within 2-feet minimum of a spigot end on the existing main. This must be verified to the satisfaction of the existing main's Owner or Owner's Representative, and any deviation from this requirement must have written approval from the existing main's Owner or Owner's Representative prior to the work being done.

All connections to the existing water mains shall be scheduled with the approval of the existing main's Owner or Owner's Representative and shall be completed in a manner that does not endanger the existing water distribution system. The complete installation shall be made without reducing the pressure or flow in the distribution system. The Tapping Sleeve shall be air tested after installation and prior to making the tap to assure that the sleeve is properly installed and does not leak. Proper support and blocking shall be provided for the sleeve and valve.

This pay item includes installation of the Tapping Sleeve, Tapping Valve, and Valve Box shall include the material, equipment, and labor for making the complete connection without reducing the pressure in the existing mains. Accessories excavation of the pit, cleaning of the pipe exterior, concrete support, thrust blocking, etc., shall be incidental to the installation of the tapping sleeve and tapping valve.

The minimum requirements for all gate valves shall be manufactured by Mueller and shall be, in design, material and workmanship, conform to the standards of the latest AWWA C-509. All materials used in the manufacture of waterworks gate valves shall conform to the AWWA standards designed for each material listed. All bolts, nuts, fasteners, etc. shall be 304 (18-8) stainless steel on all valves. The gate valves shall be standard pattern and shall have the name or mark of the manufacturer, size and working pressure plainly cast in raised letters on the body.

End connections for all valves, unless specifically called out on the drawings, shall be mechanical joint.

The valve bodies shall be cast iron, mounted with approved non-corrosive metals. All wearing surfaces shall be bronze or other non-corrosive material, and there shall be no moving bearing or contact surfaces or iron in contact with iron. Contact surfaces shall be machined and finished in the best workmanlike manner, and all wearing surfaces shall be easily renewable.

Gate valves shall be non-rising stem, resilient wedge style. The stem shall be of high-tensile strength bronze or other approved non-corrosive metal. All non-ferrous bushings shall be of substantial thickness, tightly fitted and pressed into machined seats. All valves shall open by turning to the left counterclockwise.

Unless otherwise designated in the specifications, all gate valves shall be furnished with O-ring stem seals. Number, size and design shall conform to the AWWA standard for gate valve O-ring stem seals.

All gate valves shall be provided with stainless extension shafts when the water line connecting to the valve is buried greater than the minimum of fifty-four (54) inches, operating nuts and valve boxes as follows:

Extension shafts (if required) shall be Type 304 stainless steel and the operating nut shall be 2 in square. Shafts shall be designed to provide a factor of safety of not less than four. Operating nuts shall be pinned to the shafts. Top of the operating nut shall be located 1 foot below the rim of the valve box.

Valve boxes shall be manufactured by Mueller and shall be a heavy pattern cast iron, three-piece, telescoping type box with dome base suitable for installation on the buried valves. The inside diameter shall be at least 4 1/2 inches. Barrel length shall be adapted to the depth of cover, with a lap of at least 6 inches when in the most extended position. Covers shall be cast iron with "WATER" cast into lid. Aluminum or plastic are not acceptable. A means of lateral support for the valve extension shafts (if required) shall be provided in the top portion of the valve box. The upper section of each box shall have a top flange of sufficient bearing area to prevent settling. The bottom of the lower section shall enclose the stuffing box and operating nut of the valve and shall be oval. All valve boxes shall use a two (2) piece centering device to center the box on the operating nut.

This work will be paid for at the contract unit price per EACH for TAPPING VALVES AND SLEEVES, of the size specified, which price shall include all tapping sleeves, gate valves, valve boxes, support blocks, installation and all labor, materials and equipment to satisfactorily complete the work.

VERTICAL DUAL AUGER SCREEN

This work shall consist of furnishing and installing a packaged dual auger screen including inlet and outlet pipes, valves, fittings, controller, startup and testing and other accessories at the locations specified in accordance with the plans and specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area.
Location 2	South Bound I-55 Rest Area.

SUMMARY

A. Summary of Work

1. The contractor shall furnish and install double helix dual auger screen for removing floating, particulate, and fibrous material and for conveying, dewatering, and compacting the screenings before discharging the compacted screenings into bagger and dumpster as indicated on the drawings. Fabrication and assembly shall be in conformance with these specifications and drawings.
2. Each screen shall include support legs, controls, and all accessories and appurtenances specified or otherwise required for a complete and properly operating installation.
3. The contractor shall coordinate all details of the equipment with other related parts of the work. The Contractor shall verify that all structures, piping, wiring, and equipment components are compatible. The Contractor shall be responsible for all structural and other alterations required to accommodate equipment differing in dimensions, weight, or other characteristics from these specifications and drawings.
4. The contractor shall install the equipment according to instructions and recommendations of the equipment manufacturer.
5. Power supply for main control panels are the following: Lift Station (240V, 1Ph, 60Hz).

REFERENCES

- A. American National Standards Institute (ANSI)
- B. American Society for Testing and Materials (ASTM)
- C. American Welding Society (AWS)
- D. American Institute of Steel Construction (AISC)
- E. American Bearing Manufacturers Association (ABMA)
- F. American Gear Manufacturers Association (AGMA)
- G. National Electrical Manufacturers Association (NEMA)
- H. Underwriters Laboratory (UL)

SUBMITTALS

The manufacturer will provide submittal for review by the Engineer.

- A. Product Data: Include the following:
 - 1. Descriptive literature, brochures, catalogs, cut-sheets and supplementary material to define the equipment.
 - 2. Motor characteristics and performance information.
 - 3. Gear reducer data including service factor, efficiency, torque rating, and materials.
 - 4. Parts list including a list of recommended spare parts.
- B. Shop Drawings: Include the following:
 - 1. Manufacturer's installation drawings.
 - 2. Wiring and schematic diagrams.
- C. Operations and maintenance manual.
- D. Detailed mechanical and electrical installation instructions and procedures.
- E. Equipment weights and lifting points.
- F. Recommendations for short and long-term storage.
- G. A copy of the manufacturer's warranty.
- H. A copy of documents proving certification of the Manufacturer's Quality Management System according to ISO 9001.
- I. Failure to include all drawings applicable to the equipment specified in this section will result in rejection of the entire submittal with no further review.

QUALITY ASSURANCE

- A. To ensure quality, conformance, reliability, and environmental practices with regard to the manufacturing and production of the machinery described in this section, the equipment manufacturer shall meet the requirements listed in this section.
- B. Manufacturer shall have established an ISO 9001 certified quality management system. Manufacturers without an ISO 9001 certified quality management program must provide complete documentation of their existing quality management system with supplemental information clarifying why areas do not meet ISO 9001 standards. Meeting national quality management standards alone shall not be considered an acceptable substitute because ISO standards exceed national quality management standards.
- C. Stainless steel shall undergo electrochemical treatment to remove heat tint scale and provide a uniform finish. All stainless steel welding and passivation shall be performed in the shop – field welding and field passivation of stainless steel is prohibited. Passivation utilizing pastes, gels, or sprays shall not be acceptable
- D. No stainless steel components may be fabricated or assembled in a factory where carbon steel products are fabricated, in order to prevent contamination by rust.
- E. All welding is performed in accordance with American Welding Society (AWS), European Welding Federation (EWF), International Institute of Welding (IIW), or equivalent.
- F. Manufacturer shall provide screen, motors, gear reducers, controls, control panels, and lifting attachments as a complete integrated package to ensure proper coordination, compatibility, and operation of the system.
- G. Manufacturer shall provide services by a factory-trained service technician, specifically trained on the type of equipment specified. Service technician requirements include, but are not limited to the following:
 - 1. Service technician shall be present during initial energizing of equipment to determine directional testing.
 - 2. Service technician shall inspect and verify location of anchor bolts, placement, leveling, alignment and field erection of equipment, as well as control panel operation and electrical connections.
 - 3. Service technician shall provide classroom and/or field training on the operation and maintenance of the equipment to operator personnel.

- H. Manufacturer shall state field service rates for a service technician to owner and contractor. In the event that the field service time required by this section should not be sufficient to properly place the equipment into operation, additional time shall be purchased by contractor to correct deficiencies in installation, equipment, or material without additional cost to owner.
- I. Contractor shall guarantee all equipment against improper installation, defective workmanship or materials, and breakage or other failure. Materials shall be suitable for service conditions.
- J. All equipment shall be designed, fabricated, and assembled in accordance with recognized and acceptable engineering and shop practice. Individual parts shall be manufactured to standard sizes and thicknesses so that repair parts can be installed in the field. Like parts of duplicate units shall be interchangeable. Equipment shall not have been in service prior to delivery, except as required by testing.
- K. Each major component of equipment shall have the manufacturer's name, address and product identification on a nameplate securely affixed to the equipment.

DELIVERY, STORAGE, AND HANDLING OF EQUIPMENT

- A. Equipment shall be shipped and delivered fully assembled, except where partial disassembly is required in order to conform to transportation regulations or for the protection of components.
- B. Contractor shall be responsible for unloading and shall have equipment on-site at the time of delivery permitting proper hoisting of the equipment.

PRE-SUBMITTAL OF ALTERNATE EQUIPMENT

Manufacturers of alternative equipment shall submit a pre-approval package to the Engineer at least fifteen (15) days prior to bid date. Alternative manufacturers shall submit the following information and supporting documentation:

- A. A complete set of drawings, specifications, catalog cut-sheets, and detailed descriptive material. Drawings shall show all relevant details of the unit. This information shall identify all technical and performance requirements stipulated on the drawings and in the specification. If the proposed equipment does not meet these specifications, any deviation from the specification must be expressly noted. All deviations shall be listed on a single document.
- B. Detailed installation drawings illustrating how the proposed screen will be installed. The drawings shall include plan, elevation, and sectional views of the installation. Drawings shall include details of the anchor bolt locations.

- C. Motor characteristics and performance information. Vendor data shall be furnished to confirm the torque and thrust rating of the drives.
- D. Complete reference list of all installations of same and similar equipment including contact names and phone numbers, showing at least 10 municipal installations of the same size as the alternate equipment located in the United States.
- E. Complete bill of materials for all equipment, showing dimensions and materials of construction of all components.
- F. Certification that the entire equipment will be passivated by submersion in an acid bath as specified in chapter 2.03.
- G. A copy of documents proving certification of the Manufacturer's Quality Management System according to ISO 9001. Manufacturers without an ISO 9001 certified quality management program must provide complete documentation of their existing quality management system with supplemental information clarifying why areas do not meet ISO 9001 standards. Meeting national quality management standards alone shall not be considered an acceptable substitute because ISO standards exceed national quality management standards.
- H. Details of the control and instrumentation system including wiring diagrams. A Professional Engineer shall note any required changes to the project electrical drawings.
- I. Information on equipment field erection requirements including total weight of assembled components and weight of each sub-assembly.
- J. List of recommended additional equipment and current cost of each.
- K. A maintenance schedule showing the required maintenance, frequency of maintenance, lubricants and other items required at each regular preventative maintenance period, including all ancillary equipment provided.

MANUFACTURERS:

Duperon® Dual Auger System 0.5 HP as manufactured by Duperon Corporation in Saginaw, Michigan or equivalent.

DESIGN AND PERFORMANCE DATA

Dual Auger System DAS.A.5 Data Sheet	
Peak Flow (10 Min) Wastewater Application:	Up to 0.030 MGD with 0.34" barscreen
Average Flows Wastewater Application	.020 MGD with 0.34" barscreen
Peak Solids Capacity (approx. 7 minutes):	8 cu.ft./hr
Average Solids Capacity (continuous):	5.5 cu.ft./hr
Bar Thickness:	0.375"
Screen Field Height:	18.25"
Materials of Construction:	• 304 SSTL • CL35 Gray Iron • UHMW Auger Supports
Strainer:	Floating Bars
Below Freezing Temperatures:	Heat tracing required on transition and discharge chutes
Motor/Drive	
Motor Size:	0.5 HP
Motor Paint:	Manufacturer Standard Coating
Motor Service Factor (Minimum):	1.0
Output Speed:	6 RPM (@ motor frequency of 60hz)
Total Gear Reduction:	300:1
Speed Reducer Paint:	Manufacturer Standard Coating
Site Power	
Phase/Voltage:	1 phase 240-volt

- A. The fine screen shall be designed to withstand maximum forces exerted during operation. All structural and functional members shall be sized to prevent deflection or vibration which could impair operation.
- B. The screen shall be capable of processing spherical objects with a diameter of 3". Such objects shall be conveyed through the auger and shall be discharged with the screenings.
- C. Screening Action: The Dual Auger System shall have a pair of shafted augers to provide debris removal from the screen as well as conveyance and compaction. The augers shall utilize a "limited floating feature" against a screen to allow for the accommodation of irregular debris.
- D. Conveyance Action: The screen feature of the Dual Auger System shall capture solids. The Two augers shall push the debris off the screen and into the chute. The debris continues to convey / fill up the chute. The weight of the debris in the chute provides

- resistance for compaction/dewatering. Discharge chute design with upper elbow for above grade discharge. A single spiral auger, driven from a motor at the top end shall not be accepted as an alternative.
- E. Operation: The Dual Auger System shall be continuous run, not requiring an operator. The Dual Auger System shall create compaction via debris weight in the chute. It is designed to capture wastewater debris in its original form, including but not limited to: rocks; broken concrete; and metal (such as bolts or short pipe) up to 3 inches long. The Dual Auger System shall have the ability to process pieces of clothing, rags, debris, and/or grease. The Dual Auger System shall move at a normal operating speed of 1.5 to 6.0 RPM and shall have the ability to run intermittently if needed.
 - F. The screening equipment shall produce dewatered screenings capable of passing the EPA Paint Filter Test as described in method 9095 of EPA Publication SW-486.
 - G. To minimize odors and nuisance, the conveyance, dewatering and compaction zones shall be completely enclosed.

COMPONENTS

- A. Unless otherwise specified in these specifications, the entire equipment shall be manufactured from AISI 304 austenitic stainless-steel shapes (rods, angles, and channels), pipes, and sheets. All mechanical parts shall be designed to handle the forces that may be exerted on the unit during fabrication, shipping, erection, and proper operation according to the O&M manual.
- B. Lower Gear Housing: The lower gear housing of the Dual Auger System shall be constructed of Class 35 gray iron. It shall be sand blast, zinc primed and painted with Tnemec paint to a minimum 12 mils thickness.
- C. Inlet trough: The 304 stainless steel minimum thickness of 14 gauge. The inlet trough shall have an alignment pin to locate the main unit in the horizontal plane.
- D. Auger: The auger shall be of 304 stainless steel. The auger shaft shall be 1-1/2 inch stainless steel schedule 40 pipe with RH Helix flight spirals of 6 inch diameter x 4 inch pitch x 3/8 thick. The auger shaft is coupled at the drive by way of solid stainless steel stub shaft. The augers shall have approximately 1/2" of play at the output end. Augers are cradled by the spring-loaded screen. This arrangement shall allow for the accommodation of irregular debris.
- E. Upper Housing: The upper housing of the Dual Auger System shall be constructed of Class 35 gray iron. It shall be sand blast, zinc primed and painted with Tnemec paint to a minimum 12 mils thickness. The upper housing shall contain the motor in a sealed chamber.

- F. Discharge Chute: The discharge chute of the Dual Auger System shall be constructed of 304 stainless steel with a minimum thickness of 14 gauge. Support and flange connections shall be 3/8 inch. The discharge chute shall be tapered outward toward the discharge end.
- G. Screen: A screen shall consist of 3/8" X 1" inch bars. The bars are captured in a ring with slots which allow the bars to move in and out. Compression springs hold the bars against the augers. Designs requiring auger-mounted brushes will not be accepted.
- H. Drive Assembly:
1. Each Dual Auger System unit shall operate independently, with its own drive unit and driven components. The gearbox shall not be vented to the outside atmosphere.
 2. The gearbox shall be grease lubricated with grease points piped to above the manhole lid for access by the operator and designed for 5 years (or 20,000 hours of operation) between recommended clean and re-grease services. The gearbox shall consist of (2) worm reductions yielding a total ratio of 300:1. The speed shall be 1.5 RPM minimum to 6.0 RPM maximum and controlled by a vector-type inverter (or greater service factor) based on unit torque requirements.
 3. The motor shall be encased in the upper housing and sealed completely watertight. The motor shall be AC induction type, 0.50 HP, explosion-proof, inverter-duty model.
 4. The Cast Iron components shall incorporate the standard manufacturer's coating system.
- I Screw Support: A single screw support shall be UHWM plane type, self-lubricating, and secured by the drive shaft pillar, filling the auger cleavage on the outlet side.

ELECTRICAL, CONTROLS, INSTRUMENTATION

- A. General: Controls for the Dual Auger System shall be provided by the manufacturer. The Dual Auger System manufacturer shall be responsible for proper sizing and function of the controls.
1. Control Panel
 - a. Enclosure shall be NEMA 4X SS with lockable dead front door. All control devices shall be protected behind the dead front door.
 - b. General
 - Variable frequency drive (VFD)
 - Panel heater and thermostat
 - Surge protective device.
 - VFD to include selector switch for forward run
 - VFD to include keypad for run/fault status
 - Remote dry contact outputs for the following: Auger running,

General fault & E-Stop

- Surge protective device
- Elapsed time meter
- Control Transformer

2. Sequence of Operations:

- a. The Dual Auger System VFD shall be powered by a remote source. The On/Off switch must be in the On position. The Rev/O/Fwd switch must be in the forward position. The drive will continue to run in forward until the switch is turned to Off. The VFD will automatically restart after a power failure. The speed can be adjusted by the speed potentiometer located on the face of the VFD.
- b. The Speed Controller fault shall be cleared by turning off the Dual Auger System VFD, then waiting approximately three minutes and then turning the Off/On switch back to the desired setting. A motor over temp fault shall clear automatically when the motor cools to a temperature within the normal operating range.

3. E-Stop:

- a. A local operator station shall be provided and shall be suitable for post-mounting. Enclosure shall be NEMA 7 cast Aluminum, and shall include the following: E-stop pushbutton (red)

4. Miscellaneous

- a. The following shall be provided by the electrical contractor and are not part of the Dual Auger System manufacturer scope of supply:
 - i. Mounting stands
 - ii. Mounting hardware
 - iii. Control Panel circuit protection on incoming power
 - iv. Field wiring and conduit
 - v. Junction boxes
 - vi. Installation
- b. Field wiring shall include (but not be limited to) the following connections as applicable:
 - i. All incoming power supply to the control panel.
 - ii. All required grounding of the motor and control panel.
 - iii. Motor to the VFD.
 - iv. Motor thermostat to the terminal inputs on the VFD.

ADDITIONAL EQUIPMENT

- A. Manufacturer shall provide any specialty tools and recommend spare parts required for maintaining the equipment as follows:
 - 1. Grease Tube (14oz.) (2)
 - 2. Never-Seez (2)
- B. Heat Trace and Blanket Kit: Power requirements for the Heat Trace and Blanket Kit are 120VAC/1000 watts and components are suitable for Class I, Division 1 areas. The Heat Trace and Blanket Kit includes:
 - 1. Removable Teflon heat blanket, weatherproof construction (2)
 - 2. 100 ft. of Heat Trace cable, self-regulating, 12 AWG buss, 10 watts/ft (2)
 - 3. NEMA 7/9 Thermostat with remote probe for temperature detection (2)
 - 4. Junction box for explosion-proof termination of heat trace (2)
- C. Bagger: A continuous bag system shall be provided for containing washed/compacted screenings as they are discharged from the end of the chute. The bagger shall include quick-release latches, and a bag dispenser/holder for storing the unused bags shall be easily removed for refilling. The bag dispenser shall hold (1) continuous bag pack, with (2) bag packs provided at delivery of equipment. Bag refills shall be Longofill/Paxxo 90-meter long refills.

EXECUTION

Installation, Start-up and Operator Training

- A. Contractor shall verify all dimensions in the field to ensure compliance of equipment dimensions with the drawings. Contractor shall notify Engineer of significant deviations.
- B. Installation of the equipment shall be in strict accordance with the contract documents and the manufacturer's instructions and shop drawings. Contractor shall supply anchor bolts for the equipment. Contractors shall install the anchor bolts in accordance with the manufacturer's recommendations.
 - 1. Anchor Bolts
 - a. Contractor shall furnish all anchor bolts of ample size and strength required to securely anchor each item of equipment. Anchor bolts, hex nuts, and washers shall be stainless steel. Anchor bolts shall be wedge or epoxy type.
 - b. The contractor shall set anchor bolts. Equipment shall be placed on the foundations, leveled, shimmed, bolted down, and grouted with a non-shrinking grout.
 - c. Anchors template drawings shall be included in the submittal to permit

- verification of the location structural elements, new or existing in the concrete.
- d. Anchors sizes, quantity and requirements will be indicated on the submittal drawings. Quantity is site specific but typically each Dual Auger System requires (8) 1/2" dia. x 4 1/2" Lg. embed HILTI HAS RODS w/ RE-500v3 Adhesive system or equivalent, (2) Epoxy tube, (1) dispenser.
 - e. Above quantities not guaranteed as accurate, final quantities will be outlined in submittals.
 - f. Some minor field welding will be required at the top of the channel support bar and at the operating deck anchor points.
- C. After installation, touch-up paint shall be applied to all scratched, abraded and damaged shop painted surfaces. Coating type and color shall match shop painting. Contractor shall passivate all field welds.
1. Contractor shall provide for testing and shall be performed in strict conformance with the manufacturer's start up instructions. Testing of the Dual Auger System shall demonstrate that the equipment is fully operational.
 2. Field certification shall include inspection of the following:
 - a. Verify Dual Auger System is properly leveled and anchored per the installation instructions and site drawings.
 - b. Assure controls and instrumentation work in all modes.
 - c. Assure proper auger rotation.
 - d. Check to assure all Start-Up requirements are completed per the Installation Guide.
- D. Supplier shall furnish the services of a factory-trained service technician two (2) trips including a total of four (4) workdays to inspect the installations, observe start up, and provide operator training.
1. The service technician shall make all necessary adjustments and settings to the controls.
 2. The service technician shall demonstrate proper and sequential operation of the screening system. The screen shall be able to operate fully automatically.
 3. Contractor shall provide certification for completion of the pre-commissioning checklist.

WARRANTY

- A. Manufacturer shall provide a written one-year standard warranty from the date of substantial completion to guarantee that there shall be no defects in material or workmanship in any item supplied.

This work shall be paid at the contract unit price per LUMP SUM for VERTICAL DUAL AUGER SCREEN at the location designated for which price shall be payment in full for performing the work as specified herein.

WATER MAIN

This work shall consist of constructing water main complete in place (trenched, bored, within casing, etc.) of the size as shown on the plans and in accordance with Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The existing water main is to remain in use at all times during the installation of the new water main and service.

All water main pipe material shall be as called off on the plans and specified here:

PVC: Polyvinyl Chloride (PVC) shall conform to Section 40-2.01C of the Standard Specifications for Water and Sewer Construction in Illinois.

Polyvinyl Chloride (PVC) pipe shall conform to the latest ASTM D1784 standards for PVC, AWWA C900, CL200, w/push-on joints (ASTM D3139) with gaskets per ASTM F-477

Polyvinyl Chloride (PVC) pipe shall conform to the latest ASTM D1784 standards for PVC, SDR 26, Class 160, w/push-on joints (ASTM D3139) with gaskets per ASTM F-477

Ductile Iron: Ductile Iron Pipe shall conform to Section 40-2.01B of the Standard Specifications for Water and Sewer Construction in Illinois.

Ductile Iron Pipe shall conform to ANSI A 21.51 (AWWA C151), Class 350, seal coated and/or cement lined per ANSI A 21.4 (AWWA C104), with restraint joints (AWWA C111) with Nitrile Gaskets. Pipe shall be wrapped with polyethylene.

All water mains shall be placed at a minimum of fifty-four (54) inches below the ground line, unless otherwise noted in the plans, and shall be laid in accordance with the manufacturer's recommendations. Extra depth shown in some areas along the water main route is required to obtain the required gradient between utilities, culverts & ditches. Extra depth required for the water main installation including any extra fittings not noted on the plans, shall be considered incidental to the construction of the water main.

Contractor shall comply with the terms and conditions of all applicable permits.

The trench shall be backfilled as detailed on the plans. Compaction of earth/granular backfill shall be by method 1 (ramming or tamping) or 3 (CLSM) of Section 20-4.06 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition

All water mains shall be kept clean during the course of the work. A tapered wood plug or other approved device shall be placed inside the end of the last pipe installed while excavation is made for the next pipe or at the end of the day's work.

No direct taps will be allowed on the water main. All connections will be through fittings or saddles as specified.

All water mains shall use FA-6 for bedding, haunching and one (1) foot of initial backfill and shall be considered part of this item for payment purposes.

All existing pavement or concrete surface removal required for the installation of the water main and services outside of the limits of pavement removal shall be considered part of this item for payment purposes.

Tracer Wire: All water mains shall have a tracer wire installed and tested in the presence of the owner's representative to ensure that it has been installed in accordance with the notes within the drawings and shall be considered part of this item for payment purposes.

A #12 AWG Blue 150200WAT, 45 MIL, polyethylene insulated, solid single conductor copper tracer wire shall be furnished and installed on the crown of the pipe. It shall be terminated in the valve boxes to facilitate tracing. Two-way splices shall be made with a direct bury splice kit such as 3M DBR 790327, or equivalent.

The contractor shall demonstrate the integrity of the tracer wire by conducting a continuity test on all tracer wire in the presence of the Owner's representative. Testing shall include transmitting a 1 (one) kilohertz signal or less through the entire tracer wire length being tested and then designating it by electromagnetic means on the ground's surface for the entire length of the tracer wire. This signal must be continuous without interruption throughout the entire tracer wire's length and the tracer wire itself must be continuous without interruption. Any breaks, dead spots, gaps, shorts, poor signals, etc. shall be considered defective work, and shall be remedied in accordance with all applicable portions of the Contract Documents.

Tracer wire shall be installed on all water mains and attached (duct taped) above the crown of the pipe and brought up inside of all valve boxes as detailed on the plans. It shall be secured to the pipe as required to insure that the wire remains adjacent to the pipe. The tracer wire shall be securely bonded together at all wire joints with an approved watertight connector to provide electrical continuity, and it shall be accessible at all tracer wire access points. Tracer wire shall be laid flat and securely affixed to the pipe at a minimum of 10-foot intervals. The wire shall be protected from damage during the execution of the works. No breaks or cuts in the tracer wire or tracer wire insulation shall be permitted.

Except for approved spliced-in connections, tracer wire shall be continuous and without splices from each tracer wire access point. Where and approved spliced-in connections occur, approved watertight connectors shall be used to provide electrical continuity.

At all existing locations where there is existing tracer wire, the tracer wire shall be properly connected and spliced as outlined above.

The amount of wire required to be extended above the ground will differ between at grade and above ground structures.

The wire shall be brought up on the outside of each valve box, a hole shall be drilled near the top of the valve box, and the wire shall be terminated with a two foot minimum length of wire inside of the valve box as detailed on the plans.

Method of Measurement: This work will be measured in feet as measured along the top of the pipe installed through all fittings, valves and casings.

This work will be paid for at the contract unit price per FOOT for WATER MAINS, of the specified size and material for which price shall include all water main, tracer wire, backfilling, installation and all labor, materials and equipment to satisfactorily complete the work.

Trench backfill when required and shown on the plans will be measured and paid for separately in accordance with Section 208 of the Standards Specifications.

WATER SERVICE METER AND VAULT

This work shall consist of furnishing and installing water service meter connection and vault as shown on the plans in accordance with the applicable portions of Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The Contractor shall provide and install a new 42 inch inside diameter HDPE meter pit and cast-iron meter ring and lid, lid extension and radio read hole to match meter.

The Contractor shall provide and install 2" service saddles with double strap and 2" corporation valves and buffalo boxes for each connection to the water main. Saddles shall be brass or stainless-steel double strap saddles and tapped appropriately for a brass corporation stop with tapered CC threads as shown on the drawings. No galvanized saddles or bolts will be allowed. All corporation stops shall be Ford Type F1000 pack joint with AWWA taper CC threads on inlet side.

No direct taps will be allowed on the Water Main. All taps shall be made live under pressure through the saddle and corporation stop.

The Contractor shall provide and install 2" Ford Series 70 copper meter setter with angle ball valve and dual check valve and bypass ball valve.

The Contractor shall provide and install 2" HDPE service tubing, SDR 9, PR 200 and fittings as required to make the connection from the water main to the meter setter.

The contractor shall provide the meter as specified and shown on the plans, meeting the requirements of the Arcola-Tuscola Joint Water Agency.

This work will be paid for at the contract unit price per LUMP SUM for WATER SERVICE METER AND VAULT, which price shall include meter vault and lid, meter setter, fittings, piping, tubing, service saddle, valves, support blocks, installation and all labor, materials and equipment to satisfactorily complete the work.

WATER SERVICE INTERIOR PLUMBING

This work shall consist of furnishing and installing water service piping, equipment, fittings, and the restoration of the service area utility room within the service building at locations shown on the plans and as specified herein.

Each location is designated as described below:

Location 1	North Bound I-55 Rest Area restroom facility building.
Location 2	South Bound I-55 Rest Area restroom facility building.

The contractor shall install the service piping, equipment and fittings as shown in the plans to connect the new water service pipe to the existing water service distribution system within the rest area facility.

Contractor shall fill all holes in the walls and floors with similar material as existing walls and floors.

This work will be paid for at the contract unit price per EACH for WATER SERVICE INTERIOR PLUMBING, at the location designated which price shall include all labor for the all water service piping, equipment, fittings, restoration of the service area utility room within the service building and connection to the new water service pipe to existing water service distribution system to satisfactorily complete the work.

WATER SERVICE

This work shall consist of constructing water service complete in place (trenched, bored, within casing, etc.) of the size as shown on the plans and in accordance with Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The existing water main is to remain in use at all times during the installation of the new water service and service.

All water service pipe material shall be as called off on the plans and specified here:

PVC: Polyvinyl Chloride (PVC) shall conform to Section 40-2.01C of the Standard Specifications for Water and Sewer Construction in Illinois.

Polyvinyl Chloride (PVC) pipe shall conform to the latest ASTM D1784 standards for PVC, AWWA C900, CL200, w/push-on joints (ASTM D3139) with gaskets per ASTM F-477

Polyvinyl Chloride (PVC) pipe shall conform to the latest ASTM D1784 standards for PVC, SDR 26, Class 160, w/push-on joints (ASTM D3139) with gaskets per ASTM F-477

Ductile Iron: Ductile Iron Pipe shall conform to Section 40-2.01B of the Standard Specifications for Water and Sewer Construction in Illinois.

Ductile Iron Pipe shall conform to ANSI A 21.51 (AWWA C151), Class 350, seal coated and/or cement lined per ANSI A 21.4 (AWWA C104), with restraint joints (AWWA C111) with Nitrile Gaskets. Pipe shall be wrapped with polyethylene.

All water services shall be placed at a minimum of fifty-four (54) inches below the ground line, unless otherwise noted in the plans, and shall be laid in accordance with the manufacturer's recommendations. Extra depth shown in some areas along the water service route is required to obtain the required gradient between utilities, culverts & ditches. Extra depth required for the water service installation including any extra fittings not noted on the plans, shall be considered incidental to the construction of the water service.

Contractor shall comply with the terms and conditions of all applicable permits.

The trench shall be backfilled as detailed on the plans. Compaction of earth/granular backfill shall be by method 1 (ramming or tamping) or 3 (CLSM) of Section 20-4.06 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition

All water services shall be kept clean during the course of the work. A tapered wood plug or other approved device shall be placed inside the end of the last pipe installed while excavation is made for the next pipe or at the end of the day's work.

No direct taps will be allowed on the water service. All connections will be through fittings or saddles as specified.

All water services shall use FA-6 for bedding, haunching and one (1) foot of initial backfill and shall be considered part of this item for payment purposes.

All existing pavement or concrete surface removal required for the installation of the water service and services outside of the limits of pavement removal shall be considered part of this item for payment purposes.

Tracer Wire: All water services shall have a tracer wire installed and tested in the presence of the owner's representative to ensure that it has been installed in accordance with the notes within the drawings and shall be considered part of this item for payment purposes.

A #12 AWG Blue 150200WAT, 45 MIL, polyethylene insulated, solid single conductor copper tracer wire shall be furnished and installed on the crown of the pipe. It shall be terminated in the valve boxes to facilitate tracing. Two-way splices shall be made with a direct bury splice kit such as 3M DBR 790327, or equivalent.

The contractor shall demonstrate the integrity of the tracer wire by conducting a continuity test on all tracer wire in the presence of the Owner's representative. Testing shall include transmitting a 1 (one) kilohertz signal or less through the entire tracer wire length being tested and then designating it by electromagnetic means on the ground's surface for the entire length of the tracer wire. This signal must be continuous without interruption throughout the entire tracer wire's length and the tracer wire itself must be continuous without interruption. Any breaks, dead spots, gaps, shorts, poor signals, etc. shall be considered defective work, and shall be remedied in accordance with all applicable portions of the Contract Documents.

Tracer wire shall be installed on all water services and attached (duct taped) above the crown of the pipe and brought up inside of all valve boxes as detailed on the plans. It shall be secured to the pipe as required to insure that the wire remains adjacent to the pipe. The tracer wire shall be securely bonded together at all wire joints with an approved watertight connector to provide electrical continuity, and it shall be accessible at all tracer wire access points. Tracer wire shall be laid flat and securely affixed to the pipe at a minimum of 10-foot intervals. The wire shall be protected from damage during the execution of the works. No breaks or cuts in the tracer wire or tracer wire insulation shall be permitted.

Except for approved spliced-in connections, tracer wire shall be continuous and without splices from each tracer wire access point. Where and approved spliced-in connections occur, approved watertight connectors shall be used to provide electrical continuity.

At all existing locations where there is existing tracer wire, the tracer wire shall be properly connected and spliced as outlined above.

The amount of wire required to be extended above the ground will differ between at grade and above ground structures.

The wire shall be brought up on the outside of each valve box, a hole shall be drilled near the top of the valve box, and the wire shall be terminated with a two foot minimum length of wire inside of the valve box as detailed on the plans.

Method of Measurement: This work will be measured in feet as measured along the top of the pipe installed through all fittings, valves and casings.

This work will be paid for at the contract unit price per FOOT for WATER SERVICE, of the specified size and material for which price shall include all water service, tracer wire, backfilling, installation and all labor, materials and equipment to satisfactorily complete the work.

WATER VALVES

This work shall consist of furnishing and installing gate valves of the size as shown on the plans and valve box in accordance with the applicable portions of Section 561 of the "Standard Specifications" and Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition and as specified herein.

The minimum requirements for all gate valves shall be manufactured by Mueller and shall, in design, material and workmanship, conform to the standards of the latest AWWA C-509. All materials used in the manufacture of waterworks gate valves shall conform to the AWWA standards designed for each material listed. All bolts, nuts, fasteners, etc. shall be 304 (18-8) stainless steel on all valves. The gate valves shall be standard pattern and shall have the name or mark of the manufacturer, size and working pressure plainly cast in raised letters on the body.

End connections for all valves, unless specifically called out on the drawings, shall be mechanical joint. The valve bodies shall be cast iron, mounted with approved non-corrosive metals. All wearing surfaces shall be bronze or other non-corrosive material, and there shall be no moving bearing or contact surfaces or iron in contact with iron. Contact surfaces shall be machined and finished in the best workmanlike manner, and all wearing surfaces shall be easily renewable.

Gate valves shall be non-rising stem, resilient wedge style. The stem shall be of high-tensile strength bronze or other approved non-corrosive metal. All non-ferrous bushings shall be of substantial thickness, tightly fitted and pressed into machined seats. All valves shall open by turning to the left counterclockwise.

Unless otherwise designated in the specifications, all gate valves shall be furnished with O-ring stem seals. Number, size and design shall conform to the AWWA standard for gate valve O-ring stem seals.

All gate valves shall be provided with stainless extension shafts when the water line connecting to the valve is buried greater than the minimum of fifty-four (54) inches, operating nuts and valve boxes as follows:

Extension shafts (if required) shall be Type 304 stainless steel and the operating nut shall be 2 in square. Shafts shall be designed to provide a factor of safety of not less than four. Operating nuts shall be pinned to the shafts. Top of the operating nut shall be located 1 foot below the rim of the valve box.

Valve boxes shall be manufactured by Mueller and shall be a heavy pattern cast iron, three-piece, telescoping type box with dome base suitable for installation on the buried valves. The inside diameter shall be at least 4 1/2 inches. Barrel length shall be adapted to the depth of cover, with a lap of at least 6 inches when in the most extended position. Covers shall be cast iron with "WATER" cast into lid. Aluminum or plastic are not acceptable. A means of lateral support for the valve extension shafts (if required) shall be provided in the top portion of the valve box. The upper section of each box shall have a top flange of sufficient bearing area to prevent settling. The bottom of the lower section shall enclose the stuffing box and operating nut of the valve and shall be oval. All valve boxes shall use a two (2) piece centering device to center the box on the operating nut.

This work will be paid for at the contract unit price per EACH for WATER VALVES, of the size specified, which price shall include all gate valves, valve boxes, support blocks, installation and all labor, materials and equipment to satisfactorily complete the work.

COMPLETION DATE PLUS WORKING DAYS

It is the Department's intent that the project be completed by **5 PM on October 15, 2027**. An additional **15 working days** may be used after that date. Under extenuating circumstances, the Engineer may direct that certain items of work, not affecting the safe opening of the rest areas to traffic, may be completed within the working days allowed for clean-up work, seeding, and punch list items. Temporary closures for this work may be allowed at the discretion of the Engineer.

The provisions for the completion date plus working days shall be as set forth in Section 108 Prosecution and Progress of the Standard Specifications. All Applicable provisions of Section 108 shall apply.

If the project is not complete, except for clean-up work, seeding and punch list items, by **5 PM on October 15, 2027**, the Contractor shall be liable and shall pay to the Department the amount per calendar day shown in the table in Article 108.09, and based on the full awarded value of the contract, not as penalty but as liquidated damages, for each day of overrun in the contract time or such extended time as may have been allowed.

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: April 1, 2022

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 (ASI).

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.07
(b) Reclaimed Asphalt Pavement (RAP)	1031.09

303.03 Equipment. The vibratory roller shall be according to Article 1101.01, or as approved by the Engineer. Vibratory machines, such as tampers, shall be used in areas where rollers do not fit.

303.04 Soil Preparation. The minimum immediate bearing value (IBV) of the soil below the improved subgrade shall be according to the Department’s “Subgrade Stability Manual” for the aggregate thickness specified.

303.05 Placing and Compacting. The maximum nominal lift thickness of aggregate gradations CA 2, CA 6, and CA 10 when compacted shall be 9 in. (225 mm). The maximum nominal lift thickness of aggregate gradations CS 1, CS 2, and RR 1 when compacted shall be 24 in. (600 mm).

The top surface of the aggregate subgrade improvement shall consist of a layer of capping aggregate gradations CA 6 or CA 10 that is 3 in. (75 mm) thick after compaction. Capping aggregate will not be required when aggregate subgrade improvement is used as a cubic yard pay item for undercut applications.

Each lift of aggregate 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.

303.06 Finishing and Maintenance. 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.

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

303.08 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 (ASI). 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 ASI material is required, gravel may be used below the top 12 in (300 mm) of ASI.
- (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 ASI thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 1.

The coarse aggregate gradation for total ASI thickness greater than 12 in. (300 mm) shall be CS 1 or CS 2 as shown below or RR 1 according to Article 1005.01(c).

COARSE AGGREGATE SUBGRADE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		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 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		100	80 ± 10	25 ± 15	

- (2) Capping aggregate shall be gradation CA 6 or CA 10.”

Add the following to Article 1031.09 of the Standard Specifications:

“(b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Articles 1031.01(a), 1031.02(a), 1031.06(a)(1), and 1031.06(a)(2), and the following.

- (1) The testing requirements of Article 1031.03 shall not apply.
- (2) Crushed RAP used for the lower lift may be mechanically blended with aggregate gradations CS 1, CS 2, and RR 1 but it shall be no greater than 40 percent of the total product volume. RAP agglomerations shall be no greater than 4 in. (100 mm).

- (3) For capping aggregate, well graded RAP having 100 percent passing the 1 1/2 in. (38 mm) sieve may be used when aggregate gradations CS 1, CS 2, CA 2, or RR 1 are used in the lower lift. FRAP will not be permitted as capping material.

Blending shall be through calibrated interlocked feeders or a calibrated blending plant such that the prescribed blending percentage is maintained throughout the blending process. The calibration shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered.”

CEMENT, FINELY DIVIDED MINERALS, ADMIXTURES, CONCRETE, AND MORTAR (BDE)

Effective: January 1, 2025

Revised: January 1, 2026

Revise the first paragraph of Article 285.05 of the Standard Specifications to read:

“285.05 Fabric Formed Concrete Revetment Mat. The grout shall consist of a mixture of cement, fine aggregate, and water so proportioned and mixed as to provide a pumpable slurry. Fly ash or ground granulated blast furnace (GGBF) slag, and concrete admixtures may be used at the option of the Contractor. The grout shall have an air content of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The mix shall obtain a compressive strength of 2500 psi (17,000 kPa) at 28 days according to Article 1020.09.”

Revise Article 302.02 of the Standard Specifications to read:

“302.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Hydrated Lime	1012.01
(d) By-Product, Hydrated Lime	1012.02
(e) By-Product, Non-Hydrated Lime	1012.03
(f) Lime Slurry	1012.04
(g) Fly Ash	1010
(h) Soil for Soil Modification (Note 1)	1009.01
(i) Bituminous Materials (Note 2)	1032

Note 1. This soil requirement only applies when modifying with lime (slurry or dry).

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250.”

Revise Article 312.07(c) of the Standard Specifications to read:

“(c) Cement1001”

Add Article 312.07(i) of the Standard Specifications to read:

“(i) Ground Granulated Blast Furnace (GGBF) Slag1010”

Revise the first paragraph of Article 312.09 of the Standard Specifications to read:

“312.09 Proportioning and Mix Design. At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials to be used in the work for proportioning and testing. The mixture shall contain a minimum of 200 lb (120 kg) of cement per cubic yard (cubic meter). Cement may be replaced with fly ash or ground granulated blast furnace (GGBF) slag according to Article 1020.05(c)(1) or 1020.05(c)(2), respectively, however the minimum cement content in the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture according to the “Portland Cement Concrete Level III Technician Course” manual. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply, and a Level III PCC Technician shall develop the mix design.”

Revise Article 352.02 of the Standard Specifications to read:

“352.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement (Note 1)	1001
(b) Soil for Soil-Cement Base Course	1009.03
(c) Water	1002
(d) Bituminous Materials (Note 2)	1032

Note 1. Bulk cement may be used for the traveling mixing plant method if the equipment for handling, weighing, and spreading the cement is approved by the Engineer.

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250.”

Revise Article 404.02 of the Standard Specifications to read:

“404.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003.08
(d) Bituminous Material (Tack Coat)	1032.06
(e) Emulsified Asphalts (Note 1) (Note 2)	1032.06
(f) Fiber Modified Joint Sealer	1050.05
(g) Additives (Note 3)	

Note 1. When used for slurry seal, the emulsified asphalt shall be CQS-1h according to Article 1032.06(b).

Note 2. When used for micro-surfacing, the emulsified asphalt shall be CQS-1hP according to Article 1032.06(e).

Note 3. Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

Revise the last sentence of the fourth paragraph of Article 404.08 of the Standard Specifications to read:

“When approved by the Engineer, the sealant may be dusted with fine sand, cement, or mineral filler to prevent tracking.”

Revise Note 2 of Article 516.02 of the Standard Specifications to read:

“Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be a 1:1 blend of sand and cement comprised of a Type I, IL, or II cement at 185 lb/cu yd (110 kg/cu m). The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm).”

Revise Note 2 of Article 543.02 of the Standard Specifications to read:

“Note 2. The grout mixture shall be 6.50 hundredweight/cu yd (385 kg/cu m) of cement plus fine aggregate and water. Fly ash or ground granulated blast furnace (GGBF) slag may replace a maximum of 5.25 hundredweight/cu yd (310 kg/cu m) of the cement. The water/cement ratio, according to Article 1020.06, shall not exceed 0.60. An air-entraining admixture shall be used to produce an air content, according to Article 1020.08, of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The Contractor shall have the option to use a water-reducing or high range water-reducing admixture.”

Revise Article 583.01 of the Standard Specifications to read:

“**583.01 Description.** This work shall consist of placing cement mortar along precast, prestressed concrete bridge deck beams as required for fairing out any unevenness between adjacent deck beams prior to placing of waterproofing membrane and surfacing.”

Revise Article 583.02(a) of the Standard Specifications to read:

“(a) Cement1001”

Revise the first paragraph of Article 583.03 of the Standard Specifications to read:

“**583.03 General.** This work shall only be performed when the air temperature is 45 °F (7 °C) and rising. The mixture for cement mortar shall consist of three parts sand to one part cement by volume. The amount of water shall be no more than that necessary to produce a workable, plastic mortar.”

Revise Article 606.02(h) of the Standard Specifications to read:

“(h) Fibers (Note 1)1014”

Revise Note 1 in Article 606.02(h) of the Standard Specifications to read:

“Note 1. Fibers, when required, shall only be used in the concrete mixture for slipform applications.”

Revise the third paragraph in Article 606.10 of the Standard Specifications to read:

“Welded wire fabric shall be 6 x 6 in. (150 x 150 mm) mesh, #4 gauge (5.74 mm), 58 lb (26 kg) per 100 sq ft (9 sq m).”

Revise Article 1001.01(d) of the Standard Specifications to read:

“(d) Rapid Hardening Cement. Rapid hardening cement shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1600, Type URH, Type VRH, or Type RH-CAC. It shall be used according to Article 1020.04 or when approved by the Engineer. The Contractor shall submit a report from the manufacturer or an independent lab that contains results for testing according to ASTM C 1600 which shows the cement meets the requirements of either Type URH, Type VRH, or Type RH-CAC. Test data shall be less than 1 year old from the date of submittal.

Revise Article 1001.01(e) of the Standard Specifications to read:

“(e) Other Cements. Other cements shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1157 or ASTM C 1600, as applicable. Other cements shall be used according to Article 1020.04 or when approved by the Engineer. For cements according to ASTM C 1157, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type GU, HE, MS, MH, or LH. For cements according to ASTM C 1600, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type MRH or GRH. Test data shall be less than 1 year old from the date of submittal.”

Revise Article 1002.02 of the Standard Specifications to read:

“**1002.02 Quality.** Water used with cement in concrete or mortar and water used for curing concrete shall be clean, clear, and free from sugar. In addition, water shall be tested and evaluated for acceptance according to one of the following options.

OPTION 1.

(a) Acceptable limits for acidity and alkalinity when tested according to ITP T 26.

- (1) Acidity -- 0.1 Normal NaOH 2 ml max.*
- (2) Alkalinity -- 0.1 Normal HCl..... 10 ml max.*

*To neutralize 200 ml sample.

(b) Acceptable limits for solids when tested according to the following.

- | | |
|--|------------|
| (1) Organic (ITP T 26)..... | 0.02% max. |
| (2) Inorganic (ITP T 26)..... | 0.30% max. |
| (3) Sulfate (SO ₄) (ASTM D 516-82) | 0.05% max. |
| (4) Chloride (ASTM D 512) | 0.06% max. |

(c) The following tests shall be performed on the water sample and on deionized water. The same cement and sand shall be used for both tests.

- (1) Unsoundness (ASTM C 151).
- (2) Initial and Final Set Time (ASTM C 266).
- (3) Strength (ASTM C 109).

The test results for the water sample shall not deviate from the test results for the deionized water, except as allowed by the precision in the test method.

OPTION 2. Water shall meet the requirements ASTM C 1602 Tables 1 and 2 as outlined in Sections 5.1, 5.2, and 5.4.”

Revise Note 2/ in Article 1003.01(b) of the Standard Specifications to read:

“2/ Applies only to sand. Sand exceeding the colorimetric test standard of 11 (Illinois Modified AASHTO T 21) will be checked for mortar making properties according to Illinois Modified ASTM C 87 and shall develop a compressive strength at the age of 14 days when using Type I, IL, or II cement of not less than 95 percent of the comparable standard.

Revise the second sentence of Article 1003.02(e)(1) of the Standard Specifications to read:

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater.”

Revise the first sentence of the second paragraph of Article 1003.02(e)(3) of the Standard Specifications to read:

“The ASTM C 1293 test shall be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater.”

Revise the second sentence of Article 1004.02(g)(1) of the Standard Specifications to read:

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater.”

Add the following Section to the Standard Specifications.

“SECTION 1014. FIBERS FOR CONCRETE

1014.01 General. Fibers used in concrete shall be Type II or Type III (polyolefin or carbon) according to ASTM C 1116. The testing required for Type II fibers or Type III polyolefin fibers shall be performed by an independent lab a minimum of once every five years, and the test results provided to the Department. Manufacturers of Type III carbon fibers shall provide materials certification documentation not more than 6 years old a minimum of once every 5 years to the Department. The Department will maintain a qualified product list. The method of inclusion of fibers into concrete mixtures shall be according to the manufacturer's specifications.

At the discretion of the Engineer, the concrete mixture shall be evaluated in a field demonstration for fiber clumping, ease of placement, and ease of finishing. The field demonstration shall consist of a minimum 2 cu yd (1.5 cu m) trial batch placed in a 12 ft x 12 ft (3.6 m x 3.6 m) slab.

1014.02 Concrete Gutter, Curb, Median and Paved Ditch. Fibers shall be Type III. Fibers shall have a minimum length of 1/2 in. (13 mm) and a maximum length of 0.75 in. (19 mm). The maximum dosage rate in the concrete mixture shall not exceed 1.5 lb/cu yd (0.9 kg/cu m). The minimum dosage rate shall be per the manufacturer's recommendation.

1014.03 Concrete Inlay or Overlay. Fibers shall be Type III. Fibers shall have a minimum length of 1.0 in. (25 mm), a maximum length of 2 1/2 in. (63 mm), and a maximum aspect ratio (length divided by the equivalent diameter of the fiber) of 150. The maximum dosage rate shall not exceed 5.0 lb/cu yd (3.0 kg/cu m). The minimum dosage rate shall be per the manufacturer's recommendation.

1014.04 Bridge Deck Fly Ash, Ground Granulated Blast Furnace (GGBF) Slag, High Reactivity Metakaolin, or Microsilica (Silica Fume) Concrete Overlay. Fibers shall be Type III. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb / cu yd (1.2 kg/cu m).

1014.05 Bridge Deck Latex Concrete Overlay. Fibers shall be Type II or III. Fibers shall have a minimum length of 0.75 in. (19 mm), a maximum length of 1.75 in. (45 mm), and an aspect ratio (length divided by the equivalent diameter of the fiber) of between 70 and 100. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb/cu yd (1.2 kg/cu m)."

Add the following Section to the Standard Specifications:

“SECTION 1015. HIGH PERFORMANCE SHOTCRETE

1015.01 Packaged Shotcrete With Aggregate. The packaged shotcrete with aggregate shall be a pre-blended dry combination of materials for the wet-mix shotcrete method according to ASTM C 1480, Type FA or CA, Grade FR, Class I. The fibers shall be Type III according to Article 1014.01. The cement and finely divided minerals in the mixture shall be a minimum 6.65 cwt/cu yd (395 kg/cu m), and the portland cement shall not be below 4.70 cwt/cu yd (279 kg/cu m). Microsilica is required in the mixture and shall be a minimum of 5 percent by weight (mass) of cementitious material, and a maximum of 10 percent. Strength requirements shall be according to ASTM C 1480 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). Strength testing shall be according to ASTM C 1140. The air content as shot shall be 4.0 – 8.0 percent when tested according to AASHTO T 152, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm).

The packaged shotcrete shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 1480, ASTM C 1140, AASHTO 152, and ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations.

1015.02 Packaged Shotcrete Without Aggregate. The packaged shotcrete that does not include pre-blended aggregate shall be according to Article 1015.01, except the added aggregate shall be according to Articles 1003.02 and 1004.02. The aggregate gradation shall be according to the manufacturer. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations.”

Revise Section 1017 of the Standard Specifications to read:

“SECTION 1017. PACKAGED, DRY, COMBINED MATERIALS FOR MORTAR AND CONCRETE

1017.01 Mortar. The mortar shall be high-strength according to ASTM C 387 and shall have a minimum 80.0 percent relative dynamic modulus of elasticity when tested according to AASHTO T 161. For prestressed concrete applications, the mortar shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM C 387, AASHTO T 161, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the high-strength mortar shall be according to the manufacturer's specifications.

1017.02 Concrete. The materials, testing, and preparation of aggregate for the “high slump” packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). The “high slump” packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260. The testing according to ASTM C 387, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer’s recommendations.

1017.02 Self-Consolidating Concrete. The materials, testing, and preparation of aggregate for the “self-consolidating concrete” packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, it should be uniformly graded, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 Pa). Slump flow range shall be 22 in. (550 mm) minimum to 28 in. (700 mm) maximum when tested according to AASHTO T 347. The visual stability index shall be a maximum of 1 when tested according to AASHTO T 351. At the option of the manufacturer, either the J-Ring value shall be a maximum of 2 in. (50 mm) when tested according to AASHTO T 347 or the L-Box blocking ratio shall be a minimum of 80 percent when tested according AASHTO T 419. The hardened visual stability index shall be a maximum of 1 when tested according to AASHTO R 81.

The “self -consolidating concrete” packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 387, AASHTO T 347, AASHTO T 351, AASHTO T 419, AASHTO R 81, ASTM C 1218 and AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer’s recommendations.”

Revise Article 1018.01 of the Standard Specifications to read:

“1018.01 Requirements. The rapid hardening mortar or concrete shall be according to ASTM C 928 and shall have successfully completed and remain current with the AASHTO Product Eval and Audit Rapid Hardening Concrete Patching Materials (RHCP) testing program. R1, R2, or R3 concrete shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). For prestressed concrete applications, the mortar or concrete shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The Department will maintain a qualified product list. Mixing of the mortar or concrete shall be according to the manufacturer’s specifications..”

Revise Article 1019.02 of the Standard Specifications to read:

“1019.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate for Controlled Low-Strength Material (CLSM)	1003.06
(d) Fly Ash	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(f) Admixtures (Note 1)	

Note 1. The air-entraining admixture may be in powder or liquid form. The air content produced by the admixture shall be 15-25 percent when incorporated into Mix 2 or an equivalent mixture as determined by the Department and tested according to AASHTO T 121 or AASHTO T 152. The testing according to AASHTO T 121 or AASHTO T 152 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list.”

Revise the third paragraph of Article 1019.04 of the Standard Specifications to read:

“The Engineer will instruct the Contractor to adjust the proportions of the mix design in the field as needed to meet the design criteria, provide adequate flowability, maintain proper solid suspension, or other criteria established by the Engineer.”

Revise Article 1019.05 of the Standard Specifications to read:

“1019.05 Department Mix Design. The Department mix design shall be Mix 1, 2, or 3 and shall be proportioned to yield approximately one cubic yard (cubic meter).

Mix 1	
Cement	50 lb (30 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2900 lb (1720 kg)
Water	50-65 gal (248-322 L)
Air Content	No air is entrained

Mix 2	
Cement	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (173-248 L)
Air Content	15-25 %

Mix 3	
Cement	40 lb (24 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (179-248 L)
Air Content	15-25 %

Revise Article 1020.04, Table 1, Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise Article 1020.04, Table 1 (Metric), Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise Note 9 of Table 1 of Article 1020.04 of the Standard Specifications to read:

“(9) The cement shall be a rapid hardening according to Article 1001.01(d). Minimum or maximum cement factor may be adjusted when approved by the Engineer.”

Revise the second paragraph of Article 1020.05(a) of the Standard Specifications to read:

“For a mix design using a portland-pozzolan cement, portland blast-furnace slag cement, portland-limestone cement, or replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the Contractor may submit a mix design with a minimum portland cement content less than 400 lbs/cu yd (237 kg/cu m), but not less than 375 lbs/cu yd (222 kg/cu m), if the mix design is shown to have a minimum relative dynamic modulus of elasticity of 80 percent determined according to AASHTO T 161. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete.”

Revise the first sentence of the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

“Corrosion inhibitors and concrete admixtures shall be according to the qualified product lists.”

Delete the fourth and fifth sentences of the second paragraph of Article 1020.05(b) of the Standard Specifications.

Revise Article 1020.05(b)(5) of the Standard Specifications to read:

“(5) For Class PP-4 concrete, a high range water-reducing admixture, retarder, and/or hydration stabilizer may be used in addition to the air-entraining admixture. The Contractor also has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. A mobile portland cement concrete plant shall be used to produce the patching mixture.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture may be used. The accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture shall be per the Contractor’s recommendation and dosage. The qualified product list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.”

Revise second paragraph of Article 1020.05(b)(10) of the Standard Specifications to read:

“When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m) and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch. Other corrosion inhibitors shall be added per the manufacturer’s specifications.”

Delete the third paragraph of Article 1020.05(b)(10) of the Standard Specifications.

Revise Article 1020.15(b)(1)c. of the Standard Specifications to read:

“c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.”

Revise Article 1021.01 of the Standard Specifications to read:

“**1021.01 General.** Admixtures shall be furnished in liquid or powder form ready for use. The admixtures shall be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer, the date of manufacture, and trade name of the material. Containers shall be readily identifiable as to manufacturer, the date of manufacture, and trade name of the material they contain.

Concrete admixtures shall be on one of the Department's qualified product lists. Unless otherwise noted, admixtures shall have successfully completed and remain current with the AASHTO Product Eval and Audit Concrete Admixture (CADD) testing program. For admixture submittals to the Department; the product brand name, manufacturer name, admixture type or types, an electronic link to the product's technical data sheet, and the NTPEP testing number which contains an electronic link to all test data shall be provided. In addition, a letter shall be submitted certifying that no changes have been made in the formulation of the material since the most current round of tests conducted by AASHTO Product Eval and Audit. After 28 days of testing by AASHTO Product Eval and Audit, air-entraining admixtures may be provisionally approved and used on Departmental projects. For all other admixtures, unless otherwise noted, the time period after which provisionally approved status may be earned is 6 months.

The manufacturer shall include the following in the submittal to the AASHTO Product Eval and Audit CADD testing program: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range established by the manufacturer shall be according to AASHTO M 194. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to AASHTO M 194.

For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, 1021.07, and 1021.08, the pH allowable manufacturing range established by the manufacturer shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to AASHTO M 194.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass) as determined by an appropriate test method. To verify the test result, the Department will use Illinois Modified AASHTO T 260, Procedure A, Method 1.

Prior to final approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material."

Revise Article 1021.03 of the Standard Specifications to read:

“1021.03 Retarding and Water-Reducing Admixtures. The admixture shall be according to the following.

- (a) Retarding admixtures shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) Water-reducing admixtures shall be according to AASHTO M 194, Type A.
- (c) High range water-reducing admixtures shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).”

Revise Article 1021.05 of the Standard Specifications to read:

“1021.05 Self-Consolidating Admixtures. Self-consolidating admixture systems shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

High range water-reducing admixtures shall be according to AASHTO M 194, Type F.

Viscosity modifying admixtures shall be according to AASHTO M 194, Type S (specific performance).”

Revise Article 1021.06 of the Standard Specifications to read:

“1021.06 Rheology-Controlling Admixture. Rheology-controlling admixtures shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. Rheology-controlling admixtures shall be according to AASHTO M 194, Type S (specific performance).”

Revise Article 1021.07 of the Standard Specifications to read:

“1021.07 Corrosion Inhibitor. The corrosion inhibitor shall be according to one of the following.

- (a) Calcium Nitrite. Corrosion inhibitors shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution and shall comply with either the requirements of AASHTO M 194, Type C (accelerating) or the requirements of ASTM C 1582. The corrosion inhibiting performance requirements of ASTM C 1582 shall not apply.
- (b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.

For submittals requiring testing according to ASTM M 194, Type C (accelerating), the admixture shall meet the requirements of the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01.

For submittals requiring testing according to ASTM C 1582, a report prepared by an independent laboratory accredited by AASHTO re:source for portland cement concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, ASTM G 109 test information specified in ASTM C 1582 is not required to be from an independent accredited lab. All other information in ASTM C 1582 shall be from an independent accredited lab. Test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall instead be submitted directly to the Department.”

Add Article 1021.08 of the Standard Specifications as follows:

“1021.08 Other Specific Performance Admixtures. Other specific performance admixtures shall, at a minimum, be according to AASHTO M 194, Type S (specific performance). The Department also reserves the right to require other testing, as determined by the Engineer, to show evidence of specific performance characteristics.

Initial testing according to AASHTO M 194 may be conducted under the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01, or by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. In either case, test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall also be submitted directly to the Department. The independent accredited lab report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.”

Add Article 1021.09 of the Standard Specifications as follows:

“1021.09 Latex Admixtures. The latex admixture shall be a uniform, homogeneous, non-toxic, film-forming, polymeric emulsion in water to which all stabilizers have been added at the point of manufacture. The latex admixture shall not contain any chlorides and shall contain 46-49 percent solids.

In lieu of meeting the requirements of Article 1021.01, the Contractor shall submit a manufacturer's certification that the latex emulsion meets the requirements of FHWA Research Report RD-78-35, Chapter VI. The certificate shall include the date of manufacture of the latex admixture, batch or lot number, quantity represented, manufacturer's name, and the location of the manufacturing plant. The latex emulsion shall be sampled and tested in accordance with RD-78-35, Chapter VII, Certification Program.

The latex admixture shall be packaged and stored in containers and storage facilities which will protect the material from freezing and from temperatures above 85°F (30°C). Additionally, the material shall not be stored in direct sunlight and shall be shaded when stored outside of buildings during moderate temperatures.”

Revise Article 1024.01 of the Standard Specifications to read:

“1024.01 Requirements for Grout. The grout shall be proportioned by dry volume, thoroughly mixed, and shall have a minimum temperature of 50 °F (10 °C). Water shall not exceed the minimum needed for placement and finishing.

Materials for the grout shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003.02
(d) Fly Ash	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(f) Concrete Admixtures	1021”

Revise Note 1 of Article 1024.02 of the Standard Specifications to read:

“Note 1. Nonshrink grout shall be according to ASTM C 1107.

For prestressed concrete applications, the nonshrink grout shall have a water soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride ion content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM 1107, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the nonshrink grout shall be according to the manufacturer’s specifications.”

Revise Article 1029.02 of the Standard Specifications to read:

“ 1029.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement.....	1001
(b) Fly Ash	1010
(c) Ground Granulated Blast Furnace (GGBF) Slag	1010
(d) Water.....	1002
(e) Fine Aggregate.....	1003
(f) Concrete Admixtures	1021
(g) Foaming Agent (Note 1)	

Note 1. The manufacturer shall submit infrared spectrophotometer trace and test results indicating the foaming agent meets the requirements of ASTM C 869 in order to be on the Department’s qualified product list. Submitted data/results shall not be more than five years old.”

Revise the second paragraph of Article 1103.03(a)(4) the Standard Specifications to read:

“The dispenser system shall provide a visual indication that the liquid admixture is actually entering the batch, such as via a transparent or translucent section of tubing or by independent check with an integrated secondary metering device. If approved by the Engineer, an alternate indicator may be used for admixtures dosed at rates of 25 oz/cwt (1630 mL/100 kg) or greater, such as accelerating admixtures, corrosion inhibitors, and viscosity modifying admixtures.”

Revise Article 1103.04 of the Standard Specifications to read:

“ **1103.04 Mobile Portland Cement Concrete Plants.** The mobile concrete plant shall be according to AASHTO M 241 and the Bureau of Materials Policy Memorandum “Approval of Volumetric Mobile Mixers for Concrete”. The mixer shall be capable of carrying sufficient unmixed materials to produce not less than 6 cu yd (4.6 cu m) of concrete.”

Revise the first two sections of Check Sheet #11 “Subsealing of Concrete Pavements” of the Recurring Special Provisions to read:

“Description. This work shall consist of filling voids beneath rigid and composite pavements with cement grout.

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications:

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fly Ash	1010
(d) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(e) Admixtures	1021
(f) Packaged Rapid Hardening Mortar or Concrete	1018”

Revise the Materials section of Check Sheet #28 “Portland Cement Concrete Inlay or Overlay” of the Recurring Special Provisions to read:

“Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Fibers for Concrete.....	1014
(c) Protective Coat.....	1023.01

Note 1. Class PV concrete shall be used, except the cement factor for central mixed concrete shall be 6.05 cwt/cu yd (360 kg/cu m). A cement factor reduction according to Article 1020.05(b)(8) of the Standard Specifications will be permitted. CA 5 shall not be used and CA 7 may only be used for overlays that are a minimum of 4.5 in. (113 mm) thick. The Class PV concrete shall have a minimum flexural strength of 550 psi (3800 kPa) or a minimum compressive strength of 3000 psi (20,700 kPa) at 14 days.”

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."

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: July 2, 2026

1. OVERVIEW AND GENERAL 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 in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory. Award of the contract is conditioned on meeting the requirements of 49 CFR Part 26, and failure by the Contractor to carry out the requirements of Part 26 is a material breach of the contract and may result in the termination of the contract or such other remedies as the Department deems appropriate.
2. CONTRACTOR ASSURANCE. All assurances set forth in FHWA 1273 are hereby incorporated by reference and will be physically attached to the final contract and all subcontracts.
3. CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. The Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies and that, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **3.00%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work in accordance with the requirements of 49 CFR 26.53 and SBE Memorandum No. 24-02.
4. IDENTIFICATION OF CERTIFIED DBE. Information about certified DBE Contractors can be found in the IL UCP Directory. Bidders can obtain additional information and assistance with identifying DBE-certified companies at the Department's website or by contacting the Department's Bureau of Small Business Enterprises at (217) 785-4611.

PLEASE NOTE: As of October 3, 2025, the U.S. Department of Transportation issued an Interim Final Rule requiring all existing DBE and ACDBE certifications to be re-evaluated for social and economic disadvantage without consideration of race or gender. As of March 24, 2026, the ILUCP has completed reevaluation of those firms that submitted required information by January 31, 2026. DBE and ACDBE Certifications appearing in the IL UCP directory as certified have been recertified under the current federal regulations and may be counted for DBE goal credit. DBE and ACDBE firms appearing in this directory as ineligible have not submitted required documentation for reevaluation to date. Ineligible firms cannot currently be counted for DBE goal credit, but HAVE NOT BEEN DECERTIFIED and may still submit documentation to be reevaluated. All firms decertified under the October 3, 2025 Interim Final Rule reevaluation process have been removed from the Directory. Additional information regarding the IFR and the current status of the DBE/ACDBE program can be found at <https://idot.illinois.gov/doing-business/certifications/dbe.html>.

PLEASE BE ADVISED THAT A FIRM THAT IS INDICATED AS INELIGIBLE CANNOT BE USED FOR GOAL CREDIT. IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO VERIFY THAT ANY FIRM RELIED UPON FOR DBE GOAL CREDIT IN A UTILIZATION PLAN IS CURRENTLY CERTIFIED AND CAN BE COUNTED FOR GOAL CREDIT AT THE TIME OF BID.

5. BIDDING PROCEDURES. Compliance with this Special Provision and SBE Policy Memorandum 24-02 is a material bidding requirement. The following shall be included with the bid.
 - (a) DBE Utilization Plan (form SBE 2026) documenting enough DBE participation has been obtained to meet the goal, or a good faith effort has been made to meet the goal even though the efforts did not succeed in obtaining enough DBE participation to meet the goal.
 - (b) Applicable DBE Participation Statement (form SBE 2023, 2024, and/or 2025) for each DBE firm the bidder has committed to perform the work to achieve the contract goal.

The required forms and documentation shall 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 bid if it does not meet the bidding procedures set forth herein and the bid will be declared non-responsive. A bidder declared non-responsive for failure to meet the bidding procedures will not give rise to an administrative reconsideration. In the event the bid is declared non-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.

6. UTILIZATION PLAN EVALUATION. 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 the bidder has committed to DBE participation sufficient to meet the goal, or that the bidder has made good faith efforts to do so, in the event the bidder cannot meet the goal, in order for the Department to 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 Department

determines, based upon the documentation submitted, that the bidder has made a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A and the requirements of SBE 2026.

If the Department determines that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan of that determination in accordance with SBE Policy Memorandum 24-02.

7. CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work the bidder commits to have performed by the specified DBEs 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 firms. 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 guidelines for counting goal credit are provided in 49 CFR Part 26.55. In evaluating Utilization Plans for award the Department will count goal credit as set forth in Part 26 and in accordance with SBE Policy Memorandum 24-02.
8. CONTRACT COMPLIANCE. The Contractor must utilize the specific DBEs listed to perform the work and supply the materials for which each DBE is listed in the Contractor's approved Utilization Plan, unless the Contractor obtains the Department's written consent to terminate the DBE or any portion of its work. The DBE Utilization Plan approved by SBE is a condition-of-award, and any deviation to that Utilization Plan, the work set forth therein to be performed by DBE firms, or the DBE firms specified to perform that work, must be approved, in writing, by the Department in accordance with federal regulatory requirements. Deviation from the DBE Utilization Plan condition-of-award without such written approval is a violation of the contract and may result in termination of the contract or such other remedy the Department deems appropriate. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan.
 - (a) NOTICE OF DBE PERFORMANCE. The Contractor shall provide the Engineer with at least three days advance notice of when all DBE firms are expected to perform the work committed under the Contractor's Utilization Plan.
 - (b) SUBCONTRACT. If awarded the contract, the Contractor is required to enter into written subcontracts with all DBE firms indicated in the approved Utilization Plan and must provide copies of fully executed 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.
 - (c) PAYMENT TO DBE FIRMS. 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 goal has been paid to the DBE. The Contractor shall document and report all payments for work performed by DBE certified firms in accordance with Article 109.11 of the Standard Specifications. All records of payment for work performed by DBE certified firms shall be made available to the Department upon request.

- (d) **FINAL PAYMENT.** After the performance of the final item of work or trucking, or delivery of material by a DBE and final payment 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 (form SBE 2115) to the Engineer. 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.
- (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.

EROSION CONTROL BLANKET (BDE)

Effective: August 1, 2025

Revise Article 251.02 of the Standard Specifications to read:

“251.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Compost	1081.05(b)
(b) Mulch	1081.06(a)
(c) Chemical Mulch Binder	1081.06(a)(3)
(d) Chemical Compost Binder	1081.06(a)(4)
(e) Erosion Control Blanket	1081.10(a)
(f) Wildlife Friendly Erosion Control Blanket	1081.10(b)
(g) Wire Staples	1081.10(c)
(h) Wood Stakes	1081.10(d)
(i) Turf Reinforcement Mat	1081.10(e)”

Revise the first and second sentences of Article 251.04 of the Standard Specifications to read:

“251.04 Erosion Control Blanket. All erosion control blanket materials shall be placed on the areas specified within 24 hours of seed placement.”

Revise the second paragraph of Article 251.04 of the Standard Specifications to read:

“After the area has been properly shaped, fertilized (when applicable), and seeded, the blanket shall be laid out flat, evenly, and smoothly, without stretching the material. The erosion control blanket shall be placed according to the manufacture’s recommendations.”

Revise the second sentence of Article 251.06(b) of the Standard Specifications to read:

“Erosion control blanket, wildlife friendly erosion control blanket, and turf reinforcement mat will be measured for payment in square yards (square meters).”

Revise Article 251.07 of the Standard Specifications to read:

“251.07 Basis of Payment. This work will be paid for at the contract unit price per acre (hectare) for MULCH, of the method specified; and at the contract unit price per square yard (square meter) for EROSION CONTROL BLANKET, WILDLIFE FRIENDLY EROSION CONTROL BLANKET, or TURF REINFORCEMENT MAT.”

Revise first sentence of Article 280.04(h) of the Standard Specifications to read:

“This system consists of temporarily installing erosion control blanket or wildlife friendly erosion control blanket over areas that are to be reworked during a later construction phase.”

Revise Article 280.08(g) of the Standard Specifications to read:

“(g) Temporary Erosion Control Blanket. Temporary erosion control blanket will be paid for at the contract unit price per square yard (square meter) for TEMPORARY EROSION CONTROL BLANKET or TEMPORARY WILDLIFE FRIENDLY EROSION CONTROL BLANKET.

The work of removing, storing, and reinstalling the blanket over areas to be reworked more than once will not be paid for separately but shall be included in the cost of the temporary erosion control blanket or temporary wildlife friendly erosion control blanket.”

Revise Article 1081.10 of the Standard Specifications to read:

“1081.10 Erosion Control Blankets. The manufacturer shall furnish a certificate with each shipment stating the amount of product furnished and that the material complies with these requirements.

- (a) Erosion Control Blanket. Erosion control blanket shall be covered on top and bottom, also known as double net, with a 100 percent biodegradable woven, natural fiber or jute net meeting the following.

Material	Minimum Value
Excelsior	80%
Straw	100%
Coconut or Coir	100% Coconut or Coir
Straw/Coconut or Coir	70% Straw / 30% Coconut or Coir

- (b) Wildlife Friendly Erosion Control Blanket. Wildlife friendly erosion control blanket shall be according to Article 1081.10(a) except the netting shall be loose weave, also known as leno weave or gauze weave, with a moveable joint.
- (c) Wire Staples. Staples shall be made from No. 11 gauge or heavier uncoated black carbon steel wire, a minimum of 1 in. (25 mm) wide at the top and a minimum overall length of 8 in. (200 mm).

- (d) Wood Stakes. Hardwood blanket anchors shall be nominally 7 in. (180 mm) long from neck of hook to tip of anchor. The anchor shall have a minimum 1/2 in. (13 mm) curving hook to hold the blanket in place.
- (e) Turf Reinforcement Mat (TRM). The TRM shall be comprised of non-degradable, ultraviolet stabilized synthetic fibers, filaments, netting, and/or wire mesh processed into a three-dimensional reinforced mat. The mats may include degradable material to assist with vegetation establishment. Soil filled mats will not be allowed.

The TRM shall meet the following physical and performance properties:

Property	Value	Test Method
Tensile Strength, lb/ft (kN/m)	150 (2.19) min.	ASTM D 6818
UV Stability, (% Tensile Retained)	80 min.	ASTM D 4355 (1000 Hour Exposure)
Resiliency, (% Thickness Retained)	80 min.	ASTM D 6524
Allowable Shear Stress, lb/sq ft (Pa) ^{1/}	8 (384)	ECTC approved test method and independent laboratory

^{1/} Minimum shear stress the TRM (fully vegetated) can sustain without physical damage or excess erosion (> 1/2 in. (13 mm) soil loss) during a 30 minute flow event in large scale testing.

For TRMs containing degradable components, all property values shall be obtained on the non-degradable portion of the matting alone.”

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_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
 FPI_L = 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_L and FPI_P 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.

INLET FILTERS

Effective: April 1, 2026

Revise the first paragraph of Article 1081.15(h) of the Standard Specifications to read:

“(h) Inlet Filters. An inlet filter shall consist of a steel frame with a two piece geotextile fabric bag or a single reinforced geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall be according to the following.”

Revise Article 1081.15(h)(3) of the Standard Specifications to read:

“(3) Geotextile Fabric Bag. The sediment bag shall have a minimum silt and debris capacity of 2.0 cu ft (0.06 cu m). The sediment bag shall also meet one of the following options.

(1) OPTION 1. Two piece geotextile fabric bag.

The inner filter bag shall be constructed of a polypropylene geotextile fabric according to the following.

Inner Filter Bag		
Material Property	Test Method	Minimum Average Roll Value
Grab Tensile Strength	ASTM D 4632	100 lb (45 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833/ ASTM D 6241	65 lb (29 kg)
Trapezoidal Tear	ASTM D 4533	45 lb (20 kg)
UV Resistance	ASTM D 4355	70% at 500 hours
Apparent Opening Size	ASTM D 4751	No. 70 (212 µm) sieve
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	145 gpm/sq ft (5900 Lpm/sq m)

The outer reinforcement bag shall be constructed of a polyester mesh material according to the following.

Outer Reinforcement Bag		
Material Property	Test Method	Value
Content	ASTM D 629	Polyester
Weight	ASTM D 3776	4.55 oz/sq yd (155 g/sq m) $\pm$ 15%
Apparent Opening Size	ASTM D 4751	No. 30 (600 μ m) sieve
Water Flow Rate	ASTM D 4491	225 gpm/sq ft (9150 Lpm/sq m)
Burst	ASTM D 3786/ ASTM D 3787	120 psi (830 kPa) min.
Thickness	ASTM D 1777	0.040 $\pm$ 0.0050 in. (1.0 $\pm$ 0.1 mm)

b. OPTION 2. Reinforced geotextile fabric bag.

The filter bag shall be constructed of a polypropylene geotextile fabric reinforced with continuous filament fiberglass according to the following.

Reinforced Filter Bag		
Material Property	Test Method	Value or Minimum Average Roll Value
Weight	ASTM D 3776	5.00 oz/sq yd (170 g/sq m) $\pm$ 15%
Grab Tensile Strength	ASTM D 4632	200 lb (90 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833/ ASTM D 6241	95 lb (42 kg)
Trapezoidal Tear	ASTM D 4533	70 lb (31 kg)
Burst Strength	ASTM D 3786/ ASTM D 3787	325 psi (2240 kPa)
UV Resistance	ASTM D 4355	70% at 500 hours
Apparent Opening Size	ASTM D 4751	No. 70 (212 μ m) sieve
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	145 gpm/sq ft (5900 Lpm/sq m)

- (4) Certification. The manufacturer shall furnish a certification with each shipment of inlet filters, stating the amount of product furnished and that the material complies with these requirements.”

PAVEMENT MARKING (BDE)

Effective: April 1, 2025

Revised: November 1, 2025

Revise the fourth sentence of the fourth paragraph of Article 780.05 of the Standard Specifications to read:

“Grooves for letters and symbols shall be cut in a rectangular shape or in the shape of the proposed marking so the entire marking will fit within the limits of the grooved area.”

Revise the last sentence of the third paragraph of Article 780.08 of the Standard Specifications to read:

“The Contractor shall install the preformed plastic pavement markings according to the manufacturer’s recommendations.”

Revise the second sentence of the first paragraph of Article 780.13 of the Standard Specifications to read:

“In addition, thermoplastic, preformed plastic, epoxy, preformed thermoplastic, polyurea, and modified urethane pavement markings will be inspected following a winter performance period that extends from November 15 to April 1 of the next year.”

PAVEMENT PATCHING (BDE)

Effective: August 1, 2025

Revise the first sentence of the last paragraph of Article 442.06(a)(2) of the Standard Specifications to read:

“Type IV patches shall be reinforced with welded wire reinforcement according to the details shown on the plans.”

Revise Article 442.06(a)(3) of the Standard Specifications to read:

“(3) Class C Patching. Patches adjacent to a new lane of pavement, new portland cement concrete shoulder, or new curb and gutter of more than 20 ft (6 m) in length shall be tied with No. 6 (No. 19) tie bars, 24 in. (600 mm) long, embedded 8 in. (200 mm) at 36 in. (900 mm) centers according to Article 420.05(b).

When the patched pavement is not to be resurfaced, transverse contraction joints shall be formed on 15 ft (4.5 m) to 20 ft (6 m) centers by sawing in all patches that are more than 20 ft (6 m) in length. They shall be placed in line with joints or cracks in the existing slab whenever possible.”

Revise the eighth paragraph of Article 442.11 of the Standard Specifications to read:

“Pavement tie bars for patches will be paid for at the contract unit price per each for TIE BARS, of the diameter specified.”

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2024

Revised: April 1, 2026

Revise the first paragraph of Article 669.04 of the Standard Specifications to read:

“669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities. The excavated soil and groundwater within the work areas shall be managed as either uncontaminated soil, hazardous waste, special waste, or non-special waste.

As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 “Regulated Substances Monitoring Daily Record (RSM DR)”.

Revise the first two sentences of the nineteenth paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall coordinate waste disposal approvals with the disposal facility and provide the specific analytical testing requirements of that facility. The Contractor shall make all arrangements for collection, transportation, and analysis of landfill acceptance testing.”

Revise the last paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall select a permitted landfill facility or CCDD/USFO facility meeting the requirements of 35 Ill. Admin. Code Parts 810-814 or Part 1100, respectively. The Department will review and approve or reject the facility proposed by the Contractor based upon information provided in BDE 2730. The Contractor shall verify whether the selected facility is compliant with those applicable standards as mandated by their permit and whether the facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected facility shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.”

Revise the first paragraph of Article 669.07 of the Standard Specifications to read:

“669.07 Temporary Staging. Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. All other soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Topsoil for re-use as final cover which has been field screened and found not to exhibit PID readings over daily background readings as documented on the BDE 2732, visual staining or odors, and is classified according to Articles 669.05(a)(2), (a)(3), (a)(4), (b)(1), or (c) may be temporarily staged at the Contractor's option.”

Add the following paragraph after the fourth paragraph of Article 669.10 of the Standard Specifications.

“Regulated substances monitoring will be measured for payment per calendar day, where 4 or more hours of monitoring activities is defined as 1.0 calendar day and less than 4 hours of monitoring activities is defined as 0.5 calendar day.”

Revise the second paragraph of Article 669.11 of the Standard Specification to read:

“Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day for REGULATED SUBSTANCES MONITORING. In no case will more than 1.0 calendar day be paid on a given calendar day.”

Add the following paragraph after the sixth paragraph of Article 669.11 of the Standard Specifications.

“The sampling and testing of effluent water derived from dewatering discharges for priority pollutants volatile organic compounds (VOCs), priority pollutants semi-volatile organic compounds (SVOCs), or priority pollutants metals, will be paid for at the contract unit price per each for VOCS GROUNDWATER ANALYSIS using EPA Method 8260B, SVOCs GROUNDWATER ANALYSIS using EPA Method 8270C, or RCRA METALS GROUNDWATER ANALYSIS using EPA Methods 6010B and 7471A. This price shall include transporting the sample from the job site to the laboratory.”

Revise the first sentence of the eight paragraph of Article 669.11 of the Standard Specifications to read:

“Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) to be managed and disposed of, if required and approved by the Engineer, will be paid according to Article 109.04.”

SEEDING (BDE)

Effective: November 1, 2022

Revised: July 1, 2026

Revise Article 250.07 of the Standard Specifications to read:

“250.07 Seeding Mixtures. The classes of seeding mixtures and combinations of mixtures will be designated in the plans.

When an area is to be seeded with two or more seeding classes, those mixtures shall be applied separately on the designated area within a seven day period. Seeding shall occur prior to placement of mulch cover. A Class 7 mixture can be applied at any time prior to applying any seeding class or added to them and applied at the same time.

TABLE 1 - SEEDING MIXTURES		
Class - Type	Seeds	lb/acre (kg/hectare)
1 Lawn Mixture 1/	Kentucky Bluegrass Perennial Ryegrass <i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	100 (110) 60 (70) 40 (50)
1A Salt Tolerant Lawn Mixture 1/	Kentucky Bluegrass Perennial Ryegrass <i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue) <i>Festuca brevipilla</i> (Hard Fescue) <i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60 (70) 20 (20) 20 (20) 20 (20) 60 (70)
1B Low Maintenance Lawn Mixture 1/	Turf-Type Fine Fescue 3/ Perennial Ryegrass Red Top <i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	150 (170) 20 (20) 10 (10) 20 (20)
2 Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue) Perennial Ryegrass <i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue) Red Top	100 (110) 50 (55) 40 (50) 10 (10)
2A Salt Tolerant Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue) Perennial Ryegrass <i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue) <i>Festuca brevipilla</i> (Hard Fescue) <i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60 (70) 20 (20) 30 (20) 30 (20) 60 (70)
3 Northern Illinois Slope Mixture 1/	<i>Elymus canadensis</i> (Canada Wild Rye) 5/ Perennial Ryegrass Alsike Clover 4/ <i>Desmanthus illinoensis</i> (Illinois Bundleflower) 4/ 5/ <i>Schizachyrium scoparium</i> (Little Bluestem) 5/ <i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/ <i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass) Oats, Spring Slender Wheat Grass 5/ Buffalo Grass 5/ 7/	5 (5) 20 (20) 5 (5) 2 (2) 12 (12) 10 (10) 30 (35) 50 (55) 15 (15) 5 (5)
3A Southern Illinois Slope Mixture 1/	Perennial Ryegrass <i>Elymus canadensis</i> (Canada Wild Rye) 5/ <i>Panicum virgatum</i> (Switchgrass) 5/ <i>Schizachyrium scoparium</i> (Little Blue Stem) 5/ <i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/ <i>Dalea candida</i> (White Prairie Clover) 4/ 5/ <i>Rudbeckia hirta</i> (Black-Eyed Susan) 5/ Oats, Spring	20 (20) 20 (20) 10 (10) 12 (12) 10 (10) 5 (5) 5 (5) 50 (55)

Class – Type	Seeds	lb/acre (kg/hectare)
4 Native Grass 2/ 6/	<i>Andropogon gerardi</i> (Big Blue Stem) 5/	4 (4)
	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/	5 (5)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	5 (5)
	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	1 (1)
	<i>Panicum virgatum</i> (Switch Grass) 5/	1 (1)
	<i>Sorghastrum nutans</i> (Indian Grass) 5/	2 (2)
	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Perennial Ryegrass	15 (15)
4A Low Profile Native Grass 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/	5 (5)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	5 (5)
	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	1 (1)
	<i>Sporobolus heterolepis</i> (Prairie Dropseed) 5/	0.5 (0.5)
	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Perennial Ryegrass	15 (15)
4B Wetland Grass and Sedge Mixture 2/ 6/	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Wetland Grasses (species below) 5/	6 (6)
	<u>Species:</u>	<u>% By Weight</u>
	<i>Calamagrostis canadensis</i> (Blue Joint Grass)	12
	<i>Carex lacustris</i> (Lake-Bank Sedge)	6
	<i>Carex slipata</i> (Awl-Fruited Sedge)	6
	<i>Carex stricta</i> (Tussock Sedge)	6
	<i>Carex vulpinoidea</i> (Fox Sedge)	6
	<i>Eleocharis acicularis</i> (Needle Spike Rush)	3
	<i>Eleocharis obtusa</i> (Blunt Spike Rush)	3
	<i>Glyceria striata</i> (Fowl Manna Grass)	14
	<i>Juncus effusus</i> (Common Rush)	6
	<i>Juncus tenuis</i> (Slender Rush)	6
	<i>Juncus torreyi</i> (Torrey's Rush)	6
	<i>Leersia oryzoides</i> (Rice Cut Grass)	10
	<i>Scirpus acutus</i> (Hard-Stemmed Bulrush)	3
	<i>Scirpus atrovirens</i> (Dark Green Rush)	3
	<i>Bolboschoenus fluviatilis</i> (River Bulrush)	3
	<i>Schoenoplectus tabernaemontani</i> (Softstem Bulrush)	3
	<i>Spartina pectinata</i> (Cord Grass)	4

Class – Type	Seeds	lb/acre (kg/hectare)
5	Forb with Annuals Mixture 2/ 5/ 6/	Annuals Mixture (Below) Forb Mixture (Below)
		1 (1) 10 (10)
	Annuals Mixture - Mixture not exceeding 25 % by weight of any one species, of the following:	
	<i>Coreopsis lanceolata</i> (Sand Coreopsis) <i>Leucanthemum maximum</i> (Shasta Daisy) <i>Gaillardia pulchella</i> (Blanket Flower) <i>Ratibida columnifera</i> (Prairie Coneflower) <i>Rudbeckia hirta</i> (Black-Eyed Susan)	
	Forb Mixture - Mixture not exceeding 5 % by weight PLS of any one species, of the following:	
	<i>Amorpha canescens</i> (Lead Plant) 4/ <i>Anemone cylindrica</i> (Thimble Weed) <i>Asclepias tuberosa</i> (Butterfly Weed) <i>Aster azureus</i> (Sky Blue Aster) <i>Symphyotrichum leave</i> (Smooth Aster) <i>Aster novae-angliae</i> (New England Aster) <i>Baptisia leucantha</i> (White Wild Indigo) 4/ <i>Coreopsis palmata</i> (Prairie Coreopsis) <i>Echinacea pallida</i> (Pale Purple Coneflower) <i>Eryngium yuccifolium</i> (Rattlesnake Master) <i>Helianthus mollis</i> (Downy Sunflower) <i>Heliopsis helianthoides</i> (Ox-Eye) <i>Liatris aspera</i> (Rough Blazing Star) <i>Liatris pycnostachya</i> (Prairie Blazing Star) <i>Monarda fistulosa</i> (Prairie Bergamot) <i>Parthenium integrifolium</i> (Wild Quinine) <i>Dalea candida</i> (White Prairie Clover) 4/ <i>Dalea purpurea</i> (Purple Prairie Clover) 4/ <i>Physostegia virginiana</i> (False Dragonhead) <i>Potentilla arguta</i> (Prairie Cinquefoil) <i>Ratibida pinnata</i> (Yellow Coneflower) <i>Rudbeckia subtomentosa</i> (Fragrant Coneflower) <i>Silphium laciniatum</i> (Compass Plant) <i>Silphium terebinthinaceum</i> (Prairie Dock) <i>Oligoneuron rigidum</i> (Rigid Goldenrod) <i>Tradescantia ohiensis</i> (Spiderwort) <i>Veronicastrum virginicum</i> (Culver's Root)	

Class – Type	Seeds	lb/acre (kg/hectare)
5A Large Flower Native Forb Mixture 2/ 5/ 6/	Forb Mixture (see below)	5 (5)
<u>Species:</u> <i>Aster novae-angliae</i> (New England Aster) <i>Echinacea pallida</i> (Pale Purple Coneflower) <i>Helianthus mollis</i> (Downy Sunflower) <i>Heliopsis helianthoides</i> (Ox-Eye) <i>Liatris pycnostachya</i> (Prairie Blazing Star) <i>Ratibida pinnata</i> (Yellow Coneflower) <i>Rudbeckia hirta</i> (Black-Eyed Susan) <i>Silphium laciniatum</i> (Compass Plant) <i>Silphium terebinthinaceum</i> (Prairie Dock) <i>Oligoneuron rigidum</i> (Rigid Goldenrod)		<u>% By Weight</u> 5 10 10 10 10 5 10 10 20 10
5B Wetland Forb 2/ 5/ 6/	Forb Mixture (see below)	2 (2)
<u>Species:</u> <i>Acorus calamus</i> (Sweet Flag) <i>Angelica atropurpurea</i> (Angelica) <i>Asclepias incarnata</i> (Swamp Milkweed) <i>Aster puniceus</i> (Purple Stemmed Aster) <i>Bidens cernua</i> (Beggarticks) <i>Eutrochium maculatum</i> (Spotted Joe Pye Weed) <i>Eupatorium perfoliatum</i> (Boneset) <i>Helenium autumnale</i> (Autumn Sneeze Weed) <i>Iris virginica shrevei</i> (Blue Flag Iris) <i>Lobelia cardinalis</i> (Cardinal Flower) <i>Lobelia siphilitica</i> (Great Blue Lobelia) <i>Lythrum alatum</i> (Winged Loosestrife) <i>Physostegia virginiana</i> (False Dragonhead) <i>Persicaria pensylvanica</i> (Pennsylvania Smartweed) <i>Persicaria lapathifolia</i> (Curlytop Knotweed) <i>Pychanthemum virginianum</i> (Mountain Mint) <i>Rudbeckia laciniata</i> (Cut-leaf Coneflower) <i>Oligoneuron riddellii</i> (Riddell Goldenrod) <i>Sparganium eurycarpum</i> (Giant Burreed)		<u>% By Weight</u> 3 6 2 10 7 7 7 2 2 5 5 2 5 10 10 5 5 2 5
6 Conservation Mixture 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/ <i>Elymus canadensis</i> (Canada Wild Rye) 5/ Buffalo Grass 5/ 7/ Vernal Alfalfa 4/ Oats, Spring	5 (5) 2 (2) 5 (5) 15 (15) 48 (55)
6A Salt Tolerant Conservation Mixture 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/ <i>Elymus canadensis</i> (Canada Wild Rye) 5/ Buffalo Grass 5/ 7/ Vernal Alfalfa 4/ Oats, Spring <i>Puccinellia distans</i> (Fulfs Saltgrass or Salty Alkaligrass)	5 (5) 2 (2) 5 (5) 15 (15) 48 (55) 20 (20)
7 Temporary Turf Cover Mixture	Perennial Ryegrass Oats, Spring	50 (55) 64 (70)

Notes:

- 1/ In Districts 1 through 6, the planting times shall be April 15 to June 15 and September 15 to November 1. In Districts 7 through 9, the planting times shall be April 1 to June 1 and October 15 to December 1. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent uniform growth over the entire seeded area(s) after a period of establishment. The guarantee shall be submitted to the Engineer in writing prior to performing the work.
- 2/ Planting times shall be April 15 to June 15 and October 1 to December 1.
- 3/ Specific variety as shown in the plans or approved by the Engineer.
- 4/ Inoculation required.
- 5/ Pure Live Seed (PLS) shall be used.
- 6/ Fertilizer shall not be used.
- 7/ Seed shall be primed with KNO_3 to break dormancy and dyed to indicate such.

Seeding will be inspected after a period of establishment. The period of establishment shall be six (6) months minimum, but not to exceed nine (9) months. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department.”

SIGN PANELS AND APPURTENANCES (BDE)

Effective: January 1, 2025

Revised: January 1, 2026

Add Article 720.02(c) of the Standard Specifications to read:

“(c) Aluminum Epoxy Mastic1008.03”

Revise the second and third paragraphs of Article 720.02 of the Standard Specifications to read:

“The sign mounting support channel shall be manufactured from steel or aluminum and shall be according to Standard 720001.

Steel support channels shall be according to ASTM A 1011 (A 1011M), ASTM A 635 (A 635M), ASTM A 568 (A 568M), or ASTM A 684 (A 684M), and shall be galvanized. Galvanizing shall be according to ASTM A 653 (A 653M) when galvanized before fabrication, and AASHTO M 111 (M 111M) when galvanized after fabrication. Field or post fabricated drilled holes shall be spot painted with one coat of aluminum epoxy mastic paint prior to installation.”

Revise the fifth paragraph of Article 720.02 of the Standard Specifications to read:

“The stainless steel banding for mounting signs or sign support channels to light or signal standards shall be according to ASTM A 240 (A 240M) Type 302 stainless steel.”

Revise the first sentence of the tenth paragraph of Article 720.03 of the Standard Specifications to read:

“The backs of all sign panels shall be marked in a manner designed to last as long as the sign face material, in letters and numerals at least 3/8 in. (9.5 mm) but no more than 3/4 in. (19 mm) in height with the month and year of manufacture, the name of the sign manufacturer, the name

of the sign sheeting manufacturer, the method of manufacture (“screened”, “EC film”, “direct applied”, or “digital print”), and the initials IDOT.”

Revise the first sentence of the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications to read:

“Transparent colors screened, or transparent acrylic electronic cutting films, or digital printing on white sheeting, shall meet the minimum initial coefficient of retroreflection values of the 0.2 degree observation angle, -4.0 degree entrance angle values as listed in the previous tables for the color being applied.”

Add the following after the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications:

“Digitally printed signs shall be produced using digital print technologies and ink systems, products and processes that comply with the sheeting manufacturer’s recommendation. The digitally printed signs shall be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlamine shall comply with the sheeting manufacturer’s recommendations to ensure proper adhesion and transparency.”

Add the following after the third paragraph of Article 1106.01 of the Standard Specifications:

“Digitally printed signs may omit protective overlay film.”

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023

Revised: January 1, 2026

Revise the third through ninth paragraphs of Article 106.01 of the Standard Specifications to read:

“Articles, materials, and supplies shall be classified into only one of the following categories.

- (a) Iron and Steel. All iron and steel products, which are to be incorporated into the work, shall be domestically manufactured or produced and fabricated, unless an exception is expressly permitted under Federal and/or State law and written permission is given by the Department. The Contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

The applications of all coatings, epoxy, galvanizing, painting, etc. to iron and steel products shall be domestically applied.

- (b) Manufactured Products. Manufactured products shall include articles, materials or supplies that have been processed into a specific form or shape; or have been combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. Manufactured products incorporated into the work shall have the final assembly for the manufacturing process occur domestically.

A manufactured product may include components that are construction materials, iron or steel products, or exempt materials.

Precast concrete products and intelligent transportation systems (ITS) or other electronic hardware systems shall comply with the requirements of Article 106.01(a) in addition to the requirements of manufactured products.

(c) Construction Materials. All manufacturing processes for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply consisting of only one of the following.

- (1) Non-ferrous metals;
- (2) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (3) Glass (including optic glass);
- (4) Fiber optic cable (including drop cable);
- (5) Optical fiber;
- (6) Lumber;
- (7) Drywall;
- (8) Engineered wood.

Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

(d) Exempt Materials. Materials exempt from domestic production requirements are cement or cementitious materials, aggregates, aggregate binding agents or additives, or items not permanently incorporated into the work. Exempt materials may be combined with other materials into a final form to produce a manufactured product.”

SPEED DISPLAY TRAILER (BDE)

Effective: April 2, 2014

Revised: January 1, 2022

Revise the last paragraph of Article 701.11 of the Standard Specifications to read:

“When not being utilized to inform and direct traffic, sign trailers, speed display trailers, arrow boards, and portable changeable message boards shall be treated as nonoperating equipment.”

Add the following to Article 701.15 of the Standard Specifications:

“(m) Speed Display Trailer. A speed display trailer is used to enhance safety of the traveling public and workers in work zones by alerting drivers of their speed, thus deterring them from driving above the posted work zone speed limit.”

Add the following to Article 701.20 of the Standard Specifications:

“(k) When speed display trailers are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other speed display trailers, this work will be paid for at the contract unit price per calendar month or fraction thereof for each trailer as SPEED DISPLAY TRAILER.”

Add the following to Article 1106.02 of the Standard Specifications:

“(o) Speed Display Trailer. The speed display trailer shall consist of a LED speed indicator display with self-contained, one-direction radar mounted on an orange see-through trailer. The height of the display and radar shall be such that it will function and be visible when located behind concrete barrier.

The speed measurement shall be by radar and provide a minimum detection distance of 1000 ft (300 m). The radar shall have an accuracy of ± 1 mile per hour.

The speed indicator display shall face approaching traffic and shall have a sign legend of “YOUR SPEED” immediately above or below the speed display. The sign letters shall be between 5 and 8 in. (125 and 200 mm) in height. The digital speed display shall show two digits (00 to 99) in mph. The color of the changeable message legend shall be a yellow legend on a black background. The minimum height of the numerals shall be 18 in. (450 mm), and the nominal legibility distance shall be at least 750 ft (250 m).

The speed indicator display shall be equipped with a violation alert that flashes the displayed detected speed when the work zone posted speed limit is exceeded. The speed indicator shall have a maximum speed cutoff. On roadway facilities with a normal posted speed limit greater than or equal to 45 mph, the detected speeds of vehicles traveling more than 25 mph over the work zone speed limit shall not be displayed. On facilities with normal posted speed limit of less than 45 mph, the detected speeds of vehicles traveling more than 15 mph over the work zone speeds limit shall not be displayed. On any roadway facility if detected speeds are less than 25 mph, they shall not be displayed. The display shall include automatic dimming for nighttime operation.

The speed indicator measurement and display functions shall be equipped with the power supply capable of providing 24 hours of uninterrupted service.”

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: November 1, 2025

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. The following documentation shall be furnished to the Engineer.

- (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 will be derived from submitted documentation.

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.

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%”

SUBMISSION OF BIDDERS LIST INFORMATION (BDE)

Effective: January 2, 2025

Revised: March 2, 2025

In accordance with 49 CFR 26.11(c) all DBE and non-DBEs who bid as prime contractors and subcontractors shall provide bidders list information, including all DBE and non-DBE firms from whom the bidder has received a quote or bid to work as a subcontractor, whether or not the bidder has relied upon that bid in placing its bid as the prime contractor.

The bidders list information shall be submitted with the bid using the link provided within the “Integrated Contractor Exchange (iCX)” application of the Department’s “EBids System”.

SUBMISSION OF PAYROLL RECORDS – FEDERAL AID CONTRACT (BDE)

Effective: April 1, 2026

If the prevailing rate of wages published by the Illinois Department of Labor (IDOL) is equal to or greater than the prevailing wage determination by the United States Secretary of Labor for the same locality for the same type of construction used to classify the federal construction project, the requirements of the Illinois Prevailing Wage Act (820 ILCS 130) shall apply, including the “ILLINOIS PREVAILING WAGE ACT” section below. If not, only the requirements of the Davis-Bacon Act shall apply, including the “DAVIS-BACON ACT” section below.

DAVIS-BACON ACT. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

“STATEMENTS AND PAYROLLS

The payroll records shall include the worker’s name, social security number, last known address, telephone number, email address, classification(s) of work actually performed, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof), daily and weekly number of hours actually worked in total, deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit certified payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers, last known addresses, telephone numbers, and email addresses shall not be included on weekly submittals. Instead, the payrolls need only include an identification number for each employee (e.g., the last four digits of the employee’s social security number). The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option (“No Work”, “Suspended”, or “Complete”) selected.”

ILLINOIS PREVAILING WAGE ACT. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

“STATEMENTS AND PAYROLLS

- (1) Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
- (2) Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll records shall include the worker’s name, the worker’s address, the worker’s telephone number when available, the worker’s social security number, the worker’s classification or classifications, the worker’s gross and net wages paid in each pay period, the worker’s number of hours worked each day, and the worker’s starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employer and one or more labor organization must additionally submit the worker’s hourly wage rate, the worker’s hourly overtime wage rate, the worker’s hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days’ notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

- (3) Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Certified Transcript of Payroll Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://labor.illinois.gov>. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected.

- (4) Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

SURVEYING SERVICES (BDE)

Effective: April 1, 2025

Delete the fourth paragraph of Article 667.04 of the Standard Specifications.

Delete Section 668 of the Standard Specifications.

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021

Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

"The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations."

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: January 2, 2025

The following applies to all Disadvantaged Business Enterprise (DBE) trucks on the project, whether they are utilized for DBE goal credit or not.

The Contractor shall notify the Engineer at least three days prior to DBE trucking activity.

The Contractor shall submit a weekly report of DBE trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) 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.

WOOD SIGN SUPPORT (BDE)

Effective: November 1, 2023

Add the following to Article 730.02 of the Standard Specifications:

"(c) Preservative Treatment1007.12"

Revise the first paragraph of Article 730.03 of the Standard Specifications to read:

" **730.03 General.** Wood sign supports shall be treated. When the 4 x 6 in. (100 x 150 mm) posts are used, they shall be modified to satisfy the breakaway requirements by drilling 1 1/2 in. (38 mm) diameter holes centered at 4 and 18 in. (100 and 450 mm) above the groundline and perpendicular to the centerline of the roadway."

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Revised: January 1, 2026

Add the following to Article 701.03 of the Standard Specifications:

"(q) Temporary Sign Supports1106.02"

Revise Article 701.03(p) of the Standard Specifications to read:

"(p) Detectable Pedestrian Channelizing Barricades 1106.02(m)"

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 shall be MASH compliant.

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 shall be MASH compliant.

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 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350, 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 sign supports, speed feedback displays, 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 compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019.”

Revise the first paragraph of Section 1106.02(a) of the Standard Specifications to read:

- “(a) Lights. Lights shall meet the requirements of Chapter 13 of the “Equipment and Materials Standards of the Institute of Transportation Engineers,” 1998, Institute of Transportation Engineers, and shall be visible on a clear night from a distance of 3000 ft (900 m). Lights are classified as follows.”

Revise Articles 1106.02(g), 1106.02(k), 1106.02(l), and 1106.02(m) of the Standard Specifications 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.

- (m) Detectable Pedestrian Channelizing Barricades. The top panel or handrail shall be continuous and there should be at least a 2 in. (50 mm) gap between the hand trailing edge and its support. When visible to vehicular traffic, the top rail shall have alternating white and orange retroreflective stripes sloping at 45 degrees. The bottom panel shall be continuous and have alternating white and orange retroreflective stripes sloping at 45 degrees. Barricade stripes shall be 6 in. (150 mm) in width. The predominant color for other barricade components shall be white, orange, or silver.”

WORK ZONE WIDTH RESTRICTION (BDE)

Effective: July 1, 2026

Revise the second paragraph of Article 701.06 of the Standard Specifications to read:

“Where the clear width through a work zone will be 17.5 ft (5.34 m) or less, the Contractor shall notify the Engineer at least 21 days in advance of implementing the traffic control for that restriction.”

STORM WATER POLLUTION PREVENTION PLAN



Storm Water Pollution Prevention Plan

Route	Marked Route	Section Number
FAI Route 57	I-57	RA 2023-1
Project Number	County	Contract Number
C-95-017-23	Champaign	70G29

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.

Permittee Signature & Date

Kenneth A. Bennett *6/30/26*

SWPPP Notes

Preparing BDE 2342 (Storm Water Pollution Prevention Plan)

Guidance on preparing each section of BDE 2342 (Storm Water Pollution Prevention Plan) is found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual, please consult this chapter during SWPPP preparation. Please note that the Illinois Environmental Protection Agency (IEPA) has 30 days to review the Notice of Intent (NOI) prior to project approval and any deficiencies can result in construction delays.

The Notice of Intent contains the following documents:

- BDE 2342 (Storm Water Pollution Prevention Plan)
- BDE 2342 A (Contractor Certification Statement)
- Erosion and Sediment Control Plan (See Section 63-4.09 of the BDE Manual)

Non-applicable information

If any section of the SWPPP is not applicable put "N/A" in box rather than leaving blank.

National Pollutant Discharge Elimination System (NPDES) Compliance

Description of Work: This work shall consist of those efforts necessary for compliance with the requirements of the Clean Water Act, Section 402 (NPDES), and the Illinois Environment Protection Act. This provision also provides the background information needed to comply with ILR10 and ILR40 permits for this project.

NPDES COMPLIANCE REQUIREMENTS

Part I: Site Description

1. Describe the project location; include latitude and longitude, section, town, and range.

The work on this project is located along I-57 in Champaign County in Sections 16 and 21 in Township 17N, Range 8E, 3rd PM. The project takes place at the NB and SB Illini Prairie Rest Areas for I-57 just northwest of the town of Pesotum. The gross length of the project is 0.720 miles. The net length of the project is 0.720 miles. The general latitude and longitude of the middle of the project is 39.92289312 & -88.30107335.

2. Describe the nature of the construction activity or demolition work.

The proposed project consists of the installation of new sanitary sewer and water main connections to the existing NB & SB Illini Prairie Rest Areas along I-57. The proposed improvements include sewer & water main construction; pavement reconstruction; drainage improvements; earthwork; removals; traffic control and protection; temporary erosion control; landscaping; pavement markings; signing; and various other items required to complete the planned improvements.

3. Describe the intended sequence of major activities which disturb soils for major portions of the site (e.g. clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils, on-site or off-site storage of materials).

The project is designed to minimize the effects of construction activities that will result in earth disturbing activities causing erosion. The phasing of the construction activities will involve only disturbing what is required and leaving the remainder of the site with established grass cover to be undisturbed. All areas exposed due to construction will utilize temporary erosion control seeding applied to minimize the potential discharge of sediment. The perimeter barrier will be placed at locations indicated on the plans and will be installed prior to major earth disturbing activities. Storm drain inlet protection will be utilized where completed drains are active inlets to the storm water system to prevent infiltration of any sediment. Temporary ditch checks will be utilized in the graded ditches. Locations where contractor equipment enter and or exit the site will have a stabilized rock base to minimize sediment tracked off site. All stockpiles, both on and off-site, shall have perimeter barrier installed to prevent any runoff discharges from the stockpile location.

4. The total area of the construction site is estimated to be 38 acres.

5. The total area of the site estimated to be disturbed by excavation, grading or other activities is 10 acres.

6. Determine an estimate of the runoff coefficient of the site after construction activities are completed.

C(ex) = 0.45, C(final)=0.46

7. Provide the existing information describing the potential erosivity of the soil at discharge locations at the project site.

The soil map as developed by the Natural Resources Conservation Services for this section of Kankakee County was utilized to identify the potentially erosive soils with the proposed development. The soils map indicates that soils within the project area have a 'slight' to 'moderate' potential for erosion. The erosion control plan provides Best Management Practices (BMPs) to minimize erosion from occurring during construction.

8. Erosion and Sediment Control Plan (Graphic Plan) is included in the contract. ☒ Yes ☐ No

9. List all soils found within project boundaries; include map until name, slope information, and erosivity.

152A Drummer silty clay loam, 0 to 2 percent slopes
 154A Flanagan silt loam, 0 to 2 percent slopes

10. List of all MS4 permittees in the area of this project

N/A

Note: For sites discharging to an MS4, a separate map identifying the location of the construction site and the location where the MS4 discharges to surface water must be included.

Part II: Waters of the US

1. List the nearest named receiving water(s) and ultimate receiving waters.

Ultimate receiving waters include the Kaskaskia River. This section of the Kaskaskia River is not listed as a Biologically Significant Stream.

2. Are wetlands present in the project area? ☐ Yes ☒ No

If yes, describe the areal extent of the wetland acreage at the site.

3. Natural buffers:

For any storm water discharges from construction activities within 50 feet of a Waters of the United States, except for activities for water-dependent structures authorized by a Section 404 permit, the following shall apply:

(i) A 50-foot undisturbed natural buffer between the construction activity and the Waters of the United States has been provided

☐ Yes ☒ No; and/or

(ii) Additional erosion and sediment controls within that area has been provided

☒ Yes ☐ No; and Describe: _____

Part III. Water Quality

1. Water Quality Standards

As determined by the Illinois Pollution Control Board, Illinois waters have defined numeric limits of pollutants under the umbrella term "Water Quality Standards." In the following table are commonly used chemicals/practices used on a construction site. These chemicals if spilled into a waterway, could potentially contribute to a violation of a Water Quality Standard. If other chemicals that could contribute a violation of a Water Quality Standard, add as needed.

- ☒ Fertilizer (check as appropriate)
- ☒ Nitrogen
 - ☒ Phosphorus, and/or
 - ☒ Potassium
- ☐ Herbicide

- ☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
- ☒ Waste water for concrete washout station
- ☐ Coal tar Pitch Emulsion
- ☒ Other (Specify) Portable restrooms
- ☐ Other (Specify) _____

Table 1: Common chemicals/potential pollutants used during construction

If no boxes are checked in Table 1 above, check the following box:

☐ There are no chemicals on site that will exceed a Water Quality Standards if spilled.

If any boxes are checked in Table 1 above, check the following box:

There are chemicals on site that if spilled could potentially cause an exceedance of a Water Quality Standard. The Department shall implement Pollution Prevention/Good Housekeeping Practices as described in the Department's ILR40 Discharge for Small

☒ Municipal Separate Storm Sewer Systems (MS4) reiterated below and Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures:

Pollution Prevention:

The Department will design, and the contractor shall, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from construction activities. At a minimum, such measures must be designed, installed, implemented and maintained to:

- (a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- (b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, chemical storage tanks, deicing material storage facilities and temporary stockpiles, detergents, sanitary waste, and other materials present on the site exposed to precipitation and to storm water.
- (c) Minimize the discharge of pollutants from spills, leaks and vehicle and equipment maintenance and repair activities and implement chemical spill and leak prevention and response procedures;
- (d) Minimize the exposure of fuel, oil, hydraulic fluids, other petroleum products, and other chemicals by storing in covered areas or containment areas. Any chemical container with a storage of 55 gallons or more must be stored a minimum of 50 feet from receiving waters, constructed or natural site drainage features, and storm drain inlets. If infeasible due to site constraints, store containers as far away as the site permits and document in your SWPPP the specific reasons why the 50-foot setback is infeasible and how the containers will be stored.
- (e) The contractor is to provide regular inspection of their construction activities and Best Management Practices (BMPs). Based on inspection findings, the contractor shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of structural storm water BMPs. Necessary maintenance shall be completed as soon as conditions allow to prevent or reduce the discharge of pollutants to storm water or as ordered by the Engineer. The Engineer shall conduct inspections required in Section XI Inspections, and report to the contractor deficiencies noted. These Department conducted inspections do not relieve the contractor from their responsibility to inspect their operations and perform timely maintenance; and
- (f) In addition, all IDOT projects are screened for Regulated Substances as described in Section 27-3 of the BDE Manual and implemented via Section 669: Removal and Disposal of Regulated substances in the Standard Specifications for Road and Bridge Construction.

Approved alterations to the Department's provided SWPPP, including those necessary to protect Contractor Borrow, Use and Waste areas, shall be designed, installed, implemented and maintained by the Contractor in accordance with IDOT Standard Specifications Section 280.

2. 303(d) Impaired Waterways

Does the project area have any 303(d) impaired waterways with the following impairments?

- suspended solids
- turbidity, and or
- siltation

☒ Yes ☐ No

If yes, list the name(s) of the listed water body and the impairment(s)

303(d) waterbody	Impairments(s)
Kaskaskia River (IEPA Segment IL_O-35)	dissolved oxygen by pH, aldrin, dieldrin, endrin, heptachlor, mercury, mirex, and toxaphene.

In addition, It is paramount that the project does not increase the level of the impairment(s) described above. Discuss which BMPs will be implemented to reduce the risk of impairment increase

Maintaining the listed practices in this plan will not increase discharge levels of any impairment.

3. Total Maximum Daily Load (TMDL)

Does the project include any receiving waters with a TMDL for sediment, total suspended solids, turbidity or siltation? ☐ Yes ☒ No

If yes, List TMDL waterbodies below and describe associated TMDL

TMDL waterbody	TMDL

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

Part IV. Temporary Erosion and Sediment Controls

Stabilization efforts must be initiated within 1 working day of cessation of construction activity and completed within 14 days. Areas must be stabilized if they will not be disturbed for at least 14 calendar days. Exceptions to this time frame include:

- (i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures must be initiated as soon as practicable,
- (ii) On areas where construction activities have temporarily ceased and will resume after 14 days, a temporary stabilization method can be used (temporary stabilization techniques must be described), and
- (iii) Stabilization is not required for exit points at linear utility construction site that are used only episodically and for very short durations over the life of the project, provided other exit point controls are implemented to minimize sediment track-out.

Additionally, a record must be kept with the SWPPP throughout construction of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.

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.

Note: For practices below, consult relevant design criteria in Chapter 41 of the BDE Manual and maintenance criteria in Erosion and Sediment Control Field Guide for Construction.

1. Erosion Control:

The following are erosion control practices which may be used on a project (place a check by each practice that will be utilized on the project, add additional practices as needed):

- | | |
|---|--|
| ☐ Mulch | ☒ Preservation of existing vegetation |
| ☒ Erosion Control Blanket | ☒ Temporary Turf Cover Mixture (Class 7) |
| ☐ Turf Reinforcement Mat | ☒ Permanent seeding (Class 1-6) |
| ☐ Sodding | ☐ Other (Specify) _____ |
| ☐ Geotextile fabric | ☐ Other (Specify) _____ |
| | ☐ Other (Specify) _____ |

2. Sediment Control:

The following sediment control devices will be implemented on this project:

- | | |
|---|---|
| ☒ Ditch Checks | ☒ Perimeter Erosion Barrier |
| ☒ Inlet and Pipe protection | ☐ Rolled Excelsior |
| ☐ Hay or Straw bales | ☐ Silt Filter Fence |
| ☐ Above grade inlet filters (fitted) | ☐ Urethane foam/geotextiles |
| ☐ Above grade inlet filters (non-fitted) | ☐ Other (Specify) _____ |
| ☒ Inlet filters | ☐ Other (Specify) _____ |
| | ☐ Other (Specify) _____ |

3. Structural Practices:

Provide below is a description of structural practices that will be implemented:

- | | | |
|--|---|----------------------|
| ☐ Aggregate Ditch | ☒ Stabilized Construction Exits | |
| ☐ Articulated Block Revetment Mat | ☐ Stabilized Trench Flow | |
| ☐ Barrier (Permanent) | ☐ Sediment Basin | |
| ☐ Concrete Revetment Mats | ☐ Retaining Walls | |
| ☐ Dewatering Filtering | ☐ Riprap | |
| ☐ Gabions | ☒ Storm Drain Inlet Protection | |
| ☐ In-Stream or Wetland Work | ☐ Slope Walls | |
| ☐ Level Spreaders | ☐ Sediment Trap | |
| ☐ Paved Ditch | ☒ Other (Specify) _____ | Stockpile management |
| ☐ Permanent Check Dams | ☐ Other (Specify) _____ | _____ |
| ☐ Precast Block Revetment Mat | ☐ Other (Specify) _____ | _____ |
| ☐ Rock Outlet Protection | ☐ Other (Specify) _____ | _____ |

4. Polymer Flocculants

Design guidance for polymer flocculants is available in Chapter 41 of the BDE Manual. In addition, Polymer Flocculants may only be used by district Special Provision.

If polymer flocculants are used for this project, the following must be adhered to and described below:

- Identify the use of all polymer flocculants at the site.
- Dosage of treatment chemicals shall be identified along with any information from any Material Safety Data Sheet.
- Describe the location of all storage areas for chemicals.
- Include any information from the manufacturer's specifications.
- Treatment chemicals must be stored in areas where they will not be exposed to precipitation.
- The SWPPP must describe procedures for use of treatment chemicals and staff responsible for use/application of treatment chemicals must be trained on the established procedures.

Polymer flocculants are not planned to be used

Part V. Other Conditions

1. Dewatering

Will dewatering be required for this project? ☐ Yes ☒ No

If yes, the following applies:

- Dewatering discharges shall be routed through a sediment control (e.g., sediment trap or basin, pumped water filter bag) designed to minimize discharges with visual turbidity;
- The discharge shall not include visible floating solids or foam;
- The discharge must not cause the formation of a visible sheen on the water surface, or visible oily deposits on the bottom or shoreline of the receiving water. An oil-water separator or suitable filtration device shall be used to treat oil, grease, or other similar products if dewatering water is found to or expected to contain these materials;
- To the extent feasible, use well-vegetated (e.g., grassy or wooded), upland areas of the site to infiltrate dewatering water before discharge;
- You are prohibited from using receiving waters as part of the treatment area;
- To minimize dewatering-related erosion and related sediment discharges, use stable, erosion-resistant surfaces (e.g., well-vegetated grassy areas, clean filler stone, geotextile underlayment) to discharge from dewatering controls. Do not place dewatering controls, such as pumped water filter bags, on steep slopes (15% or greater in grade);
- Backwash water (water used to backwash/clean any filters used as part of storm water treatment) must be properly treated or hauled off-site for disposal;
- Dewatering treatment devices shall be properly maintained; and
- See Part XI (Inspections) for inspection requirement.

Part VI. Permanent (i.e., Post-Construction) Storm Water Management Controls

Provided below is a description of measures that may be installed during the construction process to control volume and therefore the amount pollutants in storm water runoff that can occur after construction operations have been completed.

Practices may include but are not limited to the following:

- Aggregate ditch checks;
- bioswales,
- detention pond(s),
- infiltration trench;
- retention pond(s),
- open vegetated swales and natural depressions,
- treatment train (sequential system which combine several practices).
- Velocity dissipation devices (See Structural Practices above)

Describe these practices below

Structural practices will be utilized to prevent sediment from being discharged off site. The perimeter barrier will be placed at locations indicated on the plans and will be installed prior to major earth disturbing activities. Storm drain inlet protection will be utilized where completed drains are active inlets to the storm water system to prevent infiltration of any sediment. Temporary ditch checks will be utilized in the graded ditches. Locations where contractor equipment enter and or exit the site will have a stabilized rock base to minimize sediment tracked off site. All stockpiles, both on and off-site, shall have perimeter barrier installed to prevent any runoff discharges from the stockpile location. Once permanent vegetation, in the form of grass turf, has been established the temporary measures may be removed.

Part VII. Additional Practices Incorporated From Local Ordinance(s)

In some instances, an additional practice from a local ordinance may be included in the project. If so, describe below (Note: the Department is not subject to local ordinances)

None.

Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures

When Unexpected Regulated Substances or chemical spills occur, Article 107.19 of the Standard Specifications for Road and Bridge Construction shall apply. In addition, it is the contractor's responsibility to notify the Engineer in the event of a chemical spill into a ditch or waterway, the Engineer will then notify appropriate IEPA and IEMA personnel for the appropriate cleanup procedures.

Part IX. 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 construction entrances and exits to be used and how they will be maintained)
- 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. Specifically, any chemical stored in a 55 gallon drum provided by the contractor.
- 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.
- 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.

Additional measures indicated in the plan

None.

Part X. Maintenance

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. However, 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. Any damage or undermining shall be repaired immediately.

For Inlet Protection: Where there is evidence of sediment accumulation adjacent to the inlet protection measure, the deposited sediment must be removed by the following business day.

Below, describe procedures to maintain in good and effective operating conditions

Perimeter barriers and ditch checks will have built-up sediment removed when sediment reaches 1/3 the height of the practices. Concrete truck washout locations and BMPs will be designated by the contractor. No concrete truck washouts will be allowed to occur into any storm water conveyances.

Part XI. Inspections

Qualified personnel shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm or by the end of the following business or workday that is 0.50 inches or greater or equivalent snowmelt (except as allowed for Frozen Conditions).

In addition, all areas where storm water typically flows within the site should be inspected periodically to check for evidence of pollutants entering the drainage system, as well as all locations where stabilization measures have been implemented to ensure they are operating correctly.

Inspections shall be documented on the form BC 2259 (Storm Water Pollution Prevention Plan Erosion Control Inspection Report).

The Erosion and Sediment Control Field Guide for Construction Inspection shall be consulted as needed.

Dewatering

For site(s) discharging dewatering water, an inspection during the discharge shall be done once per day on which the discharge occurs and record the following in a report within 24 hours of completing the inspection:

- The inspection date;
- Names and titles of personnel performing the inspection;
- Approximate times that the dewatering discharge began and ended on the day of inspection;
- Estimates of the rate (in gallons per day) of discharge on the day of inspection;
- Whether or not any of the following indications of pollutant discharge were observed at the point of discharge: a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; and/or a visible sheen on the water

surface or visible oily deposits on the bottom or shoreline of the receiving water.

Frozen Conditions

Inspections may be reduced to once per month when all construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities resume, either temporarily or continuously, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

Flooding or unsafe conditions

Areas that are inaccessible during required inspections due to flooding or other unsafe conditions must be inspected within 72 hours of becoming accessible.

Part XII. Incidence of Noncompliance (ION)

The Department shall notify the appropriate Agency Field Operations Section office by email as described on the IEPA ION form, within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit.

The Department shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the IEPA and 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. Corrective actions must be undertaken immediately to address the identified non-compliance issue(s).

Illinois EPA
2520 W. Iles Ave./P.O. Box 19276
Springfield, IL 62794-9276

Please note that if these are delivered via FedEx or UPS, these carriers cannot deliver to our P.O. Box and this number must be excluded from the mailing address.

Part XIII. Corrective Actions

Corrective actions must be taken when:

- A storm water control needs repair or replacement;
- A storm water control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
- Discharges are causing an exceedance of applicable water quality standards; or
- A prohibited discharge has occurred.

Corrective Actions must be completed as soon as possible and documented within 7 days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within 7 calendar days, it must be documented in the records why it is infeasible to complete the installation or repair within the 7 day time-frame and document the schedule for installing the storm water control(s) and making it operational as soon as feasible after the 7-day time-frame.. In the event that maintenance is required for the same storm water control at the same location three or more times, the control must be repaired in a manner that prevents continued failure to the extent feasible, and it must be documented the condition and how it was repaired in the records. Alternatively, it must be documented why the specific re-occurrence of this same issue must continue to be addressed as a routine maintenance fix.

Part XIV. Retention of Records

The Department must retain copies of the SWPPP and all reports and notices required by this permit, records of all data used to complete the NOI to be covered by this permit, and the Agency Notice of Permit Coverage letter for at least three years from the date that the permit coverage expires or is terminated. the permittee must retain a copy of the SWPPP and any revisions to the SWPPP required by this permit at the construction site from the date of project initiation to the date of final stabilization. Any manuals or other documents referenced in the SWPPP must also be retained at the construction site.

Part XV. 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 (See Article 105.03 Conformity with Contract)

Part XVI. Keeping the SWPPP ("plan") Current

IDOT shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to Waters of the United States and which has not otherwise been addressed in the plan or if the plan proves to be ineffective in eliminating or significantly minimizing sediment and/or pollutants identified under paragraph Part II. Water Quality or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity.

In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the plan. Amendments to the plan may be reviewed by the IEPA the same manner as the SWPPP and Erosion and Sediment Control Plan (ESCP) submitted as part of the Notice of Intent (NOI). The SWPPP and site map must be modified within 7 days for any changes to construction plans, storm water controls or other activities at the site that are no longer accurately reflected in the SWPPP.

In addition, the NOI shall be modified using the CDX system for any substantial modifications to the project such as:

- address changes
- new contractors
- area coverage
- additional discharges to Waters of the United States, or
- other substantial modifications (e.g. addition of dewatering activities).

The notice of intent shall be modified within 30 days of the modification to the project.

Part XVII: Notifications

In addition to the NOI submitted to IEPA, all MS4 permittees identified in Part I. Site Description shall receive a copy of the NOI.

Part XVIII. Notice of Termination

Where a site has completed final stabilization and all storm water discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination (NOT) that is signed in accordance with ILR10 permit.

Method of Measurement: NPDES Compliance shall not be measured for payment separately. Measurement for payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be measured for payment in accordance with their respective provisions in the contract.

Basis of Payment: NPDES Compliance shall not be paid for separately. Payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be paid for in accordance with their respective payment provisions in the contract.

IEPA PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2520 West Iles Avenue; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: Arcola/Tuscola Water Transmission Main (IL0410020)

Permit Issued to:

Arcola/Tuscola Water Transmission Main
214 North Main Street
Tuscola, IL 61953

PERMIT NUMBER: 0872-FY2026

DATE ISSUED: March 19, 2026

PERMIT TYPE: Water Main Extension

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act", Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Benton & Associates, Inc.

NUMBER OF PLAN SHEETS: 19

TITLE OF PLANS: "I-57 Illini Prairie Rest Areas – Water Main Extension"

APPLICATION RECEIVED DATE: February 10, 2026

PROPOSED IMPROVEMENTS:

The installation of approximately 1,095 feet of 6-inch water main, 1 hydrant with auxiliary water control valve, and 2 water main control valves.

ADDITIONAL CONDITIONS:

1. All water mains shall be satisfactorily disinfected prior to use pursuant to Ill. Adm. Code, Title 35, Subtitle F, Section 602.310. Two consecutive sets of samples collected at least 24 hours apart must show the absence of coliform bacteria. **A minimum of 1 set of coliform samples must be taken.** The samples must be collected from every 1,200 feet of new water main along each branch and from the end of the line. An operating permit must be obtained before the project is placed in service. The application for operating permit and supporting documents can either be mailed to this office or emailed to EPA.PWSPermits@illinois.gov. Use of the email address is preferred.
2. The permit approval is for the Application, Schedule B, and 19 plan sheets received on February 10, 2026.

CJ:SLH

cc: Benton & Associates, Inc.
Champaign Regional Office
Douglas County Health Department
IDPH/DEH – Plumbing and Water Quality Program



Chris Johnston, P.E.
Manager Permit Section
Division of Public Water Supplies

IEPA WATER POLLUTION CONTROL PERMIT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBER: 2026-73574

PERMIT NO.: 2026-AB-73574

BUREAU ID: W0190550006

FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS

DATE ISSUED: MAY 12 2026

PREPARED BY: Benton Engineering

SUBJECT: ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)-Sanitary Sewer at Illini Prairie Rest Areas

PERMITTEE TO CONSTRUCT, OWN, AND OPERATE

Illinois Department of Transportation
13473 IL HWY 133
P.O. Box 610
Paris, Illinois 61944

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows (quantities are approximate):

Northbound: A lift station having 2 pumps each with a rated capacity of 60 gpm at 26.6 feet of TDH, 5 feet of 2-inch force main, a mechanical screen manhole, a 15,000 gallon septic tank, two 105 ft x 96 ft seepage fields, 348 feet of 8-inch sanitary sewer and 3 manholes to serve as replacement of a wastewater system located at Illini Prairie Rest Area on I-57 in Champaign County.

Southbound: A lift station having 2 pumps each with a rated capacity of 60 gpm at 28.4 feet of TDH, 5 feet of 2-inch force main, a mechanical screen manhole, a 15,000 gallon septic tank, two 115 ft x 100 ft seepage fields, 621 feet of 8-inch sanitary sewer and 3 manholes to serve as replacement of a wastewater system located at Illini Prairie Rest Area on I-57 in Champaign County.

The flow in each project is 23 P.E., 2300 GPD, DAF.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s)

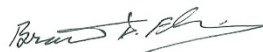
Page 1 of 2

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

BDF:LAT:\Illinois.gov\epa\spiusers1\lisa.tossi\ 2026-73574.docx

DIVISION OF WATER POLLUTION CONTROL

cc EPA-Champaign FOS
Benton Engineering
Records - Municipal
IDPH
Champaign County Health Department



Brant D. Fleming, P.E.
Manager, Municipal Unit, Permit Section

**READ ALL CONDITIONS CAREFULLY:
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised statutes Chapter 111-12, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials.
 - a. To enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
 - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
 - c. To inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated, and maintained under this permit;
 - d. To obtain and remove at reasonable times samples of any discharge or emission of pollutants;
 - e. To enter at reasonable times and utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit;
5. The issuance of this permit:
 - a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
 - b. Does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. Does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances, and regulations;
 - d. Does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. In no manner implies or suggests that the Agency (or its offices, agents, or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility;
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the Agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit;
 - a. Upon discovery that the permit application contained misrepresentations, misinformation, or false statement or that all relevant facts were not disclosed; or
 - b. Upon finding that any standard or special conditions have been violated; or
 - c. Upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBER: 2026-73574

PERMIT NO.: 2026-AB-73574

BUREAU ID: W0190550006

FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS

DATE ISSUED: MAY 12 2026

PREPARED BY: Benton Engineering

SUBJECT: ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)-Sanitary Sewer at Illini Prairie Rest Areas

additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: If this project is located within a wetlands, the U.S. Army Corps of Engineers may require a permit for construction pursuant to Section 404 of the Clean Water Act.

SPECIAL CONDITION 2: The Permittee to Construct shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activities associated with this project will result in the disturbance of one (1) or more acres total land area. Additional information is provided on the following webpage:

<https://epa.illinois.gov/topics/forms/water-permits/storm-water/construction.html>.

SPECIAL CONDITION 3: The issuance of this permit does not release the Permittee to Construct from any obligation to comply with the requirements of the Illinois State Agency Historic Resources Preservation Act or the Illinois Historic Preservation Office.

SPECIAL CONDITION 4: The design of this sewer deviates from 35 Ill. Admin. Code, Subtitle C, Chapter II, Part 370 and as such if built as designed the applicant assumes all responsibilities related to any possible excessive maintenances required to keep adequate sewer service available to the users of this system. As such the applicant shall periodically check this sewer for restricted flow and clean the system when necessary when this occurs.

SPECIAL CONDITION 5: The systems shall be maintained and serviced per the manufactures and NSF requirements for the life of the system.

SPECIAL CONDITION 6: This permit also covers all necessary appurtenances not specifically mentioned herein but detailed in the specifications and/or the design drawings.

SPECIAL CONDITION 7: The operational portion of this permit is contingent upon completion of construction and start of operation of all downstream transporting and treating facilities. Issuance of this permit is not to be construed as Agency agreement that the downstream transporting and treating facilities will be completed in time to serve this project.

**READ ALL CONDITIONS CAREFULLY:
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised statutes Chapter 111-12, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials.
 - a. To enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
 - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
 - c. To inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated, and maintained under this permit;
 - d. To obtain and remove at reasonable times samples of any discharge or emission of pollutants;
 - e. To enter at reasonable times and utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit;
5. The issuance of this permit:
 - a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
 - b. Does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. Does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances, and regulations;
 - d. Does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. In no manner implies or suggests that the Agency (or its offices, agents, or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility;
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the Agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit;
 - a. Upon discovery that the permit application contained misrepresentations, misinformation, or false statement or that all relevant facts were not disclosed; or
 - b. Upon finding that any standard or special conditions have been violated; or
 - c. Upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

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

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

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

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

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

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

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

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

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

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

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

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

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment situations unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials

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

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

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

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.*

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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

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

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

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

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access (1) Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeymen under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. 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. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

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

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

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

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

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

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

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

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

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

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

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

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

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

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

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

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

ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
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.