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Letting June 16, 2023

Notice to Bidders, Specifications and Proposal



**Contract No. 62P71
Various Counties
Section 2021-154-R
Route FAI 80
Project NHPP-I4WJ(714)
District 1 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. June 16, 2023 at which time the bids will be publicly opened from the iCX SecureVault.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 62P71
Various Counties
Section 2021-154-R
Project NHPP-I4WJ(714)
Route FAI 80
District 1 Construction Funds**

(2.78-Mile) Reconstruction of new continuously reinforced concrete pavement, concrete median barrier wall, Portland cement concrete shoulders, grading work, drainage improvements, erosion control, pavement marking and signage installation, maintenance of traffic, construction layout, landscaping, etc. Located in the Villages of Minooka and Shorewood and the Township of Troy in various Counties.

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to re-advertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Omer Osman,
Secretary

INDEX
 FOR
 SUPPLEMENTAL SPECIFICATIONS
 AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2023

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

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

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1 2022, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI Route 80 (I-80), Project NHPP-I4WJ(714), Section 2021-154-R, Will County, Contract No. 62P71 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAI Route 80 (I-80)
Project NHPP-I4WJ(714)
Section 2021-154-R
Will County
Contract No. 62P71

LOCATION OF PROJECT

This project is located on FAI Route 80 between east of Ridge Road and east of River Road in the Villages of Minooka and Shorewood, Illinois and the Township of Troy in the County of Will. The work involves 14,690 linear feet of pavement reconstruction along Interstate 80 (I-80), for a net and gross length of 14,627 feet (2.77 miles).

DESCRIPTION OF PROJECT

The project consists of the reconstruction of the existing interstate facility and the work to be performed under this contract consists of construction of new continuously reinforced concrete pavement, concrete median barrier wall, Portland cement concrete shoulders, grading work, drainage improvements, erosion control, pavement marking and signage installation, maintenance of traffic, construction layout, landscaping, as well as all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

PROGRESS SCHEDULE

Description. Time is of the essence in this Contract. It may be necessary for the Contractor to work longer hours, use additional crews, and work during weekends in order to complete the work within the required time limit. The Contractor shall submit a Critical Path Method (CPM) Progress Schedule as described below for the Engineer's approval before the work can be started.

The Contractor will not be allowed any compensation for working longer hours or using extra shifts; and working on weekends or during Holidays; working during winter months, etc. to meet the specified Completion Date.

This work shall consist of preparing, revising, and updating a detailed progress schedule based upon the Critical Path Method (CPM). This work shall also consist of performing time impact analysis of the progress schedule based upon the various revisions and updates as they occur.

Requirements. The software shall produce an electronic progress schedule for submission to the department that is 100% compatible with Primavera P6 Professional Project Management, by Oracle Corporation, Inc.

Format. The electronic schedule format shall contain the following:

- a. Project Name: (Optional).
- b. Template: Construction.
- c. Type: Primavera P6 Professional: Native file format for stand-alone contracts.
- d. Planning Unit: Days (calendar working).
- e. Number/Version: Original or updated number.
- f. Start Date: Not later than ten days after execution of the contract.
- g. Must Finish Date: Completion date for completion date contracts.
- h. Project Title: Contract number.
- i. Company Name: Contractor's name.
- j. Calendars.
 - a. Completion Date Contracts. The base calendar shall show the proposed working days of the week and the proposed number of work hours per day.

Schedule Development. The detailed schedule shall incorporate the entire contract time. The minimum number of activities shown on the schedule shall represent the work incorporating the pay items whose aggregate contract value constitutes 80 percent of the total contract value. These pay items shall be determined by starting with the pay item with the largest individual contract value and adding subsequent pay item contract values in descending order until 80 percent of the contract value has been attained. Any additional activities required to maintain the continuity of the schedule logic shall also be shown.

The following shall be depicted in the schedule for each activity:

- a. Activity Identification (ID) Numbers. The Contract shall utilize numerical designations to identify each activity. Numbering of activities shall be in increments of not less than ten digits.
- b. A description of the work represented by the activity (maximum forty-five characters). The use of descriptions referring to a percentage of a multi-element item (i.e., construct deck 50%) shall not be used. Separate activities shall be included to represent different elements of multi-element items (i.e., forms, reinforcing, concrete, etc.). Multiple activities with the same work description shall include a location as part of the description.
- c. Proposed activity duration shall be shown in whole days. The Contractor shall provide production rates to justify the activity duration. Schedule duration shall be contiguous and not interruptible.

The schedule shall indicate the sequence and interdependence of activities required for the prosecution of the work. The schedule logic shall not be violated.

Activities should be broken down such that each activity encompasses a single operation or tightly integrated operations in a single, contiguous, and continuous area of the project, with no activity exceeding \$200,000 without the consent of the Engineer.

Total Float shall be calculated as finish float. The schedule shall be calculated using retained logic. The Contractor shall not sequester float by calendar manipulations or extended duration. Float is not for the exclusive use or benefit of either the Department or the Contractor.

Tabular Reports.

- a. The following tabular reports will be required with each schedule submission:
 1. Classic Gantt
 2. Pert with Time Scale
- b. The heading of each tabular report shall include, but not be limited to, the project name, contract number, Contractor name, report date, data date, report title and page number.

- c. Each of the tabular reports shall also contain the following minimum information for each activity.
1. Activity ID
 2. Activity Description
 3. Original Duration (calendar day/working day)
 4. Remaining Duration (calendar day/working day)
 5. Activity Description
 6. Early Start Date
 7. Late Start Date
 8. Early Finish Date
 9. Late Finish Date
 10. Percent Complete
 11. Total Float
 12. Calendar ID
 13. Work performed by DBE Subcontractors and Trainees shall be shown in the Gantt Report
- d. Reports shall be printed in color on 11 in. x 17 in. (minimum) size sheets. The Classic Gantt shall show all columns, bars, column headings at the top, time scale at the top and shall show relationships.

Submission Requirements. The initial schedule shall be submitted prior to starting work but no later than five calendar days after execution of the contract. Updated schedules shall be submitted to the Engineer on a monthly basis.

Updating.

- a. The Contractor shall not make any changes to the original duration, activity relationships, constraints, costs, add or delete activities, or alter the schedule's logic when updating the schedule.
- b. The originally approved baseline CPM schedule will be designated as the "Target Schedule" and shall only be changed based on a Change Order that extends the Contract duration. All updates will be plotted against the "Target Schedule." If the Contractor believes any such changes result in an overall increase in the contract time, the Contractor will immediately submit a request for extension of time along with the changed progress schedule and a detailed justification for the time extension request in accordance with Article 108.08.
- c. The updated information will include the original schedule detail and the following additional information:
 1. Actual start dates
 2. Actual finish dates
 3. Activity percent completion
 4. Remaining duration of activities in progress
 5. Identified or highlighted critical activities.
- d. The Contractor shall submit scheduling documents in the same formats and number as indicated in this section.
- e. The Engineer shall withhold progress payments if the Contractor does not submit scheduled updates as required.
- f. Upon receipt of the CPM schedule update, the Engineer will review the schedule for conformance with the Contract Documents and degree of detail. The Engineer, within fourteen (14) Days after receipt of the Updated CPM Schedule and supporting documents, will approve or reject it with written comments. If the Updated CPM schedule is rejected, the Contractor must submit a Revised Updated CPM Schedule within seven (7) Days after the date of rejection.
- g. The updated progress schedule must accurately represent the Project's current status.

Contractor Changes to the Schedule.

The Contractor shall comply with the following requirements regarding proposed changes to the approved baseline CPM schedule:

- a. If the Contractor proposes to make any changes in the approved baseline CPM schedule, the Contractor shall notify the Engineer in writing, stating the reasons for the change, identifying each changed activity (including duration and interrelationships between activities), and providing a diskette of the proposed changed schedule. Every effort must be made by the Contractor to retain the original Activity ID numbers.
- b. The Engineer has the authority to approve or disapprove the proposed change in the baseline CPM schedule and shall do so in writing within ten (10) Days after receipt to the Contractor's submission.
- c. If the Engineer approves the change in the baseline. All monthly updates will be plotted against the new "Target Schedule."
- d. If the Engineer approves a portion of the change to the baseline CPM schedule, the Contractor shall submit a revised CPM schedule incorporating such change(s) within ten (10) Days after approval along with a written description of the change(s) to the schedule.

Recovery Schedule.

- a. The Contractor shall maintain an adequate work force and the necessary materials, supplies and equipment to meet the current approved baseline CPM schedule. In the event that the Contractor, in the judgment of the Engineer, is failing to meet the approved CPM schedule including any Contract milestones, the Contractor shall submit a recovery schedule.
- b. The recovery schedule shall set forth a plan to eliminate the schedule slippage (negative float). The plan must be specific to show the methods to achieve the recovery of time, i.e., increasing manpower, working overtime, weekend work, employing multiple shifts. All costs associated with implementing the recovery schedule shall be borne by the Contractor.
- c. Upon receipt of the CPM recovery schedule, the Engineer will review the schedule for conformance with the Contract Documents and degree of detail. The Engineer will approve the schedule or reject it with written comments within fourteen (14) Days of receipt of the recovery schedule and supporting documents. If the detailed CPM recovery schedule is rejected, the Contractor must submit a revised CPM recovery schedule within seven (7) Days of the date of rejection.

Revised Schedule.

The Engineer may direct the Contractor to revise the approved CPM schedule. Reasons for such direction may include, but are limited to, the following: (1) changes in the Work, (2) rephrasing of the Project or any phase, (3) a change in the duration of the Project or phase, and (4) acceleration of the Project or phase.

- a. The Engineer will direct the Contractor to provide a revised CPM schedule in writing.
- b. The Contractor will provide the revised CPM schedule within ten (10) Days of receipt of the Engineer's written direction. The Engineer has the authority, in its sole discretion, to approve or reject the revised CPM schedule and will do so in writing within ten (10) Days after receipt of the Contractor's submission. If the Engineer approves the revised schedule, such schedule will be designated the new "Target Schedule."

The schedule shall be submitted in the Sorted by Activity Layout (SORT4). The activities on the schedule shall be plotted using early start, late start, early finish, late finish, and total finish.

For every schedule submission, the Contractor shall submit an electronic version of the schedule in a format acceptable to the Engineer for review and one-color copy of 11 in. x 17 in. (minimum) size sheets showing all columns, bars, column headings at the top, time scale at the top and showing relationships.

The schedule shall indicate the critical path to contract completion. Only one controlling item shall be designated at any point in time on the schedule.

Acceptance or approval of any progress schedule by the Engineer shall not be construed to imply approval of any particular method of construction, sequence of construction, any implied or stated rate of production. Acceptance will not act as a waiver of the obligation of the Contractor to complete the work in accordance with the contract proposal, Plans and Specifications, modify any rights or obligations of the Department as set forth in the contract, nor imply any obligation of a third party. Acceptance shall not be construed to modify or amend the contract or the time limit(s) therein. Acceptance shall not relieve the Contractor of the responsibility for the accuracy of any of the information included on the schedule. Failure of the Contractor to include in the schedule any element of work required for the performance of the contract, any sequence of work required by the contract, or any known or anticipated condition affecting the work shall not excuse the Contractor from completing all work required within the time limit(s) specified in the contract notwithstanding acceptance of the schedule by the Engineer.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the costs of the various items of work in the contract.

WORK RESTRICTION

Temporary traffic control according to the STAGE 1 Maintenance of Traffic Plan shall not be established prior to **April 1, 2024** or as approved by the engineer.

Temporary traffic control according to the STAGE 2 Maintenance of Traffic Plan shall not be established prior to **April 1, 2025** or as approved by the engineer.

For the purpose of the proposed Progress Schedule required by Article 108.02 of the Standard Specifications for Road and Bridge Construction and other parts of the specifications, the contractor shall not implement the Stage 1 work prior to April 1, 2024. The Contractor shall identify work that can be completed prior to Stage 1 Maintenance of Traffic configuration and submit a written work plan to the Engineer for review and approval. The Contractor shall perform this work upon receipt of written approval by the Engineer. No adjustment to the contract completion date or interim completion date will be made should the contractor perform other work prior to September 30, 2023. No extension of the contract completion date or interim completion date will be made should the Contractor elect to not perform other

MAINTENANCE OF ROADWAYS (D1)

Effective: September 30, 1985

Revised: November 1, 1996

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

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

STATUS OF UTILITIES (D1)

Effective: June 1, 2016

Revised: January 1, 2020

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information regarding their facilities and the proposed improvements. The tables below contain a description of specific conflicts to be resolved and/or facilities which will require some action on the part of the Department's contractor to proceed with work. Each table entry includes an identification of the action necessary and, if applicable, the estimated duration required for the resolution.

UTILITIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances, resolution will be a function of the construction staging. The responsible agency must relocate, or complete new installations as noted below; this work has been deemed necessary to be complete for the Department's contractor to then work in the stage under which the item has been listed.

Pre-Stage

No conflicts to be resolved

Stage 1

No conflicts to be resolved

Stage 2

No conflicts to be resolved

Stage 3

No conflicts to be resolved

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

AGENCY/COMPANY RESPONSIBLE TO RESOLVE CONFLICT	NAME OF CONTACT	PHONE	E-MAIL ADDRESS
AT&T Distribution	Steve Pesola	630.573.5703	sp9653@att.com
AT&T Transmission	Jeremy Pendleton	812.597.5207	<i>Email address unknown</i>
G4S / ISTHA	Bill Mitchell	708.528.0128	bill.mitchell@adestagroup.com
Kinder Morgan	Mark Cavazos, PE	713.420.4363	Mark_Cavazos@kindermorgan.com
ComEd	Kyle Isek	779.231.1740	Kyle.Isek@comed.com
TC Energy	Karen Macejewski	832.320.5414	karen_macejewski@tcenergy.com
Enbridge	Shane Young	346.732.7291	Shane.young@enbridge.com
BP	Blake Patrick	872.245.3915	Blake.Patrick@bp.com
ONEOK	Kalli Ritterbush	405.433.1044	Kalli.Ritterbush@oneok.com

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department's contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances, the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owner's part can be secured.

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER	ACTION
I-80 Sta. 210+35	Electric	Aerial crossing near Shepley Road Bridge.	ComEd	Watch and Protect only
I-80 Sta. 212+50	Telephone	Buried cable and duct.	AT&T	Watch and Protect Only
I-80 Sta. 239+25	Gas	Gas main crossing of unknown size	ONEOK	Watch and Protect Only. Contractor shall complete the ONEOK Vehicle Crossing Data Sheet and return to utility prior to construction.
I-80 Sta. 278+10	Fiber Optic	Buried fiber optic	AT&T	Watch and Protect only
I-80 Sta. 284+05	Petroleum	24" petroleum pipeline	Enbridge	Watch and Protect. Provide notice of at least seventy-two (72) hours in advance of construction. IDOT must contact the following Enbridge field representative: Name: Troy Toweson Cell: 219-793-3214 Enbridge will arrange for a representative to be on site when work is occurring on or near the Right of Way area, or within 16 ft of the pipelines, whether located above or below grade.

				<p>No hammering removal methodology shall be allowed within 10 ft of the pipeline. Any proposed pavement removal shall be completed by dozer, shovel excavator, or similar construction machinery.</p>
I-80 Sta. 284+50	Petroleum	10" petroleum pipeline	BP	<p>Watch and Protect.</p> <p>Contact BP field representatives at least seventy-two (72) hours in advance of construction.</p> <p>Pavement within 10 feet of the BP pipeline shall be removed by milling. No hammering removal methodology shall be allowed within 10 feet of the pipeline.</p> <p>Note that no construction equipment will be allowed to cross the pipeline(s) without prior approval from BP. Also please note that BP will not allow equipment to be positioned or storage of equipment, girders, spoil piles, etc. above the BP pipeline(s).</p> <p>Construction equipment will be verified with BP before construction by submitting the completed BP Equipment Inventory List provided as Figure 1.</p> <p>Additional requirements are outlined in the Special Provision GAS/OIL PIPELINE PROTECTION.</p>
I-80 Sta. 287+00	Gas	36" steel gas main (42" casing)	Kinder-Morgan	<p>Watch and Protect.</p> <p>Contact Kinder Morgan field representative (Mark Thorson T: 815-272-9154) at least seventy-two (72) hours in advance of</p>

				construction and confirm the surface loading of the asphalt equipment prior to performing work.
I-80 Sta. 299+15	Gas	36" steel gas main (42" casing)	Kinder-Morgan	Watch and Protect. Contact Kinder Morgan field representative (Mark Thorson T: 815-272-9154) at least seventy-two (72) hours in advance of construction and confirm the surface loading of the asphalt equipment prior to performing work.
I-80 Sta. 301+05	Gas	30" steel gas main (34" casing)	Kinder-Morgan	Watch and Protect. Contact Kinder Morgan field representative (Mark Thorson T: 815-272-9154) at least seventy-two (72) hours in advance of construction and confirm the surface loading of the asphalt equipment prior to performing work.
I-80 Sta. 304+00	Electric	Aerial crossing near River Road Bridge.	ComEd	Watch and Protect Only
I-80 Sta. 305+20	Fiber Optic	Buried fiber optic	AT&T	Watch and Protect Only

I-80 Sta. 308+25	Gas	24" & 30" gas pipelines	TC Energy	<p>Watch and Protect. Provide notice of at least seventy-two (72) hours in advance of construction.</p> <p>IDOT must contact the following TC Energy field representatives:</p> <p>Name: Chad Klatt Cell: 815-826-0987</p> <p>TC Energy will arrange for a representative to be on site when work is occurring on or near the Right of Way area, or within 25' of the pipelines. After hours call 1-800-447-8066.</p> <p>Illinois DOT, or it's consultant must hydro-vac or hand expose TC Energy's buried pipeline(s) prior to the use of mechanical equipment within 15 ft of the pipeline(s).</p>
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Stage 2 and Stage 3

All facilities listed under Stage 1 shall be included. See above.

No additional facilities requiring extra consideration are identified for the subsequent stages.

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

AGENCY/COMPANY RESPONSIBLE TO RESOLVE CONFLICT	NAME OF CONTACT	PHONE	E-MAIL ADDRESS
AT&T Distribution	Steve Pesola	630.573.5703	sp9653@att.com
AT&T Transmission	Jeremy Pendleton	812.597.5207	<i>Email address unknown</i>
G4S / ISTHA	Bill Mitchell	708.528.0128	bill.mitchell@adestagroup.com
Kinder Morgan	Mark Cavazos, PE	713.420.4363	Mark_Cavazos@kindermorgan.com
ComEd	Kyle Isek	779.231.1740	Kyle.Isek@comed.com
TC Energy	Karen Macejewski	832.320.5414	karen_macejewski@tcenergy.com
Enbridge	Shane Young	346.732.7291	Shane.young@enbridge.com
BP	Blake Patrick	872.245.3915	Blake.Patrick@bp.com
ONEOK	Kalli Ritterbush	405.433.1044	Kalli.Ritterbush@oneok.com

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be considered in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided above for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

The estimated relocation duration must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor and the utility companies when necessary. The Department's contractor is responsible for contacting J.U.L.I.E. prior to all excavation work.

PUBLIC CONVENIENCE AND SAFETY (D1)

Effective: May 1, 2012

Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

“If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply.”

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

“The Length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday After”

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

“On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.”

COMPLETION DATE PLUS WORKING DAYS

Revise Article 108.05 (b) of the Standard Specifications as follows:

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, **September 30, 2025** except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within **10** working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

INTERIM COMPLETION DATE

Work requiring Stage 1 Maintenance of Traffic shall be completed and temporary traffic control according to the WINTER STAGE Maintenance of Traffic Plan shall be installed on or before **December 1, 2024**.

Article 108.09 or the Special Provision for “Failure to Complete the Work on Time” if included in this contract, shall apply to the completion date, interim completion dates and the number of working days.

FAILURE TO COMPLETE THE WORK ON TIME (D1)

Effective: September 30, 1985

Revised: January 1, 2007

Should the Contractor fail to complete the work on or before the completion date as specified in the Special Provision for "Completion Date Plus Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of **\$10,000**, not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

EMBANKMENT I (D1)

Effective: March 1, 2011

Revised: November 1, 2013

Description. This work shall be according to Section 205 of the Standard Specifications except for the following.

Material. All material shall be approved by the District Geotechnical Engineer. The proposed material must meet the following requirements.

- a) The laboratory Standard Dry Density shall be a minimum of 90 lb/cu ft (1450 kg/cu m) when determined according to AASHTO T 99 (Method C).
- b) The organic content shall be less than ten percent determined according to AASHTO T 194 (Wet Combustion).
- c) Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 3 ft (900 mm) of soil not considered detrimental in terms of erosion potential or excess volume change.
 - 1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.

- 2) A plasticity index (PI) of less than 12.
- 3) A liquid limit (LL) in excess of 50.
- d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.
- e) The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

Samples. Embankment material shall be sampled, tested, and approved before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for approval and compaction can be performed. Embankment material placement cannot begin until tests are completed and approval given.

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 6 inches (150 mm) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum blade diameter of 24 inches (600 mm).

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the engineer.

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

- a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.
- b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

Stability. The requirement for embankment stability in Article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

Basis of Payment. This work will not be paid separately but will be considered as included in the various items of excavation.

COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D1)

Effective: November 1, 2011

Revised: November 1, 2013

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

RECLAIMED ASPHALT PAVEMENT FOR NON-POROUS EMBANKMENT AND BACKFILL (D1)

Effective: April 1, 2001

Revised: January 1, 2007

Add the following sentence to Article 1004.05 (a) of the Standard Specifications:

"Reclaimed Asphalt Pavement (RAP) may be used as aggregate in Non-porous Granular Embankment and Backfill. The RAP material shall be reclaimed asphalt pavement material resulting from the cold milling or crushing of an existing hot-mix bituminous concrete pavement structure, including shoulders. RAP containing contaminants such as earth, brick, concrete, sheet asphalt, sand, or other materials identified by the Department will be unacceptable until the contaminants are thoroughly removed.

Add the following sentence to Article 1004.05 (c)(2) of the Standard Specifications:

"One hundred percent of the RAP when used shall pass the 3 inch (75 mm) sieve. The RAP shall be well graded from coarse to fine. RAP that is gap-graded or single-sized will not be accepted."

FLY ASH RESTRICTION

Effective: May 8, 2012
Revised: August 21, 2018

The use of fly ash in Class PV concrete will not be allowed. All references to fly ash in the Standard Specifications shall not apply.

TEMPORARY PAVEMENT (D1)

Effective: March 1, 2003
Revised: April 10, 2008

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement, if required, shall conform to Section 440 of the Standard Specification.

Method of Measurement. Temporary pavement will be measured in place and the area computed in square yards (square meters).

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for TEMPORARY PAVEMENT and TEMPORARY PAVEMENT (INTERSTATE).

Removal of temporary pavement will be paid for at the contract unit price per square yard (square meter) for PAVEMENT REMOVAL.

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D1)

Effective: November 1, 2019

Revised: December 1, 2021

Revise Article 1004.03(c) to read:

“(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

Use	Size/Application	Gradation No.
Class A-1, A-2, & A-3	3/8 in. (10 mm) Seal	CA 16 or CA 20
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & A-3	Cover Coat	CA 14
HMA High ESAL	IL-19.0; Stabilized Subbase IL-19.0	CA 11 ^{1/}
	SMA 12.5 ^{2/}	CA 13 ^{4/} , CA 14, or CA 16
	SMA 9.5 ^{2/}	CA 13 ^{3/4/} or CA 16 ^{3/}
	IL-9.5	CA 16, CM 13 ^{4/}
	IL-9.5FG	CA 16
HMA Low ESAL	IL-19.0L	CA 11 ^{1/}
	IL-9.5L	CA 16

1/ CA 16 or CA 13 may be blended with the CA 11.

2/ The coarse aggregates used shall be capable of being combined with the fine aggregates and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ The specified coarse aggregate gradations may be blended.

4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

Revise Article 1004.03(e) of the Supplemental Specifications to read:

“(e) Absorption. For SMA the coarse aggregate shall also have water absorption ≤ 2.0 percent.”

Revise the “High ESAL” portion of the table in Article 1030.01 to read:

“High ESAL	Binder Courses	IL-19.0, IL-9.5, IL-9.5FG, IL-4.75, SMA 12.5, Stabilized Subbase IL-19.0
	Surface Courses	IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5”

Revise Note 2. and add Note 6 to Article 1030.02 of the Standard Specifications to read:

“Item	Article/Section
(g)Performance Graded Asphalt Binder (Note 6)	1032
(h)Fibers (Note 2)	

Note 2. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 6. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be a SBS PG 76-22 for IL-4.75, except where modified herein..”

Revise table in Article 1030.05(a) of the Standard Specifications to read:

"MIXTURE COMPOSITION (% PASSING) ^{1/}												
Sieve Size	IL-19.0 mm		SMA 12.5		SMA 9.5		IL-9.5mm		IL-9.5FG		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5 mm)												
1 in. (25 mm)		100										
3/4 in. (19 mm)	90	100		100								
1/2 in. (12.5 mm)	75	89	80	100		100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	60	75 ^{6/}	90	100
#8 (2.36 mm)	20	42	16	24 ^{4/}	16	32 ^{4/}	34 ^{5/}	52 ^{2/}	45	60 ^{6/}	70	90
#16 (1.18 mm)	15	30					10	32	25	40	50	65
#30 (600 μm)			12	16	12	18			15	30		
#50 (300 μm)	6	15					4	15	8	15	15	30
#100 (150 μm)	4	9					3	10	6	10	10	18
#200 (75 μm)	3.0	6.0	7.0	9.0 ^{3/}	7.5	9.5 ^{3/}	4.0	6.0	4.0	6.5	7.0	9.0 ^{3/}
#635 (20 μm)			≤ 3.0		≤ 3.0							
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0		1.0

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with N_{design} = 90.

3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.

4/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.

- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.
- 6/ When the mixture is used as a binder, the maximum shall be increased by 0.5 percent passing.”

Revise Article 1030.05(b) of the Standard Specifications to read:

(b) Volumetric Requirements. The target value for the air voids of the HMA shall be 4.0 percent, for IL-4.75 and SMA mixtures it shall be 3.5 percent and for Stabilized Subbase it shall be 3.0 percent at the design number of gyrations. The voids in the mineral aggregate (VMA) and voids filled with asphalt binder (VFA) of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the following requirements.

Mix Design	Voids in the Mineral Aggregate (VMA), % Minimum for Ndesign				
	30	50	70	80	90
IL-19.0		13.5	13.5		13.5
IL-9.5		15.0	15.0		
IL-9.5FG		15.0	15.0		
IL-4.75 ^{1/}		18.5			
SMA-12.5 ^{1/2/5/}				17.0 ^{3/} /16.0 ^{4/}	
SMA-9.5 ^{1/2/5/}				17.0 ^{3/} /16.0 ^{4/}	
IL-19.0L	13.5				
IL-9.5L	15.0				

- 1/ Maximum draindown shall be 0.3 percent according to Illinois Modified AASHTO T 305.
- 2/ The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30°F.
- 3/ Applies when specific gravity of coarse aggregate is ≥ 2.760 .
- 4/ Applies when specific gravity of coarse aggregate is < 2.760 .
- 5/ For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone”

Revise the last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

“IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steal slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours.”

Add after third sentence of Article 1030.09(b) to read:

“If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure.”

Revise Table 1 and Note 4/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

	Breakdown/Intermediate Roller (one of the following)	Final Roller (one or more of the following)	Density Requirement
IL-9.5, IL-9.5FG, IL-19.0 ^{1/}	V _D , P, T _B , 3W, O _T , O _B	V _S , T _B , T _F , O _T	As specified in Section 1030
IL-4.75 and SMA ^{3/ 4/}	T _B , 3W, O _T	T _F , 3W	As specified in Section 1030
Mixtures on Bridge Decks ^{2/}	T _B	T _F	As specified in Articles 582.05 and 582.06.

“4/ The Contractor shall provide a minimum of two steel-wheeled tandem rollers (T_B), and/or three-wheel (3W) rollers for breakdown, except one of the (T_B) or (3W) rollers shall be 84 inches (2.14 m) wide and a weight of 315 pound per linear inch (PLI) (5.63 kg/mm) and one of the (T_B) or (3W) rollers can be substituted for an oscillatory roller (O_T). T_F rollers shall be a minimum of 280 lb/in. (50 N/mm). The 3W and T_B rollers shall be operated at a uniform speed not to exceed 3 mph (5 km/h), with the drive roll for T_B rollers nearest the paver and maintain an effective rolling distance of not more than 150 ft (45 m) behind the paver.”

Add the following after the fourth paragraph of Article 406.13 (b):

“The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design’s G_{mb}.”

Revise first paragraph of Article 1030.10 of the Standard Specifications to read:

“A test strip of 300 ton (275 metric tons), except for SMA mixtures it will be 400 ton (363 metric ton), will be required for each mixture on each contract at the beginning of HMA production for each construction year according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”. At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results.”

Revise third paragraph of Article 1030.10 of the Standard Specifications to read:

“When a test strip is constructed, the Contractor shall collect and split the mixture according to the document “Hot-Mix Asphalt Test Strip Procedures”. The Engineer, or a representative, shall deliver split sample to the District Laboratory for verification testing. The Contractor shall complete mixture tests stated in Article 1030.09(a). Mixture sampled shall include enough material for the Department to conduct mixture tests detailed in Article 1030.09(a) and in the document “Hot-Mix Asphalt Mixture Design Verification Procedure” Section 3.3. The mixture test results shall meet the requirements of Articles 1030.05(b) and 1030.05(d), except Hamburg wheel tests will only be conducted on High ESAL mixtures during production.”

COFFERDAM (TYPE 1) (IN-STREAM/WETLAND WORK) (D1)

Effective: January 1, 2019

Revised: August 15, 2022

Description. This work shall be performed in accordance with Section 502.06 of the Standard Specifications for Road and Bridge Construction, except as herein modified. The work shall consist of the preparation of an in-stream/wetland work plan and the installation, maintenance, removal and disposal of the temporary cofferdam(s) to isolate the work area from water within regulated wetlands and Waters of the U.S. (WOUS) in accordance with the authorized U.S. Army Corps of Engineers (USACE) Section 404 Permit and the General Conditions of the current Nationwide Permit Program.

Materials. Materials shall be in accordance with the USACE Section 404 Permit and General Conditions of the current Nationwide Permit Program.

Construction Requirements. Construction shall be in accordance with Article 502.06(a) of the Standard Specifications for Road and Bridge Construction and in accordance with the authorized USACE Section 404 Permit. For Cofferdam - Type 1, it is anticipated the design will be based on the flow requirement as shown in the plans and per the General Conditions of the current Nationwide Permit Program.

The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer and in accordance with the authorized USACE Section 404 Permit and General Conditions of the current Nationwide Permit Program.

This project requires a USACE Section 404 Permit prior to the start of work. All conditions of the Section 404 Permit must be followed. As a condition of the Section 404 Permit, the Contractor will be required to submit an In-Stream/Wetland Work Plan to the Department for approval. The USACE defines and determines in-stream/wetland work within the WOUS.

Guidelines on acceptable In-Stream/Wetland work techniques can be found on the USACE website: <https://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/IL-Nationwide-Permits/>

Method of Measurement. This work will be measured for payment in units of Each where Each is defined as a plan detailed stage of bridge, culvert or other construction for which a temporary in-stream cofferdam(s) is required. If staged construction is not detailed/specified on the plans, this work will be measured as a total of One Each.

Basis of Payment. This work will be paid for at the contract unit price per each for COFFERDAM (TYPE 1) (IN-STREAM/WETLAND WORK).

AGGREGATE FOR CONCRETE BARRIER (D1)

Effective: February 11, 2004

Revised: January 24, 2008

Add the following paragraph to Article 637.02 of the Standard Specifications:

“The coarse aggregate to be used in the concrete barrier walls shall conform to the requirement for coarse aggregate used in Class BS concrete according to Article 1004.01(b), paragraph 2.”

ENGINEER’S FIELD OFFICE TYPE A (D1)

Effective: December 1, 2011

Revised: May 1, 2013

Revise the first paragraph of Article 670.02 to read:

670.02 Engineer's Field Office Type A (Special). Type A (Special) field offices shall have a ceiling height of not less than 7 feet and a floor space of not less than 3000 square feet with a minimum of two separate offices. The office shall also have a separate storage room capable of being locked for the storage of the nuclear measuring devices. The office shall be provided with sufficient heat, natural and artificial light, and air conditioning. Doors and windows shall be equipped with locks approved by the Engineer.

Revise the first sentence of the second paragraph of Article 670.02 to read:

An electronic security system that will respond to any breach of exterior doors and windows with an on-site alarm shall be provided.

Revise the last sentence of the third paragraph of Article 670.02 to read:

Adequate all-weather parking space shall be available to accommodate a minimum of twelve vehicles.

Revise the fifth paragraph of Article 670.02 to read:

Sanitary facilities shall include hot and cold potable running water, lavatory and toilet as an integral part of the office where available. Solid waste disposal consisting of seven waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service. A weekly cleaning service for the office shall be provided.

Revise subparagraph (a) of Article 670.02 to read:

(a) Twelve desks with minimum working surface 42 inch x 30 inch each and twelve non-folding chairs with upholstered seats and backs.

Revise the first sentence of subparagraph (c) of Article 670.02 to read:

(c) Two four-post drafting tables with minimum top size of 37-½ inch x 48 inch.

Revise subparagraph (d) of Article 670.02 to read:

(d) Eight free standing four-drawer legal size file cabinets with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.

Revise subparagraph (e) of Article 670.02 to read:

(e) Twenty folding chairs and two conference tables with minimum top size of 44 inch x 96 inch.

Revise subparagraph (h) of Article 670.02 to read:

(h) Three electric desk type tape printing calculator and two pocket scientific notation calculators with a 1000 hour battery life or with a portable recharger.

Revise subparagraph (i)(2) of Article 670.02 to read:

(i)(2) Telephones lines. Five separate telephone lines including one line for the fax machine, and two lines for the exclusive use of the Engineer. All telephone lines shall include long distance service and all labor and materials necessary to install the phone lines at the locations directed by the Engineer. The TELCOM company shall configure ROLL/HUNT features as specified by the engineer.

Revise subparagraph (j) of Article 670.02 to read:

- (j) Two plain paper network multi-function printer/copier/scanner machines capable of reproducing prints up to 11 inch x 17 inch within automatic feed tray capable of sorting 30 sheets of paper. Letter size and 11 inch x 17 inch paper shall be provided. The contractor shall provide the multi-function machines with IT support for setup and maintenance.

Revise subparagraph (k) of Article 670.02 to read:

- (k) One plain paper fax machine including maintenance and supplies.

Revise subparagraph (l) of Article 670.02 to read:

- (l) Six four-line telephones, with touch tone, where available, and two digital answering machines, for exclusive use by the Engineer.

Revise subparagraph (m) of Article 670.02 to read:

- (m) One electric water cooler dispenser including water service.

Add the following subparagraphs to Article 670.02:

- (s) One 4 foot x 6 foot chalkboard or dry erase board.
- (t) One 4 foot x 6 foot framed cork board.

Add the following to Article 670.07 Basis of Payment.

The building or buildings, fully equipped, will be paid for at the contract unit price per calendar month or fraction thereof for ENGINEER'S FIELD OFFICE, TYPE A (D-1).

ENGINEER'S FIELD OFFICE TYPE A (SPECIAL)

Description. This work shall consist of furnishing and maintaining in good condition for the exclusive use of the Engineer a weatherproof building hereinafter described at locations approved by the Engineer. Unless otherwise provided, the building shall be independent of any building used by the Contractor and all keys to the buildings shall be turned over to the Engineer. The building shall remain available for use until released by the Engineer. Each field office furnished shall be equipped with fire extinguishers having a minimum Underwriters Laboratory rating of 4A60BC.

Bureau of Land Acquisition Field Office. Field office shall have a ceiling height of not less than 7 ft and a floor space of 1,000 sq ft with a minimum of four separate office with doors and one conference room. The office shall be provided with sufficient heat, natural and artificial light, and air conditioning. A waiting area shall be provided. Doors and windows shall be equipped with locks approved by the Engineer. The building shall be handicapped accessible.

The location of the office shall be within a 1.5 mile radius of the intersection of the Des Plaines River bridge and I-80.

An electronic security system that will respond to any breach of exterior doors and windows with an on-site alarm shall be provided.

Windows shall be equipped with exterior screens to allow adequate ventilation. All windows shall be equipped with interior shades, curtains, or blinds. Adequate all-weather Free parking space shall be available to accommodate a minimum of twelve vehicles with 2 handicapped parking spots.

Suitable on-site sanitary facilities meeting Federal, State, and local health department requirements shall be provided, maintained clean and in good working condition, and shall be always stocked with lavatory and sanitary supplies.

Sanitary facilities shall include hot and cold potable running water, lavatory, and toilet as an integral part of the office where available. Solid waste disposal consisting of ten waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service. A weekly cleaning service for the office shall be provided.

In addition, the following furniture and equipment meeting the approval of the Engineer shall be furnished.

- a) Ten desks with minimum working surface 42 x 30 in.
- b) Ten non-folding chairs with upholstered seats and backs.
- c) Two four-post drafting table with minimum top size of 37-1/2 inch x 48 inch. Eight free standing four drawer legal size file cabinets with lock and an underwriters' laboratories insulated file device 350° F one hour rating.
- d) Twenty folding chairs and one conference table with minimum of top size 44 inch x 96 inch.
- e) One equipment cabinet of minimum inside dimension of 44 in. high x 24 in. wide x 30 in. deep with lock. The walls shall be of steel with a 3/32 in. minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- f) One refrigerator with a minimum size of 14 cu ft with a freezer unit.
- g) Three electric desk type tape printing calculator and two pocket scientific notation calculators with a 1000 hour battery life or with a portable recharger. A minimum of two communication paths. The configuration shall include:
 - 1) Internet Connection. An internet service connection with a wireless router capable of providing service to a minimum of five devices. The internet service shall be for unlimited data with a minimum internet data download speed of 25 megabits per second. For areas where this minimum download speed is not available, the maximum speed available for the area shall be provided.
 - 2) Telephones lines. Five separate telephone lines including one line for the fax machine, and two lines for the exclusive use of the Engineer. All telephone lines shall include long distance service and all labor and materials necessary to install the phone lines at the locations directed by the Engineer. The TELCOM company shall configure ROLL/HUNT features as specified by the engineer.
- h) Two plain paper network multi-function color printer/copier/scanner machines capable of reproducing prints up to 11 inch x 17 inch within automatic feed tray capable of sorting 30 sheets of paper. Letter size and 11 inch x 17 inch paper shall be provided. The contractor shall provide the multi-function machines with IT support for setup and maintenance including all required supplies including by not limited to paper, ink, etc.
- i) One electric water cooler dispenser including water service
- j) One first-aid cabinet fully equipped.
- k) One microwave oven (minimum 700 watt) with a turntable and 2 cu ft minimum capacity.
- l) One fire-proof safe, 0.5 cu ft minimum capacity.
- m) One electric paper shredder.
- n) One plain paper fax machine including maintenance and supplies
- o) Five four-line telephones, with touch tone, where available, and two digital answering machines, exclusive use by the Engineer.
- p) One 4 foot by 6 foot chalkboard or dry erase board.
- q) One 4 foot by 6 foot framed cork board

Basis of Payment. The building or buildings fully equipped as specified will be paid for on a monthly basis until the building or buildings are released by the Engineer. The Contractor will be paid the contract bid price each month provided the building or buildings are maintained, equipped, and utilities furnished. Payment will not be made when the contract is suspended according to Article 108.07 for failure of the Contractor to comply with the provisions of the contract. The building or buildings fully equipped, will be paid for at the contract unit price per calendar month or fraction thereof for ENGINEER'S FIELD OFFICE TYPE A (SPECIAL) This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which remain the property of the Contractor after release by the Engineer, except the Department will pay that portion of the monthly long distance and monthly local telephone, when combined, exceed \$250.

Any extraordinary damage attributed to State operations during the course of the job will be repaired by the Contractor and may be paid for according to Article 109.04. No extra payment will be made for systems maintenance, repairs or replacement, or for damages incurred as a result of vandalism, theft, or other criminal activities.

TRAFFIC CONTROL AND PROTECTION (ARTERIALS) (D1)

Effective: February 1, 1996

Revised: March 1, 2011

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

Method of Measurement: All traffic control (except "Traffic Control and Protection (Expressways)" and temporary pavement markings) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

TRAFFIC CONTROL PLAN (D1)

Effective: September 30, 1985

Revised: January 1, 2007

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS:

701106, 701400, 701401, 701411, 701428, 701901, 704001

DETAILS:

- ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC-08)
- TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE (TC-09)
- MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS (TC-12)
- TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17)
- FREEWAY / EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS / EXPRESSWAYS (TC-18)
- DETOUR SIGNING FOR CLOSING STATE HIGHWAYS (TC-21)

SPECIAL PROVISIONS:

- Maintenance of Roadways (D1)
- Public Convenience and Safety (D1)
- Traffic Control and Protection (Arterials) (D1)
- Keeping The Expressway Open To Traffic
- Failure To Open Traffic Lanes To Traffic
- Traffic Control And Protection (Expressways)
- Traffic Control Surveillance (Expressways)
- Temporary Information Signing
- Traffic Control For Work Zone Areas
- Speed Display Trailer (D1)
- Temporary Pavement Marking (BDE)
- Traffic Spotters (BDE)
- Work Zone Traffic Control Devices (BDE)

FRICITION AGGREGATE (D1)

Effective: January 1, 2011

Revised: December 1, 2021

Revise Article 1004.03(a) of the Standard Specifications to read:

“1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA Low ESAL	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}

Use	Mixture	Aggregates Allowed	
HMA High ESAL Low ESAL	C Surface and Binder IL-9.5 IL-9.5FG or IL-9.5L	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
HMA High ESAL	D Surface and Binder IL-9.5 or IL-9.5FG	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/}	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone		
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite ^{2/}	Any Mixture E aggregate

Use	Mixture	Aggregates Allowed	
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
		75% Crushed Gravel ^{2/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} :	
		Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel ^{2/} or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

ROCKFILL

Effective: January 1, 2010

Revised: April 1, 2022

Description. This work shall consist of the furnishing and placement of rockfill where unstable and/or unsuitable materials have been removed below the plan bedding grade of proposed cast-in-place and/or precast concrete box culverts. This work shall be done as shown on the plans and as directed by the Engineer.

Materials. Materials shall meet the following requirements of the Standard Specifications:

<u>Item</u>	<u>Section</u>
CA 07 and CA 11	1004
Rockfill	1005

The gradation of rockfill shall be selected based on the following table:

Material: Crushed Stone, Crushed Gravel, and Crushed Concrete

<u>Sieve Size</u>	<u>Option 1</u> Percent Passing	<u>Option 2</u> Percent Passing
3 inches (75 mm)	100	
2 1/2 inches (63 mm)	95 ± 5	100
2 inches (50 mm)	60 ± 15	93 ± 7
1 1/2 inches (37.5 mm)	15 ± 15	55 ± 20
1 inch (25 mm)	3 ± 3	8 ± 8
1/2 inch (12.5 mm)		3 ± 3

Geotechnical fabric for ground stabilization shall be nonwoven and meeting the requirements of Article 1080.02 of the Standard Specifications may be necessary dependent upon subgrade soil conditions. The Engineer shall make the determination if Geotechnical fabric utilization is necessary.

Construction Requirements. Unstable and/or unsuitable soil shall be excavated according to Article 502.11 of the Standard Specifications. Rockfill shall be placed following the excavation of the unstable and/or unsuitable material. The maximum nominal thickness when compacted shall be 24 in. (600 mm). Each lift of aggregate shall be compacted to the satisfaction of the Engineer.

The rockfill shall be capped with material meeting the aggregate gradations of CA 07 or CA 11 according to Article 1004.01. The minimum cap thickness shall be 3 in. (75 mm).

The fabric, if required, shall be installed according to the applicable portions of Section 210 of the Standard Specifications.

Method of Measurement. Rockfill will be measured for payment in cubic yards (cubic meters).

Geotechnical fabric for ground stabilization will be measured for payment according to Article 210.05 of the Standard Specifications.

Basis of Payment. Rockfill will be paid for at the contract unit price per cubic yard (cubic meter) for ROCKFILL.

Geotechnical fabric for ground stabilization will be paid for according to Article 210.06 of the Standard Specifications. When the contract does not contain a pay item for the fabric and this item is required, it will be paid for according to Article 109.04 of the Standard Specifications.

Box culverts, removal and disposal of unstable and unsuitable materials, porous granular bedding material, and the excavation required for bedding will be paid for according to Section 540 of the Standard Specifications.

SLIPFORM PAVING (D1)

Effective: November 1, 2014

Revise Article 1020.04 Table 1, Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 1/2 to 1 1/2 in.”

Revise Article 1020.04 Table 1 (metric), Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 13 to 40 mm.”

HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (D1)

Effective: January 1, 2019

Revised: December 1, 2021

Add to Article 1030.05 (d)(3) of the Standard Specifications to read:

“ During mixture design, prepared samples shall be submitted to the District laboratory by the Contractor for verification testing. The required testing, and number and size of prepared samples submitted, shall be according to the following tables.

High ESAL – Required Samples for Verification Testing	
Mixture	Hamburg Wheel and I-FIT Testing ^{1/2/}
Binder	total of 3 - 160 mm tall bricks
Surface	total of 4 - 160 mm tall bricks

Low ESAL – Required Samples for Verification Testing	
Mixture	I-FIT Testing ^{1/2/}
Binder	1 - 160 mm tall brick
Surface	2 - 160 mm tall bricks

- 1/ The compacted gyratory bricks for Hamburg wheel and I-FIT testing shall be 7.5 ± 0.5 percent air voids.
- 2/ If the Contractor does not possess the equipment to prepare the 160 mm tall brick(s), twice as many 115 mm tall compacted gyratory bricks will be acceptable.

Revise the fourth paragraph of Article 1030.10 of the Standard Specifications to read:

“When a test strip is not required, each HMA mixture shall still be sampled on the first day of production: I-FIT and Hamburg wheel testing for High ESAL; I-FIT testing for Low ESAL. Within two working days after sampling the mixture, the Contractor shall deliver gyratory cylinders to the District laboratory for Department verification testing. The High ESAL mixture test results shall meet the requirements of Articles 1030.05(d)(3) and 1030.05(d)(4). The Low ESAL mixture test results shall meet the requirements of Article 1030.05(d)(4). The required number and size of prepared samples submitted for the Hamburg wheel and I-FIT testing shall be according to the “High ESAL - Required Samples for Verification Testing” table in Article 1030.05(d)(3) above.”

Add the following to the end of Article 1030.10 of the Standard Specifications to read:

“Mixture sampled during first day of production shall include approximately 60 lb (27 kg) of additional material for the Department to conduct Hamburg wheel testing and approximately 80 lb (36 kg) of additional material for the Department to conduct I-FIT testing. Within two working days after sampling, the Contractor shall deliver prepared samples to the District laboratory for verification testing. The required number and size of prepared samples submitted for the Hamburg wheel and I-FIT testing shall be according to the “High ESAL - Required Samples for Verification Testing” table in Article 1030.05(d)(3) above.”

UNDERGROUND RACEWAYS

Effective: March 1, 2015

Revise Article 810.04 of the Standard Specifications to read:

“Installation. All underground conduits shall have a minimum depth of 30-inches (700 mm) below the finished grade.”

Add the following to Article 810.04 of the Standard Specifications:

“All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

Add the following to Article 810.04 of the Standard Specifications:

“All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 300 mm (12”) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.

The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap.

The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.”

GENERAL ELECTRICAL REQUIREMENTS

This special provision replaces Articles 801.01 – 801.07, 801.09 – 801-16 of the Standard Specifications.

Definition. Codes, standards, and industry specifications cited for electrical work shall be by definition the latest adopted version thereof, unless indicated otherwise.

Materials by definition shall include electrical equipment, fittings, devices, motors, appliances, fixtures, apparatus, all hardware and appurtenances, and the like, used as part of, or in connection with, electrical installation.

Standards of Installation. Materials shall be installed according to the manufacturer’s recommendations, the NEC, OSHA, the NESC, and AASHTO’s Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

All like materials shall be from the same manufacturer. Listed and labeled materials shall be used whenever possible. The listing shall be according to UL or an approved equivalent.

Safety and Protection. Safety and protection requirements shall be as follows.

Safety. Electrical systems shall not be left in an exposed or otherwise hazardous condition. All electrical boxes, cabinets, pole handholes, etc. which contain wiring, either energized or non-energized, shall be closed or shall have covers in place and be locked when possible, during nonworking hours.

Protection. Electrical raceway or duct openings shall be capped or otherwise sealed from the entrance of water and dirt. Wiring shall be protected from mechanical injury.

Equipment Grounding Conductor. All electrical systems, materials, and appurtenances shall be grounded. Good ground continuity throughout the electrical system shall be assured, even though every detail of the requirements is not specified or shown. Electrical circuits shall have a continuous insulated equipment grounding conductor. When metallic conduit is used, it shall be bonded to the equipment grounding conductor, but shall not be used as the equipment grounding conductor.

Detector loop lead-in circuits, circuits under 50 volts, and runs of fiber optic cable will not require an equipment grounding conductor.

Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point. After the connection is completed, the paint system shall be repaired to the satisfaction of the Engineer.

Bonding of all boxes and other metallic enclosures throughout the wiring system to the equipment grounding conductor shall be made using a splice and pigtail connection. Mechanical connectors shall have a serrated washer at the contact surface.

All connections to structural steel or fencing shall be made with exothermic welds. Care shall be taken not to weaken load carrying members. Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate a mechanical connection. The epoxy coating shall be repaired to the satisfaction of the Engineer. Where connections are made to insulated conductors, the connection shall be wrapped with at least four layers of electrical tape extended 6 in. (150 mm) onto the conductor insulation.

Submittals. At the preconstruction meeting, the Contractor shall submit a written listing of manufacturers for all major electrical and mechanical items. The list of manufacturers shall be binding, except by written request from the Contractor and approval by the Engineer. The request shall include acceptable reasons and documentation for the change.

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, through the Traffic Operations Construction Submittals Application (TOCS) system the manufacturer's product data (for standard products and components) and detailed shop drawings (for fabricated items). Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

Each PDF document must be a vector format PDF from the originating supplier or program and not scanned images.

The submittal must clearly identify the specific model number or catalog number of the item being proposed.

For further information and requirements regarding the TOCS system, the Contractor should reference the *TOCS Contractors User Guide*.

The submittal shall be properly identified by route, section, county, and contract number.

The Contractor shall have reviewed the submittal material and affixed his/her stamp of approval, with date and signature, for each individual item.

Illegible print, incompleteness, inaccuracy, or lack of coordination will be grounds for rejection.

Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations.

The Department may provide a list of pay items broken out by discipline upon request for a particular contract.

The Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as "Approved", "Approved as Noted", "Disapproved", or "Information Only". Since the Engineer's review is for conformance with the design concept only, it shall be the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, or layout drawings by the Engineer's approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked "Disapproved" or "Approved as Noted" shall be resubmitted by the Contractor in their entirety, unless otherwise indicated within the submittal comments.

Work shall not begin until the Engineer has approved the submittal. Material installed prior to approval by the Engineer, will be subject to removal and replacement at no additional cost to the Department.

Certifications. When certifications are specified and are available prior to material manufacture, the certification shall be included in the submittal information. When specified and only available after manufacture, the submittal shall include a statement of intent to furnish certification. All certificates shall be complete with all appropriate test dates and data.

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than fourteen (14) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 1 foot (304.8 mm) to either side. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition.”

Maintenance and Responsibility During Construction.

Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of the existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately

The proposed lighting system must be operational prior to opening the roadway to traffic unless temporary lighting exists which is designed and installed to properly illuminate the roadway.

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

Damage to Electrical Systems. Should damage occur to any existing electrical systems through the Contractor's operations, the Engineer will designate the repairs as emergency or non-emergency in nature.

Emergency repairs shall be made by the Contractor, or as determined by the Engineer, the Department, or its agent. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification. All repairs shall be performed in an expeditious manner to assure all electrical systems are operational as soon as possible. The repairs shall be performed at no additional cost to the Department.

Lighting. An outage will be considered an emergency when three or more lights on a circuit or three successive lights are not operational. Knocked down materials, which result in a danger to the motoring public, will be considered an emergency repair.

Temporary aerial multi-conductor cable, with grounded messenger cable, will be permitted if it does not interfere with traffic or other operations, and if the Engineer determines it does not require unacceptable modification to existing installations.

Marking Proposed Locations for Highway Lighting System. The Contractor shall mark or stake the proposed locations of all poles, cabinets, junction boxes, pull boxes, handholes, cable routes, pavement crossings, and other items pertinent to the work. A proposed location inspection by the Engineer shall be requested prior to any excavation, construction, or installation work after all proposed installation locations are marked. Any work installed without location approval is subject to corrective action at no additional cost to the Department.

Inspection of electrical work. Inspection of electrical work shall be according to Article 105.12 and the following.

Before any splice, tap, or electrical connection is covered in handholes, junction boxes, light poles, or other enclosures, the Contractor shall notify and make available such wiring for the Engineer's inspection.

Testing. Before final inspection, the electrical work shall be tested. Tests may be made progressively as parts of the work are completed or may be made when the work is complete. Tests shall be made in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced. Tests shall include checks of control operation, system voltages, cable insulation, and ground resistance and continuity.

The forms for recording test readings will be available from the Engineer in electronic format. The Contractor shall provide the Engineer with a written report of all test data including the following:

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Detector Loop Tests

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.

- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet shall be measured and recorded with all loads disconnected. Prior to performance of the insulation resistance test, the Contractor shall remove all fuses within all light pole bases on a circuit to segregate the luminaire loads.

On tests of new cable runs, the readings shall exceed 50 megohms for phase and neutral conductors with a connected load over 20A and shall exceed 100 megohms for conductors with a connected load of 20A or less.

On tests of cable runs which include cables which were existing in service prior to this contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

- (3) Loads. The current of each circuit, phase main, and neutral shall be measured and recorded. The Engineer may direct reasonable circuit rearrangement. The current readings shall be within ten percent of the connected load based on material ratings.
- (4) Ground Continuity. Resistance of the system ground as taken from the farthest extension of each circuit run from the controller (i.e. check of equipment ground continuity for each circuit) shall be measured and recorded. Readings shall not exceed 2.0 ohms, regardless of the length of the circuit.
- (5) Resistance of Grounding Electrodes. Resistance to ground of all grounding electrodes shall be measured and recorded. Measurements shall be made with a ground tester during dry soil conditions as approved by the Engineer. Resistance to ground shall not exceed 10 ohms.

ITS. The following test shall be made in addition to the lighting system test above.

Detector Loops. Before and after permanently securing the loop in the pavement, the resistance, inductance, resistance to ground, and quality factor for each loop and lead-in circuit shall be tested. The loop and lead-in circuit shall have an inductance between 20 and 2500 microhenries. The resistance to ground shall be a minimum of 50 megohms under any conditions of weather or moisture. The quality factor (Q) shall be 5 or greater.

Fiber Optic Systems. Fiber optic testing shall be performed as required in the fiber optic cable special provision and the fiber optic splice special provision.

All test results shall be furnished to the Engineer seven working days before the date the inspection is scheduled.

Contract Guarantee. The Contractor shall provide a written guarantee for all electrical work provided under the contract for a period of six months after the date of acceptance with the following warranties and guarantees.

- (a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 120 months from the date of delivery.
- (b) The Contractor's written guarantee that, for a period of six months after the date of final acceptance of the work, all necessary repairs to or replacement of said warranted material or apparatus for reasons not proven to have been caused by negligence on the part of the user or acts of a third party shall be made by the Contractor at no additional cost to the Department.
- (c) The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of six months after final acceptance of the work.

The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years.

Record Drawings. Alterations and additions to the electrical installation made during the execution of the work shall be made on the PDF copy of the as-Let documents using a PDF editor. Hand drawn notations or markups and scanned plans are not acceptable. These drawings shall be updated daily and shall be available for inspection by the Engineer during the work. The record drawings shall include the following:

- Cover Sheet
- The Electrical Maintenance Contract Management System (EMCMS) location designation, i.e. "L" number
- Summary of Quantities, electrical items only
- Legends, Schedules, and Notes
- Plan Sheets
- Pertinent Details
- Single Line Diagrams
- Other useful information useful to locate and maintain the systems.

Any modifications to the details shall be indicated. Final quantities used shall be indicated on the Summary of Quantities. Foundation depths used shall also be listed.

As part of the record drawings, the Contractor shall inventory all materials, new or existing, on the project and record information on inventory sheets provided by the Engineer.

The inventory shall include:

- Location of Equipment, including rack, chassis, slot as applicable.
- Designation of Equipment
- Equipment manufacturer
- Equipment model number
- Equipment Version Number
- Equipment Configuration
 - Addressing, IP or other
 - Settings, hardware or programmed
- Equipment Serial Number

The following electronic inventory forms are available from the Engineer:

- Lighting Controller Inventory
- Lighting Inventory
- Light Tower Inspection Checklist
- ITS Location Inventory

The information shall be entered in the forms; handwritten entries will not be acceptable; except for signatures. Electronic file shall also be included in the documentation.

When the work is complete, and seven days before the request for a final inspection, the set of contract drawings, stamped "**RECORD DRAWINGS**", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or Electrician. . The record drawings shall be submitted in PDF format through TOCS, on CD-ROM as well as hardcopy's for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible. Hard copies of the catalog are not required with this submittal.

The Contractor shall provide three sets of electronically produced drawings in a moisture proof pouch to be kept on the inside door of the controller cabinet or other location approved by the Engineer. These drawings shall show the final as-built circuit orientation(s) of the project in the form of a single line diagram with all luminaires numbered and clearly identified for each circuit.

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review.

A total of three hardcopies and two CD-ROMs of the final documentation shall be submitted. The identical material shall also be submitted through the TOCS system utilizing the following final documentation pay item numbers:

Pay Code	Description	Discipline
FDLRD000	Record Drawings - Lighting	Lighting
FDSRD000	Record Drawings - Surveillance	Surveillance
FDTRD000	Record Drawings - Traffic Signal	Traffic Signal
FDIRD000	Record Drawings - ITS	ITS
FDLCC000	Catalog Cuts - Lighting	Lighting
FDSCC000	Catalog Cuts – Surveillance	Surveillance
FDTCC000	Catalog Cuts – Traffic Signal	Traffic Signal
FDICC000	Catalog Cuts - ITS	ITS
FDLWL000	Warranty - Lighting	Lighting
FDSWL000	Warranty - Surveillance	Surveillance
FDTWL000	Warranty - Traffic Signal	Traffic Signal
FDIWL000	Warranty - ITS	ITS
FDLTR000	Test Results - Lighting	Lighting
FDSTR000	Test Results - Surveillance	Surveillance
FDTTR000	Test Results - Traffic Signal	Traffic Signal
FDITR000	Test Results - ITS	ITS
FDLINV00	Inventory - Lighting	Lighting
FDSINV00	Inventory - Surveillance	Surveillance
FDTINV00	Inventory - Traffic Signal	Traffic Signal
FDIINV00	Inventory - ITS	ITS
FDLGPS00	GPS - Lighting	Lighting
FDSGPS00	GPS - Surveillance	Surveillance
FDTGPS00	GPS - Traffic Signal	Traffic Signal
FDIGPS00	GPS - ITS	ITS

Record Drawings shall include Marked up plans, controller info, Service Info, Equipment Settings, Manuals, Wiring Diagrams for each discipline.

Test results shall be all electrical test results, fiber optic OTDR, and Fiber Optic power meter as applicable for each discipline.

GPS Documentation. In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- All light poles and light towers.
- Handholes and vaults.
- Junction Boxes
- Conduit roadway crossings.
- Controllers.
- Control Buildings.
- Structures with electrical connections, i.e. DMS, lighted signs.
- Electric Service locations.
- CCTV Camera installations.
- Roadway Surveillance installations.
- Fiber Optic Splice Locations.
- Fiber Optic Cables. Coordinates shall be recorded along each fiber optic cable route every 200 feet.
- All fiber optic slack locations shall be identified with quantity of slack cable included. When sequential cable markings are available, those markings shall be documented as cable marking into enclosure and marking out of enclosure.
- Fiber Optic Utility Markers

Datum to be used shall be North American 1983.

Data shall be provided electronically. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

1. District
2. Description of item
3. Designation
4. Use
5. Approximate station
6. Contract Number
7. Date
8. Owner
9. Latitude
10. Longitude
11. Comments

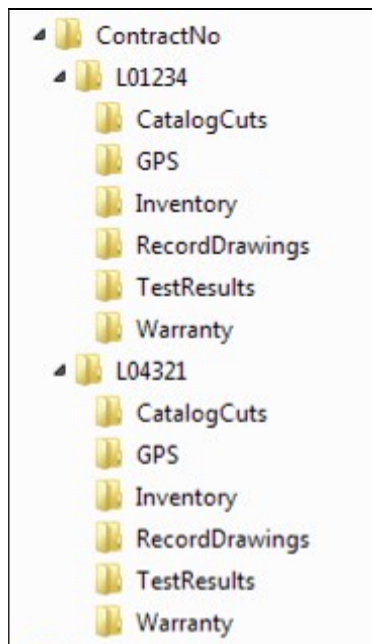
A spreadsheet template will be available from the Engineer for use by the Contractor.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years.”

The documents on the CD shall be organized by the Electrical Maintenance Contract Management System (EMCMS) location designation. If multiple EMCMS locations are within the contract, separate folders shall be utilized for each location as follows:



Extraneous information not pertaining to the specific EMCMS location shall not be included in that particular folder and sub-folder.

The inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

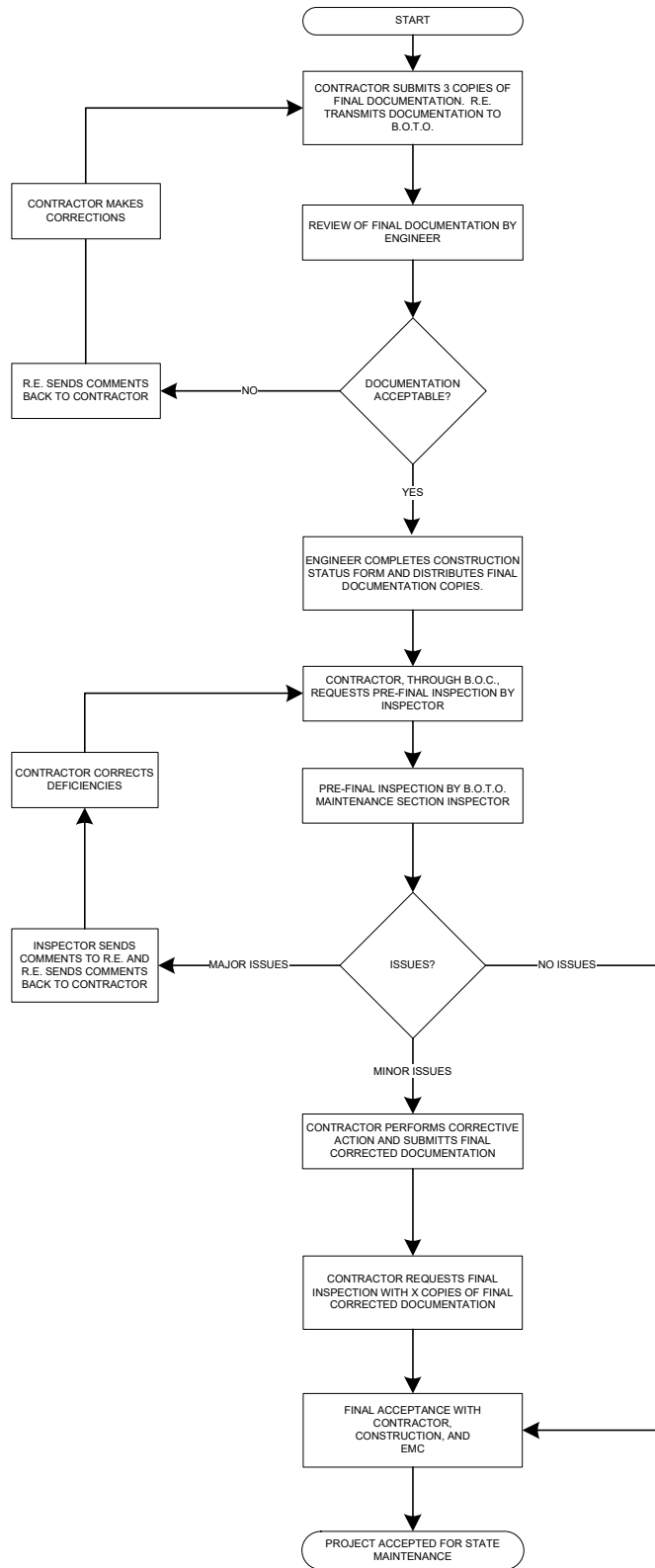
The Final Acceptance Documentation Checklist shall be completed and is contained elsewhere herein.

All CD's shall be labeled as illustrated in the CD Label Template contained herein.

Acceptance. Acceptance of electrical work will be given at the time when the Department assumes the responsibility to protect and maintain the work according to Article 107.30 or at the time of final inspection.

When the electrical work is complete, tested, and fully operational, the Contractor shall schedule an inspection for acceptance with the Engineer no less than seven working days prior to the desired inspection date. The Contractor shall furnish the necessary labor and equipment to make the inspection.

A written record of the test readings taken by the Contractor according to Article 801.13 shall be furnished to the Engineer seven working days before the date the inspection is scheduled. Inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.



Final Acceptance Documentation Checklist

LOCATION	
Route	Common Name
Limits	Section
Contract #	County
Controller Designation(s)	EMC Database Location Number(s)

ITEM	Contractor (Verify)	Resident Engineer (Verify)
Record Drawings -Three hardcopies (11" x 17") -Scanned to two CD-ROMs	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Field Inspection Tests -Voltage -Amperage -Cable Insulation Resistance -Continuity -Controller Ground Rod Resistance (Three Hardcopies & scanned to two CD's)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
GPS Coordinates -Excel file (Check Special Provisions, Excel file scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
Job Warranty Letter (Three Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
Catalog Cut Submittals -Approved & Approved as Noted (Scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
Lighting Inventory Form (Three Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
Lighting Controller Inventory Form (Three Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
Light Tower Inspection Form (If applicable, Three Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>

Three Hardcopies & scanned to two CD's shall be submitted for all items above. The CD ROM shall be labeled as shown in the example contained herein.

General Notes:

Record Drawings – The record drawings should contain contract cover sheet, summary of quantities showing all lighting pay item sheets, proposed lighting plans and lighting detail sheets. Submit hardcopies shall be 11” x 17” size. Temporary lighting plans and removal lighting plans should not be part of the set.

Field Inspection Tests – Testing should be done for proposed cables. Testing shall be per standard specifications. Forms shall be neatly filled out.

GPS Coordinates – Check special provisions “General Electrical Requirements”. Submit electronic “EXCEL” file.

Job Warranty Letter – See standard specifications.

Cutsheet Submittal – See special provisions “General Electrical Requirements”. Scan Approved and Approved as Noted cutsheets.

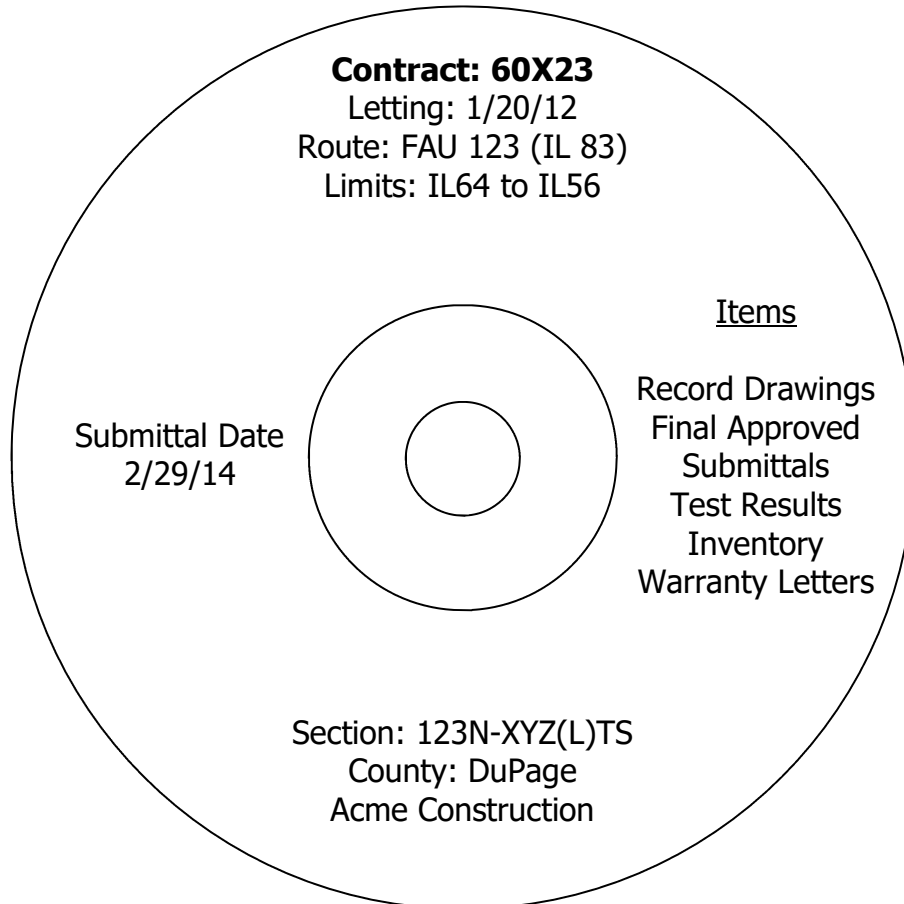
Lighting Inventory Form – Inventory form should include only proposed light poles, proposed light towers, proposed combination (traffic/light pole) lighting and proposed underpass luminaires.

Lighting Controller Inventory Form – Form should be filled out for only proposed lighting controllers.

Light Tower Safety Inspection Form – Form should be filled out for each proposed light tower.

CD LABEL FORMAT TEMPLATE.

Label must be printed; hand written labels are unacceptable and will be rejected.



ELECTRIC UTILITY SERVICE CONNECTION (COMED)

Effective: January 1, 2012

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

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.**

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

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$50,000.

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

ELECTRIC SERVICE INSTALLATION

Effective: January 1, 2012

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the Standard Specifications.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method Of Measurement. Electric Service Installation shall be counted, each.

Basis Of Payment. This work will be paid for at the contract unit price each for **ELECTRIC SERVICE INSTALLATION** which shall be payment in full for the work specified herein.

JUNCTION BOX EMBEDDED IN STRUCTURE

Effective: January 1, 2012

Description. This work shall consist of furnishing and installing an embedded Composite Concrete Junction Box in concrete.

Materials. The box and cover shall be constructed of a polymer concrete and reinforced with a heavy-weave fiberglass cloth. The material shall have the following properties:

Mechanical Property	Value	Physical Property	Value
Compressive strength	9,000 – 15,000 psi	Density	85-150 lbs/ft ²
flexural strength	3,000 – 6,000 psi	Barcol Hardness	45
Impact Energy	30 – 72 ft.-lbs	Water Absorption	Less Than 1%
tensile strength	800 – 1,100 psi		

The resulting enclosure shall have a Tier 8 Load Rating in accordance with ANSI/SCTE 77 2002. The material shall have light gray color to match the surrounding concrete. The cover shall be made of the same material. The junction box and cover shall be arranged to fit flush with the structure surface. The cover shall be gasketed and attached with a minimum of four stainless steel hex-head bolts factory coated with anti-seize compound. The enclosure shall be UL Listed.

Installation. The embedded junction box shall be set flush with the adjoining surface and shall be properly supported during concrete placement. Concrete cover shall not be less than 3 in. (75 mm) all around the embedded junction box. The junction box shall not be installed in areas where vehicular traffic may drive over the junction box.

Field cut conduit openings shall be uniform and smooth. All burrs and rough edges shall be filed smooth to the satisfaction of the Engineer prior to the installation of conduit(s) into the junction box. Field cut conduit openings shall be fitted with the appropriate conduit fittings and accessories. Conduit fittings and accessories shall be provided according to Article 1088.01 and as shown on the plans.

Conduit openings may be factory cut and pre-assembled with conduit fittings. Conduit fittings and accessories shall be manufactured from polyvinyl chloride complying with ASTM D 1784 and shall comply with all the applicable requirements of NEMA Publication No. TC2, U.L. Standard 651 for EPC-40-PVC and NEC Article 347.

Slight deviations to a larger size than the specified sizes may be allowed to conform to a standard manufacturer's production size with the approval of the Engineer.

Basis of Payment. This work will be paid for at the contract unit price each for **JUNCTION BOX, EMBEDDED IN STRUCTURE**, of the type and size when specified. The Contractor may, with the approval of the Engineer, use box sizes larger than indicated, at no additional cost to the Department.

MAINTENANCE OF LIGHTING SYSTEMS

Effective: March 1, 2017

Replace Article 801.11 and 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. During the maintenance preconstruction inspection, the party responsible for existing maintenance shall perform testing of the existing system in accordance with Article 801.13a. The Contractor shall request a date for the preconstruction inspection no less than fourteen (14) days prior to the desired date of the inspection.

The Engineer will document all test results and note deficiencies. All substandard equipment will be repaired or replaced by the existing maintenance contractor, or the Engineer can direct the Contractor to make the necessary repairs under Section 109.04.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained. Contract documents shall indicate the circuit limits.

Maintenance of Existing Lighting Systems

Existing lighting systems. Existing lighting systems shall be defined as any lighting system or part of a lighting system in service at the time of contract Letting. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

Existing Lighting Systems Requiring Maintenance.

IDOT – Cross Over Lighting – Full Maintenance:

- Lighting Controller at west side of Wabena Road.
- 14 light poles with luminaire along I-80 from Wabena Road to approximate Station 160+50.
- 11 light poles with luminaires along I-80 from River Road to DuPage River.

Extent of Maintenance.

Partial Maintenance. Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits within the project limits. The project limits are defined as those limits indicated in the contract plans. Equipment outside of the project limits, on the affected circuits shall be maintained and paid for under Article 109.04. The affected circuits shall be isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer. The unaffected circuits and the controller will remain under the maintenance of the State.

Full Maintenance. If the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits within the project limits. Equipment outside of the project limits shall be maintained and paid for under Article 109.04.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Maintenance of Proposed Lighting Systems

Proposed Lighting Systems. Proposed lighting systems shall be defined as any lighting system or part of a lighting system, temporary or permanent, which is to be constructed under this contract regardless of the project limits indicated in the plans.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, vandalism, or other means. The potential cost of replacing or repairing any malfunctioning, damaged, or vandalized equipment shall be included in the bid price of this item and will not be paid for separately.

Lighting System Maintenance Operations

The Contractor's responsibility shall include all applicable responsibilities of the Electrical Maintenance Contract, State of Illinois, Department of Transportation, Division of Highways, District One. These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service. The equipment shall then be re-set by the contractor within the time limits specified herein.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer. Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from any monies owed to the Contractor. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

Operation of Lighting

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods.

Method of Measurement

The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request. Months in which the lighting systems are not maintained and not operational will not be paid. Payment shall not be made retroactively for months in which lighting systems were not operational.

Basis of Payment. Maintenance of lighting systems shall be paid for at the contract unit price per calendar month for **MAINTENANCE OF LIGHTING SYSTEM.**

LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL, 24" DIAMETER

Description. This item shall consist of constructing a light pole foundation according to the Standard Specifications, as shown on the plans and as specified herein.

Materials. The materials shall be in accordance with Article 836.02 of the Standard Specifications as applicable.

Conduit expansion deflection couplings shall be in accordance with Article 1088.02 of the Standard Specifications.

CONSTRUCTION REQUIREMENTS

Installation. The top portion of the foundation shall be integral with a portion of the double face barrier wall, as one monolithic structure, as shown on the plans and as directed by the Engineer. This portion of the foundation shall be of the same shape as the wall and shall be constructed according to Articles 503.06 and 503.07 of the Standard Specifications as applicable. Any required sheeting, cribbing or other associated work required to complete the foundation shall be included. The length of the wall included shall be as shown on the plans.

The drilled shaft portion of the foundation shall be constructed according to Article 836.03(a) of the Standard specifications as applicable and as shown on the plans.

Method of Measurement. Pole foundations will be measured per foot complete and in place.

Relocation of a foundation due to an obstruction and any shaft excavation to that point will not be measured for payment.

Excavation in rock will be measured for payment according to Article 502.12.

Basis of Payment. This work will be paid for at the contract unit price per foot for LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL, 24" DIAMETER which shall be payment in full for the work specified herein.

KEEPING THE EXPRESSWAY OPEN TO TRAFFIC

Effective: March 22, 1996

Revised: October 9, 2020

Whenever work is in progress on or adjacent to an expressway, the Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards and the District Freeway details. All Contractors' personnel shall be limited to these barricaded work zones and shall not cross the expressway.

The Contractor shall request and gain approval from the Illinois Department of Transportation's Expressway Traffic Operations Engineer at www.idotlcs.com twenty-four (24) hours in advance of all daily lane, ramp and shoulder closures and 7 days in advance of all permanent and weekend closures on all Freeways and/or Expressways in District One. This advance notification is calculated based on workweek of Monday through Friday and shall not include weekends or Holidays.

LOCATION: I-80: Kendall Co. to Center/Meadow

WEEK NIGHT	TYPE OF CLOSURE	ALLOWABLE LANE CLOSURE HOURS					
		INBOUND			OUTBOUND		
Sun - Thu	1-Lane	8:00 PM	to	5:00 AM	9:00 PM	to	6:00 AM
Friday	1-Lane	8:00 PM (Fri)	to	10:00 AM (Sat)	9:00 PM (Fri)	to	10:00 AM (Sat)
Saturday	1-Lane	8:00 PM (Sat)	to	11:59 AM (Sun)	8:00 PM (Sat)	to	11:59 AM (Sun)

In addition to the hours noted above, temporary shoulder and non-system interchange partial ramp closures are allowed weekdays between 9:00 A.M. and 3:00 P.M. and between 7:00 P.M. and 5:00 A.M or as approved by the Expressway Traffic Operations Engineer.

Narrow Lanes and permanent shoulder closures will not be allowed between Dec. 1st and April 1st. Permanent shoulder closures per District Detail TC-17 will only be permitted if called for in the plans or as approved by the Expressway Traffic Operations Engineer.

Full Expressway Closures will only be permitted for a maximum of 15 minutes at a time during the low traffic volume hours of 1:00 A.M. to 5:00 A.M. Monday thru Friday and from 1:00 A.M. to 7:00 A.M. on Sunday. During Full Expressway Closures, the Contractor will be required to close off all lanes except one, using Freeway Standard Closures. Police forces should be notified and requested to close off the remaining lane at which time the work item may be removed or set in place. The District One Expressway Traffic Control Supervisor (847-705-4151) **shall be** notified at least 3 working days (weekends and holidays DO NOT count into this 72 hours notification) in advance of the proposed road closure and will coordinate the closure operations with police forces. Liquidated Damages as specified in the Failure to Open Traffic Lanes to Traffic for One lane or ramp blocked shall be assessed to the Contract for every 15 minutes beyond the initial 15 minutes all lanes are blocked.

All stage changes requiring the stopping and/or the pacing of traffic shall take place during the allowable hours for Full Expressway Closures and shall be approved by the Department. The Contractor shall notify the District One Expressway Traffic Control Supervisor at least 3 working days (weekends and holidays DO NOT count into this 72 hours notification) in advance of any proposed stage change.

A Maintenance of Traffic Plan shall be submitted to the District One Expressway Traffic Control Supervisor 14 days in advance of any stages changes or full expressway closures. The Maintenance of Traffic Plan shall include, but not be limited to: lane and ramp closures, existing geometrics, and equipment and material location.

All daily lane closures shall be removed during adverse weather conditions such as rain, snow, and/or fog and as determined by the Engineer. Also, the contractor shall promptly remove their lane closures when Maintenance forces are out for snow and ice removal.

Additional lane closure hour restrictions may have to be imposed to facilitate the flow of traffic to and from major sporting events and/or other events.

All lane closure signs shall not be erected any earlier than one-half (1/2) hour before the starting hours listed above. Also, these signs should be taken down within one-half (1/2) hour after the closure is removed.

The Contractor will be required to cooperate with all other contractors when erecting lane closures on the expressway. All lane closures (includes the taper lengths) without a three (3) mile gap between each other, in one direction of the expressway, shall be on the same side of the pavement. Lane closures on the same side of the pavement with a one (1) mile or less gap between the end of one work zone and the start of taper of next work zone should be connected. The maximum length of any lane closure on the project and combined with any adjacent projects shall be three (3) miles. Gaps between successive permanent lane closures shall be no less than two (2) miles in length.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at the locations approved by the Engineer.

Check barricades shall be placed every 1000' within a lane closure to prevent vehicles from driving through closed lanes.

Temporary ramp closures for service interchanges will only be permitted at night during the restricted hours listed for temporary one-lane closures within the project limits. However, no two (2) adjacent entrance and exit ramps in one direction of the expressway shall be closed at the same time.

Freeway to freeway (system interchange) full ramp closures for two lane ramps will not be permitted. Partial ramp closures of system ramps may be allowed during the 1-lane closure hours above. System ramp full closures for single lane ramps are only permitted for a maximum of four (4) hours

- between the hours of 1:00 a.m. and 5:00 a.m. on Monday thru Friday
- between the hours of 1:00 a.m. and 6:00 a.m. on Saturday, and
- between the hours of 1:00 a.m. and 7:00 a.m. on Sunday.

The Contractor shall furnish and install large (48" X 48") "DETOUR with arrow" signs as directed by the Engineer for all system ramp closures. In addition, one portable changeable message sign will be required to be placed in advance of the ramp closure. The cost of these signs and PCMS board shall be included in the cost of traffic control and protection (6 static signs maximum per closure).

Should the Contractor fail to completely open, and keep open, the ramps to traffic in accordance with the above limitations, the Contractor shall be liable to the Department for liquidated damages as noted under the Special Provision, "Failure to Open Traffic Lanes to Traffic".

FAILURE TO OPEN TRAFFIC LANES TO TRAFFIC

Effective: March 22, 1996

Revised: February 9, 2005

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified under the Special Provisions for "Keeping the Expressway Open to Traffic", the Contractor shall be liable to the Department for the amount of:

One lane or ramp blocked = **\$3,000.00**

Two lanes blocked = **\$6,000.00**

Not as a penalty but as liquidated and ascertained damages for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. Such damages may be deducted by the Department from any monies due the Contractor. These damages shall apply during the contract time and during any extensions of the contract time.

TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)

Effective: March 8, 1996

Revised: April 1, 2019

Description. This work shall include furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices used for the purpose of regulating, warning, or directing traffic. Traffic control and protection shall be provided as called for in the plans, applicable Highway Standards, District One Expressway details, Standards and Supplemental Specifications, these Special Provisions, or as directed by the Engineer.

General. The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions on the expressway through the construction zone. The Contractor shall arrange his operations to keep the closing of lanes and/or ramps to a minimum.

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to existing warning signs and overhead guide signs during all construction operations. Warning signs and existing guide signs with down arrows shall be kept consistent with the barricade placement at all times. The Contractor shall immediately remove, completely cover, or turn from the motorist's view all signs which are inconsistent with lane assignment patterns.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices that were furnished, installed, or maintained by him under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

Additional requirements for traffic control devices shall be as follows.

(a) Traffic Control Setup and Removal. The setting and removal of barricades for the taper portion of a lane closure shall be done under the protection of a vehicle with a truck/trailer mounted attenuator and arrow board per State Standard 701428 and Section 701 of the Standard Specifications. Failure to meet this requirement will be subject to a Traffic Control Deficiency. The deficiency will be calculated as outlined in Article 105.03 of the Standard Specifications. Truck/trailer mounted attenuators shall comply with Article 1106.02(g) or shall meet the requirements of NCHRP 350 Test Level 3 with vehicles used in accordance with manufacturer's recommendations and requirements.

(b) Sign Requirements

(1) Sign Maintenance. Prior to the beginning of construction operations, the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. All provisions of Article 107.25 of the Standard Specifications shall apply.

- (2) Work Zone Speed Limit Signs. Work zone speed limit signs shall be installed as required in Article 701.14(b) and as shown in the plans and Highway Standards. Based upon the existing posted speed limit, work zone speed limits shall be established and signed as follows.
- a. Existing Speed Limit of 55mph or higher. The initial work zone speed limit assembly, located approximately 4200' before the closure, and shall be 55mph as shown in 701400. Additional work zone 45mph assemblies shall be used as required according to Article 701.14(b) and as shown in the Highway Standards and plans. WORK ZONE SPEED LIMIT 55 PHOTO ENFORCED assemblies may be omitted when this assembly would normally be placed within 1500 feet of the END WORK ZONE SPEED LIMIT sign. If existing speed limit is over 65mph then additional signage should be installed per 701400.
 - b. Existing Speed Limit of 45mph. The advance 55mph work zone speed limit assembly shown in 701400 shall be replaced with a 45mph assembly. Additional work zone 45mph assemblies shall be used as required according to Article 701.14(b) and as shown in the Highway Standards and plans. WORK ZONE SPEED LIMIT 55 PHOTO ENFORCED assemblies shall be eliminated in all cases. END WORK ZONE SPEED LIMIT signs are required.
- (3) Exit Signs. The exit gore signs as shown in Standard 701411 shall be a minimum size of 48 inch by 48 inch with 12 inch capital letters and a 20 inch arrow. EXIT OPEN AHEAD signs shown in Standard 701411 shall be a minimum size of 48 inch by 48 inch with 8 inch capital letters.
- (4) Uneven Lanes Signs. The Contractor shall furnish and erect "UNEVEN LANES" signs (W8-11) on both sides of the expressway, at any time when the elevation difference between adjacent lanes open to traffic equals or exceeds one inch. Signs shall be placed 500' in advance of the drop-off, within 500' of every entrance, and a minimum of every mile.
- (c) Drums/Barricades. Check barricades shall be placed in work areas perpendicular to traffic every 1000', one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Check barricades shall also be placed in advance of each open patch, or excavation, or any other hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades, either Type I or II, or drums shall be equipped with a flashing light.

To provide sufficient lane widths (10' minimum) for traffic and also working room, the Contractor shall furnish and install vertical barricades, in lieu of Type II or drums, along the cold milling and asphalt paving operations. The vertical barricades shall be placed at the same spacing as the drums.

- (d) Vertical Barricades. Vertical barricades shall not be used in lane closure tapers, lane shifts, exit ramp gores, or staged construction projects lasting more than 12 hours. Also, vertical barricades shall not be used as patch barricades or check barricades. Special attention shall be given, and ballast provided per manufacture's specification, to maintain the vertical barricades in an upright position and in proper alignment.
- (e) Temporary Concrete Barrier Wall. Prismatic barrier wall reflectors shall be installed on both the face of the wall next to traffic, and the top of sections of the temporary concrete barrier wall as shown in Standard 704001. The color of these reflectors shall match the color of the edgelines (yellow on the left and crystal or white on the right). If the base of the temporary concrete barrier wall is 12 inches or less from the travel lane, then the lower slope of the wall shall also have a 6 inch wide temporary pavement marking edgeline (yellow on the left and white on the right).
- (f) Flaggers. One flagger will be required for each separate activity of an operation that requires frequent construction vehicles to enter or leave a work zone to or from a lane open to traffic. Temporary traffic control and flagger position shall be according to District One Detail TC-18 – Expressway Flagging, or as directed by the Engineer.
- (g) Full Expressway Closures. Full Expressway Closures will only be permitted for a maximum of 15 minutes during the allowable hours listed in the Keeping the Expressway Open to Traffic Special Provision. During Full Expressway Closures, the Contractor will be required to close off all lanes except one, using Freeway Standard Closures. The Contractor will be required to provide one changeable message sign to be placed at the direction of the Engineer. The sign shall display a message as directed by the Engineer. A Maintenance of Traffic Plan shall be submitted to the District One Expressway Traffic Control Supervisor 14 days in advance of the planned work; including all stage changes. The Maintenance of Traffic Plan shall include, but not be limited to: lane and ramp closures, existing geometrics, and equipment and material location. The District One Expressway Traffic Control Supervisor (847-705-4151) shall be contacted at least 3 working days in advance of the proposed road closure and will coordinate the closure operation with police forces.

Method of Measurement. This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating, and removing traffic control devices required in the plans and these Special Provisions. Traffic control and protection required under Standards 701101, 701400, 701401, 701402, 701406, 701411, 701416, 701426, 701428, 701446, 701901 and District details TC-8, TC-9, TC-17, TC-18 and TC-25 will be included with this item.

Basis of Payment.

- (a) This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS). This price shall be payment in full for all labor, materials, transportation, handling, and incidental work necessary to furnish, install, maintain, replace, relocate, and remove all Expressway traffic control devices required in the plans and specifications.

In the event the sum total value of all the work items for which traffic control and protection is required is increased or decreased by more than ten percent (10%), the contract bid price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS) will be adjusted as follows:

$$\text{Adjusted contract price} = .25P + .75P [1 \pm (X - 0.1)]$$

Where: "P" is the bid unit price for Traffic Control and Protection

Where: "X" =	$\frac{\text{Difference between original and final sum total value of all work items for which traffic control and protection is required}}{\text{Original sum total value of all work items for which traffic control and protection is required.}}$
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The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the Standard Specifications and only items which require use of Traffic Control and Protection.

Temporary traffic control costs due to delay will be paid for according to the Compensable Delay Costs (BDE) Special Provision.

- (b) The Engineer may require additional traffic control be installed in accordance with standards and/or designs other than those included in the plans. In such cases, the standards and/or designs will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required will be in accordance with Article 109.04 of the Standard Specifications.
- (c) Revisions in the phasing of construction or maintenance operations, requested by the Contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. Revisions or modifications to the traffic control shown in the contract shall be submitted by the Contractor for approval by the Engineer. No additional payment will be made for a Contractor requested modification.
- (d) Temporary concrete barrier wall will be measured and paid for according to Section 704.
- (e) Impact attenuators, temporary bridge rail, and temporary rumble strips will be paid for separately.
- (f) Temporary pavement markings shown on the Standard will be measured and paid for according to Section 703 and Section 780.
- (g) All pavement marking removal will be measured and paid for according to Section 703 or Section 783.

- (h) Temporary pavement marking on the lower slope of the temporary concrete barrier wall will be measured and paid for as TEMPORARY PAVEMENT MARKING, 6”.
- (i) All barrier wall reflectors will be measured and paid for according to Section 782.
- (j) The Changeable Message Sign required for Full Expressway Closures shall not be paid for separately.

TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS)

Effective: October 25, 1995

Revised: January 21, 2015

The contractor shall provide a person with a vehicle to survey, inspect and maintain all temporary traffic control devices when a lane is closed to traffic, when hazards are present adjacent to or within 10 foot of the edge of pavement for more than 24 hours, or as directed by the Engineer.

The surveillance person is required to drive through the project, to inspect all temporary traffic control devices, to correct all traffic control deficiencies, if possible, or immediately contact someone else to make corrections and to assist with directing traffic until such corrections are made, at intervals not to exceed 4 hours. This person shall list every inspection on an inspection form, furnished by the Engineer, and shall return a completed form on the first working day after the inspections are made.

The Contractor shall supply a telephone staffed on a 24-hour-a-day basis to receive any notification of any deficiencies regarding traffic control and protection or receive any request for improving, correcting or modifying traffic control, installations or devices, including pavement markings. The Contractor shall dispatch additional men, materials and equipment as necessary to begin to correct, improve or modify the traffic control as directed, within one hour of notification by this surveillance person or by the Department. Upon completion of such corrections and/or revisions, the Contractor shall notify the Department's Communication Center at (847) 705-4612.

Method of Measurement.

Traffic Control Surveillance will be measured on calendar day basis. One calendar day is equal to a minimum of six (6) inspections. The inspections shall start within 4 hours after the lane is closed to traffic, a hazard exists within 10 foot from the edge of pavement, or as directed by the Engineer and shall end when the lane closure or hazard is removed or as directed by the Engineer.

Basis of Payment.

Surveillance will be paid for at the contract unit price per calendar day or fraction thereof for TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS). The price shall include all labor and equipment necessary to provide the required inspection and maintenance on the expressway and on all cross streets which are included in the project. The cost of the materials for the maintenance of traffic control devices shall be included in the traffic control pay items.

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996

Revised: January 29, 2020

Description.

This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, skid mount signs, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

Materials.

Materials shall be according to the following Articles of Section 1000 - Materials:

	<u>Item</u>	<u>Article/Section</u>
a.)	Sign Base (Note 1)	1090
b.)	Sign Face (Note 2)	1091
c.)	Sign Legends	1091
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 3)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.

Note 2. The sign face material shall be in accordance with the Department's Fabrication of Highway Signs Policy.

Note 3. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

The attachment of temporary signs to existing bridges, sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs and/or structures due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Method of Measurement.

This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

All hardware, posts or skids, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

Basis Of Payment.

This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

TRAFFIC CONTROL FOR WORK ZONE AREAS

Effective: September 14, 1995

Revised: January 1, 2007

Work zone entry and exit openings shall be established daily by the Contractor with the approval of the Engineer. All vehicles including cars and pickup trucks shall exit the work zone at the exit openings. All trucks shall enter the work zone at the entry openings. These openings shall be signed in accordance with the details shown elsewhere in the plans and shall be under flagger control during working hours.

The Contractor shall plan his trucking operations into and out of the work zone as well as on to and off the expressway to maintain adequate merging distance. Merging distances to cross all lanes of traffic shall be no less than 1/2 mile. This distance is the length from where the trucks enter the expressway to where the trucks enter the work zone. It is also the length from where the trucks exit the work zone to where the trucks exit the expressway. The stopping of expressway traffic to allow trucks to change lanes and/or cross the expressway is prohibited.

Failure to comply with the above requirements will result in a Traffic Control Deficiency charge. The deficiency charge will be calculated as outlined in Article 105.03 of the Standard Specifications. The Contractor will be assessed this daily charge for each day a deficiency is documented by the Engineer.

SPEED DISPLAY TRAILER (D1)

Effective: April 1, 2015

Revised: April 1, 2021

Revise the third 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.”

Whenever the speed display trailer is not in use, it shall be considered non-operating equipment and shall be stored according to Article 701.11.”

Add the following to Article 701.20 of the Standard Specifications:

“(k) “Speed Display Trailer will NOT be paid for by separate pay item, but its costs shall be included in the contract unit price of the various traffic control pay items.

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. (125mm 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 posted 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 25mph 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 speed limit shall not be displayed. On any roadway facility if detected speeds are less than 25 mph, speed 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.”

SMART TRAFFIC MONITORING SYSTEM

Effective: September 1, 2021
701.16T

Description: This work shall consist of furnishing, installing, maintaining, removing, and programming various components of an automated Smart Traffic Monitoring (STM) System. The STM System shall cover IDOT Contract 62P71 (Interstate 80; E/O Ridge Road to E/O River Road). This work shall be done according to Section 701 of the Standard Specification, described herein, and as directed by the Engineer.

Lane Closures: The STM System shall display messages from the System for traffic conditions on Interstate 80 for the following Contract:

ROUTE I-80 (FAI 80)
SECTION 2021-154-R
COUNTY Will

DESCRIPTION OF WORK Pavement Reconstruction and Culvert Replacement

Schedule: The STM System shall be 100% operable prior to Stage 1 MOT being implemented on Interstate 80 (FAI 80). The STM System shall be in operation 24 hours a day and 7 days per week until Contract 62P71 is complete and all lanes are opened to traffic.

Function: The components include Smart Traffic Monitoring Devices (SMD), portable changeable message signs (PCMS) control software, and communications system.

The STM System shall collect real time vehicle travel data at strategic locations prior to and within the work zones to provide drivers with advance information about travel time and delay through the work zone and stopped traffic ahead. The real time vehicle travel data shall be automatically transmitted and processed by control software which remotely commands PCMS to display programmed messages based on the travel data.

The STM System shall be capable of providing dynamic lane merging by use of pre-programmed conditions to allow the system to determine when early merging should be required (generally low volumes and high speed), and when late merging should be required (generally high volumes and low speeds). The STM System components shall have the capacity and the accuracy to determine to implement the specific messages for each type of merging and to prevent frequent and unnecessary changes in merge type. Dynamic lane merging will require PCMS throughout the expected queue area, as well as advance warning signing.

The messages shall be in real time and dynamically based on the data collected by SMD. In addition, the STM System shall also have the capability to inform the District Office of traffic delays via the internet or through the District' Operations and Communications Center.

The STM System shall calculate and notify drivers via PCMS of the actual traffic backup delay time for the entire work zone. The calculation method of the backup delay time shall be submitted to the Engineer for approval. The STM System shall notify drivers of multiple levels of travel time delay based on user-definable speed thresholds (e.g. speeds less than 30 mph) and shall be capable of displaying the distance to slow or stopped traffic with an accuracy of a half mile a minimum of two (2) miles in advance of slowed or stopped traffic by displaying messages on PCMS located on mainline FAI 80, FAI 55, and I-355 as shown herein and directed by the Engineer. The message library and number of PCMS displaying travel time delay related messages will be determined by the Engineer.

Smart Monitoring Devices: The Contractor shall provide a device that is MUTCD compliant consistent with the work zone channelizing devices used throughout the regular construction work zone. The SMD shall be crashworthy as defined by NCHRP 350 or MASH, easy to carry and deploy, and lightweight so that it can be positioned by any one member of a construction crew with no special skill requirements or lifting machinery. The SMD shall be independent of all local or regional power and communications networks to provide continuous, uninterrupted, data collection even during power or communication interruptions. The SMD shall communicate in series and real time with multiple other SMD and PCMS. The SMD shall gather real-time data, provide 95% accuracy on all vehicle detection, have GPS functionality, transfer data to web-based communications for monitoring, and communicate with the PCMS 24 hours per day 7 days per week. The web-based interface shall provide vehicle speed, volume, and queue at each device location and maintain data history for a minimum of 12 months. The number and proper location of SMD needed to provide dynamic, travel time messages from the System shall be recommend by the manufacturer and approved by the Engineer. The limit of this systems detection is intended to extend beyond the limits of queueing from the project and suggest using an alternate route. *Vehicle detection shall cover a distance along the work zone and four (4) miles in advance. Portable Changeable Message Signs and traffic detectors shall be strategically placed in sufficient quantity and frequency to provide travel time delay and queue length data within 0.5 mile accuracy.*

Control Software: The control software shall be web-based. Authorized IDOT personnel shall be enabled to view all devices via the Internet. The software shall be configurable to meet project requirements. The software shall offer both a public information side and a password protected agency-only side.

The control software shall include a map feature showing real time traffic conditions. This shall be offered in an easy to understand visual format via the Internet, such as color coding. It shall also display the devices on the project. By “clicking” on any device, the user shall be able to learn its current condition and operating properties. SMD shall display current speeds and/or volumes and changeable message signs shall display current message(s). The device information will also include a data and time stamp showing when they last reported to the control software. The software shall include user-settable parameters to dynamically trigger in real time new messages to be displayed on the roadside changeable message signs. The software shall also make it easy for authorized personnel to override the current message with a new one in emergencies or when conditions warrant it.

The software shall provide email and/or text alerts to specified IDOT personnel when speeds or queue lengths exceed IDOT defined parameters.

The software shall provide an XML data feed to IDOT on request and shall hold an archive or data for a period of not less than 1 year in a manner that is readily accessible to IDOT personnel with no additional assistance and at no additional cost.

All public agencies authorized by IDOT shall be granted user accounts at no additional cost to IDOT or the agencies.

Portable Changeable Message Signs: The PCMS shall meet the requirements of Article 701 of the Standard Specifications. The signs shall be equipped with communications equipment fully compatible with the STM System and shall wirelessly communicate with the SMDs and control software independent of the PCMS manufacturer. PCMS shall be provided in sufficient quantity and strategic placement to cover the variable level conditions approaching and within the work zone. The placement plan shall include PCMS placed every 1 miles from 5 miles in advance of the work zone through the end of the work zone in each direction, with 1 additional PCMS placed on northbound I-55 south of I-80 and southbound I-55 north of I-80. The final number and location of the PCMS shall be recommended by the Contractor and approved by the Engineer. The trailer shall be installed beyond the edge of the shoulder and shall not block any part of a lane or shoulder. The Contractor may have to temporarily widen embankment with sandbags or other temporary material to properly install the trailer. The costs associated with temporarily widen embankments and restore the embankments upon completion shall be according to Section 109 of the Standard Specifications.

Protection: All communications in the STM System shall be protected to prevent unauthorized personnel from accessing the data or changing the displays on the PCMS.

Performance Requirements: Device shall gather and report real-time data during the work zone hours or as required as a single unit or as a system. Website shall report data overlaying work zones onto an interactive map. Work zones shall be represented by a single symbol and present data in a pop-up window when selected. Data shall include the data, time, and average speed through the work zone. Symbols shall also be color coded to represent general speed conditions. Website shall have web access granted accounts for all public-sector entities. For strategic speed enforcement, law enforcement agencies shall be granted an account in their jurisdiction at their request at no additional cost. Web access shall allow stakeholders to download archive data such as counts, travel time, speed bin, and speed history.

System Communications: All communication networks used in the STM System shall be provided by the Contractor. When any part of the STM System has not been functions for ten minutes, the System shall notify the Engineer of the malfunction. Upon direction of the Engineer, the System shall also notify the Contractor and/or the District's Operations and Communications Center.

Penalties: The Engineer shall notify the Contractor when any components of the STM System is not functions properly at any time 24 hours a day and 7 days per week. Once the Contractor has been notified that the STM System is not functioning properly, the Contractor shall have four hours to repair the System. After four hours a monetary penalty shall be assessed to the Contractor. The penalty shall be \$2,000 for each hour or portion thereof until the System is functioning properly.

Method of Measurement: This work will be measured for payment on a lump sum basis.

Basis of Payment: This work will be paid for at the contract unit price per lump sum for SMART TRAFFIC MONITORING SYSTEM.

- (a) After the STM System is set up and 100% operable, 25% of the pay item will be paid.
- (b) After each month of use, 65% of the pay item will be paid on a prorated monthly basis.
- (c) After the STM System is completely removed, 10% of the pay item will be paid.

SIGN SHOP DRAWING SUBMITTAL

Effective: January 22, 2013

Revised: July 1, 2015

720.02TS

Add the following paragraph to Article 720.03 of the Standard Specifications:

Shop drawings will be required, according to Article 105.04, for all Arterials/Expressways signs except standard highway signs covered in the MUTCD. Shop drawings shall be submitted to the Engineer for review and approval prior to fabrication. The shop drawings shall include dimensions, letter sizing, font type, colors and materials.

CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized over the full length. Four (4) 1" anchor bolts with 5" hook embedded a minimum of 5 ft. in the foundation with an exposed height of 3" above the foundation shall be provided in a 15" bolt circle configuration to accommodate a future ITS pole as shown on the Plans.

Foundations shall provide two (2) 2-inch raceways. Unused raceways shall be stubbed and capped for future use.

Incidental to the cost of each foundation, the Contractor shall construct a 5 inch PCC sidewalk of a rectangular area 3 feet by 4 feet immediately adjacent to the foundation as shown on the Plans.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

CONCRETE FOUNDATION, TYPE-D

Description. This item shall consist of constructing a Type-D foundation for the installation of a Type-III ground cabinet housing continuous traffic count equipment, anchor bolts and ground rod in accordance with the following requirements and conforming in all respects to the lines, grades and dimensions shown on the plans or as directed by the Engineer and in applicable portions of **Section 878** of the Standard Specifications.

Materials. The materials shall conform to the specifications for Class SI concrete Reinforcement Bars in the Standard Specifications. The conduit and fittings within the limits of the foundation shall conform to the same requirements as specified for the conduit outside these limits. Anchor bolts shall meet the requirements of **Section 505** and **Article 1006.09** of the Standard Specifications.

A ground rod shall be installed in each foundation and shall conform to **Article 1087.01**. Unless otherwise indicated, ground rods shall be one piece copper-clad steel rods $\frac{3}{4}$ " x 10 feet. After installation, and before acceptance of the ATR, the earth ground shall be tested in the presence of the Engineer utilizing an appropriate earth-ground test set.

CONSTRUCTION REQUIREMENTS

The Class SI Type-D foundations shall be at the locations specified in the plans. The top of the foundations shall be finished level. Shimming will not be permitted. All edges along the top of the foundation shall have a 1-inch bevel. A form extending a minimum of 9 inches below the top surface of the foundation is required. The form shall be set level and means shall be provided for holding same rigidly in place while the concrete is being deposited. If the excavation is irregular, a form shall be used to provide the proper dimensions of the entire foundation below the grade surface. Where a concrete foundation is contiguous to a sidewalk, preformed joint filler of 1 inch thickness shall be placed between the foundation and the sidewalk.

All conduit in the foundation shall be installed rigidly in place before concrete is deposited in the form. Insulated bushings shall be provided at the ends of conduit.

Anchor bolts shall be set in place before the concrete is deposited by means of a template constructed to place the anchor bolts in accordance with the pattern of the bolt holes in the base. After installation of cables, all conduit openings in the foundations shall be sealed with an approved mastic. The required number and size of galvanized steel conduit shall be installed in every concrete foundation as shown in the plans. An excess of galvanized steel conduit shall be installed in every concrete foundation. These excess stubs shall be 2 inches in length. Placement and Quantity shall be determined by the Engineer and the ends of the stubs shall be capped.

Incidental to the cost of each Type-D foundation, the contractor shall construct a 5-inch PCC sidewalk of rectangular area 3 foot x 4 foot immediately adjacent to the cabinet door, with the 4 foot dimension of the rectangle parallel to the cabinet door when closed. The only situation where this is not applicable is when the foundation is immediately adjacent to or within a paved sidewalk or shoulder area where no further surfacing area is required. The Engineer shall be the sole judge of proper action if this situation should arise.

Basis of Payment. This work shall be paid for at the contract unit price per foot of depth of CONCRETE FOUNDATION, TYPE D, which price shall be payment in full for all necessary excavating, backfilling, disposal of surplus material, form work, and furnishing all materials, anchor bolts, stubs, and ground rods within the limits of the foundation.

CONTROLLER CABINET TYPE III

Description. This item shall consist of furnishing and installing Type-3 ground-mounted cabinets of the size specified in place including anchor bolts, bases, cable harnesses, ground rods, terminal boards, shelves, mounting hardware, and all miscellaneous items at locations as directed by the Engineer.

Materials. Cabinets shall be of fabricated aluminum supplied in the sizes with minimum inside dimensions as listed below.

Type	Height	Width	Depth	Thickness	Opening
E.S.P. 3	49.5 In	30 In	17 In	.185 In	38 In X 27.5 In

A heavy-duty gasket shall be installed around the cabinet door opening to provide a weather-tight seal for the protection of the enclosed equipment.

The Type-3 ground mounted cabinet shall be caulked along the entire perimeter of the base with a waterproof, non-hardening compound prior to setting the cabinet on the foundation to ensure a water, dust and insect-proof seal.

The cabinet shall be provided with a screened vent under the roof overhang, but a thermostatically controlled fan is not required. No louvers or filtered air intake in the door shall be required.

The cabinet exterior surface shall be smooth, free of marks and scratches and provide an unpainted brushed aluminum finish.

The cabinet door shall be capable of being opened to various angles by a stop and catch mechanism.

The cabinet door shall be equipped with Type-2 Corbin brass locks.

The cabinet shall not be equipped with a police door.

The cabinet shall have two (2) shelves for setting counter/classifiers and other equipment. The shelves' vertical position shall be adjustable.

Materials shall conform to applicable portions of controller cabinets as listed in the Standard Specifications **Section 1074.03**

Installation. Installation shall conform to applicable portions of **Section 863** of the Standard Specifications.

The detector loop leads shall be equipped with lightning protection. Any lightning protection for the axle sensors shall be as recommended by the manufacturer. Lightning arrestors for the detector loop leads shall be EDCO SRA6LCBLL, manufactured by EDCO Inc. of Belleview, FL. or equivalent. The type of high-quality lightning arrestors for the axle sensor lead-in shall be as recommended by the equipment manufacturers. The terminal board wiring and all other wiring and connections shall be as indicated in the wiring diagram. Open-end spade connectors shall be used and shall be of sufficient length to allow moving the I.R.D. Automatic Traffic Recorder or equal counter/classifier at least 2 feet outside the cabinet door opening without disconnecting any cables.

No holes shall be drilled through the cabinet exterior for internal equipment mounting.

Each wire entering a cabinet shall be trained in a workmanlike manner and lugged at each terminal strip. If more than one wire has a common terminal on a terminal strip, the adjacent strip shall be used and an appropriate jumped connection shall be made.

All cables and wiring entering a cabinet shall be dressed, harnessed, tied, laced, and clamped to produce a workmanlike wiring installation.

All cables, loop wires, power, shall be labeled with a Panduit type cable tag. The tag will identify the type of cable and the cable destination.

The Piezo Electric Axle Sensor Transmission Cable shall be terminated in the cabinet with a male BNC connector of a commercial grade or better and a colored strain-relief sleeve. Assembly shall be performed using proper methods and tooling. **Twist-on connectors shall not be used.**

The Piezo Electric Axle Sensor Transmission Cable color code shall be as follows:

LANE #1	RED
LANE #2	WHITE
LANE #3	GREEN
LANE #4	BLUE
LANE #5	ORANGE
LANE # 6	VIOLET

A copper grounding bus shall be mounted on the rear wall of the cabinets connecting all components to earth ground. Each cabinet shall contain a wiring diagram of the installation in addition to the diagrams which are to be submitted to the Engineer.

The cabinet shall be wired in accordance with the plans provided. Any deviation from the plans shall be submitted and approved in advance.

The Contractor shall furnish three (3) diagrams of the internal and external connections of the equipment in each cabinet. He shall also furnish the operating and maintenance instructions for all equipment supplied. One copy of the wiring diagrams for each cabinet shall be retained in each field cabinet. Wiring diagram shall be contained in a plastic pouch that shall be permanently mounted to the door of each cabinet. Contractor shall permanently mark the cabinet for each terminal connection as to function and destination.

Incidental to the cost of each cabinet, the Contractor shall construct a 5-inch PCC sidewalk of a rectangular area 3 feet by 4 feet immediately adjacent to the cabinet foundation on the same side of the foundation as the cabinet door, with the 4 foot dimension of the rectangle parallel to the cabinet door when closed. If the width of the required cabinet foundation is greater than the 3-foot width of the standard Type D concrete foundation, the 4 foot dimension of the sidewalk area shall be increased to equal the width of the foundation plus 1 foot, the area to extend 6 inches beyond each side of the foundation. This paragraph shall be applicable at all cabinet locations included in this Section. The only situations where this paragraph shall not apply are as follows: When the foundation is immediately adjacent to or within a paved sidewalk or shoulder area and no further surfacing is required. The Engineer shall be the sole judge as to the applicability of this paragraph in all questions arising there from.

No conduit shall be allowed to enter cabinet through the sides, top or back walls.

Terminal blocks provided in field cabinets shall be the heavy-duty barrier type. The terminal block shall be a minimum of 2 inch wide and 1.2 inch deep. Center to center of the terminal screws or studs shall be a minimum of 0.63 inch with barriers in-between. Terminal blocks shall be rated at 45 amps 600 volts breakdown RMS line to line 11,000 V. and breakdown RMS line to ground 13,800 V. A marking strip shall be provided with each terminal block.

Method of Measurement. Each cabinet installed complete and in place on a Type D concrete foundation will be counted as a single unit.

Basis of Payment. This work will be paid for at the contract unit price each for CONTROLLER CABINET, TYPE-III which price shall be paid in full for furnishing, wiring and installing the new cabinet, anchor bolts and terminal facilities complete.

DETECTOR LOOP LEAD-IN CABLE IN CONDUIT, CONOGA-30003

Description. This work consists of furnishing and installing loop detector lead-in cables or interconnect cables of the number of pairs specified in the conduit in accordance with the requirements of the Standard Specifications, Section 886 and the following exceptions or additions:

Materials. The Traffic Count Detector Loop Lead-in Cable shall be Canoga 30003 or equivalent.

Installation. Each end of the cable shall be identified with wire markers as directed by the Engineer.

The drain wire of each pair shall be grounded to chassis ground in the cabinet only for interference suppression.

The electrical values of the cable shall be metered by the Contractor, in the presence of the Engineer, after they are spliced to the detector loop. Acceptance of the cable as metered shall be determined by the Engineer.

Basis of Payment. This work shall be paid for at the contract unit price per lineal foot for ELECTRIC CABLE IN CONDUIT, CONOGA-30003.

PIEZO AXLE SENSORS, CLASS-II

Description. This item consists of installing one Class II Piezo Axle Sensor (AMP Model No. 4-1004673-0 BLC Sensor Class II 11' with 300' led or equivalent), in each lane indicated on the plans.

The use of Global Resin Epoxy or equivalent is necessary for proper bonding. A minimum of thirty (30) days cure time for new asphalt is required before the epoxy is used for bonding.

Piezo axle sensors may not be installed before permanent striping is completed on a newly resurfaced section of road. Installation of an automated traffic recorder must be completed no later than sixty (60) days after installation is begun.

Personnel from the Illinois Department of Transportation Data Management Lab must be present to supervise installation of the axle sensors.

Materials. The Class II axle sensors, necessary RG58C/U transmission cable and Global Epoxy or equivalent for encapsulating sensors shall be furnished by the Contractor. ROADTRAX BLC Traffic Sensors manufactured by AMP Incorporated or equivalent shall be installed at this location. The axle sensor shall be flexible along its longitudinal axis to allow the sensor to easily conform to the profile of the lane in which it is being installed. Class II axle sensors shall be manufactured with suitable lengths of RG58C/U transmission cable for continuous run from axle sensor through the handhole to the cabinet. Splicing of transmission cable to axle sensor shall not be permitted unless approved in advance and supervised by Mr. Rich Marx of the Illinois Department of Transportation.

CONSTRUCTION REQUIREMENTS

Installation. Installation shall be in accordance with the attached instructions. The Engineer should be advised at least three days prior to installation. Contact Mr. Rich Marx of the Illinois Department of Transportation, telephone (217) 782-2065, to arrange a time and date for the installation. **Personnel from the Illinois Department of Transportation Data Management Lab must be present to supervise installation of the axle sensors.**

Heated loop sealers shall not be used to seal the RG58C/U transmission cable in the pavement sawcut. Sealex or equivalent loop sealant shall be used.

Testing. Piezo axle sensors shall be tested immediately upon installation and again at the time of Final Acceptance Inspection in the presence of the Engineer. The tests shall be performed utilizing an oscilloscope to ensure acceptable, clean signals of proper amplitude and polarity. Sensors that fail to test satisfactorily shall be repaired or replaced before final acceptance.

Method of Measurement. This work will be measured for payment in feet along the sawcut in the pavement containing the axle sensor. The lead-in measured from the end of the axle sensor to the dive hole shall be paid for at the contract unit price per linear foot for detector loop type III. The lead-in from the dive hole to the cabinet shall be considered incidental since it is provided with the sensor.

Basis of Payment. This work shall be paid for at the contract unit price per linear foot for PIEZO AXLE SENSOR, CLASS II.

IDOT Installation Instructions for the RoadTrax BL Traffic Sensors (or approved Equivalent)

Equipment Required

The sensors should be supplied with sufficient lengths of lead-in cable to avoid splicing. NO SPLICES are allowed in the cable. The lead-in cable length should not exceed 300 feet without consulting the manufacturer. Installation brackets are included when the sensors are shipped from the manufacturer. If splicing is required, only similar grades of RG-58 cable should be used. Splices must be soldered and an approved splice kit used to waterproof the splice.

Personnel from the Illinois Department of Transportation Data Management Lab must be present to supervise installation of the axle sensors.

The following tools and accessories are required for sensor installation:

- A heavy duty (at least 35 horsepower) self-propelled concrete cutting saw equipped with a 3/4" diamond blade. If a blade of this width is not available, multiple blades can be used to form a dado.
- A water supply for blade cooling and slot washing.
- A 1/2 inch electric or air hammer drill, 1/2 inch masonry bit, hand sledge hammer and one inch chisel.
- Air compressor with hose and nozzle for cleaning and drying the slot and to power any air tools used.
- Straight edge, chalk line, minimum 1/8" diameter cord or rope for laying out the lines, upside-down pavement fluorescent spray paint, wax crayon, measuring tape to mark locations of saw cuts to be made for sensor(s) and lead-in wire.
- One half inch variable speed drill, industrial grade mixing paddles (one for mixing sensor grout & hardener and one for mixing loop sealant & hardener. Do not cross contaminate sensor grout and loop sealant by using the same mixing paddles.
- Wire Strippers. Knife type blade strippers, pliers and diagonal cutters.
- Wire brush to remove any remaining debris from the sawed slot and to rough up the sides of the slot after the saw cuts are completed.
- Broom to keep work area clear of debris.
- Clean rags and Isopropyl Alcohol to clean and prime concrete surface of the sawed slots.
- Plumbers putty or duct seal to form dams at the end of the sensor slot to contain the resin (grout).
- PU 200 Resin (or approved equal) for encapsulating the sensors (one can for every six feet of sensor)
- Two part cold mix loop sealant for encapsulating the loop and lead wire(s). Hot tar is not acceptable.

- Duct tape (2" minimum width) to protect the pavement edge from excess resin end loop sealant along edges of sawed slots during installation of sensors and lead wire.
- Putty Knives (3" to 4") to remove excess epoxy or work epoxy around sensor and Small point trowel for putting resin (grout) into the slot if necessary.
- The contractor must provide a generator suitable for any power tools since AC power is not available at most traffic count stations.
- One hundred foot fish tape.
- Heavy duty extension cord.
- Chemical proof rubber work gloves, heavy duty work gloves , dust filter mask and goggles & safety glasses for eye protection.
- Trenching equipment as required to bury conduit.
- Cleaning Materials for hands and equipment.
- All necessary instructions.
- All necessary safety data (MSDS, etc.)

Method of Installation

1. Mark the position of the sensor slots to be cut, perpendicular to the traffic flow. Cable runs on the pavement should also be clearly marked using wax crayons or line and fluorescent pavement paint.
2. Cut a slot 3/4" wide ($\pm 1/16$ ") and 3/4" deep (+- 1/8"). The slot should be 6" longer than the sensor. The lead out should be centered on the slot.
3. The slot must be cut in one pass using one (1) 3/4" wide diamond blade or two (2) 3/8" blades may be ganged together. The slot should be wet cut to minimize damage to the roadway surface.
4. Cut the cable slots to the edge of the roadway.
5. Clear away debris and wash the slots thoroughly. Use air supply to dry. The slots and surrounding surface must be completely clean and dry before any adhesive is poured.
6. Apply two layers of 2" duct tape on the pavement along the perimeter of the slot.

7. Position the sensor on the duct tape next to the slot. Ensure that the sensor is straight and flat. Place the clips on the sensor, about every 8" .
8. Place the sensor in the slot, with the brass element about ¼" below the road surface, and the top of the brackets about 1/8" below the road surface. Ensure the ends of the sensors are pushed down sufficiently.
9. Block the ends of the slot using plumbers putty or duct seal . Ensure that there are
10. adequate 'dams' at both ends so that the encapsulation material (P5G Resin or approved equal) does not flow out. On the passive cable end, dam should be about
11. 3 ½" past the end of the lead attachment area.
12. Ensure that you are wearing rubber gloves suitable for this type of application. The sealant should not come in contact with the skin.
13. Mix the grout according to the manufactures instructions. Be sure to pre-mix the resin before combining the two parts since the filled materials have a tendency to settle. Fill the slot full of the encapsulation material. Using a trowel, distribute the encapsulation material along the sensor. Approved Installation Epoxies are Global Resin PU 200. Remove the tape on the sides of the slot as soon as the adhesive starts to cure.
14. Carefully remove the plumbers putty or duct seal used to form the dams at both ends of the sensor
15. Route the lead in cable through the slot cut for it, and cover with loop sealant Hot Tar must not be used since the temperature is difficult to control and it can burn the cable. Scatter clean dry sand to prevent sticking.
Note: The lead-in cable slot shall run to the edge of pavement.
16. When the encapsulation material is fully cured (see manufacturers recommended cure time), grind the top of the encapsulation material flush with the road using an angle grinder. The profile should be flat or with a slight 'mound', provided that there is no concave portion to the curve.
17. Remove all work related debris from the site. When the encapsulation material is fully cured, lanes may be opened to traffic.
18. Follow the manufacturers recommended cure time.

SOLAR POWER SYSTEM

Description. This work shall consist of furnishing and installing a solar power system for an Automatic Traffic Recorder (ATR) station. The system shall consist of a solar panel, wood post, solar charge controller, battery, pull box, power conductors, conduit attached to wood post, and all mounting hardware required to secure the solar panel, pull box, and conduit to the wood post.

Materials. The system must be of the following capacity: All continuous vehicle ATRs shall be equipped with 100-watt solar panel or larger, including solar panel mounting bracket. The system's capacity should enable it to operate the equipment for thirty (30) consecutive days of heavily overcast weather without the power level of the battery dropping to a point at which it would no longer power or operate the equipment.

The solar charge controller shall be a Victron Energy SmartSolar MPPT 75/15 or equivalent and include Victron Energy Smart Battery Sense wireless battery voltage and temperature sensor or equivalent. The battery shall be a Relion RB300 lithium iron phosphate battery or equivalent. This battery shall be a 12-volt, 300 ampere hour lithium deep cycle battery. Contractor shall provide

The power conductors shall be per Article 1066.02.

The wood post shall be pressure-treated and 4-inch x 6-inch nominal dimensions. The post shall be cut to the proper dimensions before treatment. No cutting of the post shall be allowed after treatment.

The pull box shall be NEMA TYPE 3R and accommodate a minimum size of ½" conduit fittings.

The conduit attached to wood post shall be rigid galvanized steel conduit in accordance with Article 1088.01(a)(3).

The solar panel and all necessary mounting hardware shall be constructed of maintenance free materials which will not require painting.

CONSTRUCTION REQUIREMENTS

Installation. The wood post shall be set according to Article 634.05. The solar panel surface shall be mounted at an angle of 57° referenced to the south horizon for maximum efficiency in this geographic region. Mounting height shall be a minimum of 9 feet above ground on the wood post. Mounting in any other fashion will be as specified by the Engineer.

The pull box shall be installed approximately 3 feet above finished grade level to facilitate splicing the power wires to the solar panel.

The rigid metal conduit attached to post shall be installed in accordance with Article 810.05(a) and 811.03.

Power conductors shall be installed within conduit from the pull-box to the Type III cabinet. Wiring of the solar panel and solar charge controller shall be per the manufacturer's specifications.

Testing. The Contractor shall demonstrate that all system components have been installed, connected, and configured correctly as per the manufacturer's requirements. The Contractor shall test the system in the presence of the Engineer and the Illinois Department of Transportation Data Management Lab to demonstrate that the installation has resulted in a reliable, fully functional system.

Method of Measurement. This work will be measured for payment in units of each, for a complete system installed and tested.

Basis of Payment. This work will be paid for at the contract unit price of each for SOLAR POWER SYSTEM.

GROUNDING OF ITS SUBSYSTEMS (TSC T 420#8)

Effective: March 12, 2009

The grounding of ITS subsystems shall meet the requirements of Section 806 of the Standard Specifications. In addition, amend Article 806.03 of the Standard Specifications to include:

General. All ITS subsystems (ramp metering system, dynamic message sign system, system detector stations, etc.), associated equipment, and appurtenances shall be properly grounded in strict conformance with the NEC and as shown on the Plans.

Testing shall be according to Section 801. 13(a)(5) of the Standard Specifications:

The grounded conductor (neutral conductor) shall be white color-coded. This conductor shall be bonded to the equipment-grounding conductor only at the Electric Service installation. All power cables shall include one neutral conductor of the same size as the phase (hot) conductors.

The equipment-grounding conductor shall be green color-coded. The following is in addition to Section 801.04 of the Standard Specifications.

Equipment grounding conductors shall be XLP insulated No. 6, unless otherwise noted on the Plans, and bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment-grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment-grounding conductor.

Equipment grounding connectors shall be bonded, using a listed grounding conductor, to all ramp meters, DMS, and detector cabinets, handholes, and other metallic enclosures throughout the ITS subsystems, except where noted herein. A listed electrical joint compound shall be applied to all conductor terminations, connector threads, and contact points.

All metallic and non-metallic raceways containing ITS circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.

The grounding electrode conductor shall be similar to the equipment grounding conductor in color-coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, listed pressure connectors, listed clamps or other approved listed means.

Basis of Payment. Payment shall be included in the various items associated with ITS.

CONCRETE FOUNDATION, TYPE A

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. (300 mm) at the threaded end. Four (4) 3/4" anchor bolts with 3" hook, embedded a minimum of 18 inches in the foundation with an exposed threaded projection height of 4" above the foundation shall be provided to accommodate a future pedestal base as shown on the Plans.

Foundations shall provide two (2) 2-inch raceways. Unused raceways shall be stubbed and capped for future use.

Incidental to the cost of each foundation, the Contractor shall construct a 5 inch PCC sidewalk of a rectangular area 3 feet by 4 feet immediately adjacent to the foundation as shown on the Plans.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

GATEWAY INTEGRATION

Description. This work shall consist of software modification to the Gateway Server Interface from the ATMS XML feed, and any modifications required to broadcast this information to the GATEWAY web page and media.

To distribute the detector data and sign legends to the media, traffic engineers and the GATEWAY web page, the ATMS data must be integrated into the GATEWAY. The integration software shall utilize the five-minute feeds from the ATMS and translate the data into a format compatible with the existing user interface and distribution processes. The data shall appear to all users in a format identical to existing stations. No operator intervention shall be required to incorporate the data into the GATEWAY.

CONSTRUCTION REQUIREMENTS

Gateway Provider Coordination: The Contractor shall contact and coordinate both the work required and timing of the integration with the Gateway Provider listed below.

John Dillenburg
University of Illinois at Chicago Department of Computer Science (312) 996-5598
dillenbu@uic.edu

This work shall be performed by Gateway Provider.

All software developed for this process shall become the property of the Illinois Department of Transportation.

Basis of Payment. Any charges by the Gateway Provider to integrate the proposed ATMS XML feed into the existing Gateway system will be paid for according to Article 109.05 once final acceptance has been granted as determined by the Engineer.

UNDERGROUND CONDUIT, MULTI-DUCT, 7-18MM MICRODUCTS

Description. This work shall consist of furnishing, installing, splicing, connecting and demonstrating continuity of a fiber optic conduit micro-duct system of the size specified herein and as shown on the Plans.

Materials. The conduit and fittings shall meet the requirements of Article 1088.01(c) of the Standard Specifications, except as modified herein. The conduit system shall consist of 7, 18 mm outside diameter (O.D.), 14 mm inside diameter (I.D.) micro-ducts contained inside an HDPE protective outer sheath with a minimum thickness of 0.07 in. The outer sheath for IDOT microduct shall be orange. The outer sheath for Third Party microduct shall be slate. The conduit system shall be designed for direct burial.

The overall conduit shall have a nominal 2.27 in. outside diameter with a supported bend radius of 31 in., an unsupported bend radius of 52 in., and a safe working pull strength of 3,500 lbs.

Conduit shall be free from holes, blisters, inclusions, cracks, or other imperfections that would affect the performance or serviceability of the product.

Conduit shall be constructed of polymeric materials, which are lightweight, flexible, corrosion resistant and nonconductive. The base material shall be clean virgin grade high-density polyethylene (HDPE), which conforms to ASTM D3350-98a, Type III, Category 5, Class B or C and Grade P- 34 per ASTM D1248-84 or equivalent.

The base HDPE material shall conform to the following minimum mechanical properties:

Description Property	ASTM Standard	Value
Density	D1505	0.940-0.950 g/cm ³
Melt Index (E)	D1238	0.10 - 0.35 g/10 Minutes
Environmental Stress Crack Resistance (ESCR)	D1693	192.0 hrs (per ASTM D3350)
Tensile @ Yield (min)	D638	2500 - 3200 psi (1,700 - 2,200 N/cm ²)
Elongation	D638	300%
Flexural Modulus (min)	D790	115,000 psi (790,000 kPa)
Hardness	D2240	60 Shore D
VICAT Softening Point	D1525	248°F (120°C)
Brittleness Temperature	D746	-94°F (-70°C)

Micro-ducts shall be smooth on the outside and ribbed on the inside. The inside shall have a co-extruded permanent layer of silicone to provide a permanent low friction boundary layer between the micro-duct and the fiber optic cable for the anticipated service life of the micro-duct.

Standard available micro-duct colors shall be blue, orange, green, brown, grey, white, and red, or other colors as approved. Micro-ducts shall be individually colored and be sequentially numbered every two feet. Colors shall be protected from ultra-violet (UV) degradation by the incorporation of Hindered Amine Light Stabilizers (HALS) to allow for two years of outside storage UV protection. The duct material shall be compounded with antioxidant additives to prevent thermal degradation.

All 18/14 mm micro-ducts shall have a minimum safe pull strength of 3,500 lbs., a minimum sustained air pressure of 300 PSI, and a minimum burst pressure of 475 PSI.

The micro-duct system shall be equipped with an integrated 20 AWG (minimum) copper wire, insulated and installed within the oversheath that is designed to be used for underground utility locating purposes. Continuity of the tracer wire must be maintained at all points. Submittal information shall demonstrate how the tracer wire continuity will be maintained throughout the micro-duct run. Connection devices used shall be as approved by the tracer wire manufacturer, except wire nuts of any type are not acceptable and shall not be used.

The Contractor shall perform a locate or conductivity test as a part of the final documentation.

Conduit shall be supplied on 3,500 ft reels (or larger as equipment and installation techniques permit) in order to minimize the number of conduit splices. Fittings shall be mechanical or glued splices that preserve the seamless surface on the inside of the conduit. Fittings shall be capable of developing a minimum of 75% of the rated tensile (pull) strength of the conduit.

CONSTRUCTION REQUIREMENTS

Installation. The micro-duct shall be installed according to Section 810 of the Standard Specifications, in accordance with manufacturer's specifications, and as specified herein.

Conduit shall be buried a minimum of 30 inches below final grade throughout its entire length. Conduit shall be installed in straight runs as much as possible with a minimum number of bends according to Section 816 of the Standard Specifications. Any bend in the conduit shall be limited to the bend radius specified herein.

Micro-duct shall be installed at a minimum depth of 42 inches approaching each communications vault in order to enter the vault from the open bottom. Micro-duct shall not be permitted to enter the side wall of the communications vault. A three foot (3') "tail" of micro-duct, along with a strain relief assembly shall be installed at each communications vault to prevent contraction of the micro-duct system.

The micro-duct system shall be sealed at all times during construction to eliminate the ingress of dirt and moisture. The Contractor shall utilize caps that are approved for use by the duct manufacturer. All micro-ducts shall be capped within communications vaults.

The Contractor shall perform post installation testing on all micro ducts prior to installing fiber optic cable. As a minimum, tests shall include: an air test, a foam sponge test, a plastic sphere test and a pressure test.

Each micro-duct shall be tested for continuity by blowing a sponge and then a plastic sphere (approximately 80% of the inside duct diameter) from one end to the other and each duct shall be pressure tested in accordance with the manufacturer's procedures to ensure that the duct will pressurize and hold air pressure for a specific amount of time.

The Contractor shall perform acceptance testing of the micro-ducts in accordance with the manufacturer's recommended practices. Testing, at a minimum shall demonstrate that the micro-ducts are installed and assembled correctly, are air-tight, and have had no reduction of the interior diameter. Each micro-duct shall be pressurized to check for leaks and other problems that would prevent the installation of fiber optic cable in the future. All testing shall be performed in the presence of the Resident Engineer. The Contractor shall submit testing results to the Department. The Contractor shall correct deficiencies to the satisfaction of the Engineer.

The Contractor shall submit testing information and procedures to the Department for review and approval included in the micro-duct submittal prior to ordering material.

A cable marking tape shall be installed above the conduit system according to Article 810 of the Standard Specifications. The color of the tape shall be red with large black lettering which reads "WARNING – FIBER OPTIC CABLE BELOW" or similar.

In addition to the GPS documentation requirements in the General Electrical Provisions, the Contractor shall locate the micro-duct every 100' feet using a GIS locating device that is accurate to the nearest foot .

The Contractor shall submit catalog cut sheets for the communications duct, micro-ducts, splice kits, and all installation and testing documents to the Department for review prior to ordering.

Method of Measurement. This work will be measured for payment in feet in place. Measurements will be made in straight lines along the centerline of the conduit between ends and changes in direction.

Vertical measurement of the duct shall be as follows: For runs terminating at junction boxes, the vertical measurement will be made from the bottom of the trench, or horizontal raceway, to a point 18 inches beyond the center of the junction box or control cabinet.

Basis of Payment. This work will be paid for at the contract unit price per foot for UNDERGROUND CONDUIT, MULTI-DUCT, 7-18MM MICRODUCTS.

ATMS INTEGRATION

Description. This item includes integrating all CHANGEABLE MESSAGE SIGN (SPECIAL) and XML data feed from the Smart Traffic Monitoring system as shown in the plans, into the IDOT District 1 Active Traffic Management System (ATMS). This item includes all software, hardware, miscellaneous devices, and cables necessary to provide the successful inclusion of the CHANGEABLE MESSAGE SIGN (SPECIAL) and Smart Traffic Monitoring System to reflect I-80 Data and control and monitor Portable Changeable Message Signs (PCMS), Smart Monitoring Device (SMD) data in the I-80 work zone. Provisions shall be made for IDOT District 1 to have override capabilities of the CHANGEABLE MESSAGE SIGN (SPECIAL) via District 1 Parsons iNET. This item shall provide the XML data feed to the Gateway (see Gateway Integration Special Provision).

The ATMS Integration will include locating the SMD data directly into the ATMS and include configuration of travel time messages for IDOT managed DMS and CHANGEABLE MESSAGE SIGN (SPECIAL) (not Smart Traffic Monitoring (STM) operated signs). They shall archive the SMD information and make that information available to ATMS maps, user interfaces, and the Gateway Traveler Information System.

The Department currently subscribes to HERE data source and this item shall provide for the VDS and travel time creation as described below.

Schedule. The ATMS integration shall be 100% operable prior to establishment of any mainline MOT. The ATMS integrated elements shall be in operation 24 hours a day and 7 days per week until through the end of the contract. The IDOT ATMS provider shall have 30 calendar days of advanced notice with a via test feed to support integration. Changes to the Smart Traffic Monitoring equipment locations shall be tested and also provided to the ATMS provider with approximately 7 days advanced notice by email and or phone correspondence.

ATMS Provider Coordination. The Contractor shall contact and coordinate with the current ATMS Provider listed below to perform all ATMS software and hardware modifications.

Parsons
c/o Project Manager
650 E Algonquin Rd, Suite 400
Schaumburg, IL 60173-3853
Phone: (847) 925-0120

This work shall be performed by the ATMS Provider.

The District 1 ATMS shall be upgraded and expanded to add all SMD Sensors, PCMS, and Travel Times via the XML data feed. The integration must be made to make this expansion a seamless transition, and function in an identical manner as the existing expressway surveillance and sign operation. Work under this item includes but is not limited to the following:

- (a) Create new Vehicle Detection Station (VDS) display, data table, description and control panel display, and travel timetables integrating HERE and XML data feeds.
- (b) Modify the existing graphic user interface, report generators, data bases, broadcast feeds (both subscriber and internal), and data tables for the CHANGEABLE MESSAGE SIGN (SPECIAL) control.
- (c) Display the new VDS data including travel times, speeds, and operational status of Here Data and XML data feed on the Traffic Systems Center ATMS maps, and all user interfaces.
- (d) Create new segments and groupings used to display travel time to the CHANGEABLE MESSAGE SIGN (SPECIAL) and Dynamic Message Signs.
- (e) Provide the Gateway (see Gateway Integration Special Provision) XML data feeds for presentation of the additional data to the Gateway web page and user interfaces.
- (f) SMD Sensor data, PCMS, and Travel Times data shall be archived in the ATMS.

- (g) Changes to SMD Sensors inventory and locations during the course of construction shall be communicated to the ATMS vendor by email or phone and updated in the XML feed.
- (h) Develop an integration acceptance test plan and conduct said test to verify that all CHANGEABLE MESSAGE SIGN (SPECIAL) XML data feed, and HERE data have been properly integrated according to the requirements. This acceptance plan shall conclude with a 30-day burn-in period. During the burn-in period, the subcontractor shall identify and resolve any problems identified with the integration.

Method of Measurement. This work will be measured for payment on a lump sum basis.

Basis of Payment. This item shall be paid for at the contract lump sum price for ATMS INTEGRATION, which price shall be payment in full for the work described. Acceptance shall be granted after integration of and passing an acceptance test proposed by the vendor and agreed upon by the Engineer.

FIBER OPTIC CABLE INNERDUCT

Effective: October 1, 2014

- 1. Description.
This item shall consist of furnishing, installing, splicing, connecting and demonstrating continuity of fiber optic cable innerduct of sizes specified herein and as shown on the contract drawings. The innerduct shall be High Density Polyethylene.
- 3. Materials.
 - 3.1 General:
The duct shall be a spiral ribbed plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The ribbed duct shall have internally designed longitudinal ribs for reduced pulling frictions and increased lubrication effectiveness

The duct shall be made of high-density polyethylene which shall meet the requirements of ASTM D 3035. The innerduct material shall be composed of high-density polyethylene meeting the requirements of PE334470E/C as defined in ASTM D3350.

Submittal information shall demonstrate compliance with the details of these requirements.

3.2 Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D3035, SDR-11. Submittal information shall demonstrate compliance with these requirements.

Nominal Size (Diameter)	Inside Diameter (minimum)	Outside Diameter (Average)	Wall Thickness (Min.)	Bend Radius (minimum)	Pull Strength	Weight Average (lbs/100ft.)
1"	1.030"	1.315"	0.120"	14"	500	19
1.25"	1.313"	1.660"	0.151"	17"	750	31
1.5"	1.506"	1.900"	0.173"	19"	1000	40
2"	1.885"	2.375"	0.216"	24"	1600	60

3.3 Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 10 feet with the material designation (HDPE for high density polyethylene), nominal size of the duct, and the name and/or trademark of the manufacturer.

3.4 Color:

Innerduct shall be colored as follows or as directed by the Engineer.

Usage Designation	Color
Fiber Optic Trunk Cable (Ducts containing cables of 96 fibers)	Orange
Fiber Optic Distribution Cable (Ducts containing cables of 12, 6 or 4 fibers and 96 fiber ducts designated as distribution fibers)	Blue

4. Installation.

4.1 Pulling Tension.

Pulling tension of the duct shall be monitored throughout the pull and pulling tension shall not exceed those listed in the table or the specific manufacturer maximum pulling tensions as indicated in the catalog cut submittals. Failure to monitor the pulling tension will result in non-payment of that particular duct span and the span may be reinstalled with new duct at no additional cost to the State. Lubricants used shall be compatible with the duct.

4.2 Junction boxes.

Where duct passes through junction and/or pull boxes, the duct shall remain continuous unless a break is specifically indicated in the plans or as directed by the Engineer.

4.3 Handholes and Communications Vaults.

Where duct passes through handholes or vaults, the duct shall be looped uncut within the handhole unless otherwise indicated on the Plans or directed by the Engineer.

Bends.

Minimum bending radius shall be in accordance with the above table or the manufacturer's recommended radius, whichever is larger. Bends shall be made so that the duct will not be damaged and the internal diameter of the duct will not be effectively reduced. The degrees of bend in one duct run shall not exceed 360° between termination points.

4.4 In Trench

Where duct is installed in trench, it shall be placed in the bottom of the trench after all loose stones have been removed and all protruding stones have been removed or covered with backfill material as directed by the Engineer.

Where duct is shown to be installed in trench, it shall be installed at a depth not less than 30 inches unless otherwise indicated or specifically directed by the Engineer.

The inner duct may be plowed into place. Unless otherwise indicated or specifically approved by the Engineer, plowing of inner duct shall lay the duct in place and shall not pull the duct through the length of the cut behind a bullet-nose mandrel or similar apparatus. In all cases, plowing operations shall be non-injurious to the duct.

4.5 In Raceway

Where duct is installed in raceways, lubricating compounds shall be used where necessary to assure smooth installation.

4.6 Encased in Concrete

Concrete shall be class SI complying with Section 720 of the Standard Specifications.

Steel Reinforcement Bars. Steel reinforcement bars shall comply with Section 706.10 of the Standard Specifications.

Underground concrete-encased conduit shall be supported on interlocking plastic spacers specifically designed for the purpose spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common duct bank shall be not less than 2 inches. The interlocking spacers shall be used at a minimum interval of 8 ft.

Concrete cover overall shall not be less than 3 inches all around the encased run. Space below the conduit, and concrete fill shall be assured. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. Concrete shall be deflected during placement to minimize the possible damage to or movement of the conduits.

Conduit encased in concrete shall have steel reinforcing where installed below roadway or other paved vehicle areas (including shoulder) and the reinforcement shall extend not less than 5 feet additional from the edge of pavement unless otherwise indicated. Steel reinforcement shall not be less than No. 4 bars at corners and otherwise spaced on 12-inch centers, tied with No. 4 bars on 12-inch centers.

The Engineer shall examine all conduit joints for compliance with section 5 of this specification before concrete is poured.

4.7 Embedded

Conduit embedded in structure shall be supported on interlocking plastic spacers specifically designed for the purpose spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common structure shall be not less than 2 inches. The interlocking spacers shall be used at a minimum interval of 8 ft.

Concrete cover overall shall not be less than 3 inches all around the embedded run. Space below the conduit, and concrete fill shall be assured. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. Concrete shall be deflected during placement to minimize the possible damage to or movement of the conduits.

The Engineer shall examine all conduit joints for compliance with section 5 of this specification before concrete is poured.

5. Joints

5.1 All HDPE duct to HDPE duct joints shall be made with an approved duct fusion splicing device.

- 5.2 HDPE coilable non-metallic conduit to non-HDPE coilable non-metallic conduit joints shall be either made with an approved mechanical connector or with a chemical compound. Both methods must be specifically designed for joining HDPE coilable non-metallic conduit. Minimum pullout force for the chemical compound shall be as listed in the following table.

Nominal Size		Pullout Force	
mm	in	N	Lbs
31.75	1.25	2400	540
38.1	1.50	2535	570
50.8	2.0	3335	750
63.5	2.5	4445	1,000
76.2	3.0	6225	1,400
101.6	4.0	8890	2,000

6. Measurement.

The duct shall be measured for payment in linear feet in place as described herein. Measurements shall be made in straight lines between horizontal changes in direction between the centers of the terminating points (poles, cabinets, junction boxes). Vertical measurement of the duct shall be as follows:

For runs terminating at junction boxes and/or control cabinets, the vertical measurement shall be taken from the bottom of the trench, or horizontal raceway, to a point 18-inches beyond the center of the junction box or control cabinet.

For runs terminating at poles, the vertical measure shall be taken from the bottom of the trench, or horizontal raceway, to a point 18-inch beyond the center of the light pole handhole regardless of light pole mounting method

Innerduct installed in excess of the limits describes herein shall not be paid for.

7. Basis of Payment.

This item will be paid for at the contract unit price per foot installed for **INNERDUCT**, of the size of duct as indicated, which shall be payment in full for all material and work as specified herein.

FIBER INTERCONNECT CABINET

Description. This work shall consist of furnishing and installing an outside plant fiber optic interconnect cabinet and constructing a concrete foundation to support the fiber optic interconnect cabinet along with an associated work pad. This work shall include installing any necessary hardware (entering conduits, bolts, anchor rods, mounting frame, grounding etc.).

Materials. The cabinet shall have sufficient space and mounting appurtenances to store a total of six 144-fiber cable splices. The splice enclosures used for determining the size shall be full size closures, i.e., not a "mini" variant. The cabinet shall be similar to a Multilink 4 Bay OTN cabinet. The minimum dimensions of the cabinet shall be 78"W x 36"D x 62"H, however, the cabinet may need to be larger to accommodate the number of splice enclosures specified.

Enclosure Requirements:

- (a) Main Body: 1/8" Aluminum 5052-H32
- (b) Hardware: Type 304 Stainless Steel
- (c) Finish: Polyester Powder Coated
- (d) Racks: 3/16" Aluminum, E.I.A. / T.I.A. spacing (10-32 threads)
- (e) Doors: Minimum of 4 with 3 point latches, latch control switch, piano hinge, wind stop, and pad-lockable
- (f) Main Cabinet:
 - (1) Two (2) 19" - 23" adjustable width racks, also adjustable front to rear position (43" tall)
 - (2) Two (2) 19" - 23" adjustable width racks, swing out for ease of rear equipment access (40" tall)
 - (3) Minimum of 166" of total inches of rack space (95 RU)
 - (4) Four (4) 15-watt shatter-shield light fixtures
 - (5) Ventilation/exhaust fan(s) sized for the enclosure
 - (6) 500-watt heater
- (g) Cable Entrance Compartment:
 - (1) Four (4) slack storage brackets with heavy duty Velcro straps to secure cables
 - (2) Two (2) entry holes for bringing cables into the main cabinet

The lock shall be Corbin #2 and two keys shall be supplied to the Department with each lock. The keys shall be removable in the locked position only.

A data pocket of high impact thermoplastic material shall be provided. The nominal dimensions of this pocket shall be 12 inches by 12 inches.

Collar studs shall be provided for mounting the stainless steel backboard panel.

Concrete foundations shall be according to materials defined in Article 836.02 of the Standard Specifications. All anchor bolts (if required) shall be in accordance with Section 1006.09 except that all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including hooks.

The concrete foundations shall also be fabricated in accordance with Section 1070 of the Standard Specifications. The concrete foundations shall be fabricated from material new and unused in any previous application. The manufacturer shall provide a Certificate of Compliance that the materials are new and meet the specified requirements in accordance with the Standard Specifications and as shown on the Plans.

CONSTRUCTION REQUIREMENTS

Installation. The cabinet shall be installed on a concrete foundation as a part of this item. The Contractor shall confirm the orientation of the cabinet with the Engineer, prior to installing the foundation. A reinforced Portland cement concrete foundation shall be constructed in accordance with the cabinet manufacturer's instructions and shall be a minimum of 36" deep. The top of the foundation shall extend a minimum of 12-inches above grade.

Two 4-inch diameter galvanized steel conduit stub out with large radius sweeps shall be provided on each side of the cabinet foundation for a total of eight.

The cabinet shall be set plumb and level on the foundation. Shimming of the appurtenance to be attached will not be permitted. The cabinet shall be fastened to the anchor rods with hot-dipped galvanized or stainless steel nuts and washers. Foundation mounted lighting controllers shall be caulked at the base with silicone.

All conduit entries shall be sealed with a rodent and dust/moisture barrier.

Work Pad. A poured, 5-inch thick concrete pad, extending not less than 48 in. from the foundation edge shall be provided on all four sides of the cabinet.

Method of Measurement. This work will be measured for payment in units of each.

Basis of Payment. This work will be paid for at the contract unit price for FIBER OPTIC INTERCONNECT CABINET.

PORTABLE VIDEO TOWER STATIONS

Description. This work shall consist of furnishing, installing, integrating, maintaining, relocating, and removing a system of video surveillance stations as well as providing web-based viewing and control for each individual station for incident management and traffic operation.

The purpose of the system is to provide real-time, full motion video surveillance of traffic operations at various locations along the project route via the internet to multiple IDOT facilities.

Equipment. The video surveillance equipment shall consist of trailer-mounted mobile video camera systems. The system shall be easily transported and set up quickly by one individual.

Cameras shall consist of full pan-tilt-zoom cameras capable of transmitting a minimum of 20 frames per second. Camera stations shall be capable of 360 degree panning, 90 degree tilt, and a minimum of 25x zoom. For video monitoring, each camera shall be capable of auto-switching between user-defined preset positions as well as full manual control. At least half of all stations shall include infrared video capability for use in unlit regions of the contract.

This Contract shall have a total of twelve (12) individual trailered video stations or as directed by the Engineer to ensure full camera coverage of the corridor including the Smart Traffic Monitoring queue area. All stations shall be capable of raising the camera(s) to a height of 40'. The stations shall also include infrared cameras for use in unlit sections of the highway. Each station shall be designed to be stable during normal winds (up to 50 MPH) keeping camera wobble to a minimum.

Each station shall have battery power with solar charging for continuous operation.

Communications. Each station shall have the necessary communication equipment required for transmitting and receiving Information via the Internet. Data upload/download requirements with the service provider shall be sufficient to ensure the 20 frames per second continuous transmission. The vendor shall provide an unlimited data plan to support the portable video trailer stations.

General. The Station shall be 100% operable prior to the implementation of MOT Stage. The MOT Stage shall not be implemented prior to the Station being in place and operable.

The Station shall be operation 24 hours a day and 7 days per week during the duration of each stage.

Video shall be accessible via the internet. No additional software shall be needed to access the website for viewing or controlling cameras. Secure logins shall be capable for full viewing and control as well as view-only.

Still Picture Capture. The station shall be capable of capturing a still image in JPEG format and automatically transferring this image to an FTP site. The resolution of the image shall be user selectable with a default size of 704X480 pixels. The frequency of captures shall be user settable and shall as a minimum range from 1 picture every 120 seconds to 1 picture every five minutes. As a part of the still image capture, a graphic overlay image shall be added to the captured image. The graphic image shall be user selectable, in JPEG, or GIF formats. The overlay shall also be user positional. The image will be provided by the Department.

Trailers shall be located as directed by the Engineer. Positioning should be to maximize the field of view and coverage along the project corridor. Once installed and operational, the Contractor shall provide the latitude and longitude of each device to the Engineer unless the stations self-transmit GPS locations. Relocation of the stations should be minimized; however it may be necessary based upon traffic characteristics or operational issues. Additionally, if and when a unit is relocated, the coordinates must also be updated. It shall be the Contractor's responsibility to notify the Engineer if the location of a Portable Video Tower Station will interfere with the Contractor's operations. If required, the Contractor shall relocate the Portable Video Tower Station as directed by the Engineer at the Contractor's expense. The Contractor may have to temporarily widen embankments with sandbags or other temporary material to properly install the Station on a level surface. The costs associated with temporarily widening embankments and restoring the embankment upon completion shall be according to Section 109.05 of the Standard Specifications.

The contractor may be required to periodically clean the protective clear shroud surrounding the camera to ensure visibility and proper operation which is included in the cost of the item.

Integration. IDOT District One Video Distribution System (VDS) Control System Driver - The portable CCTV camera and video output shall be controlled and configured through the VDS. Consequently, a software driver for the VDS is required and included as a part of the CCTV camera.

The VDS control system is Cameleon ITS manufactured by 360 Surveillance, a division of FLIR. It is the Contractor's responsibility to determine if an existing software driver exists for the proposed camera manufacturer. If a driver does not exist for the proposed CCTV camera, the work and cost of developing the driver shall be included in this item. Additionally, all cameras shall be provided with licenses to operate on the Department's primary and secondary servers. Contractor shall coordinate the integration of cameras and licenses into the IDOT District One VDS.

Contractor shall develop an acceptance plan and conduct said test to verify that all portable CCTV devices have been properly integrated according to the requirement. The acceptance plan shall conclude with a 30-day burn-in period. During the burn-in period, the vendor shall identify and resolve any problems identified with the integration or operation of the device.

CONSTRUCTION REQUIREMENTS

Method of Measurement. Portable Video Tower Stations will be measured on a calendar month basis for the entire system.

One calendar month is defined as thirty-one (31) calendar days where the system is fully functional. In the event that all or a portion of the system is not fully functional, a fraction of the full month's payment will be deducted as follows, whereas:

- X equals the number of stations not functioning
- N equals the total stations in the contract
- D equals the number of 6-hour periods where a station does not work

Work Deduction = $(X/N) \times (D/4) \times (1/31)$

Deductions will begin when the entire system or portion thereof is not functional for over 2 hours and will be rounded up to the nearest 6 hours. Fully functional shall mean that full video is being transmitted and received on a remote computer via the internet, images are not obscured due to lack of maintenance or cleaning, and stations maintain pan-tilt-zoom control via the Internet. Internet service failures not due to the Contractor or their pay item will not be included for deduction.

Basis of Payment. PORTABLE VIDEO TOWER STATIONS shall be paid at the contract unit price per calendar month or fraction thereof for the entire system.

CONCRETE FOUNDATION, SURVEILLANCE CABINET MODEL 334

Description. This work shall consist of constructing a concrete foundation to support ITS equipment cabinets at locations as shown in the Plans. This work shall include installing any necessary hardware (entering conduits, bolts, anchor rods, grounding, etc.) as shown in the Plans.

Materials. Concrete foundations shall be according to materials defined in Article 836.02 of the Standard Specifications. All anchor bolts shall be in accordance with Section 1006.09 except that all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including hooks. Anchor bolts shall provide bolt spacing as shown in the Plans.

The concrete foundations shall also be fabricated in accordance with Section 1070 of the Standard Specifications. The concrete foundations shall be fabricated from material new and unused in any previous application. The manufacturer shall provide a Certificate of Compliance that the materials are new and meet the specified requirements in accordance with the Standard Specifications and as shown on the Plans.

CONSTRUCTION REQUIREMENTS

The Engineer will determine the final placement of the concrete foundations. Concrete foundation dimensions shall be in accordance with those dimensions shown in the Plans on the detail sheet "ITS Infrastructure Details Concrete Foundation, Surveillance Cabinet Model 334". The foundation shall be located as required in order to avoid existing and relocated utilities. The top of the foundation shall be finished level. Shimming of the appurtenance to be attached will not be permitted.

Prior to pouring the foundation, the Contractor shall check the Plans for the specific number, size, and direction of conduit entrances required at the given location. All conduit in the foundation shall be installed rigidly in place before concrete is deposited in the form. Bushings shall be provided at the ends of the conduit. Anchor rods and ground rods shall be set in place before the concrete is deposited by means of a template constructed to space the anchor roads according to the pattern of the bolt holes in the base of the future appurtenance to be attached. The concrete shall cure according to Article 1020.13 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in place for units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for CONCRETE FOUNDATION, SURVEILLANCE CABINET MODEL 334.

CHANGEABLE MESSAGE SIGN (SPECIAL)

Description. This work shall consist of furnishing, installation, communications, maintenance, and removal of Changeable Message Signs, Special as directed by the Engineer, in accordance with 701 of the Standard Specifications, and as herein specified.

Changeable Message Signs, Special to be installed under this item are those to be used and controlled in conjunction with the IDOT District One ATMS.

Materials. This Contract shall have a total of one (1) Changeable Message Sign (SPECIAL). The sign shall be in accordance with Section 701 of the Standard Specifications and meet the following requirements:

- (a) The message panels shall be trailer mounted and be crashworthy as defined by NCHRP 350 or MASH, easy to carry and deploy, and lightweight so that it can be positioned by any one member of a construction crew with no special skill requirements or lifting machinery.
- (b) The message panel shall be Light Emitting Diode (LED) Full matrix design capable of displaying multiple fonts, lines of text, and graphics.
- (c) The message panel shall NTCIP 1203 V3 compliant and compatible with the IDOT ATMS and Flir 360 Cameleon systems.

- (d) The message panel shall be capable of displaying 3 lines of text, 9 characters per line, and 18-inch characters.
- (e) The message panel shall utilize 4G LTE or 5G cellular modems for communications and cellular services to be provided by the Contractor for the duration of the project. Contractor shall verify location is compatible with proposed cellular provider prior to deployment. Contractor shall adjust communications provider based on availability of service from the field location prior to deployment.
- (f) Software to be utilized shall be fully integrated and compatible with operations of the IDOT ATMS Traffic Management System as specified elsewhere in these special provisions.
- (g) The message panel shall automatically restart in case of a communications or power failure.

CONSTRUCTION REQUIREMENTS

The approximate location of Changeable Message Sign (SPECIAL) for the various construction phases shall be located at or near the permanently removed, over the road, DMS signs or as directed by the Engineer.

It shall be the Contractor's responsibility to notify the Engineer if the location of the Changeable Message Sign (SPECIAL) will interfere with the Contractor's operations. If required, the Contractor shall relocate the Changeable Message Sign (SPECIAL) as directed by the Engineer at the Contractor's expense. The Contractor may have to temporarily widen embankments with sandbags or other temporary material to properly install the trailer on a level surface. The costs associated with temporarily widening embankments and restoring the embankment upon completion shall be according to Section 109.05 of the Standard Specifications.

Changeable Message Sign (SPECIAL) Failure. To ensure a prompt response to incidents involving the integrity of the Changeable Message Signs, the Contractor shall be required to make all necessary corrections and/or repair to the system components within 24 hours of notification by the Engineer. If all corrections are made within the 24-hour period and the system is brought back on-line, no penalty will occur. After 24 hours, a monetary penalty shall be assessed to the Contractor. The penalty shall be \$2,000 for each hour or portion thereof until the System is functioning properly.

Method of Measurement. This work will be measured for payment on a calendar month basis for each sign.

Basis of Payment. This work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN (SPECIAL) as herein specified.

REMOVE EXISTING TRAFFIC SURVEILLANCE EQUIPMENT

Description. This work shall consist of removing and salvaging or disposing of various traffic surveillance equipment, as specified herein and as shown in the plans.

General Requirements. No removal work will be permitted without approval from the Engineer. Removal shall not be allowed to start until after the Smart Work Zone is installed, integrated, and placed into approved operation by the Department.

Traffic surveillance equipment shall be removed in accordance with the following requirements and/or Articles of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.

(a) Automatic Traffic Recorder (ATR) Site.

- (1) Cellular Modem (Salvage). The cellular modem shall be disconnected and removed from the ATR Equipment cabinet for salvage.
- (2) ATR Equipment Cabinet (Salvage). The ATR equipment cabinet shall be removed from the site for salvage.
- (3) ATR Equipment Cabinet Foundation. The ATR equipment cabinet foundation shall be removed in accordance with Article 895.05(c).
- (4) Solar Panels (Salvage). The solar panels and associated brackets/mounting hardware shall be disconnected and removed from the wood pole for salvage.
- (5) Wood Pole (No Salvage). The wood pole shall be removed from the site.
- (6) Conduits. Existing underground conduits associated with the ATR site shall be abandoned in place.
- (7) Cables (No Salvage). Cables between the ATR equipment cabinet and solar panels shall be removed in accordance with Article 895.05(d).
- (8) Inductive loops. Inductive loops and associated wire shall be abandoned in place.

(b) Bluetooth Detection Site.

- (1) Bluetooth detector and solar panel (Salvage). The Bluetooth detector, solar panel, and associated cable shall be disconnected and removed from the ITS pole for salvage. Upon removal from the ITS pole, the Contractor shall access the Bluetooth detector cabinet and disconnect cables from the battery.
- (2) Detector Pole and Breakaway Base (Salvage). The detector pole shall be removed in accordance with Article 842.03(b).

(c) Closed Circuit Television (CCTV) Camera Site.

- (1) CCTV Camera Assembly (Salvage). The CCTV camera shall be disconnected and removed from the ITS pole for salvage. Associated power supply and/or surge protection devices shall be disconnected and removed from the CCTV equipment cabinet for salvage.
 - (2) CCTV Camera Cables (Salvage). Cables routing between the CCTV camera and pole-mounted CCTV equipment cabinet shall be disconnected and removed for salvage.
 - (3) CCTV Equipment Cabinet (No Salvage). After removal of the camera power supply and/or surge protection devices, the CCTV equipment cabinet shall be removed from the CCTV camera pole structure.
 - (4) CCTV Camera Pole Structure (Salvage). The CCTV camera pole structure shall be removed in accordance with Article 842.03(b).
 - (5) Conduits. Existing underground conduits associated with the CCTV camera site as shown on the plans shall be abandoned in place.
 - (6) Cables (No Salvage). Existing power and fiber lateral cables between the CCTV camera pole structure and the nearest access point as shown on the plans (e.g., handhole, DMS cabinet, etc.) shall be removed in accordance with Article 895.05(d).
- (d) Dynamic Message Sign (DMS) Site. It shall be the Contractor's responsibility to contact the IDOT District One Electrical Maintenance Contract (EMC) Engineer a minimum of 7 working days prior to the DMS removal. The Contractor shall coordinate the work fully with the EMC Engineer both as to the work required and the timing of the removal of the DMS. No additional compensation will be granted under this or any other item for extra work caused by failure to comply with this requirement.

Power to the controller cabinet and sign shall be disconnected to the satisfaction of the Engineer and the EMC Engineer prior to any work on the DMS removal.

- (1) Dynamic Message Sign Housing (Salvage). The Contractor shall provide the Engineer with a DMS Removal Plan specific to each DMS location. This plan shall be approved by the Engineer at least two weeks prior to the removal of the DMS. The Contractor shall retain the services of an Illinois Licensed Structural Engineer, experienced in the analysis and preparation of demolition plans, for the completion of the site-specific DMS Removal Plan. Shop drawings of the existing DMS/DMS signs structure will be made available to the Contractor upon request. The DMS Removal Plan shall be complete in detail for all phases, stages, and conditions anticipated during the removal. The DMS Removal Plan shall include structural calculations, drawings, and supporting documentation necessary to completely describe and document the means, methods, temporary support positions, and loads necessary to safely remove the DMS, including:
- a. Falsework, struts, bracing, tie cables and other devices, material properties and specifications for temporary works, requirements prior to releasing the DMS from the cranes (if required), connection details and attachments to other structure components or objects.
 - b. Procedure and sequence of operations, including a schedule with completion times for work items that comply with the working hour limitations.
 - c. Minimum load chart lift capacity, outrigger size and reactions for each crane.
 - d. Locations of cranes and outriggers relative to other structures, including retaining walls, wingwalls and utilities.
 - e. Calculated loads and lifting weights, lift points, lifting devices, spreaders, and angle of lifting cables.
 - f. Stresses at critical points along the DMS length during progressive stages of removal shall be evaluated to assure that the structural integrity and stability is maintained at all times. Stresses at lift points induced as a result of lifting shall be evaluated and if required, adequate bracing provided as indicated by the analysis.
 - g. Stability and structural adequacy of the structure during all sequence of work.
 - h. Drawings, notes, catalog data showing the manufacturer's recommendations or performance test, and calculations clearly showing the above listed details, assumptions, and dimensions.

- i. Contingency plans detailing what measures the Contractor will take in case of inclement weather (forecast or actual), equipment failure, delivery interruption, and slower than planned production.

The DMS Removal Plan and procedures shall be submitted to the Engineer for review and acceptance prior to starting the work. Review and acceptance by the Engineer shall not be construed to guarantee the safety and acceptability of the work. Any changes to the removal plan must be reviewed and accepted by the Engineer before implementation.

A Pre-Removal meeting shall be held at least one week prior to the commencement of the work. The Engineer, Contractor, removal subcontractor (if applicable) and Contractor's Engineer shall attend the meeting. The intent of the meeting is to develop a mutual understanding of the proposed implementation of the Contractor's DMS Removal Plan. Revisions or adjustments to the plan, and potential revisions or adjustments to the implementation of the DMS Removal Plan shall be discussed. Additional Pre-Removal meetings may be required for subsequent phases of construction, or for phases that differ from the original construction plan, as directed by the Engineer. Additional meetings may also be requested by the Contractor and approved by the Engineer.

- (2) Overhead Sign Structure and Foundations – The overhead sign structure and sign structure foundation removals will be paid for separately.
- (3) Transformer and Disconnect Switch (Salvage) – The transformer and disconnect switch shall be disconnected and removed from the overhead sign structure for salvage.
- (4) Dynamic Message Sign Controller Cabinet (Salvage) – The Contractor shall remove the DMS controller cabinet and all equipment contained within for salvage.
- (5) Controller Cabinet Foundation (No Salvage) – The controller cabinet foundation shall be removed in accordance with Article 895.05(c).
- (6) Conduits – Existing underground conduits associated with the DMS site as shown on the plans shall be abandoned in place.
- (7) Cables (No Salvage) – Existing power and fiber lateral cables to the DMS sign and to the DMS controller cabinet as shown on the plans shall be removed in accordance with Article 895.05(d).

Removal of Traffic Surveillance Equipment, No Salvage. When indicated, traffic surveillance equipment and associated hardware and appurtenances shall become the property of the Contractor and shall be disposed of according to Article 202.03.

Removal of Traffic Surveillance Equipment, Salvage. When indicated, traffic surveillance equipment and associated hardware and appurtenances shall remain the property of the Department and shall be delivered to a Department facility within District One, as directed by the Engineer.

Prior to any work being performed by the Contractor, the Contractor shall, in the presence of the Engineer and the EMC Engineer, conduct an inspection of the equipment to be salvaged, making note of any parts which are found broken, missing, defective, or malfunctioning. The EMC Engineer will test the equipment as deemed necessary by the Engineer. Any problems noted will be resolved as directed by the Engineer and the EMC Engineer.

The Contractor shall assume full responsibility for the equipment during removal, transportation, and shipping/transfer to the Department facility. Traffic surveillance equipment shall be removed, boxed in new containers (exception: DMS Housing and DMS Control Cabinet), approved by the Engineer, and delivered to the Department facility. The contractor is responsible for all packaging, transportation, and delivery.

The Contractor shall handle the equipment in such a manner as to prevent damage. Any damage resulting from the removal and/or transportation/shipping of the traffic surveillance equipment to be salvaged shall be repaired or replaced in kind at the Contractor's expense. The Engineer will be the sole judge to determine the extent of damage and the suitability of repair and/or replacement.

Method of Measurement. This work will be measured on a lump sum basis.

Basis of Payment. This work will be paid for at the contract lump sum price for REMOVE EXISTING TRAFFIC SURVEILLANCE EQUIPMENT.

REMOVE FIBER OPTIC CABLE FROM CONDUIT

Description. This work shall consist of removing existing fiber optic cable from conduit and removing associated fiber optic cable marker posts along the existing fiber optic cable route.

General Requirements. No removal work will be permitted without approval from the Engineer. Removal shall not be allowed to start until after the Smart Traffic Monitoring System, changeable message sign(s), and portable video tower station(s) are installed, integrated, and placed into approved operation by the Department.

CONSTRUCTION REQUIREMENTS

The fiber optic cable shall be disconnected from any splice cases and/or the communications end equipment and fiber enclosures prior to removal. Fiber optic cable shall be removed from conduits, handholes and junction boxes as shown on the Plans, and as directed by the Engineer. Fiber optic cable marker posts shall be removed along the existing fiber optic cable route. All cables and marker posts removed as part of this item shall become the property of the Contractor and shall be disposed of according to Article 202.03.

Method of Measurement. This work will be measured for payment in place in feet. If two or more cables in a conduit are to be removed, each cable will be measured for payment separately.

Basis of Payment. This work will be paid for at the contract unit price per foot for REMOVE FIBER OPTIC CABLE FROM CONDUIT.

COMMUNICATIONS VAULT

Description. This work shall consist of constructing a composite concrete handhole and cover, and a cable marker locate post in accordance with the details shown on the plans and as specified herein.

Materials. The composite concrete handhole and two-piece vault lid shall be constructed of polymer concrete material, and shall be gray in color. The composite concrete handhole shall be 36 inches x 60 inches and shall have an effective depth of 36 inches. The composite concrete handhole shall have an open bottom.

The composite concrete handhole and cover shall have a design/test loading of 22,500/33,750 pounds, respectively. The composite concrete handhole lid shall have two 1/2-in x 4-in pull slots. The lid surface shall have a coefficient of friction of 0.50 in accordance with ASTM C-1028.

The cover of IDOT communications vaults, as shown on the plans, shall have a permanently recessed logo that reads "IDOT", or as otherwise designated by the Engineer. The cover of Third Party communications vaults, as shown on the plans, shall have no logo.

The Contractor shall install manufacturer-approved gasketing between the lid and the handhole to prevent water from entering the composite concrete handhole.

The composite concrete handhole lid shall be secured to the vault with two 3/8-inch NC stainless steel penta-head bolts and washers to lock the lid. In addition, a "lock tool" shall be provided for composite concrete handhole entry.

A fiber optic cable support assembly shall be recommended by the manufacturer and approved by the Engineer for fiber optic cable and splice enclosures used in the vault. Each support assembly shall consist of multiple brackets, racks, and/or rails required to suspend the required surplus cabling and any splice enclosures required.

The support assembly shall be made from or coated with weather resistant material such that there is no corrosion of the supports. The support assemblies shall be anchored to the vault using stainless steel hardware.

The fiber optic cable support assemblies shall be included in the Contract unit price for the composite concrete handhole.

The cable marker locate post shall be made of non-conductive high-density polymer. The locate post for IDOT communications vaults shall be white in color with an orange cap with black graphic and lettering on two sides. The locate post for Third Party communications vaults shall be orange in color with an orange cap with black graphic and lettering on two sides. Lettering on the IDOT and Third Party markers shall be as directed by the Engineer in coordination with IDOT District 1 and the IDOT Office of Planning and Programming. All colors shall be stabilized against ultraviolet light such that they will not fade under continuous exposure to direct sunlight. The marker shall retain dimensional stability in temperatures ranging between -40°F and 175°F. Each post shall be able to withstand a single vehicle impact at 45 MPH and return to within 10 degrees of vertical within 60 seconds. The Locate post will have a removeable top exposing seven (7) ½ inch stainless steel bolt lugs with locking washer and nut.

CONSTRUCTION REQUIREMENTS

Composite concrete handholes shall be installed in accordance with applicable requirements of Section 800 of the Standard Specifications and as provided herein.

Conduits shall enter the open bottom of the composite concrete handhole. The side walls of the handhole shall not be punched, drilled, or altered in any way for conduit entry.

The composite concrete handhole shall be placed on 18 inches of coarse aggregate, CA-5 or CA 7 Class A, as specified in Section 1004 of the Standard Specifications.

Incidental to the installation of each communications vault, a cable marker sign locate post shall be installed. One cable marker sign locate post shall be installed next to every communications vault. A #6 (green) ground wire shall be connected to the top lug in the locate post through the connecting conduit to the communication vault and connected to the ground rod. The tracer wire from each micro-duct conduit entering the communications vault shall be connected to the top lug in the locate post.

Method of Measurement. This work will be measured for payment in place for units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for COMMUNICATIONS VAULT.

FIBER OPTIC UTILITY MARKER

Description. This work shall consist of installing a fiber optic utility marker post.

Materials. Fiber optic utility marker posts shall be made of non-conductive high-density polymer. IDOT marker posts shall be white in color with an orange cap with black graphic and lettering on two sides. Third Party markers shall be integrally orange in color with an orange cap with black graphic and lettering on two sides. Lettering on the IDOT and Third Party markers shall be as directed by the Engineer in coordination with IDOT District 1 and the IDOT Office of Planning and Programming. All colors shall be stabilized against ultraviolet light such that they will not fade under continuous exposure to direct sunlight. The marker shall retain dimensional stability in temperatures ranging between -40°F and 175°F. Each post shall be able to withstand a single vehicle impact at 45 MPH and return to within 10 degrees of vertical within 60 seconds.

CONSTRUCTION REQUIREMENTS

Installation. Fiber optic utility marker posts shall be installed along the path of microduct conduit installation between communications vaults at a maximum spacing of 500 feet and changes in direction. For sections where IDOT and Third Party microduct conduit are installed in a common trench, separate fiber optic utility marker posts shall be installed, one for IDOT and one for Third Party.

Method of Measurement. This work will be measured for payment in units of each.

Basis of Payment. This work will be paid for at the contract unit price of each for FIBER OPTIC UTILITY MARKER.

HANDHOLE, COMPOSITE CONCRETE

Description. This work shall consist of furnishing the materials and installing a precast composite concrete handhole in accordance with Sections 814 and 1088.05 of the Standard Specifications for Road and Bridge Construction and the following additions or exceptions.

Materials. The frame and cover shall be constructed of a polymer concrete and reinforced with a heavy-weave fiberglass cloth. The nominal dimensions of the handhole shall be a minimum 17”(W) x 30”(L) x 36”(D). Handholes shall meet the structural requirements of Section 7 of ANSI/SCTE 77 for Tier 22 loading.

The cover shall contain the legend “IDOT OPP” and shall be held down by two stainless steel hex head bolts. The cover shall contain 2 recessed lift pins.

Method of Measurement. This work will be measured for payment in place for units of each.

Basis of Payment. This work will be paid for at the contract unit price each for HANDHOLE, COMPOSITE CONCRETE.

FIBER OPTIC CABLE INNERDUCT

Effective: October 1, 2014

1. Description.
This item shall consist of furnishing, installing, splicing, connecting and demonstrating continuity of fiber optic cable innerduct of sizes specified herein and as shown on the contract drawings. The innerduct shall be High Density Polyethylene.

3. Materials.

3.1 General:

The duct shall be a spiral ribbed plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The ribbed duct shall have internally designed longitudinal ribs for reduced pulling frictions and increased lubrication effectiveness

The duct shall be made of high-density polyethylene which shall meet the requirements of ASTM D 3035. The innerduct material shall be composed of high-density polyethylene meeting the requirements of PE334470E/C as defined in ASTM D3350.

Submittal information shall demonstrate compliance with the details of these requirements.

3.2 Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D3035, SDR-11. Submittal information shall demonstrate compliance with these requirements.

Nominal Size (Diameter)	Inside Diameter (minimum)	Outside Diameter (Average)	Wall Thickness (Min.)	Bend Radius (minimum)	Pull Strength	Weight Average (lbs/100ft.)
1"	1.030"	1.315"	0.120"	14"	500	19
1.25"	1.313"	1.660"	0.151"	17"	750	31
1.5"	1.506"	1.900"	0.173"	19"	1000	40
2"	1.885"	2.375"	0.216"	24"	1600	60

3.3 Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 10 feet with the material designation (HDPE for high density polyethylene), nominal size of the duct, and the name and/or trademark of the manufacturer.

3.4 Color:

Innerduct shall be colored as follows or as directed by the Engineer.

Usage Designation	Color
Fiber Optic Trunk Cable (Ducts containing cables of 96 fibers)	Orange
Fiber Optic Distribution Cable (Ducts containing cables of 12, 6 or 4 fibers and 96 fiber ducts designated as distribution fibers)	Blue

4. Installation.

4.1 Pulling Tension.

Pulling tension of the duct shall be monitored throughout the pull and pulling tension shall not exceed those listed in the table or the specific manufacturer maximum pulling tensions as indicated in the catalog cut submittals. Failure to monitor the pulling tension will result in non-payment of that particular duct span and the span may be reinstalled with new duct at no additional cost to the State. Lubricants used shall be compatible with the duct.

4.2 Junction boxes.

Where duct passes through junction and/or pull boxes, the duct shall remain continuous unless a break is specifically indicated in the plans or as directed by the Engineer.

4.3 Handholes and Communications Vaults.

Where duct passes through handholes or vaults, the duct shall be looped uncut within the handhole unless otherwise indicated on the Plans or directed by the Engineer.

Bends.

Minimum bending radius shall be in accordance with the above table or the manufacturer's recommended radius, whichever is larger. Bends shall be made so that the duct will not be damaged and the internal diameter of the duct will not be effectively reduced. The degrees of bend in one duct run shall not exceed 360° between termination points.

4.4 In Trench

Where duct is installed in trench, it shall be placed in the bottom of the trench after all loose stones have been removed and all protruding stones have been removed or covered with backfill material as directed by the Engineer.

Where duct is shown to be installed in trench, it shall be installed at a depth not less than 30 inches unless otherwise indicated or specifically directed by the Engineer.

The inner duct may be plowed into place. Unless otherwise indicated or specifically approved by the Engineer, plowing of inner duct shall lay the duct in place and shall not pull the duct through the length of the cut behind a bullet-nose mandrel or similar apparatus. In all cases, plowing operations shall be non-injurious to the duct.

4.5 In Raceway

Where duct is installed in raceways, lubricating compounds shall be used where necessary to assure smooth installation.

4.6 Encased in Concrete

Concrete shall be class SI complying with Section 720 of the Standard Specifications.

Steel Reinforcement Bars. Steel reinforcement bars shall comply with Section 706.10 of the Standard Specifications.

Underground concrete-encased conduit shall be supported on interlocking plastic spacers specifically designed for the purpose spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common duct bank shall be not less than 2 inches. The interlocking spacers shall be used at a minimum interval of 8 ft.

Concrete cover overall shall not be less than 3 inches all around the encased run. Space below the conduit, and concrete fill shall be assured. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. Concrete shall be deflected during placement to minimize the possible damage to or movement of the conduits.

Conduit encased in concrete shall have steel reinforcing where installed below roadway or other paved vehicle areas (including shoulder) and the reinforcement shall extend not less than 5 feet additional from the edge of pavement unless otherwise indicated. Steel reinforcement shall not be less than No. 4 bars at corners and otherwise spaced on 12-inch centers, tied with No. 4 bars on 12-inch centers.

The Engineer shall examine all conduit joints for compliance with section 5 of this specification before concrete is poured.

4.7 Embedded

Conduit embedded in structure shall be supported on interlocking plastic spacers specifically designed for the purpose spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common structure shall be not less than 2 inches. The interlocking spacers shall be used at a minimum interval of 8 ft.

Concrete cover overall shall not be less than 3 inches all around the embedded run. Space below the conduit, and concrete fill shall be assured. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. Concrete shall be deflected during placement to minimize the possible damage to or movement of the conduits.

The Engineer shall examine all conduit joints for compliance with section 5 of this specification before concrete is poured.

5. Joints

5.1 All HDPE duct to HDPE duct joints shall be made with an approved duct fusion splicing device.

- 5.2 HDPE coilable non-metallic conduit to non-HDPE coilable non-metallic conduit joints shall be either made with an approved mechanical connector or with a chemical compound. Both methods must be specifically designed for joining HDPE coilable non-metallic conduit. Minimum pullout force for the chemical compound shall be as listed in the following table.

Nominal Size		Pullout Force	
mm	in	N	Lbs
31.75	1.25	2400	540
38.1	1.50	2535	570
50.8	2.0	3335	750
63.5	2.5	4445	1,000
76.2	3.0	6225	1,400
101.6	4.0	8890	2,000

6. Measurement.

The duct shall be measured for payment in linear feet in place as described herein. Measurements shall be made in straight lines between horizontal changes in direction between the centers of the terminating points (poles, cabinets, junction boxes). Vertical measurement of the duct shall be as follows:

For runs terminating at junction boxes and/or control cabinets, the vertical measurement shall be taken from the bottom of the trench, or horizontal raceway, to a point 18-inches beyond the center of the junction box or control cabinet.

For runs terminating at poles, the vertical measure shall be taken from the bottom of the trench, or horizontal raceway, to a point 18-inch beyond the center of the light pole handhole regardless of light pole mounting method

Innerduct installed in excess of the limits describes herein shall not be paid for.

7. Basis of Payment.

This item will be paid for at the contract unit price per foot installed for **INNERDUCT**, of the size of duct as indicated, which shall be payment in full for all material and work as specified herein.

EXTENDED LIFE CONCRETE PAVEMENT (D1)

Effective: January 3, 2005

Revised: May 1, 2022

Description. This work shall consist of constructing concrete pavement and shoulders using extended life concrete at locations specified on the plans. Work shall be performed according to the Standard Specifications except as modified herein:

Definitions.

- a) Aggregate Subgrade. The Aggregate Subgrade layer shall be above the subgrade and below the HMA Stabilized Subbase.
- b) HMA Stabilized Subbase. The HMA Stabilized Subbase layer is above the Aggregate Subgrade Improvement and below the pavement.

Embankment. Replace the second sentence of the third paragraph of Article 205.04 to read:

Such soils shall be covered on the side and top with a minimum of 3 feet. of soil characterized as Suitable Soil.

Revise the first sentence of the second paragraph of Article 205.06 to read:

“The embankment shall not contain more than 110 percent of the optimum moisture content for all forms of clay soils and not more than 105 percent of the optimum moisture content for all forms of clay loam soils determined according to AASHTO T 99 (Method C).”

Revise the fifth paragraph of Article 205.06 to read:

“All lifts shall be compacted to not less than 95 percent of the standard laboratory density.”

Aggregate Subgrade. Work shall be done according to the Special Provision for “AGGREGATE SUBGRADE IMPROVEMENT (BDE)”.

HMA Stabilized Subbase. This work shall be performed according to Sections 312 and 1030. The mixture used shall be as shown on the plans.

Pavement and Shoulders. Add the following to Articles 420.03, 421.03, and 483.03:

“The Contractor shall submit to the Engineer, for approval before paving, the proposed internal type vibrator spacing for the paver. The Contractor shall also provide the proposed vibrator operating frequencies for a paving speed greater than or equal to 3 ft/min and for a paving speed less than 3 ft/min.”

Add the following to Article 420.07:

“When the surface temperature, as measured on the surface with a device as approved by the Engineer, of the HMA Stabilized Subbase is 115 °F or greater the Contractor shall spray the HMA Stabilized Subbase with a water mist with equipment that meets the approval of the Engineer. The HMA Stabilized Subbase shall be cooled below 115 °F prior to paving on top. The water spray shall not produce excessive water runoff or leave puddles on the HMA Stabilized Subbase at the time of paving. All cooling shall be completed a minimum of 10 minutes prior to paving. The surface temperature shall be monitored during the paving operation to determine if the HMA Stabilized Subbase requires re-spraying. The water used shall meet the requirements of Section 1002.”

Add the following to Article 701.17(c)(5):

“Construction vehicles, except light weight saws, will not be permitted on the pavement during the cure period even if the concrete has obtained the minimum required strength.”

Add the following to Article 1020.02(d):

“Note 1. For pavement, shoulders, and striped median, the freeze-thaw rating expansion limit for the coarse aggregate shall be a maximum of 0.040 percent according to Illinois Modified AASHTO T 161, Procedure B.”

Revise the curing table of Article 1020.13 as follows:

“The curing period for all pavement and shoulder shall be a minimum of 7 days.”

Revise the first sentence of the second paragraph of Article 1020.13(a)(4) to read:

“Membrane curing shall be completed within ten minutes after tining.”

Method of Measurement. This work shall be measured for payment per Sections 200, 300, and 400.

Basis of Payment. The plans indicate which roadways and pay items will be constructed to the extended life requirements. The cost to construct the roadways to the extended life requirements will not be paid for separately but are included in the cost of the various items of work.

The additional costs to meet the various Material, Samples, Compaction, Stability, Placing and Trimming requirements for embankment beneath and adjacent to the extended life items will not be measured for payment, but are included in the cost of the various items of excavation.

The additional cost to meet the various Material, Equipment, Placing, Stability, Compaction, Trimming, and Finishing requirements for Aggregate Subgrade Improvement beneath and areas adjacent to the extended life items will not be paid for separately but are included in the cost of the Aggregate Subgrade Improvement.

The additional costs to meet the various Material, Placing, Stability, Compaction, Trimming, and Finishing requirements for the HMA stabilized subbase beneath and areas adjacent to the extended life items will not be paid for separately but are included in the cost per square yard for STABILIZED SUBBASE - HMA, of the thickness specified.

The additional costs to meet the various Material, Equipment, Placement, Finishing, Curing, and Sealing requirements for extended life items will not be paid for separately but are included in the cost per square yard for PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED) or CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, of the thickness specified; and per square yard for PORTLAND CEMENT CONCRETE SHOULDER, of the thickness specified.

MOWING CYCLE

Modified: March 10, 2023

Effective: June 1, 2023

Description

This work shall consist of mowing turf areas along the expressway (**approximately 25 ACRES**) to a height of 4 inches and as directed by the Engineer to avoid impacting nesting rusty patched bumble bees, all ROW between Midland Avenue and Elgin, Joliet, and Eastern Railway (west of W. Richard Street) will be mowed starting March 1, or any time after the grass starts growing.

The work required for each work cycle must be 100 percent complete on inspection dates. Partial inspections will not be made.

Frequency

The project site will be mowed once a week throughout construction within the construction limits wherever vegetation is allowed to grow to avoid any flowering plants in the project area. The work shall continue until the last week in October or until directed the Engineer

Equipment

The Contractor shall keep the blades of all mowing equipment sharp and properly equipped for operation along an urban arterial route. The equipment used shall be capable of completely severing all growth at the cutting height and distributing it evenly over the mowed area. Special equipment may be required on steep slopes, in narrow areas, and for trimming around posts, poles, fences, trees, shrubs, seedlings, etc.

Method

All mowing and trimming operations are to proceed in the direction of traffic flow. The cut material shall not be windrowed or left in a lumpy or bunched condition. Additional mowing or trimming may be required to obtain the height specified or to disperse mowed material.

Debris encountered during the mowing operations which hampers the operation or is visible from the roadway shall be removed prior to mowing and disposed of according to Article 202.03. Remove all grass clippings from paved surfaces (Knee wall surfaces, high mast light tower pads, paved gutters and paved gore areas.) All trimmings, windrowed material, litter and trash removal must be complete to the satisfaction of the Engineer. Damage to the turf, such as ruts or wheel tracks more than 2 inches (50 MM) in depth, or other plantings or highway appurtenances caused by the mowing or trimming operation shall be repaired at the Contractor's expense.

Method of Measurement

Mowing and trimming will be measured as each at the completion of each mowing cycle. The approximate quantity of acres shall be entirely mowed during this cycle.

Basis of Payment

This work will be paid for at the contract unit price per each for MOWING CYCLE. Any additional mowing or trimming required to obtain the height specified or to disperse mowed material will be considered as included in the cost of the initial mowing. Payment for mowing and trimming shall include the cost of all material, equipment, labor, removal, disposal and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

COARSE SAND PLACEMENT

Effective: February 7, 2007

Description. This work shall consist of furnishing, transporting, spreading, and incorporating Coarse Sand (FA 2) into the soil in areas shown on the plans and as directed by the Engineer.

Materials. Materials shall meet the requirements of the following Article of Section 1000 – Materials:

- (a) Fine Aggregate.....1003.04

Method. Coarse Sand shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications and any required placement of Topsoil has been completed. Prior to Coarse Sand placement, the area shall be disked or raked to a minimum depth of 4 inches (100 mm) and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Coarse Sand placement.

The Coarse Sand shall be placed in the planting beds to the depth specified. After the Engineer verifies that the proper Coarse Sand depth has been applied, the Contractor shall completely incorporate the sand into the soil to a minimum depth of 6 inches (150 mm) by raking, disking, or roto tilling to amend the existing topsoil.

After the Coarse Sand has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the right-of-way and the area finished to the lines and grades shown on the plans and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement. Coarse Sand Placement will be measured in square yards (square meters) at the location shown in the plans and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment. This work will be paid for at the contract unit price per square yards (square meters) for COARSE SAND PLACEMENT of the thickness specified.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (SPECIAL)

Description. This work shall consist of the construction of combination concrete curb and gutter of the various types, to the lines and grades established by Engineer. This work shall be done in accordance with Section 606 of the Standard Specifications, Standard No. 606001, and the details in the Drawings, with the following modifications:

Construction of combination concrete curb and gutter shall be completed as a depressed curb at the locations shown on the Drawings. No additional compensation will be made for depressed curb.

Construction Requirements. This work shall be done in accordance with the applicable portions of Section 606 of the Standard Specifications. The concrete barrier base shall be constructed as detailed in the plans. The concrete barrier wall shall be constructed separately and not poured monolithically with the concrete barrier base.

Method of Measurement. This work will be measured for payment in feet along the face of the concrete curb, which measurement will include drainage castings incorporated into the curb and gutters.

Basis of Payment. This work will be paid for at the Contract Unit Price per foot of COMBINATION CONCRETE CURB AND GUTTER, of the type specified; (SPECIAL) measured in place, which prices shall include all materials, labor, tools, equipment, and any incidentals necessary to satisfactorily complete the Work as described herein.

CONCRETE BARRIER BASE (SPECIAL)

Description. This work shall consist of constructing a concrete barrier base below a concrete barrier wall as detailed in the plans.

Construction Requirements. This work shall be done in accordance with the applicable portions of Section 637 of the Standard Specifications. The concrete barrier base shall be constructed as detailed in the plans. The concrete barrier wall shall be constructed separately and not poured monolithically with the concrete barrier base.

Method of Measurement. CONCRETE BARRIER BASE (SPECIAL) per the number indicated on plans will be measured for payment in feet in place along the centerline of the barrier base. The concrete barrier wall of the type specified will be paid for separately in accordance to the special provision for CONCRETE BARRIER.

Basis of Payment. This work will be paid for at the contract unit price per foot for CONCRETE BARRIER BASE (SPECIAL) per the number indicated on plans, which price shall include all equipment, labor, and materials necessary to construct the concrete barrier base including all hook bars extending into the concrete barrier wall or concrete barrier transition.

CONCRETE BARRIER, VERTICAL FACE (SPECIAL)

Description. This work shall consist of constructing a concrete barrier wall as detailed in the plans.

Construction Requirements. This work shall be done in accordance with the applicable portions of Section 637 of the Standard Specifications. The concrete barrier wall shall be constructed on a concrete barrier base as detailed in the plans.

Method of Measurement. Concrete barrier walls shall be measured for payment in feet in place, along the centerline of the concrete barrier. Concrete barrier base will be paid for separately according to CONCRETE BARRIER, VERTICAL FACE (SPECIAL), per the number indicated on the plans.

Basis of Payment. This work will be paid for at the contract unit price per foot for CONCRETE BARRIER, VERTICAL FACE (SPECIAL); or as shown in the plans. This contract unit price shall include all equipment, labor and materials necessary to construct the concrete barrier wall including all reinforcement bars in the concrete barrier wall.

CONTRACTOR COOPERATION

The Contractor's attention is directed to the fact that other separate contracts may be under construction during the duration of this Contract. It is anticipated that this contract will be constructed concurrently with other roadway projects in the same area. The projects that may be under contract concurrent with this project are as follows:

IDOT Contract No. 62N31 (Interstate 80 from E/O Ridge Road to E/O River Road: Shoulder Reconstruction and Temporary Pavement Widening)

IDOT Contract No. 62P67 (River Road over Interstate 80 Bridge Replacement (S.N. 099-0177 and Widening)

IDOT Contract No. 62R28 (Interstate 80 from E/O River Road to W/O Houbolt Road: Pavement Reconstruction and Bridge Reconstruction)

The Contractor shall schedule his work in order to minimize any conflicts that may arise between contracts as specified in Article 105.08 of the Standard Specifications.

The Contractor will be governed by Article 105.08 of the Standard Specifications. No additional compensation will be allowed for delays or inconveniences resulting from activities of other contractors.

The Contractor may be required to attend a weekly coordination meeting at a time and location to be determined by the Department.

The Contractor will coordinate proposed project start dates and sequence of construction with the Engineer and other Contractors to present an effective and timely schedule for successful completion of the project.

COORDINATION WITH ADJACENT AND/OR OVERLAPPING CONTRACTS

This contract abuts and/or overlaps with other concurrent contracts listed below. Each contract includes work items requiring close coordination between the various Contractors regarding the sequence and timing of execution of work items. This contract also includes critical work items that affect the future staging of traffic and completion dates of other contracts. These critical items along with completion dates are listed after each contract.

Contract No. 62N31 – Interstate 80 from E/O Ridge Road to E/O River Road: Shoulder Reconstruction and Temporary Pavement Widening. The Contractor shall coordinate with the Department and make MOT and construction activity modifications to accommodate the planned work. The cost for coordination, modifications required to MOT and construction activities, and installation and removal lane closures shall be included in the cost of Traffic Control and Protection (Expressways).

Contract No. 62P67 – River Road over Interstate 80 Bridge Replacement and Widening. The Contractor shall coordinate with the Department and make MOT and construction activity modifications to accommodate the scheduled inspection and provide the necessary shoulder closures for the River Road Bridge Reconstruction. The cost for coordination, modifications required to MOT and construction activities, and installation and removal lane closures shall be included in the cost of Traffic Control and Protection (Expressways).

Contract No. 62R28 – Interstate 80 from E/O River Road to W/O Houbolt Road: Mainline Pavement Reconstruction and Bridge Reconstruction. The Contractor shall coordinate with the Department and make MOT and construction activity modifications to accommodate the planned work. The cost for coordination, modifications required to MOT and construction activities, and installation and removal lane closures shall be included in the cost of Traffic Control and Protection (Expressways).

DUST CONTROL WATERING

Description. This work shall consist of furnishing and applying water to control dust and airborne dirt generated by construction activities.

General. This work shall be performed according to Article 107.36 of the "Standard Specifications" and the following:

Revise Article 107.36 of the "Standard Specifications" as follows:

If the Contractor is not controlling the dust sufficiently, additional applications must be performed.

Replace subparagraph (d) of under the third paragraph with the following:

(d) Dust shall be controlled by the uniform application of sprinkled water and shall be applied only when requested and in a manner acceptable to the Engineer. All equipment used for this work shall be equipped with adequate measuring devices for determining the exact amount of water discharged. All water used shall be properly documented by ticket or other acceptable means.

Method of Measurement. This work will be paid for per unit. One unit shall equal 1,000 gallons of water.

Basis of Payment. This work will be paid for at the contract unit price per unit for DUST CONTROL WATERING

FILLING EXISTING RUMBLE STRIP

Description. This work shall consist of the scarification of existing shoulder rumble strips constructed in hot-mix asphalt shoulders, and the furnishing and placement of hot-mix asphalt in the scarified area, prior to placing traffic onto the shoulder in a construction stage. This work shall take place per the limits shown on the Plans and/or directed by the Engineer.

General Requirements. The nominal depth of scarification of the hot-mix asphalt shoulders shall be 2-inches. Unless otherwise shown in the Plans, the width of the scarification shall be four (4) feet, measured from the mainline pavement longitudinal joint between the mainline pavement and adjoining shoulder.

After removing all millings from the scarified limits, the surface shall be tacked in accordance with Article 406.05(b) of the Standard Specifications.

The scarified area shall then be filled with hot-mix asphalt surface course and compacted flush with the adjoining pavement and shoulder surfaces. The mix to be used for this item shall be Hot Mix Asphalt Surface Course, IL9.5, Mix D, N70 unless otherwise specified in the Contract.

Method of Measurement. FILLING EXISTING RUMBLE STRIP will be measured for payment in feet. Any portion of this work constructed outside the dimensions shown on the Plans or as directed by the Engineer will not be measured for payment.

Basis of Payment. Payment for FILLING EXISTING RUMBLE STRIP, measured as specified will be made at the Contract unit price per foot, which payment shall constitute full compensation for scarifying the designated portion of hot-mix asphalt shoulder; cleaning the scarified area and removing all debris; applying tack; furnishing, placing and compacting hot-mix asphalt surface mix; and for all labor, equipment, tools and incidentals necessary to complete the work as specified.

Shoulder closures required for this item will not be paid for separately, but will be included in the Contract unit price TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).

GAS/OIL PIPELINE PROTECTION

Description. This item consists of coordination with BP Central Pipelines LLC (BP Pipelines) and protection of the existing pipeline facilities owned, operated, and maintained by BP Pipelines.

Materials. Material storage shall not occur within BP Pipelines right-of-way (ROW) without prior written approval from BP Pipelines. Materials shall not be stored longitudinal to the pipeline within 25 feet of the pipeline. The Contractor shall furnish a copy of the written approval to the Engineer at least one working day prior to beginning material storage over the pipeline.

Equipment. Equipment shall be limited in the following ways when performing work within the BP Pipelines ROW:

- (a) Equipment shall not transit the pipeline ROW by moving longitudinally to the pipeline within 25 feet of the pipeline.
- (b) Where it is necessary for construction equipment (i.e., tractors, backhoes, dump trucks, etc.) or equipment transporting construction materials to cross the pipeline, the crossing of the pipeline ROW shall be at, or as near to, a 90 degree angle as is feasible.
- (c) No track type construction equipment shall be permitted to pivot or turn directly over the top of the pipeline.
- (d) A scraper or pan type tractor shall not be used for removal of soil within 10 feet of the centerline of the pipeline. Rubber tire or small track type equipment is an acceptable alternative.
- (e) A sheepsfoot roller shall not be used for compaction purposes within 5 feet or directly above the centerline of the pipeline.
- (f) No vibratory rollers shall be used within 3 feet of the centerline of the pipeline until the compacted cover over the pipeline has reached a depth of 3.5 feet.

The Contractor shall submit to BP Pipelines for approval an Equipment Plan consisting of working drawings and a written narrative indicating the following:

- (a) Where construction equipment will cross the pipeline.
- (b) The depth of the pipe at equipment crossing locations.
- (c) Proposed ramping over the pipeline.
- (d) Specifications for each piece of equipment proposed to cross the pipeline, including:
 - i. Type of equipment.
 - ii. Weight of equipment.
 - iii. Track width and length for tracked equipment.
 - iv. Number of axles and single or tandem axles for wheeled equipment.
- (e) Special pipeline protection measures if such measures are required by BP Pipelines.

Review and approval of the Equipment Plan will be performed in accordance with the requirements for working drawings in accordance with Article 105.04. A revised plan shall be submitted to BP Pipelines for approval if the Contractor proposes to use different equipment or methods than those included in the original plan. The Contractor shall furnish a copy of the approved plan and any approved revisions to the Engineer at least one working day prior to beginning work.

CONSTRUCTION REQUIREMENTS

Notice and Representatives. The Contractor shall notify BP's Damage Prevention Specialist at least 48 hours prior to the beginning any activities within the pipeline ROW. The BP Pipelines contact person is:

Steve Adams (779) 801-4969
Marcus Jamerson (312) 231-2609 (contact only in the event Mr. Adams cannot
be reached)

Work shall not be performed within BP ROW unless BP's representative is onsite or BP provides a written waiver of this requirement prior to beginning work. The Contractor shall furnish a copy of this waiver to the Engineer at least one working day prior to beginning work.

A copy of the BP Pipelines approval letter (dated October 17, 2022) shall be onsite at all times (Attachment "A"). All construction workers and equipment operators shall be made aware of the requirements of this special provision and BP Pipeline's approval letter prior to starting work. This letter is included at the end of this special provision. The Contractor shall implement the requirements stated in the letter specific to each Encroachment in addition to the requirements of this special provision. In the case of any conflict between the approval letter and this special provision, the requirements of this special provision shall govern.

Concerns expressed by the BP Pipelines representative may be considered by the Engineer as the basis for suspension of work in accordance with Article 108.07.

The Contractor shall include a coordination meeting with the Engineer and BP Pipeline representative in the Progress Schedule in accordance with Article 108.02. The meeting shall be held at least 30 calendar days prior to beginning work within BP Pipeline ROW. The meeting will be held onsite at the Engineer's field office. The Contractor's superintendent shall attend this meeting. No work shall occur within BP Pipeline ROW until after the meeting is held.

Excavation. Excavation within BP Pipelines ROW shall not occur without prior written approval by BP Pipelines. The Contractor shall furnish a copy of the written approval to the Engineer at least one working day prior to beginning excavation.

A minimum of two feet (24") of undisturbed soil shall be maintained above the pipeline. Anything less would be considered a scope change and require further review/approval by BP. If approved, all excavation within two feet (24") of the pipeline shall be done by hand.

Miscellaneous. The Contractor shall maintain a communications log of telephone calls, emails, and all other contacts with BP Pipelines. A photograph log shall be created daily showing the equipment and operations within 25 feet of the pipeline. Each photograph shall have a caption describing the location of the photograph, the equipment and operations shown in the photograph, and the date of the photograph. The Contractor shall furnish to the Engineer a copy of the communications and photograph logs weekly no more than one working day after the end of the previous week.

Should the design require a field change in the vicinity of the BP pipelines, Steve Adams must be contacted and approve any revisions prior to actuating the changes in the field.

The Contractor shall furnish to the Engineer as-built drawings of all improvements within the BP Pipeline ROW within 10 working days of all work within the BP Pipeline ROW being completed. As-builts shall consist of two sets of hardcopies and two CDs or flash drives with scanned PDFs of the hardcopies showing the actual locations and extents of completed work.

Method of Measurement. Work required to comply with the requirements of this special provision will be measured on a lump sum basis.

Earth excavation will be measured separately for payment in accordance with Article 202.07.

Removal and disposal of unsuitable material will be measured separately for payment in accordance with Article 202.07.

Basis of Payment. This work will be paid for at the contract lump sum for GAS/OIL PIPELINE PROTECTION which payment shall be full compensation for the work described herein and as directed by the Engineer.

Earth excavation will be paid for separately in accordance with Article 202.08.

Removal and disposal of unsuitable material will be paid for separately in accordance with Article 202.08.

Attachment "A." BP Pipelines Approval Letter (dated October 17, 2022)



BP Pipelines (North America) Inc.
30 South Wacker Drive
Suite 1000
Chicago, IL 60606

October 17, 2022

Illinois Department of Transportation
Office of Highways Project Implementation/Region 1/ District 1
Attn: Ed Kanthack
201 W Center Ct
Schaumburg, IL 60196

RE: #IL_Will_IDOT 62P71_Pavement and culvert replacement on I80
City of Minooka, Will County, IL
BP Ref: 4008_0260 Log #13350

Dear Mr. Kanthack:

Thank you for contacting BP Central Pipelines LLC (Operated by BP Pipelines (North America) Inc.) (hereinafter referred to as "BP") regarding your proposed project to widen and rehabilitate the I-80 Westbound lanes along with removal and installation of new culvert. BP has reviewed the information you provided and has determined your proposed activity, from BP's perspective, and subject to the following terms and conditions, is clear to proceed:

Illinois Department of Transportation (hereafter referred to as IDOT), must contact the local "One-Call Center" at least 48 hours (two working days) prior to initiating any excavation or construction activities so BP can arrange to have a representative present when IDOT is working in close proximity to BP's pipeline(s).

BP's Damage Prevention Specialist, Steve Adams at (779) 801- 4969 must be contacted at least 48 hours prior to undertaking any activities within the pipeline right of way. No construction work within the pipeline right of way may commence without his/her presence or prior approval. In the event Steve cannot be reached please contact Marcus Jamerson at (312) 231-2609 48 hours prior to undertaking any activities within the pipeline right of way.

A copy of this letter must be onsite at all times, all construction workers and equipment operators must be made aware of the requirements herein. Failure to have a copy of the approval letter onsite may result in a stop work order until the construction team is made aware of the conditions and requirements required in this Approval Letter.

If the BP Damage Prevention Specialist, in his/her sole discretion, determines that IDOT activities could result in damage to the pipeline, such Damage Prevention Specialist will notify IDOT, their operator or contractor. IDOT herein acknowledges that the BP Damage Prevention Specialist shall have full authority to stop any of IDOT's excavation or construction related activities in close

proximity to the BP pipeline if in the BP Damage Prevention Specialist's sole opinion, IDOT's activities could result in damage to the BP pipeline.

Should the scope of your project change and it become necessary to operate equipment in close proximity to BP's right-of-way, a list of the proposed equipment, and when applicable revised drawings, must be submitted to BP for review and analysis. The change(s) to your scope of project cannot proceed until BP provides written approval for the contemplated changes in scope and/or equipment.

Note: Unless otherwise stipulated herein, no equipment will be allowed on or near BP's pipeline without prior written approval from BP.

IDOT shall require its contractors, agents, or other representatives to adhere to the conditions set forth herein.

IDOT further agrees to adhere to all the technical requirements and specifications contained within the Engineering Approval Letter attached hereto as Exhibit B.

Per relevant state law, 811, the national One-Call number, must be contacted, prior to commencement of any approved excavation related activities.

For your further reference, included with this letter, is BP's Excavation and Construction Guidelines for your review. If you have any questions or concerns, please contact Blake Patrick at (872) 245-0342 or Blake.Patrick@bp.com.

Best regards,



Blake Patrick
R/W Agent

BP: CR



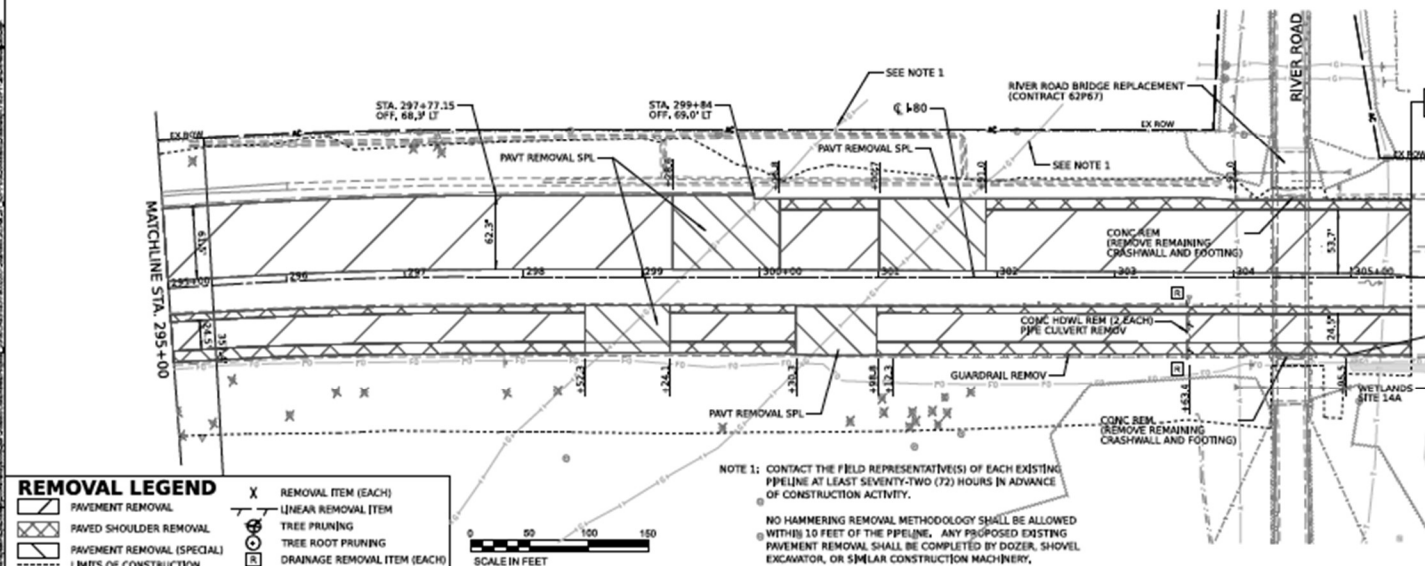
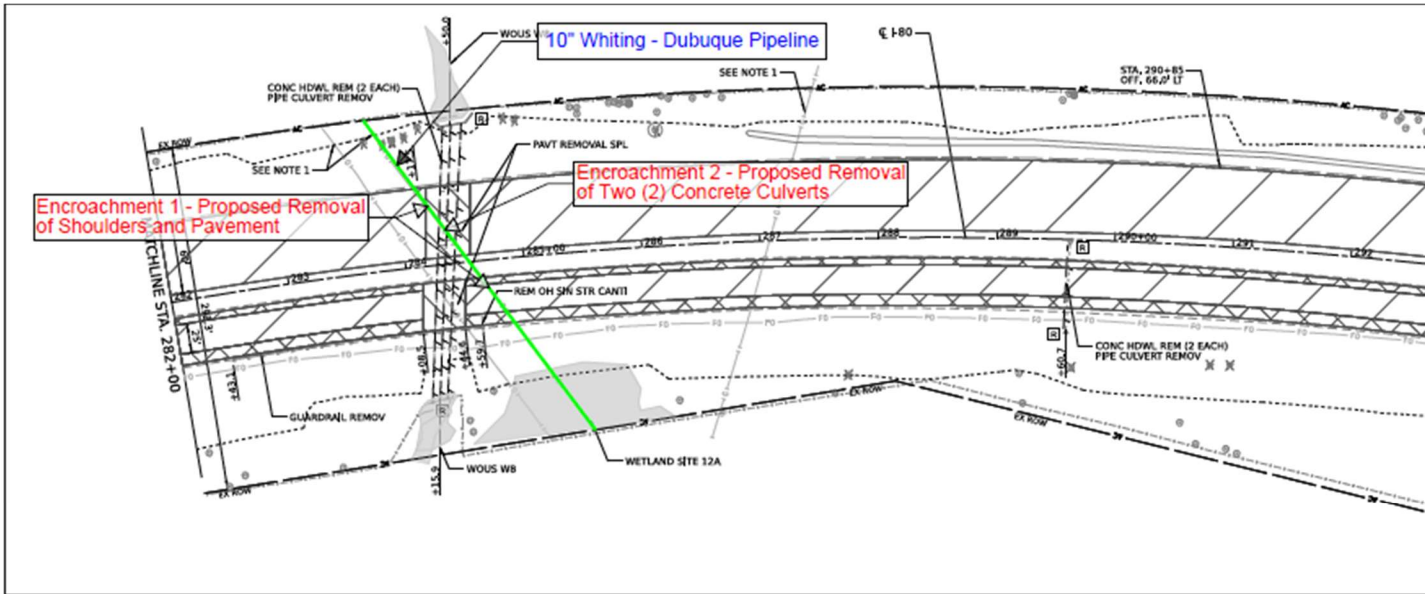
BP Pipelines (North America) Inc.
30 South Wacker Drive
Suite 1000
Chicago, IL 60606

Excavation Specific Requirements

1. No excavation or construction activity will be permitted in the vicinity of a pipeline until all appropriate communications have been made with BP's field operations and the Right-of-Way Department. A formal engineering assessment may be required.
2. There shall be no excavation or backfilling within the pipeline right-of-way for any reason without a representative of BP on site giving permission.
3. In some instances, excavation and other construction activities around certain pipelines can be conducted safely only when the pipeline operating pressure has been reduced. Contractors are therefore cautioned that excavation which exposes or significantly reduces the cover over a pipeline may have to be delayed until the reduced operating pressures are achieved.

General Construction Activities

1. The contractor shall not be permitted to transport construction materials or equipment longitudinally over the pipeline.
2. Where it is necessary for construction equipment (*i.e.*, tractors, backhoes, dump trucks, etc.) or equipment transporting construction materials to cross the pipeline, the crossing of the pipeline right-of-way shall be at, or as near to, a 90° angle as is feasible.
3. To gain access to the job site, the contractor shall submit a plan indicating where construction equipment will cross the pipeline, along with the depth of the pipe at the crossings, any proposed ramping over the pipeline, together with the following specifications for the equipment: type and weight of equipment; for track equipment – track width and length; for wheeled equipment – number of axles (single or tandem axles). BP will perform a stress factor calculation to determine if the equipment can safely cross the pipeline. If crossing of the pipeline is allowed, special measures may need to be taken to ensure the integrity of the pipeline.
4. No track type construction equipment shall be permitted to pivot or turn directly over the top of the pipeline.
5. A scraper or pan type tractor shall not be used for removal of soil within ten feet (10') of the centerline of the pipeline. Rubber tire or small track type equipment is an acceptable alternative.
6. A sheepsfoot roller shall not be used for compaction purposes within five feet (5') or directly above the centerline of the pipeline.
7. No vibratory rollers shall be used within three feet (3') of the centerline of the pipeline until the compacted cover over the pipeline has reached a depth of three and one-half feet (3 ½').



REMOVAL LEGEND

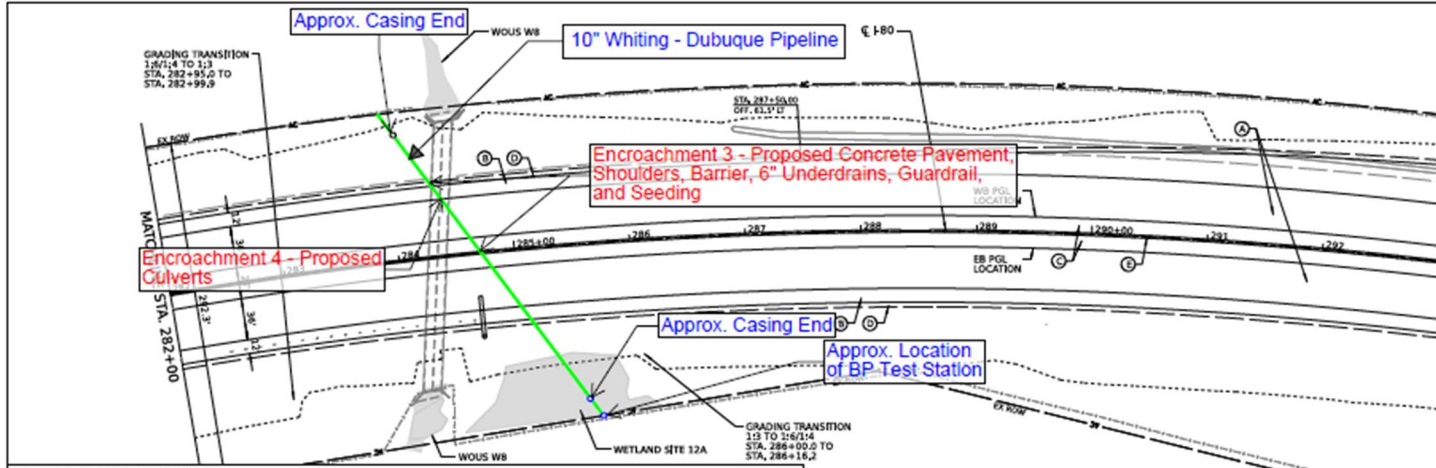
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	PAVED SHOULDER REMOVAL		TREE PRUNING
	PAVEMENT REMOVAL (SPECIAL)		TREE ROOT PRUNING
	LIMITS OF CONSTRUCTION		DRAINAGE REMOVAL ITEM (EACH)
	REMOVAL ITEM (EACH)		



NOTE 1: CONTACT THE FIELD REPRESENTATIVE(S) OF EACH EXISTING PIPELINE AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF CONSTRUCTION ACTIVITY.

NO HAMMERING REMOVAL METHODOLOGY SHALL BE ALLOWED WITHIN 10 FEET OF THE PIPELINE. ANY PROPOSED EXISTING PAVEMENT REMOVAL SHALL BE COMPLETED BY DOZER, SHOVEL EXCAVATOR, OR SIMILAR CONSTRUCTION MACHINERY.

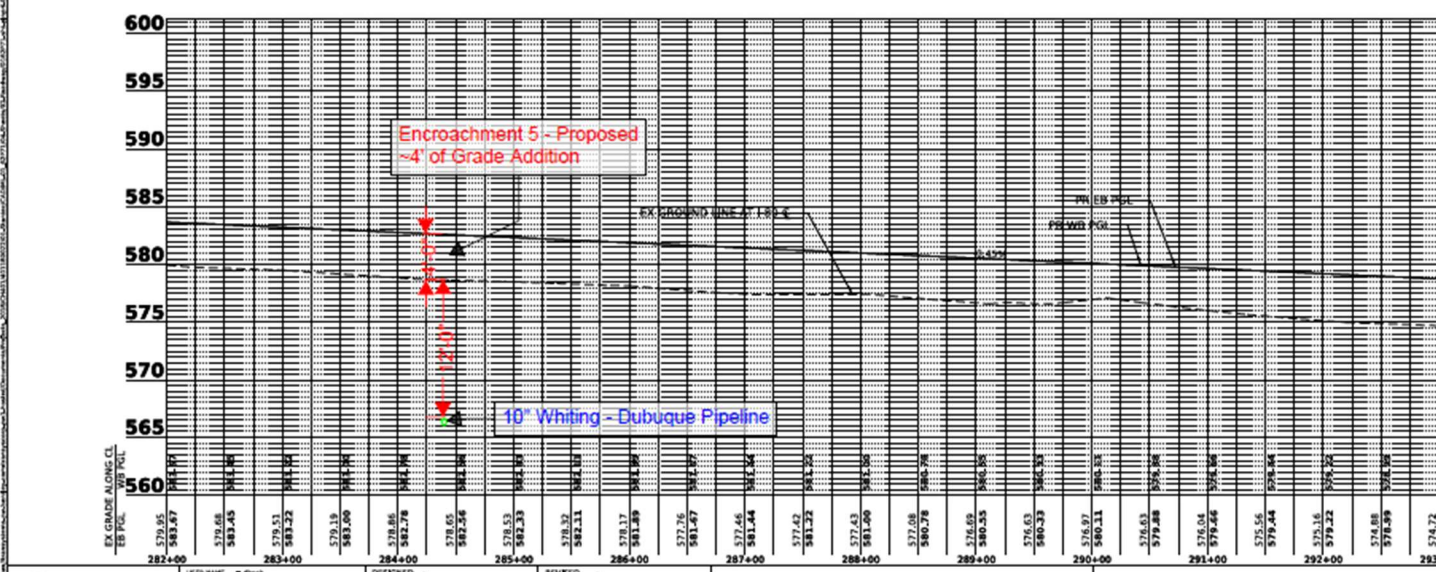
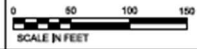
	USER NAME • <i>adon</i>	DESIGNED •	REVISED •	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY REMOVAL PL
	PLOT SCALE • 1/8"=1'-0" PLOT DATE • 10/20/20	DRAWN • CHECKED • DATE •	REVISED • REVISED • REVISED •		



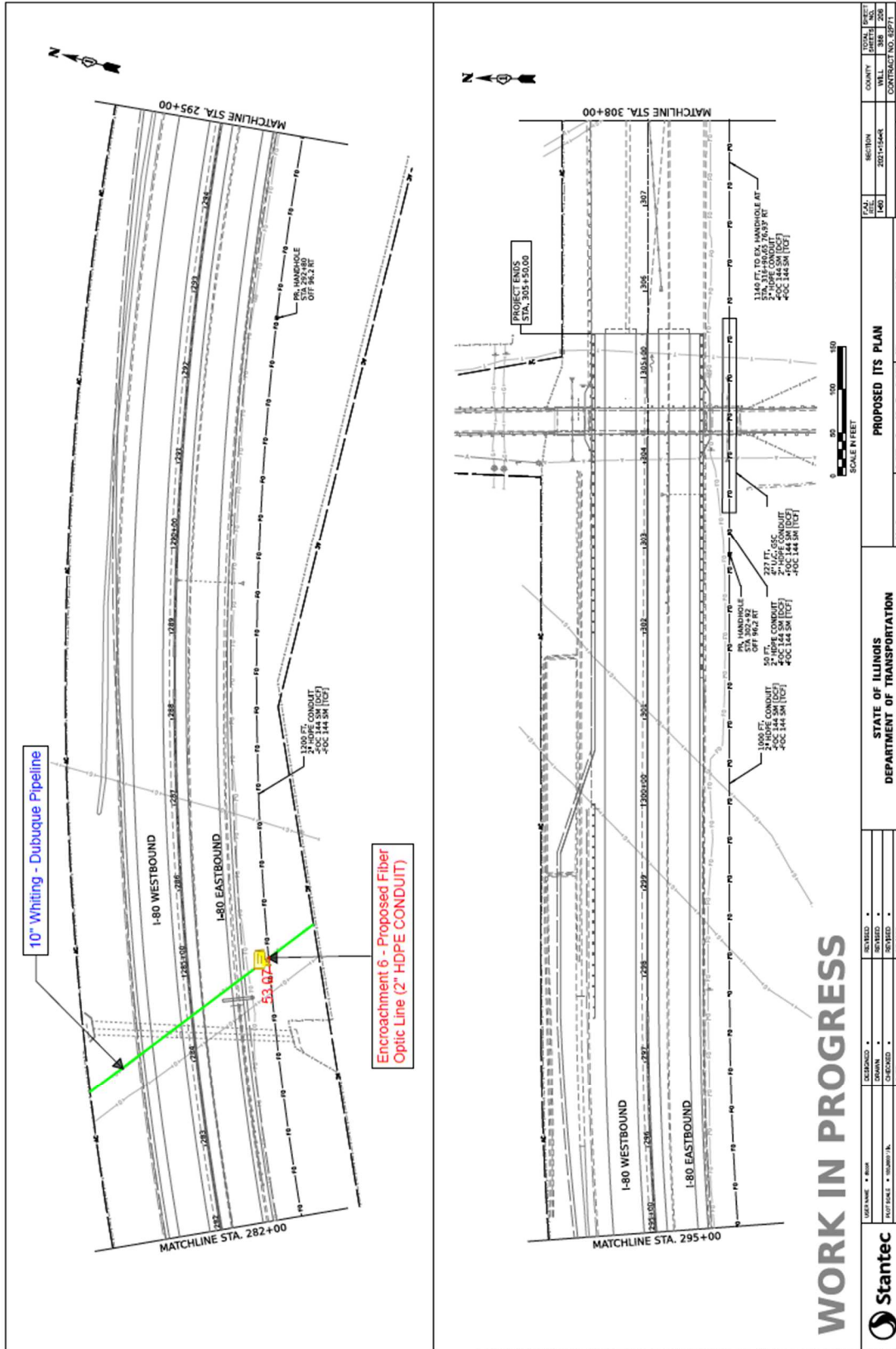
ROADWAY LEGEND

<ul style="list-style-type: none"> Ⓐ CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 13" PAVEMENT REINFORCEMENT STABILIZED SUBBASE - HOT MIX ASPHALT, 4" AGGREGATE SUBGRADE IMPROVEMENT 12" 	<ul style="list-style-type: none"> Ⓒ PORTLAND CEMENT CONCRETE SHOULDERS 13" STABILIZED SUBBASE + HOT MIX ASPHALT, 4" AGGREGATE SUBGRADE IMPROVEMENT 12"
<ul style="list-style-type: none"> Ⓓ PORTLAND CEMENT CONCRETE SHOULDERS 13" SUBBASE GRANULAR MATERIAL, TYPE C AGGREGATE SUBGRADE IMPROVEMENT 12" 	<ul style="list-style-type: none"> Ⓔ AGGREGATE SHOULDERS, TYPE B 6" Ⓕ CONCRETE BARRIER DOUBLE FACE 44 INCH HEIGHT Ⓖ CONCRETE BARRIER VARIABLE CROSS SECTION 44 INCH HEIGHT

--- LIMITS OF CONSTRUCTION



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	PLOT SCALE: 1/8"=1'-0" PLOT DATE: 1/19/2012	CHECKED: <input type="text"/>	REVIEWED: <input type="text"/>		



DESIGNED • DRAWN • CHECKED • DATE •		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SHEET 6 OF 7 BRACKET 61A TO 61A		PROPOSED ITS PLAN	
USER NAME • PROJECT FILE • PROJECT NO. •	SCALE 1" = 100'	SECTION 2021-154-R	COUNTY WILL	LOCAL SHEET 308 203	CONTRACT NO. 62P71	11.300 11.41 41.000	



BP Pipelines (North America) Inc.
30 South Wacker Drive
Suite 900
Chicago, IL 60606

October 04, 2022

Illinois Department of Transportation
Office of Highways Project Implementation / Region 1 / District 1
Attn: Ed Kanthack
201 W. Center Ct.
Schaumburg, IL 60196-2096
Edward.kanthack@illinois.gov
(847) 705-4209

Re: Proposed Highway Plans FAI Route 80 (Contract No. 62P71) – dated 07-28-2022

BP File No. 4000-0260 / BP Ref. No. 13350

Dear Mr. Kanthack:

BP Pipelines (North America) Inc. (hereafter referred to as BP) has reviewed the Subject drawings for the proposed widening and rehabilitation of the I-80 westbound lanes along with removal and installation of new culvert in Will County, Illinois, for the Illinois Department of Transportation (hereafter referred to as IDOT) and prepared by Stantec Inc., and has approved the plans with respect to the 14" Whiting – Dubuque Pipeline (hereafter referred to as the BP pipeline), subject to the following terms:

1. 811, the national One Call number, must be contacted, per your state requirements, prior to any excavation within twenty five feet (25') of the pipeline.
2. In addition to the "One Call", BP's Damage Prevention Specialist, Steve Adams (779) 801-4969 shall be contacted at least 48 hours prior to any activities within twenty five feet (25') of the BP pipeline and must be present prior to commencing work or moving equipment within BP pipeline rights of way. In the event Steve Adams cannot be reached please Marcus Jamerson at (312) 231-2609 48 hours prior to undertaking any activities within the pipeline right of way.
3. A copy of this letter must be onsite at all times, and all construction workers and equipment operators must be made aware of the requirements herein. Failure to have a copy of this letter onsite may result in a stop work order until the construction team is made aware of the terms and conditions set forth in this Approval Letter.
4. If the BP Damage Prevention Specialist, in his/her sole discretion, determines that IDOT activities could result in damage to the pipeline, such Damage Prevention Specialist will notify IDOT, and/or their operator or contractor. IDOT herein acknowledges that the BP Damage Prevention Specialist shall have full authority to stop any of IDOT's excavation or construction related activities in close proximity to the BP pipeline if in the BP Damage Prevention Specialist's sole opinion, IDOT activities could result in damage to the BP pipeline.
5. Encroachment 1 – Sheet 37 – IDOT has proposed removal of permanent shoulders, asphalt surface, and base course, with a total removal depth of 12", above the BP pipeline via milling.
 - a. Pavement within twenty five feet (25') of the pipeline shall be removed by milling.
 - b. A sheepfoot roller shall not be used for compaction purposes within five feet (5') or directly above the pipeline.

- c. No vibratory rollers shall be used within three feet (3') of the centerline of the pipeline until the compacted cover over the pipeline has reached a depth of three and one-half feet (3 ½').
 - d. Under no circumstance may any vibratory rollers commence, terminate, or operate in vibratory mode within twenty five feet (25') of the centerline of the BP pipeline.
6. Encroachment 2 – Sheet 37 – IDOT has proposed the removal of a concrete culvert above the BP pipeline along I-80. The closest Culvert scheduled for removal is approximately 4.0' away from the pipeline.
- a. Prior to any pavement or concrete removal, the contractor's removal methodology shall be provided to BP. Depending on the methodology, removal may be limited in the area of the pipelines, i.e. if a hammer method is to be used, it shall not be allowed within ten feet (10') of the pipelines.
 - b. BP requires seismic monitoring for any hammering/vibratory activities occurring around the pipelines. If such activities are to occur, a monitoring plan shall be submitted to BP for review and approval a minimum of ten (10) working days prior to proposed work.
 - c. No excavation or backfilling will be permitted within the pipeline rights of way without the BP Damage Prevention Specialist onsite.
 - d. Prior to any earth disturbance, the pipeline depth of cover shall be confirmed by the BP Damage Prevention Specialist.
 - e. The slope of excavation adjacent to the pipeline shall be at a minimum slope of 1-1/2:1.
 - f. A minimum of two feet (24") of undisturbed soil shall be maintained above the pipeline. Anything less would be considered a scope change and require further review/approval by BP. If approved, all excavation within two feet (24") of the pipeline shall be done by hand.
 - g. Backfilling over the pipeline shall be as per the following:
 - i. Two layers of geotextile material (Johns Manville Spunbound polyester Type 011/250 or similar) shall be placed beneath any permanent aggregate material below the roadway, extending for a minimum of ten feet (10') to either side of the pipeline.
 - ii. Acceptable good quality flowable fill (not to exceed a strength of 100 psi) shall be used to backfill up to the base of the pavement layer and will extend for a minimum distance of five feet (5') on either side of the pipeline.
 - h. Land restoration after construction shall not result in any grade reduction above the pipeline.
 - i. The construction schedule must allow time for BP personnel to inspect the pipeline while it is exposed and perform any maintenance work required.
7. Encroachment 3 – Sheet 49 – IDOT has proposed construction of a permanent concrete road, I-80, crossing above the BP pipeline to improve the road conditions.
- a. The proposed road shall be constructed above the pipeline with a minimum of five and one-half feet (5.5') of cover (proposed 16.0').
 - b. The road shall cross the pipeline at as close to a 90 degree angle as is feasible, and no crossing less than 45 degrees will be permitted (proposed 60°).
 - c. No excavation or backfilling will be permitted within the pipeline rights of way without the BP Damage Prevention Specialist onsite.
 - d. Prior to any earth disturbance, the pipeline depth of cover shall be confirmed by the BP Damage Prevention Specialist.
 - e. A minimum of two feet (24") of undisturbed soil shall be maintained above the pipeline. Anything less would be considered a scope change and require further review/approval by BP, and if approved, any excavation within two feet (24") of the pipeline shall be done by hand.
 - f. Backfilling over the pipeline shall be as per the following:
 - i. Two layers of geotextile material (Johns Manville Spunbound polyester Type 011/250 or similar) shall be placed beneath any permanent aggregate

- material below the roadway, extending for a minimum of ten feet (10') to either side of the pipeline.
- ii. Acceptable good quality flowable fill (not to exceed a strength of 100 psi) shall be used to backfill up to the base of the pavement layer and will extend for a minimum distance of five feet (5') on either side of the pipeline.
8. Encroachment 4 – Sheet 49 – IDOT has proposed the installation of concrete culvert above the BP pipeline along the south end of I-80. The closest Concrete Culvert is proposed to be approximately 4.0' away from the pipeline.
 - a. No excavation or backfilling will be permitted within the pipeline rights of way without the BP Damage Prevention Specialist onsite.
 - b. Prior to any earth disturbance, the pipeline depth of cover shall be confirmed by the BP Damage Prevention Specialist.
 - c. A minimum of two feet (24") of undisturbed soil shall be maintained above the pipeline. Anything less would be considered a scope change and require further review/approval by BP. If approved, all excavation within two feet (24") of the pipeline shall be done by hand.
 - d. BP requests that permanent structures and foreign lines maintain as much horizontal separation as possible from the pipeline.
 - e. Land restoration after construction shall not result in any grade reduction above the pipeline.
 - f. The construction schedule must allow time for BP personnel to inspect the pipeline while it is exposed and perform any maintenance work required.
 9. Encroachment 5 – Sheet 49 – IDOT has proposed the addition of approximately 4.0' of grade above the BP pipeline over the entire road of I-80 along.
 - a. No excavation or backfilling will be permitted within the pipeline rights of way without the BP Damage Prevention Specialist onsite.
 - b. Prior to any earth disturbance, the pipeline depth of cover shall be confirmed by the BP Damage Prevention Specialist.
 10. Encroachment 6 – Sheet 206 - IDOT has proposed installation of a 2" HDPE Conduit Fiber Optic Line crossing above the BP pipeline south of I-80 via the open cutting method.
 - a. The proposed 2" fiber optic line shall be installed above the pipeline with a minimum of three feet (3') of edge to edge vertical separation (proposed 8.0').
 - b. The 2" fiber optic line shall maintain a minimum depth of 2.5' for the full width of the BP easement.
 - c. The proposed 2" fiber optic line shall cross the pipeline at as close to 90° as is feasible, and no crossing less than 45° will be permitted (proposed 53°).
 - d. No excavation or backfilling will be permitted within the pipeline rights of way without the BP Damage Prevention Specialist onsite.
 - e. Prior to any earth disturbance, the pipeline depth of cover shall be confirmed by the BP Damage Prevention Specialist.
 - f. A minimum of two feet (24") of undisturbed soil shall be maintained above the pipeline. Anything less would be considered a scope change and require further review/approval by BP. If approved, all excavation within two feet (24") of the pipeline shall be done by hand.
 - g. Backfilling over the pipeline shall be as per the following:
 - i. Good quality fill shall be used for backfill and shall be compacted in six inch (6") lifts (not to exceed eight inches (8")) until surface grade is achieved.
 - h. The fiber optic line shall be placed in a Schedule 40 PVC conduit, or greater, for a linear distance extending ten feet (10') on either side of the centerline of the pipeline. The fiber optic line shall either be encased in red-dyed concrete or shall have a red-dyed concrete cap placed on top of it. Below-ground precautionary flagging, with color indicating type of utility, shall be placed approximately one foot (1') below final surface grade for a distance

of ten feet (10') on either side of the centerline of the pipeline at the 2" fiber optic line crossing.

- i. Land restoration after construction shall not result in any grade reduction above the pipeline.
 - j. The construction schedule must allow time for BP personnel to inspect the pipeline while it is exposed and perform any maintenance work required.
11. There shall be no storage of material (i.e. excavation spoils) or equipment over the BP pipeline without prior written approval.
 12. Should silt fence placement be required close to or over the pipeline, the BP Damage Prevention Specialist shall be contacted first in order to approve placement of the stakes (a minimum of five feet (5') from the pipeline) and flag the location of the pipeline.
 13. Should project sign placement be required close to or over the pipeline, the BP Damage Prevention Specialist shall be contacted first in order to approve placement of the sign posts (a minimum of five feet (5') from the pipeline) and flag the location of the pipeline.
 14. If applicable, all BP signage, vent pipes and test stations shall be protected during construction. Should any of these need relocation due to construction, this work shall only be performed by or under the supervision of the BP Damage Prevention Specialist.
 15. As-builts of the proposed construction in the vicinity of the BP pipeline shall be submitted to BP within 12 months after construction is completed.

Should your design require a field change in the vicinity of the BP pipelines, Steve Adams must be contacted and approve any revisions prior to actuating the changes in the field.

Best regards,

Chin S. Kim

Chin Kim
BP Engineering

PAVEMENT REMOVAL (SPECIAL)

Description. This work shall consist of the complete removal of existing pavement and paved shoulders that are located over existing utilities as shown on the plans.

General. All existing pavement shall be removed in accordance with Section 440 of the Standard Specifications.

In addition, the contractor shall submit a construction equipment list and identify proposed equipment crossing locations over the existing pipeline(s). The contractor shall also provide a plan detailing the removal methods that minimize ground vibrations to the satisfaction of the Engineer.

Any damage to public or private property which results from the removal of existing pavement shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost.

Method of Measurement. Pavement Removal (Special) will be measured for payment in place and the area computed in square yards.

Basis of Payment. Basis of payment shall be at the contract unit price per square yard for PAVEMENT REMOVAL (SPECIAL) and shall include the disposal to an approved site.

PROTECTION OF EXISTING TREES

The Contractor shall be responsible for taking measures to minimize damage to the tree limbs, tree trunks, and tree roots at each work site. All such measures shall be included in the contract price for other work except that payment will be made for TEMPORARY FENCE and TREE ROOT PRUNING.

All work, materials and equipment shall conform to Section 201 and 1081 of the Standard Specifications except as modified herein.

A. Earth Saw Cut of Tree Roots (Root Pruning):

1. Whenever proposed excavation falls within a drip-line of a tree, the Contractor shall:
 - a. Root prune 6-inches behind and parallel to the proposed edge of trench a neat, clean vertical cut to a minimum depth directed by the Engineer through all affected tree roots.
 - b. Root prune to a maximum width of 4-inches using a "Vermeer" wheel, or other similar machine. Trenching machines will not be permitted.

- c. Exercise care not to cut any existing utilities.
 - d. If during construction it becomes necessary to expose tree roots which have not been pre-cut, the Engineer shall be notified and the Contractor shall provide a clean, vertical cut at the proper root location, nearer the tree trunk, as necessary, by means of hand-digging and trimming with chain saw or hand saw. Ripping, shredding, shearing, chopping or tearing will not be permitted.
 - e. Top Pruning: When thirty percent (30%) or more of the root zone is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.
2. Whenever curb and gutter is removed for replacement, or excavation for removal of or construction of a structure is within the drip line/root zone of a tree, the Contractor shall:
 - a. Root prune 6-inches behind the curbing so as to neatly cut the tree roots.
 - b. Depth of cut shall be 12 inches for curb removal and replacement and 24 inches for structural work. Any roots encountered at a greater depth shall be neatly saw cut at no additional cost.
 - c. Locations where earth saw cutting of tree roots is required will be marked in the field by the Engineer.
 3. All root pruning work is to be performed through the services of a licensed arborist to be approved by the Engineer.

Root pruning will be paid for at the contract unit price each for TREE ROOT PRUNING, which price shall be payment for all labor, materials and equipment.

B. Temporary Fence:

1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone" before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored or vehicles driven or parked within the "tree protection zone".
2. The exact location and establishment of the "tree protection zone" fence shall be approved by the Engineer prior to setting the fence.
3. The fence shall be erected on three sides of the tree at the drip-line of the tree or as determined by the Engineer.

4. All work within the “tree protection zone” shall have the Engineer’s prior approval. All slopes and other areas not regarded should be avoided so that unnecessary damage is not done to the existing turf, tree root system ground cover.
5. The grade within the “tree protection zone” shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

The fence shall be similar to wood lath snow fence (48 inches high), plastic poly-type or and other type of highly visible barrier approved by the Engineer. This fence shall be properly maintained and shall remain up until final restoration, unless the Engineer directs removal otherwise. Temporary fence shall be supported using T-Post style fence posts. **Utilizing re-bar as a fence post will not be permitted.**

Temporary fence will be paid for at the contract unit price per foot for TEMPORARY FENCE, which price shall include furnishing, installing, maintaining, and removing.

C. Backfilling:

1. Prior to placing the topsoil and/or sod, in areas outside the protection zone, the existing ground shall be disked to a depth no greater than one (1”), unless otherwise directed by the Engineer. No grading will be allowed within the dripline of any tree unless directed by the Engineer.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PROJECT SPECIFIC)

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

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

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

Site 2233V3-1: I-80 ROW – Interstate 80, Will County
Noise Abatement Wall B-2

- Station 150+00 to Station 154+65 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 154+65 to Station 156+85 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic and Manganese.
- Station 156+85 to Station 159+00 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 159+00 to Station 162+95 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 162+95 to Station 167+00 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 167+00 to Station 169+0 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 169+00 to Station 170+70 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 170+70 to Station 173+00 (CL I-80), 85 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.

Site 2233V3-1: I-80 ROW – Interstate 80, Will County
Highway Median

- Station 158+70 to Station 194+50 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 194+50 to Station 197+55 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 197+55 to Station 225+55 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 225+55 to Station 229+50 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 229+50 to Station 233+60 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Manganese.
- Station 233+60 to Station 244+50 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 244+50 to Station 247+55 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic and Manganese.
- Station 247+55 to Station 250+60 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 250+60 to Station 290+00 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Arsenic, Lead and Manganese.
- Station 294+50 to Station 303+00 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 303+00 to Station 305+50 (CL I-80), 10 feet LT to 10 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

At the I-80 ROW property, Manganese was detected at a concentration exceeding the TACO Tier 1 soil remediation objectives for the Construction Worker ingestion exposure route in soil boring ROW-132, from the sample interval 4 to 9 feet deep, as noted in the Final Preliminary Site Investigation Report for this project submitted by Weston Solutions, Inc. Procedures shall be implemented to protect site workers and observers from hazards encountered during construction activities in locations containing contaminated materials, pursuant to Article 669 of the Standard Specifications for Road and Bridge Construction manual.

Site 2233V3-1: I-80 ROW – Interstate 80, Will County
Mainline Roadway – WESTBOUND

- Station 158+70 to Station 168+60 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 168+60 to Station 175+95 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Lead and Manganese.
- Station 175+95 to Station 180+50 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 180+50 to Station 195+80 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 195+80 to Station 202+60 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 202+60 to Station 205+10 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 208+20 to Station 210+30 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic and Manganese.
- Station 210+30 to Station 213+80 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

- Station 213+80 to Station 215+95 (CL I-80), 10 feet LT to 150 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 215+95 to Station 219+75 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 219+75 to Station 225+00 (CL I-80), 10 feet LT to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 225+00 to Station 227+85 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 227+85 to Station 230+40 (CL I-80), 10 feet LT to 160 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 230+40 to Station 234+60 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 234+60 to Station 240+80 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene and Manganese.
- Station 240+80 to Station 250+20 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 250+20 to Station 255+50 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 255+50 to Station 258+60 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 258+60 to Station 261+00 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.

- Station 261+00 to Station 265+00 (CL I-80), 10 feet LT to 95 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 265+00 to Station 269+00 (CL I-80), 10 feet LT to 90 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene and Manganese.
- Station 269+00 to Station 283+50 (CL I-80), 10 feet LT to 100 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Lead and Manganese.
- Station 283+50 to Station 285+85 (CL I-80), 10 feet LT to 120 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 285+85 to Station 289+85 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene and Manganese.
- Station 289+85 to Station 294+50 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(4). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene and Manganese.
- Station 294+50 to Station 297+80 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene and Manganese.
- Station 297+80 to Station 300+45 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 300+45 to Station 303+00 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 303+00 to Station 305+50 (CL I-80), 10 feet LT to 110 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

Site 2233V3-1: I-80 ROW – Interstate 80, Will County
Mainline Roadway – EASTBOUND

- Station 158+70 to Station 162+95 (CL I-80), 10 feet RT to 85 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 162+95 to Station 167+00 (CL I-80), 10 feet RT to 85 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 167+00 to Station 172+30 (CL I-80), 10 feet RT to 85 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 172+30 to Station 173+00 (CL I-80), 10 feet RT to 85 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 173+00 to Station 186+00 (CL I-80), 10 feet RT to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 186+00 to Station 188+60 (CL I-80), 10 feet RT to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 188+60 to Station 192+45 (CL I-80), 10 feet RT to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 192+45 to Station 198+50 (CL I-80), 10 feet RT to 135 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 198+50 to Station 201+15 (CL I-80), 10 feet RT to 120 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 201+15 to Station 207+45 (CL I-80), 10 feet RT to 110 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 207+45 to Station 211+25 (CL I-80), 10 feet RT to 140 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

- Station 211+25 to Station 213+80 (CL I-80), 10 feet RT to 120 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 213+80 to Station 215+20 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene.
- Station 215+20 to Station 217+90 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Iron, Lead and Manganese.
- Station 217+90 to Station 222+65 (CL I-80), 10 feet RT to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 222+65 to Station 226+45 (CL I-80), 10 feet RT to 110 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 226+45 to Station 232+60 (CL I-80), 10 feet RT to 120 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 232+60 to Station 235+70 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Carbazole, Dibenzo(a,h)anthracene, Indeno(1,2,3- cd)pyrene, Lead and Manganese.
- Station 235+70 to Station 237+70 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 237+70 to Station 247+10 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Chromium, Benzo(a)pyrene and Manganese.
- Station 247+10 to Station 252+90 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 252+90 to Station 257+00 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.

- Station 257+00 to Station 262+75 (CL I-80), 10 feet RT to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 262+75 to Station 276+20 (CL I-80), 10 feet RT to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 276+20 to Station 278+15 (CL I-80), 10 feet RT to 120 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 278+15 to Station 281+90 (CL I-80), 10 feet RT to 130 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 281+90 to Station 292+45 (CL I-80), 10 feet RT to 140 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Carbazole, Dibenzo(a,h)anthracene, Indeno(1,2,3- cd)pyrene, Naphthalene, Lead and Manganese.
- Station 292+45 to Station 296+95 (CL I-80), 10 feet RT to 130 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 296+95 to Station 303+00 (CL I-80), 10 feet RT to 110 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese.
- Station 303+00 to Station 305+50 (CL I-80), 10 feet RT to 110 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

At the I-80 ROW property, Naphthalene was detected at a concentration exceeding the TACO Tier 1 soil remediation objectives for the Construction Worker inhalation exposure route in soil boring ROW-53, from the sample interval 0 to 2 feet deep, as noted in the Final Preliminary Site Investigation Report for this project submitted by Weston Solutions, Inc. Procedures shall be implemented to protect site workers and observers from hazards encountered during construction activities in locations containing contaminated materials, pursuant to Article 669 of the Standard Specifications for Road and Bridge Construction manual.

Engineered Barrier. An engineered barrier shall be installed in storm sewer, sanitary sewer and/or water main trenches to limit the exposure and control the migration of contamination from the contaminated soil that remains within the trench excavation. It shall be placed beneath the trench backfill material at the following location:

- Station 229+50 to Station 233+60 (CL I-80), 10 feet LT to 10 feet RT (I-80 ROW, PESA Site 2233V3-1, Will County) – non-special waste. Contaminant of concern sampling parameter: Manganese.

The engineered barrier shall consist of a geosynthetic clay liner system, geomembrane liner, or equivalent material as approved by the Engineer. A geosynthetic clay liner shall be composed of a bentonite clay liner approximately 0.25 inches thick. The engineered barrier shall have a permeability of less than 10^{-7} cm/sec. Installation of the geosynthetic clay liner system shall be in accordance with the manufacturer's recommendations except that all laps shall face down- slope.

The geomembrane liner shall have a minimum thickness of 30 mils. The geomembrane liner shall line the entire trench and in accordance with the manufacturer's recommendations.

No equipment will be allowed on the engineered barrier until it is covered by a minimum of 1 foot of backfill. Any damage to the engineered barrier caused by the Contractor shall be repaired at no additional expense to the Department in accordance with the manufacturer's recommendations and as directed by the Engineer

Method of Measurement: The engineered barrier will be measured for payment in place and the area computed in square yards.

Basis of Payment: The engineered barrier will be paid for at the contract unit price per square yard for ENGINEERED BARRIER.

Work Zones

Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites:

None

REMOVAL OF TEMPORARY LIGHTING UNITS, SALVAGE

(Effective 02/01/2022)

Description. This work shall consist of the disconnection, removal and salvaging of the temporary lighting system.

CONSTRUCTION REQUIREMENTS

Removal. Removal shall include the removal of temporary poles (which may be wood, concrete, steel, or aluminum), aerial cable, and all associated apparatus and connections. This removal shall also include removal of all wiring and connections to the associated lighting controller. All equipment and material shall become property of the Department and shall be removed from the site.

When indicated, poles, mast arms, luminaires, and all associated hardware and appurtenances shall remain the property of the Department and shall be delivered to a Department facility within the District and unloaded and stacked there, as directed by the Engineer. Wood blocking, banding, or other appurtenant items required for proper stacking and protection shall be included. Luminaires shall be removed, boxed in new containers, approved by the Engineer, and delivered and unloaded at a Department storage facility, as designated by the Engineer.

All luminaires will be inspected by the Engineer. Non-operating or damaged luminaires shall be repaired or replaced in kind.

(The equipment to be salvaged are the temporary 80ft wood poles, 15ft mast arms and the high mast LED luminaires.)

The void caused by the removal of the pole shall be backfilled with suitable excavated material approved by the Engineer. Backfill shall be deposited in uniform lifts not exceeding 6 in. (150 mm) thick loose measure and compacted.

Backfill material for areas in the subgrade of the proposed improvement, and for areas outside of the subgrade where the inner edge of the void is within 2 ft (600 mm) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk shall be fine aggregate, gradation FA 6.

Disposal of surplus material shall be according to Article 202.03.

With the approval of the Engineer, the Contractor may partially remove the temporary lighting system after parts of the permanent lighting system are operational. Any modifications to the temporary system to keep the temporary lighting system and permanent lighting system operational shall be performed at no additional cost to the Department.

Method of Measurement. Units will be measured for payment as each on a per pole basis, regardless of pole material, mounting height, the number and type of mast arm(s), luminaires and other appurtenant items attached thereto.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVE TEMPORARY LIGHTING UNITS, SALVAGE.

REMOVE AND REINSTALL IMPACT ATTENUATORS

Description. This work shall consist of furnishing all equipment and labor required for the removal, storage, and reinstallation of existing impact attenuators as shown on the plans and/or directed by the Engineer.

Construction Requirements. The Contractor shall remove existing sand barrel impact attenuators from their current placement, store the barrels at an off-site location, and reinstall the sand barrels at a new location as shown on the plans.

The Contractor shall install the impact attenuators according to Section 643 of the Standard Specifications.

The cost of filling the barrels with sand shall be included in the unit price for this pay item, and no additional compensation shall be provided to the contractor.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans regardless of size, type or material.

Basis of Payment. This work shall be paid for at the contract unit price each for REMOVE AND REINSTALL IMPACT ATTENUATORS.

REMOVE CONCRETE HEADWALLS FOR PIPE DRAIN

Description. This work shall consist of the removal of existing concrete headwalls as designated in the plans.

Construction Requirements. Existing concrete headwalls shall be removed fully as designated in the plans. All earth and debris shall be removed from the invert of the portions of existing storm sewers and/or culverts which are to remain in service after the concrete headwall has been removed.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans regardless of size, type or material. Excavation of earth necessary to perform the removal of end treatments will not be measured for payment, but shall be included in the cost of the concrete headwall removal.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVE CONCRETE HEADWALLS FOR PIPE DRAINS. Earth and debris removed from existing storm sewers and/or culverts will not be measured for payment, but shall be included in the cost of the REMOVE CONCRETE HEADWALLS FOR PIPE DRAINS.

REMOVE EXISTING LIGHTING CONTROLLER AND SALVAGE

Description. This item consists of removing and salvaging an existing lighting controller cabinet, enclosed electrical equipment, and all other miscellaneous items associated with the lighting controller as shown on the plans, as describe herein, as directed by the Engineer and as required for a complete removal.

No removal work shall be permitted without approval from the Engineer. The existing electric utility power cables and conduit shall be disconnected from the meter. The cables shall be coiled and protected for re-use.

The existing lighting controller cabinet, enclosed electrical equipment, and all other miscellaneous items associated with the lighting controller shall remain the property of IDOT, shall be delivered to an IDOT facility within the District and unloaded and stacked there, as directed by the Engineer. Wood blocking, banding or other appurtenant items required for proper stacking and protection shall be included.

Any damage sustained to the existing lighting controller cabinet and its contents during the cabinet removal, delivery and unloading operations, shall be repaired or replaced in kind, to the satisfaction of the Engineer and IDOT at no additional cost. The Engineer and IDOT will be the sole judge to determine the extent of damage and the suitability of repair and/or replacement.

Method of Measurement. Each lighting controller cabinet, including all contents, which is removed and delivered to an IDOT storage facility will be counted as a unit for payment.

Basis of Payment. Removal and salvage of a lighting controller will be paid for at the contract unit price per each for REMOVE EXISTING LIGHTING CONTROLLER AND SALVAGE.

REMOVE IMPACT ATTENUATORS, NO SALVAGE

Description. This work shall consist of removing and disposing of existing impact attenuators at locations designated on the plans. The work will also include the removal of the existing concrete slabs and the concrete base.

The concrete slabs shall be removed and disposed of off-site.

Construction Requirements. No materials removed shall be salvaged under the contract. All materials shall be removed and disposed of according to Article 202.03 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans regardless of size, type, or material.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVE IMPACT ATTENUATORS, NO SALVAGE, regardless of size or type, which payment shall constitute full compensation for all removal, disposal, transportation and incidentals necessary to complete the work as specified.

The removing of the concrete base shall be paid for at the contract unit price EACH for REMOVE ATTENUATOR BASE.

REMOVE TEMPORARY CONCRETE BARRIER

Description. This work shall consist of the complete removal and disposal of existing temporary concrete barrier according to the applicable portions of Section 202 and Section 704 of the Standard Specifications and as specified herein.

Construction Requirements. The concrete barrier and any welded wire fabric and/or reinforcing bars, anchor bolts, joint filler, conduit or junction boxes embedded in or attached to the barrier shall be removed. This work shall include all saw cuts as required according to Article 440.03 of the Standard Specifications including those required at the base of the concrete barrier.

Method of Measurement. This work will be paid for payment in feet, in place and standing prior to removal.

Basis of Payment. Concrete barrier and base removal will be paid for at the contract unit price per foot for REMOVE TEMPORARY CONCRETE BARRIER or REMOVE TEMPORARY CONCRETE BARRIER, STATE OWNED.

REMOVE TEMPORARY WOOD POLE

Description. This item shall consist of the disconnection and removal of the temporary wood poles and aerial cable installed to provide temporary connections for the existing lighting system and all associated apparatus and connections in accordance with the Standard Specifications for Road and Bridge Construction adopted April 1, 2016, Section 841 except as specified within

Construction Requirements.

Removal. Removal shall be as described in Article 841.02. When the proposed lighting is installed and operational, All equipment and material removed as part of this item shall be removed and become the property of the Contractor and shall be removed from the site.

Method of Measurement. Units measured for payment will be counted on a per-pole basis, regardless of pole material, pole dimensions and installation depth.

Basis of Payment. This item shall be paid at the contract unit price each for REMOVE TEMPORARY WOOD POLE.

ROADWAY SWEEPING

Description. This work shall consist of sweeping the left and right shoulders and adjacent lane of all impacted expressways and expressway ramps at least once per month or as directed by the Engineer.

Sweeping equipment shall conform with Article 1101.03. Vacuum type equipment may be allowed at the discretion of the Engineer

Method of Measurement. This work shall be measured for payment in lane miles.

Basis of Payment. This work shall be paid for at the contract unit price per lane mile for ROADWAY SWEEPING.

ROAD CONSTRUCTION REPORTING AND SIGNING FOR VEHICLE WIDTH RESTRICTIONS

Introduction

The intent of this policy is to provide uniform width restriction signing and reporting in order to reduce the chances of oversized vehicles, particularly those operating under blanket permits, from becoming entrapped in construction zones.

Construction/Maintenance Projects Requiring Over Size and Over Weight Restrictions

- a) Closures of any roadway, Rail Road crossing, Interstate or Freeway Ramps
- b) All road construction that restricts the actual measured opening to less than 17' 6".
- c) Any construction zone with characteristics that have the potential of creating delays and/or potentially hazardous conditions such as roadways with a high traffic volume or unnecessary merging situations. Any other condition that the Engineer deems necessary to ensure safety should be listed.

Measuring with Restrictions

In order to ensure state-wide uniformity, the opening shall be measured as follows:

- a) Two fixed structures – Measurement shall be made between the narrowest points of the fixed structures. Fixed structures may include but are not limited to bridge railing, concrete barrier, cable rail, or guard rail.
- b) Fixed structure and non-fixed devices or equipment – Measurement shall be made between the two narrowest points of the fixed structure and non-fixed devices when such non-fixed devices cannot easily be moved to accommodate the overwidth load. Such devices or equipment may include snooper trucks, barricades/cones/drums placed to keep traffic away from open holes in the pavement, arrow boards, dynamic message signs, etc.
- c) Construction near a fixed structure – Construction activities near a fixed structure may result in a reportable width restriction where there is insufficient room for an overwidth load to safely move onto the structure

Reporting

In order to provide timely information to truckers, all road construction or maintenance activities which result in measured openings for traffic of less than 17' 6" or which involve the closure of any roadway, railroad grade crossing or freeway ramp are to be reported to the Central Bureau of Operations at least 21 days in advance of the date of the restriction start date, which may be different from the start date of the project itself. The reporting is to be on form OPER 2410. Note on the form if the restrictions will only be in effect during the time period of ½ hour before sunrise to ½ after sunset Monday through Friday and ½ hour before sunrise to noon on Saturday, or if they will be in effect at all times.

When using form OPER 2410, the restriction location on interstate routes or other freeways should be identified with mileposts and/or a distance from an identifiable location, such as an intersection of two routes. If the restriction is located at a structure, identify the feature crossed. The location of restrictions on conventional highways should be identified with a distance from an identifiable locations, such as an intersection of two routes and the From Mile/To Mile fields left blank. If construction is located at a structure, identify the feature crossed. If there are multiple structures with different width restriction dimensions, each structure and restriction must be listed separately. This can be accomplished on the same form.

If the construction and/or width restriction start/stop dates change after being submitted, a revised OPER 2410 must be submitted.

The width restriction dimension to be listed on form OPER 2410 and used on the width restriction signing should be the actual measured opening less 18". For example if the actual measured opening is 16' 3", the restriction dimension is to be reported and signed at 14' 9".

A greater deduction than 18" may be taken if, in the opinion of the Engineer, it is warranted due to unusual geometrics or other operational considerations. The dimension listed on form OPER 2410 and used on the signing should reflect the greater deduction.

After completion, the form is to be e-mailed to the **IDOT ROAD INFO** mailbox.

Emergencies or any unusual construction restrictions or closures should be reported immediately.

- a) During Normal Business Hours: Call (217) 782-8551. Submittal of OPER 2410 by e-mail to **IDOT ROAD INFO** is still required.
- b) After Normal Business Hours/ Weekends/ Holidays: Call the Communications Center (Station 1) at (217) 782-2937. After calling Station 1, submit OPER 2410 by e-mail to **IDOT ROAD INFO** and fax a copy to the Communications Center at (217) 782-1927.

Signing

Signing shall be provided whenever the actual measured restriction is less than 17' 6". W12- I102 signs should be placed prior to the beginning of the traffic control where the width restriction occurs. Advance signing (W12-I103) shall also be placed where the roadway intersects with the previous state route and with any major local routes where overwidth vehicles are likely to enter the highway. The advance signing must be visible to approaching traffic sufficiently in advance of the intersection to enable overwidth trucks to change direction. This may require the use of more than one advance sign at the intersection. The dimensions shown on the signing shall be the actual measured opening less 18" as noted previously

SEDIMENT BASIN

Description. This work consists of constructing a permanent sediment basin in accordance with the detail shown on the Plans and with Sections 202, 205 and 281 of the Standard Specifications.

The basins shall be a maximum of 2 feet deep with length and width dimensions as shown on the plans. The bottom of the basins shall be lined with filter fabric. Broken Concrete Riprap, eight inches in thickness, shall be hand placed on the liner forming the bottom of the basin. Gradation RR 4 stone riprap shall be placed around the perimeter of the basin and piled high enough to provide a two-foot catchment area within.

The excavation for the basin shall not be paid for separately but shall be included in the price of the sediment basin.

Measurement and Payment. This work shall be paid for at the contract unit price per each for SEDIMENT BASIN.

SERVICE PATROLS

Description. The Contractor shall provide vehicles and personnel to patrol the expressway, to relocate incidents and stalls from the traveled lanes up to and including loaded semi-trucks, to clean up debris from the incidents and, in general, to increase safety, reduce delays, and provide assistance to motorists. Vehicles shall continuously patrol the expressway within the patrol limits. Vehicles shall not be parked on standby waiting to be dispatched to an incident.

Patrolling Requirements. Service patrols shall be provided to cover the entire I-80 Project in accordance with the following requirements:

- **Dates:** Start 12:01 a.m. no later than ten days after the execution of the Contract by the Department or as directed by the Engineer.
- **Times:** 24 hours per day, 7 days per week.
- **Patrol Limits:** from Brisbin Road to Larkin Avenue
- **Number of Patrols:** one service patrol unit.

Patrol Vehicle Requirements. The service patrol vehicle shall be a “medium duty” tow vehicle with a minimum Gross Vehicle Weight Rating (GVWR) chassis of twenty nine thousand (29,000) pounds, dual wheel chassis and ten ton recovery equipment rating. Tow body shall have adequate storage for items listed in this special provision. All vehicles used on this project shall be less than two years old and have less than twenty-four thousand (24,000) miles on an individual vehicle’s odometer, engine, transmission, and chassis at the beginning of the project. The use of “flat bed” type recovery vehicles is prohibited.

Within one (1) week of the start of the project and before initiating any patrol activities, the Contractor along with the Engineer shall inspect each patrol vehicle and its associated equipment, accessories and parts to ensure that they meet all specifications and requirements contained herein. The Contractor shall perform basic similar inspections, at least once per month, throughout the duration of this project. The Contractor shall fully document all inspections and all actions taken as a result of such inspections, and submit them to the Department. The format of such documentation shall be submitted by the Contractor and approved by the Department before initiating service patrols.

All Service Patrol Vehicles shall be marked with logos and letters on 2-foot by 2-foot magnetic signs (each side of the vehicle). No other Logos, letters, and umbers except those required by law, shall be visible while on patrol. The wording on the magnetic signs will be as specified by the Department. “Service Free” stickers (3-inch capital letters) shall also be posted on both side of the vehicle. All identification markings shall be maintained in a clean and readable condition throughout this contract. All wording and logos shall be removed or covered when vehicles are not patrolling.

Each Service Patrol Vehicle shall be equipped with the following:

- A. Hydraulically operated, wheel lift-towing equipment, with a minimum lift rating of ten thousand (10,000) pounds retracted, eight thousand (8,000) pounds extended. All tow equipment shall include proper nylon webbed safety straps. The wheel lift shall accommodate tire sizes of both automobiles and medium duty trucks. Towing capacity of wheel lift shall be 32,000 pound minimum.
- B. Hydraulically operated tow boom with a minimum static rating of twenty thousand (20,000) pounds which shall be capable of towing up to an 80,000 pound loaded tractor trailer.
- C. Winch Cable – one hundred feet of ½” diameter, 6X19 with working limit of ten thousand (10,000) pounds.
- D. Accessory truck tow bar shall be rated at eighty thousand (80,000) pounds minimum.
- E. Two 12 foot 3/8 inch alloy tow chains, with grab hooks on each end.
- F. A rubber face push bumper.
- G. Spot light capable of directing a three hundred foot beam centered in any direction.
- H. Power outlets (hot boxes), front and rear mounted, with outlets compatible to twelve volt booster cables.
- I. Heavy duty, 145+ amps charged battery.
- J. A trailer hitch capable of handling a 1.875 inch and/or a 2 inch ball.
- K. Motorcycle transporting capability.
- L. Rear work lights.
- M. Safety chain D-ring or eyelet mounted on rear of vehicle.
- N. A truck mounted flashing Type B arrow board with in cab controls capable of folding by means of electrical hydraulic controls. Manually operated, fold up/fold down typed are not acceptable.
- O. Amber warning lights or strobe with front and rear directional flashing capability.

The vehicle shall also contain the following equipment, accessories, and parts:

- A. Tool Kit
- B. 2 gallons of diesel fuel in approved safety can.
- C. 2 gallons of unleaded gasoline in approved safety can.
- D. 2 3/8 inch safety chains, minimum of 5 feet in length, grab hooks on both ends.
- E. One First Aid kit.
- F. One fire extinguisher, twenty pound minimum, chemical ABC.
- G. One pry bar, minimum 36 inches long.
- H. 5 gallons of water.
- I. 2 wood blocks, 4-inch x 4-inch x 12-inch.
- J. A 24-inch wide street broom.
- K. A square-end shovel.
- L. 36 highway flares of 15 minute burn.
- M. 16 twenty-eight inch high reflectorized cones.
- N. A two ton, minimum, hydraulic floor jack.

- O. Lug wrenches for standard and metric.
- P. One set of booster cables, 25 feet in length.
- Q. Multipurpose funnel with flexible spout.
- R. Dolly, "pop-up-type" for removing otherwise untowable vehicles.
- S. 5 gallon can filled with oil absorbent material.
- T. One 5 gallon trash can for debris removal.
- U. One lock out set.
- V. One container of "plug-in-dike", to plug diesel fuel tanks.

The Contractor is responsible to replace items as they are used and/or damaged.

Requirements for Vehicle Operators. Service Patrol Vehicle Operators shall be licensed in accordance with the Illinois Vehicle Code of the vehicles to be used under this contract. Any change in drivers and vehicles as presented under this Contract must be approved in writing, in advance, by the Resident Engineer. Termination of the employee may occur for noncompliance. All operators must have a current Class A or B Commercial Driver's License with endorsements, if applicable, and be certified in CPR and basic first aid.

Operators shall be competent and trained in the tasks of tow truck operators and provide safe and proper discharge of their service responsibilities. The Contractor shall provide resumes of the proposed operators to the Department before assigning them to patrol vehicles. Potential operators shall be subjected to driving record and criminal background checks by the Illinois State Police. The Department reserves the right to not approve a driver based on any information obtained by the Department or information contained in the background checks.

The Service Patrol Vehicle Operator shall:

1. Follow all policies and procedure set forth in the I-80 Service Patrol Manual which will be given to the Contractor at the start of the project.
2. Work closely with the Illinois State Police, local fire departments, local police departments, and the Department's Emergency Traffic Patrol rendering assistance as needed.
3. Attend all Incident Management Meetings for this project.
4. Wear nametags with photo identification that are visible to the motorists.
5. Maintain "Service Patrol Logs" which will be completed daily and made available to the Department at all times. These Service Patrol Logs shall contain all times which will be listed in the I-80 Service Patrol Manual.
6. The Contractor shall provide 10,000 first-class postage paid I-80 Service Patrol Post Cards bearing the following return address: I-80 Service Patrol, Illinois Department of Transportation, 201 West Center Ct, Schaumburg, IL 60196. The format of the post card shall be approved by the Engineer. The Contractor shall be responsible for ensuring an adequate number of post cards are available. In each service patrol vehicle throughout the duration of this project. Operator shall distribute the post card to each motorist that the assist.

7. Not accept gratuities, gifts, or compensation in cash, check, or any form from the motorists under any circumstances. Not ask any motorist/passenger encountered for any personal information such as name, address, or phone number. VIOLATION OF THESE REQUIREMENT SHALL CONSTITUTE GROUNDS FOR IMMEDIATE DISMISSAL.
8. Not tow any vehicle to any location other than shoulders or drop locations.
9. Not recommend any specific secondary towing service or repair shop. VIOLATION OF THIS REQUIREMENT SHALL CONSTITUTE GROUNDS FOR IMMEDIATE DISMISSAL.

Communication Equipment Requirements. Each Service Patrol Vehicle shall be equipped with a licensed cellular telephone. Each vehicle shall also be equipped with an external speaker and public address system with one hundred watts output. The PA system shall be used while assisting motorists or as directed by the Department. The Contractor is expected to use the PA system in a professional manner.

In addition, each Service Patrol Vehicle shall have 2 Department supplied Star Com radios installed prior to initiating patrols. Each Service Patrol Vehicle shall be made available to the Department at a location in District 1 to have the radios installed. Each Service Patrol Vehicle shall be made available to the Department at a location in District 1 to have the radios inspected as necessary, and to have the radios removed at the conclusion of this project. The radios shall remain the property of the Department and shall be returned to the Department at the conclusion of this project.

Method of Measurement. Service Patrols shall be measured for payment in calendar days or fraction thereof for each vehicle and operator.

Basis of Payment. This work will be paid for at the contract unit price per calendar day or fraction thereof for SERVICE PATROL. This price shall include an operator, the vehicle, and all materials, supplies, and equipment necessary to reduce traffic delays by providing assistance to motorists and by relocations stalled and disabled vehicles in an expeditious manner.

SLOTTED DRAIN REMOVAL

Description. This work shall consist of the removal and disposal of existing slotted drains at the locations shown on the plans or as directed by the Engineer. Removal shall include all existing concrete and metal, including grates, associated with the slotted drain.

General. This work shall be performed in accordance with Section 551 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in place in feet, measured along the slotted drain grate.

Basis of Payment. This work will be paid for at the contract unit price per foot for SLOTTED DRAIN REMOVAL.

STABILIZED CONSTRUCTION ENTRANCE

Description. This work shall consist of the furnishing, installation, maintenance and removal of all stabilized construction entrances which are used to reduce or eliminate the tracking of sediment onto public right-of-ways or streets. Construction entrances shall be used in conjunction with the stabilization of construction roads and other exposed areas.

Materials. All materials shall conform to the applicable requirements of Materials, Division 1000 and specific references as follows:

- Coarse Aggregate Article 1004
- Filter Fabric Article 1080

Construction Requirements. Stabilized construction entrances shall consist of 12 inches of CA-1 Aggregate placed over filter fabric. The filter fabric shall be included with this pay item. The aggregate shall be crushed stone or crushed gravel.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Pipe used for this will not be paid for, but shall be included in the work. The stabilized construction entrance will have positive drainage away from the roadway.

Maintenance shall consist of placing additional aggregate of the same type and gradation as the base aggregate. Additional aggregate will not be paid for, but shall be included in the work.

After the stabilized construction entrances have served their purpose, the suitable aggregate shall be removed, and, at the direction and approval of the Engineer, utilized for embankment construction or otherwise disposed of as specified in Article 202.03 of the Standard Specifications.

Method of Measurement. This work will be measured for payment for payment in place and the area computed in square yards.

Basis of Payment. Payment for STABILIZED CONSTRUCTION ENTRANCE will be made at the Contract unit price per square yard, measured as specified.

TRANSFER SERVICE SIGN

This work shall consist of removing an existing service guide sign advertising a business establishment from a previously or newly erected business logo panel and reinstalling the business logo panel on a newly erected service guide sign.

Extreme care shall be taken not to damage or mar the sign in any way. Any sign damaged by the Contractor shall be replaced in exact kind at no cost to the Department.

Contractor shall coordinate with the adjacent contract's Contractor to store, transfer, and reinstall all applicable business logo panels to the newly erected service guide signs.

This work will be paid for at the contract unit price each for TRANSFER SERVICE SIGN, which price shall include payment in full for removing an existing service sign from a previously erected business logo panel and reinstalling the existing service sign on a newly erected business logo panel. The cost of transferring existing mileage plates and directional arrows for the service signs shall be considered included with this pay item.

TEMPORARY SUPPORT SYSTEM

Description. This work shall consist of the design, fabrication, furnishing, erecting and subsequent removal of temporary support system at the locations shown on the plans.

Construction Requirements. The Contractor shall submit complete design calculations and details, signed and sealed by a Structural Engineer licensed in the State of Illinois, to the Engineer for structural review and approval. Such approval shall in no way relieve the Contractor of responsibility for the safety of workers, the structure, and the travelling public.

Prior to ordering any materials for construction, the Contractor shall field-verify all existing dimensions, details and elevations as required for successful installation of the temporary support system. After the support system herein specified is no longer required, it shall be completely removed. All materials shall become the property of the Contractor.

Basis of Payment. This work shall be paid for at the contract unit price per each for TEMPORARY SUPPORT SYSTEM.

TRAVERSABLE PIPE GRATE, SPECIAL

Description. This work shall consist of constructing a traversable pipe grate on a concrete drop box, at the location and per the details shown on the plans and as directed by the Engineer.

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

Item	Article/Section
(a) Traversable Pipe Grate Components (Note 1)	
(b) Chemical Adhesive Resin System	1027

(c) High Strength Steel Bolts, Nuts, and Washers (Note 2)..... 1006.08

Note 1. All steel pipe shall be according to ASTM A 53 (Type E or S), Grade B, or ASTM A 500 Grade B, standard weight (SCH. 40). Structural steel shapes and plates shall be according to AASHTO M270 Grade 50 (M 270M Grade 345) and the requirements of Article 1006.04 of the Standard Specifications. All steel components of the grating system shall be galvanized according to AASHTO M 111 or ASTM F 2329 as applicable.

Anchor rods shall be according to ASTM F 1554, Grade 36 (Grade 250).

Note 2. Threaded rods conforming to the requirements of ASTM F 1554, Grade 105 (Grade 725) may be used for the thru bolts.

CONSTRUCTION REQUIREMENTS

Fabrication of the traversable pipe grate shall be according to the requirements of Section 505 of the Standard Specifications and as shown on the plans.

Anchor rods shall be set according to Article 509.06 of the Standard Specifications. Bolts and anchor rods shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Thru bolts shall be snug tightened and shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

Splicing of pipes shall be made by utilizing full penetration butt welds according to Article 505.04(q) of the Standard Specifications. In lieu of welding, bolted or sleeve type splices may be utilized, provided the splices are located over intermediate supports with no more than one splice per pipe run with the exception that no splice may occur in pipe runs under 30 ft (9 m) in length.

Method of Measurement. This work will be measured for payment in place in feet (meters). The length measured shall be along the pipe grate elements from end to end for both longitudinal and intermediate support pipes.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for TRAVERSABLE PIPE GRATE, SPECIAL. Such price shall constitute full payment for the fabrication and installation of the entire steel pipe grate system including, but not limited to, all associated steel plates, bolts, nuts, washers and anchor rods.

TREE REMOVAL DATE RESTRICTION

Description. Add the following to Article 201.04 of the Standard Specifications:

“No tree removal or tree clearing shall occur from April 1 to September 30 due to IDOT’s commitment to protect the Northern Long-Eared Bat (NLEB).”

TREE REMOVAL, ACRES (SPECIAL)

Modified: August 9, 2021

Project objectives and general requirements:

- 100% removal via mechanical and/or hand cutting methods of woody plant material (trees and shrubs).
- Disposal of all cut trees, shrubs, and chips should be hauled off-site.
- Wood chips shall be removed and not blown back onto the site.
- Preservation of all native shrubs and trees that are marked with green flagging.
- Damages to existing vegetation to remain, such as broken limbs, frayed limbs, or other plantings or roadside appurtenances caused by the Contractor’s tree removal or trimming operations shall be repaired at the Contractor’s expense to the satisfaction of the Engineer.
- Protection of soils from compaction, erosion, and disturbance are the Contractor’s responsibility prior to start of work. Any damage caused by Contractor including but not limited to tire ruts, damage to turf, damage to drainage swales, damage to trails, damage to road pavement, etc. shall be repaired by the Contractor at the Contractor’s expense to the satisfaction of the Engineer. This work shall consist of the removal of the existing woven wire fence, which may or may not include barb wired strands at those locations shown on the plans.
- Tree Removal, Acres (Special) shall include removal of typical amounts of litter and debris encountered during tree removal operations.
- No slash shall be left in drainage ways and be blocking drainage structures. No slash shall be left in piles.
- The Engineer shall have the ultimate authority to approve the final condition of slash. In areas where seeding will take place the use of a forestry mower to manage minor woody vegetation, grind slash, stumps under 6”, and any remaining woody plant debris down to the surface of the soil to prepare the site for future seeding.
- The Engineer shall have the ultimate authority to approve the final condition of slash. In areas where seeding will not take place, slash is acceptable at a maximum depth of no more than two (2) inches to act as a mulch. • Tree debris, logs, equipment, etc. should not be stored within clear zone.
- All cut trees and shrubs shall be removed off site within 24 hours.

Project Preparation. This shall include preparation of a clearing access plan and identification of sensitive natural resources. Mechanical clearing operations shall not begin until the Engineer indicates that ground conditions are appropriate to commence mechanical work.

Contractor shall contact the Roadside Development Unit at 847-705-4171, at least 2 weeks prior to beginning forestry work for layout.

Contractor shall furnish at time of layout the following as requested: wooden lathe, neon pink ribbon, neon green ribbon, pink marking paint.

A site visit prior to work shall be arranged with the Contractor, Tree Removal Contractor, the Engineer, and the Roadside Development Unit to do a walk through to review vegetation to protect and remain. Extreme care shall be taken when conducting work within the work site to lessen damage to native vegetation to remain.

Submittals. Contractor shall provide the Engineer with a list of herbicides, surfactants, water conditioners, dyes, pH balancers, and other chemicals and adjuvants to be used for implementation of this project for prior approval.

Prior to commencement of any work, submit to the Engineer a written description of all mechanical equipment and its intended use during the execution of the work for prior approval.

Tree Removal and Initial Cut Stump Treatment. All cutting of material shall be completed via mechanical (e.g., tracked skid-loaders, forestry mowers) and/or hand cutting (chain saws, clearing saws) methods. Any mechanized clearing equipment must be approved for use on the work site prior to its implementation.

In general, mechanical cutting equipment with all steel tracks or a ground pressure rating of greater than 9.0 psi will not be allowed unless the Contractor can adequately demonstrate that the use of such equipment will not cause adverse rutting/soil compaction to the work site and will not damage the pavement adjacent to the work site.

The Engineer may specify certain areas as "HAND CLEAR ONLY" to be avoided by mechanical equipment or access paths. In these areas, the Contractor is prohibited from using mechanical clearing equipment due to sensitive site conditions.

All woody trees and shrubs over two (2) feet in height of any diameter, including protruding stumps or fallen trees within the defined area shall be removed. Any woody vegetation under two (2) feet in height shall be treated with a foliar herbicide or resprout herbicide.

Branches on remaining trees shall be pruned off up to eight (8) feet from the ground.

All stumps shall be cut flat with no sharp points, and less than two (2) inches of surrounding grade shall be treated with an approved resprout herbicide mixed with a marking dye within twenty-four (24) hours of the tree being cut to prevent regrowth from those stumps.

All herbicides shall be applied according to the manufacturer's label specifications. Contractor personnel applying the resprout herbicide shall have a valid pesticide applicator license issued by the Illinois Department of Agriculture.

The resprout herbicide shall be approved by the Engineer. Resprout herbicide shall be labeled to control woody species present within clearing areas. Resprout herbicide shall be included in the cost of TREE REMOVAL, ACRES (SPECIAL).

The Contractor shall maintain copies at the project site of all current pesticide herbicide labels and Material Safety Data Sheets (MSDS) for all chemicals utilized during completion of the work.

Method of Measurement. TREE REMOVAL, ACRES (SPECIAL) will be measured in units of 1 square acre. Plan quantities are estimates only. Actual quantities will be measured in place. Agreement to plan quantities will not be allowed.

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work within forty-eight (48) hours. Work that is not acceptable on the inspection date will not be measured for payment. Individual areas will not be measured for payment if any portion of the area has not been completed to the satisfaction of the Engineer.

Basis of Payment. Tree removal shall be paid for at the contract unit price per acre for TREE REMOVAL, ACRES (SPECIAL). Payment for TREE REMOVAL, ACRES (SPECIAL) shall include the cost of all material, equipment, labor, removal, herbicide application, disposal, cleanup, and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

WINTER WORK

No adjustments will be made in the contract until prices for any concrete if winter work is necessary to meet the required completion dates specified in the contract.

WOVEN WIRE FENCE REMOVAL

Description. This work shall consist of the removal of the existing woven wire fence, which may or may not include barb wired strands at those locations shown on the plans.

General. The woven wire fence removal shall include the removal of woven wire fence, posts and foundations in their entirety.

The existing fence shall be removed in a logical sequence, and with continuity, ahead of fence replacement, at a distance that will not result in unusually long delays between fence removal and new fence replacement. At the end of each day's work or whenever no work is being performed in the areas that have had the fence removed, a temporary fence shall be installed by the Contractor. This temporary fence may be snow fence, or other fence material approved by the Engineer. Temporary fencing shall be kept to a minimum and shall be inspected daily by the Contractor. Maintenance shall be checked daily and kept up by the Contractor so long as the temporary fence is in use. Permanent and temporary fence ends shall be securely fastened together by steel wire in such a manner as to prevent casual dismantling of the temporary fence. No gaps shall be left between ends of the fence. There shall be no additional compensation for furnishing and installing temporary fence as herein specified.

The resulting void from the removal of the post or foundation holes shall be backfilled with compacted (hand tamped as a minimum) course aggregate material (CA-6, CA-10 or CA-12). If the holes are in turf, areas at finished grade they shall be capped with four (4) inches of topsoil graded to match existing ground. Any ruts resulting from these operations shall be filled with topsoil and graded smooth. No additional compensation shall be made for the off-site disposal of materials and for filling of foundation holes or ruts.

Existing posts which are set in concrete may be sawed off flush with the top of the concrete foundations. After the alignment of the new fence has been established and new posts are in place, the Contractor has the option of totally removing the old fence posts and foundations or removing the old fence posts and foundations a minimum of 6" below the existing ground elevation. No old fence posts and foundations are to remain in place upon completion of the new fence. All the holes from the old fence foundations shall be filled with natural sand. The top 6" shall be filled with topsoil.

Any damage to public or private property which results from the removal of existing fence shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost.

Method of Measurement. This work will be paid for payment in feet, in place and standing prior to removal.

Basis of Payment. This work will be paid for at the contract unit price per foot for WOVEN WIRE FENCE REMOVAL.

SOILS INFORMATION

Soil boring logs and generalized soil profiles are shown in the Plans for SN 099-8342, 099-8343, 099-0451, and 099-8339.

The reports below are available for inspection at IDOT District 1, 201 W. Center Court, Schaumburg, Illinois.

Structure Geotechnical Report
Interstate 80 EB/WB Over Roadway Ditch
Culvert At Station 209+76.81
PR SN 099-8342, Section 2021-154-R
Will County, Illinois
Prepared by Wang Engineering, Inc.
Original: June 6, 2022
Revised: June 24, 2022

Roadway Geotechnical Report
Interstate 80 From
Ridge Road To River Road
Improvements (MI-1)
Station 158+73 To Station 305+50
Will County, Illinois
Will County, Illinois
Prepared by Wang Engineering, Inc.
Original: December 21, 2021
Revised April 18, 2022

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES

Effective: October 4, 2016

Revised: March 1, 2019

Description. This work shall consist of furnishing and placing a membrane waterproofing system on the top slab and sidewalls, or portions thereof, for buried structures as detailed on the contract plans.

All membrane waterproofing systems shall be supplied by qualified producers. The Department will maintain a list of qualified producers.

Materials. The materials used in the waterproofing system shall consist of the following.

- (a) Cold-applied, self-adhering rubberized asphalt/polyethylene membrane sheet with the following properties:

Physical Properties	
Thickness ASTM D 1777 or D 3767	60 mils (1.500 mm) min.
Width	36 inches (914 mm) min.
Tensile Strength, Film ASTM D 882	5000 lb./in ² (34.5 MPa) min.
Pliability [180° bend over 1" inch (25 mm) mandrel @ -20 °F (-29 °C)] ASTM D 146 (Modified) or D1970	No Effect
Puncture Resistance-Membrane ASTM E 154	40 lb. (178 N) min.
Permeability (Perms) ASTM E 96, Method B	0.1 max.
Water Absorption (% by Weight) ASTM D 570	0.2 max.
Peel Strength ASTM D 903	9 lb./in (1576 N/m) min.

- (b) Ancillary Materials: Adhesives, Conditioners, Primers, Mastic, Two-Part Liquid Membranes, and Sealing Tapes as required by the manufacturer of the membrane and film for use with the respective membrane waterproofing system.

Construction. The areas requiring waterproofing shall be prepared and the waterproofing shall be installed in accordance with the manufacturer's instructions. The Contractor shall not install any part of a membrane waterproofing system in wet conditions, or if the ambient or concrete surface temperature is below 40° (4° C), unless allowed by the Engineer.

Surfaces to be waterproofed shall be smooth and free from projections which might damage the membrane sheet. Projections or depressions on the surface that may cause damage to the membrane shall be removed or filled as directed by the Engineer. The surface shall be power washed and cleaned of dust, dirt, grease, and loose particles, and shall be dry before the waterproofing is applied.

The Contractor shall uniformly apply primer to the entire area to be waterproofed, at the rate stated in the manufacturer's instructions, by brush, or roller. The Contractor shall brush out primer that tends to puddle in low spots to allow complete drying. The primer shall be cured according to the manufacturer's instructions. Primed areas shall not stand uncovered overnight. If membrane sheets are not placed over primer within the time recommended by the manufacturer, the Contractor shall recoat the surfaces at no additional cost to the Department.

The installation of the membrane sheet to primed surfaces shall be such that all joints are shingled to shed water by commencing from the lowest elevation of the buried structure's top slab and progress towards the highest elevation. The membrane sheets shall be overlapped as required by the manufacturer. The Contractor shall seal with mastic any laps that were not thoroughly sealed. The membrane shall be smooth and free of wrinkles and there shall be no depressions in horizontal surfaces of the finished waterproofing. After placement, exposed edges of membrane sheets shall be sealed with a troweled bead of a manufacturer's recommended mastic, or two-part liquid membrane, or with sealing tape.

Sealing bands at joints between precast segments shall be installed prior to the waterproofing system being applied. Where the waterproofing system and sealing band overlap, the installation shall be planned such that water will not be trapped or directed underneath the membrane or sealing band.

Care shall be taken to protect and to prevent damage to the waterproofing system prior to and during backfilling operations. The waterproofing system shall be removed as required for the installation of slab mounted guardrails and other appurtenances. After the installation is complete, the system shall be repaired and sealed against water intrusion according to the manufacturer's instructions and to the satisfaction of the Engineer.

Replace the last paragraph of Article 540.06 Precast Concrete Box Culverts and replace with:

Handling holes shall be filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation nor project above the outside surface to the extent that may cause damage to the membrane. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar compatible with the membrane.

Method of Measurement. The waterproofing system will be measured in place, in square yards (square meters) of the concrete surface to be waterproofed.

Basis of Payment. This work will be paid for at the contract unit price, per square yard (square meter) for MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES.

BAR SPLICERS

Effective: September 2, 2022

Revised: December 9, 2022

Add the following to Article 508.08(b):

When bar splicers are epoxy-coated, all damaged or uncoated areas near the threaded ends shall be coated with a two-part epoxy according to ASTM D 3963 (D 3963M). All threaded ends of Stage II construction threaded splicer bars shall be coated according to ASTM D 3963 or dipped in an epoxy-mastic primer prior to joining the Stage II construction threaded splicer bar to the threaded coupler.

Add the following to Article 1006.10(a)(1)g:

For bar splicers with welded connections between the threaded coupler and threaded rod, the Stage I construction threaded splicer bar shall be welded to the threaded coupler using an all-around fillet weld.

NOISE ABATEMENT WALL, GROUND MOUNTED

Revised: December 9, 2022

General. This work shall consist of furnishing the design, shop drawings, materials, post anchorage, and construction of ground mounted concrete noise abatement walls (noise walls) according to this Special Provision, the Contract Plans and/or as directed by the Engineer.

The noise abatement wall shall consist of precast concrete panels spanning between vertical posts supported by concrete drilled shaft foundations (ground mounted) as shown on the plans. Driven piles will not be allowed. The posts shall be steel or concrete, unless otherwise specified on the Contract Plans. The design, material, fabrication and construction shall comply with this Special Provision and the requirements specified by the noise wall supplier selected by the Contractor for use on this project. The walls shall have no omissions or gap except as detailed in the Contract Plans.

The Contractor shall verify the locations for the proposed ground mounted wall for conflicts and inform the Engineer in writing of any conflicts before realigning or redesigning the wall. The Contractor shall realign or redesign the wall to avoid any conflicts.

Post spacing shall avoid existing and proposed underground utilities and storm sewers.

Wall components shall be fabricated and erected to produce a precast concrete reflective noise wall system and/or an absorptive noise reduction system at the locations shown in the Contract Plans. The noise reduction system shall satisfy the acoustical requirements as specified on the Contract Plans. An absorptive noise reduction system may be used as an alternate to a reflective noise wall system. Substitution of alternate materials in lieu of precast concrete panels will not be allowed.

All appurtenances behind, in front of, under, over, mounted upon, or passing through the noise wall, such as drainage structures, fire hydrant access, highway signage, emergency access, utilities, and storm sewers shall be accounted for in design of the wall.

The noise walls shall be designed and constructed to extend to the minimum lines, grades and dimensions of the wall envelope, with no omissions or gaps, as shown on the Contract Plans and as directed by the Engineer.

Submittals. A complete wall and foundation design submittal, including design calculations for wall panels, posts, foundations, and all connections and shop drawings shall be submitted to the Department for review and approval no later than 90 days prior to beginning construction of the wall. The time required for the preparation and review of these submittals shall be charged to the allowable contract time. Delays caused by untimely submittals or insufficient data will not be considered justifications for any time extensions. No additional compensation will be made for any additional material, equipment or other items found necessary to comply with the project specifications as a result of the Engineer's review. The Contractor will be required to submit the necessary shop drawings. All submittals shall be prepared and sealed by an Illinois Licensed Structural Engineer.

Submittals shall include all structural calculations, details, dimensions, quantities and cross sections necessary for the construction of the noise abatement walls including but not be limited to:

- (1) Structural design calculations for all structural members, foundations, and connections prepared and sealed by an Illinois Licensed Structural Engineer, and prints of shop drawings on reduced size 11 x 17 in. (275 x 425 mm) sheets in accordance with Article 503.05 and 1042.03(b) of the Standard Specifications.
- (2) A plan view of the wall indicating the stations and offsets required to locate the drilled shaft foundations. The proposed foundation diameter(s) and spacing(s) shall be indicated with all changes to the horizontal alignment shown. Each panel and post shall be numbered and any changes in type or size shall be noted. The centerline of any utilities passing under the wall and locations of expansion joints, access doors, lighting, signing, curb cuts, and drainage structures shall also be shown.
- (3) An elevation view of the wall, indicating the elevations of the top of the posts and panels as well as the elevations of the bottom of the panels, tops of the shaft foundations, all steps in wall system, the finished grade line, and vertical clearances to existing utilities and storm sewers. Each post size and length, panel type and size, and foundation depth shall be designated.
- (4) A typical cross section(s) that shows the panel, post, foundation, and the elevation relationship between existing ground conditions and the finished grade as well as slopes adjacent to the wall.

- (5) All general notes required for constructing the wall.
- (6) All details for the steps in the bottom of panels shall be shown. The bottom of the panels shall be located at or below the theoretical bottom of panel line shown on the Contract Plans. The theoretical bottom of panel line is assumed to be 8 in (200 mm) below the finished grade line at front face of the wall for ground mounted noise walls, unless otherwise shown on the Contract Plans.
- (7) Tops of the panels and posts shall extend to or above the theoretical top of wall line shown on the Contract Plans. All panel tops shall be cast and placed horizontally with any changes in elevation accomplished by stepping adjacent panel sections at posts. Steps shall not exceed 2 ft (300 mm) in height.
- (8) All panel types shall be detailed. The details shall show panel weight, orientation, all dimensions necessary to cast and/or fabricate each type of panel, the reinforcing steel, and location of post or foundation connection hardware as well as lifting devices embedded in the panels. The Noise Reduction Coefficient (NRC) of each panel of the absorptive face shall be noted.
- (9) All post types shall be detailed. The details shall show post weight, orientation, all dimensions necessary to cast and/or fabricate each type of post, the reinforcing steel, connecting plates, and anchorage details as well as lifting devices embedded in or attached to the posts. Post spacing for walls shall be limited to a distance that does not over stress the supporting structure.
- (10) Details of wall panels with appurtenances attached to or passing through the wall, as shown on the contract plans, such as utilities, emergency access doors, framed openings, drainage structures, signs, etc. shall be shown. Any modifications to the design or location of these appurtenances to accommodate a particular system shall also be submitted.
- (11) All architectural panel treatment, including color, texture and form liner patterns shall be shown. All joints shall be placed horizontal or vertical and shall be aligned with adjacent panels.
- (12) The details for the connection between panels and posts as well as their connection to the foundation, shall be shown. Foundation details, including details showing the dimensions, reinforcement, and post anchorage system for the drilled shaft foundations, shall be shown. The method of securing the reinforcement in the foundation prior to concrete placement shall be shown.

- (13) Testing, certifications and reports from independent laboratories documenting that the panel's sound Transmission Loss (TL) and NRC for the panel satisfy the criteria shown in the design criteria section of this specification. The testing results for the flame spread, smoke density and freeze-thaw/salt scaling requirements described in the materials section of this specification shall also be submitted. If unable to document panel and post deflections by calculations, reports of full scale testing shall be submitted to demonstrate the deflection criteria have been met.
- (14) Manufacturer recommended installation requirements, a sequence of construction and a detailed bill of materials shall be included.
- (15) The color of the wall panels and support posts identified by Federal Standard 595-B color number.

The Contractor shall deliver to the Department, a 2 ft x 2 ft (600 mm x 600 mm) precast concrete sample of the wall which contains the colors, textures and patterns proposed for use on the project for approval.

The samples shall be made at the same plant manufacturing the product for the noise walls under this contract, and shall be representative of those which will be tested per this specification. Once the color sample is approved, a batch shall be designated by batch number and date and will remain the standard for the entire project.

The Contractor shall submit site access plans showing access and limits of the work areas for the installation of the wall. Any required traffic controls shall be according to the requirements in the plans or the special provision for TRAFFIC CONTROL PLAN.

The initial wall and foundation design submittal shall include three (3) sets of shop drawings and calculations. One set of drawings will be returned to the Contractor with any corrections indicated. The Contractor shall do no work or ordering of materials for the structure until the Engineer has approved the submittal.

Design Criteria. The wall system shall be designed to withstand wind pressure, applied perpendicular to the panels in either direction, according to the AASHTO LRFD Bridge Design Specifications, Chapter 15, for the Design of Sound Barriers. The noise wall design life shall be 75 years unless otherwise noted. The wall system shall be designed to withstand active earth pressure and live load surcharge at locations indicated on the plans. The contractor shall be responsible for the structural adequacy of the panels, posts, foundations and connections as well as overall wall overturning stability. Prestressed and/or post tensioned panel concepts will not be permitted.

The factored Strength III design wind loading shall be as specified on the plans but not less than 35 psf (1.7 kPa). The Service I factored design wind loading shall be as specified on the plans but not less than 15 psf. When a sound wall is also required to support earth pressures, the unfactored design active earth pressure shall be based on an equivalent fluid pressure of 55 pounds per cubic foot (880 kg/m³) and a minimum live load surcharge pressure of 2 feet (600 mm) of earth pressure. The earth pressure fill height shall be defined by the proposed grade line elevation and the theoretical bottom of panel line.

The post shall be connected to the foundation by either embedding the post inside the concrete foundation shaft or by attaching the post to the foundation shaft with base plates and anchor bolts as required by design. Embedded posts shall extend into the shaft for the full length of the shaft. For base plate and anchor bolt connections, the minimum number of anchor bolts per post shall be four 1 in. (M24) diameter bolts, with a minimum embedment depth of 18 in. (450 mm). The concrete shaft for base plate and anchor bolt type connections shall be reinforced. For embedded post type connections, the shaft need not be reinforced unless the minimum clear cover over the post exceeds 10 inches (250 mm). When reinforcement of the concrete shaft is required as specified above, the reinforcement shall consist of a minimum of eight #5 (#15) vertical bars symmetrically placed and tied with #3 (#10) ties at 6 in. (150 mm) centers. An additional tie shall be provided at the top and bottom of the foundation. As an alternative to the ties, a #3 (#10) spiral at a 6 in. (150 mm) pitch with an additional 1 1/2 turns at the top and bottom of the foundation or an equivalent 4 x 4 – W12.3 x W7.4 welded wire fabric may be substituted. Reinforcement bars inside the concrete foundations do not require epoxy coating.

Posts shall be oversized by 0.0625 in. in each direction to account for corrosion.

The material and construction of the foundations (drilled shafts) shall be according to Section 516 of the Standard Specifications.

The shaft foundation dimensions shall be determined according to AASHTO LRFD Bridge Design Specifications. Soil borings from prior soil investigations when available are shown in the plans and may be used to generate foundation design parameters. The design shall utilize load and resistance factors as specified in the AASHTO LRFD Bridge Design Specifications and shall account for the effects of a sloping ground surface and water table indicated on the plans. In the event that insufficient data is shown on the plans, the following parameters should be assumed for the foundation design:

Effective unit weight	70 pcf (1120 kg/m ³)
Internal friction angle	30 degrees
Cohesion intercept	0 ksf (0 kg/m ³)

The maximum post spacing shall be as specified in the Contractor's approved design, but not greater than 20 ft.

The maximum allowable panel deflection shall be no more than the panel length (L) divided by 240 ($L/240$). The maximum post deflection due to post curvature shall be $H/180$, where H is the height of the post above the foundation. The maximum total post deflection due to post curvature, foundation curvature, and top-of-foundation rotation shall be $H/90$. A method utilizing P-y springs for different soil layers shall be used to calculate the total post deflection. When meeting the deflection limits cannot be demonstrated by calculations, a lateral load test and report shall be submitted to the Engineer indicating that the above noted design lateral loads can be applied to the panels and/or posts without exceeding noted deflection tolerance. The test shall apply lateral loads to the panel simulating uniform wind pressure, and earth pressure when present.

The design shall account for the presence of all appurtenances mounted on or passing through the wall such as drainage structures, existing or proposed utilities, emergency access doors and other items.

Corrugations, ribs or battens on the panel shall be oriented vertically when erected. The panels shall be designed to prevent entrapment and ponding of water. The walls shall not have openings allowing the perching or nesting of birds or the collection of dirt, debris or water.

The walls shall not have handholds or grips promoting climbing of the walls. Any bolts or fasteners used to connect material to the supporting panel, posts, or foundations shall be recessed or embedded in concrete, hidden from view and weather exposure. No external mechanical fastening devices such as frames or clips shall be used for these connections.

The noise abatement material shall be designed to achieve a sound TL equal to or greater than 20 dB in all one-third octave bands from 100 hertz to 5000 hertz, inclusive, when tested according to ASTM E-90. The sound absorptive material shall have a minimum NRC as indicated on the plans. For the side of the walls specified as reflective, no minimum NRC is required.

The NRC shall be determined per ASTM E795, tested according to ASTM C423 (mounting type A). The ratio of noise absorptive material on the panel surface to total wall area (including posts) shall be greater than 90 percent. NRC testing shall be performed on coated samples, utilizing the stain that will be applied for color.

Access Doors. All access doors shall be designed to fit within the design of the noise wall as shown on the plans. Doors shall be complete with hardware and locking devices. Each door shall provide a 3 ft (0.9 m) wide by 7 ft (2.1 m) high minimum clear access opening. Both door jambs shall be securely fastened to anchored posts. Front and back face of the installed door shall be flush with the faces of the noise wall.

Perimeter and internal door frames shall consist of welded hot dip galvanized steel channels and miscellaneous angle stiffeners and plates designed to provide support for noise wall panels to match the noise wall material as specified in this special provision. Infill noise panel geometry and color shall match the adjacent noise wall panels. Noise wall panels shall be fastened to steel frames as per panel manufacturer's recommendations.

The door, jambs, head, hinges, door appurtenances, and adjacent ground mounted posts shall be designed to withstand the wind pressure of 30 psf (1.4 kPa) with the door in fully open and fully closed positions and support the weight of the door and a 300 lb (136 kg) vertical load on the non-hinged side of the door. Provide steel bracing as required. Door bottom shall be equipped with drainage holes to avoid accumulation of trapped moisture.

Door jambs and head section shall be hot dip galvanized steel. Door hinges shall be barrel type, edge mount, extra heavy-duty, hot dip galvanized steel or stainless steel. The hinges shall be designed to support the weight of door assembly, wind loads on the open door, and a 300 lb (136 kg) vertical load on the non-hinged side of the door.

Door pulls shall be provided on both sides of access door(s). Door locking hardware shall be hasp-type to be used with a padlock and shall be located according to local fire department or other requirements as applicable. A solid steel emergency access lock box system shall be provided and mounted near the hasp location at the steel post on the locking hardware side of door. The lock box for emergency access doors shall be according to local fire department requirements.

Doors shall be equipped with lifting bolts or beams as required for safe lifting of door units.

Materials. Noise wall materials shall conform to the supplier's standards, AASHTO Specifications for noise walls and the following:

- (a) Reinforcement bars shall satisfy ASTM A706 Grade 60 (400). Welded wire fabric shall be according to AASHTO M 336. All reinforcement in the wall panels shall be epoxy coated or galvanized.
- (b) Anchor bolts shall conform to ASTM F1554 Grade 55 or 105 and shall be galvanized per AASHTO M232.
- (c) The precast elements shall be according to applicable portions of Section 1042 of the Standard Specifications. The precast elements are considered to be Precast Concrete Structural Members. Coarse Aggregate shall meet the requirements of Article 1004.02(f) of the Standard Specifications. Concrete shall be Class PC with a minimum compressive strength of 4500 psi (31,000 kPa) at 28 days. Dry cast concrete element will not be permitted.
- (d) For sound absorptive panels, the manufacturer shall provide test information from an independent lab that the panels meet specified durability requirements.

All sound absorbing concrete and composite concrete components shall be tested for long-term durability according to ASTM C672 and the following modifications and/or requirements:

Three specimens of a full cross section of the panel at least 144 square inches in face area will be selected at random from the provided panel. Sample specimens shall be representative of the manufacturer's continuous production operation, as selected and marked by the engineer. Specimens shall be 2D-symmetric and shaped according to the testing laboratory's accommodations. Surfaces of the sample specimens shall be prepared for testing as follows. Brush the surfaces of the sample to remove any loose particles. Before testing, submerge the test specimens be submerged in water for a period of 24 hours before testing. Immediately following this, cover the specimens with the sodium chloride solution as stated below.

Test Procedure

Place samples in a 5 sided water tight container, fully submerged in a solution of sodium chloride (concentration 3% by mass). Maintain 1/4 inch of sodium chloride solution above the top surface of the fully submerged specimen within the container.

Subject the submerged specimens to continuous freeze-thaw cycles as follows:

After each five cycles, remove the salt solution and particles of deteriorated concrete from the slab and collect in a watertight container. The operation is best accomplished by tilting the slab in a funnel approximately 20 inches in diameter and washing the surface of the slab with a 3% sodium chloride solution. Continue this washing until all loose particles are removed from the sample. Strain the solution through a filter and dry the residue at 221 degrees Fahrenheit to a constant mass condition. Cumulatively weigh the residue after each five cycles. The dry residue is defined as the loss of mass. Calculate the loss of mass to the nearest 0.01 pounds per square foot, not including the exposed surface of any core material on the cast or cut edges. Visually rate the surfaces according to 10.1.5 of ASTM C672 including any delamination of the sound absorbing material from the concrete core for composite concrete materials. After each washing of each sample, re-establish the initial submerged condition with a new solution of 3% sodium chloride before continuing with freeze-thaw cycling.

Continue the test until 30 freeze-thaw cycles have been completed.

During the test position and support each specimen to allow free circulation of the test solution under, around, and over test pieces. Support the bottom of the specimens on blocks in a manner to facilitate movement of moisture through and around the test specimens.

Test Report

Submit to the engineer an independent testing laboratory test report which shows that all solid and composite concrete products meet or exceed the following criteria:

1. After 30 freeze-thaw cycles the test specimens shall not exhibit excessive deterioration in the form of cracks, spalls, aggregate disintegration, delamination or other objectionable features.
 2. Compliance with the test requirements is based upon a loss of mass of not more than 0.2 pounds per square foot from the surface after 30 cycles of freezing and thawing.
 3. The report shall include the following:
 - a. Name of manufacturer.
 - b. Location of production.
 - c. Production description.
 - d. Date product sample was cast.
 - e. Date testing began.
 - f. Specimen identification.
 - g. 5x7-inch color photographs of the test specimens before and after the 30 cycles of freeze-thaw test showing both sound absorbing faces and at least one representative side view of a cut (not cast) face, and any defects.
 - h. A graph of the cumulative mass loss of each specimen plotted against the number of freeze-thaw cycles for 5, 10, 15, 20, 25, and 30 freeze-thaw cycles.
 - i. Visual rating according to ASTM C672 Section 10.1.5, including report of any delamination of the sound absorbing material from the concrete core for composite concrete components.
- (e) The manufacturer for the noise abatement wall shall provide their quality control plan for testing the product, and test results shall be provided upon request by the Engineer. Manufacturers on the Department's Qualified Product List of Certified Precast Concrete Producers who are approved for noise abatement walls will be considered in compliance with this requirement. The panel manufacturer shall warranty the panels for aesthetic coating durability and no material delaminations or failures for a minimum of ten years.
- (f) Steel plates and posts shall conform to AASHTO M 270 (M 270 M) Grade 36 (250) or 50 (345). All portions of the post shall be galvanized according to AASHTO M111 and ASTM A385 or primed according to Section 506 of the Standard Specifications. The exposed portions of the steel posts shall be painted according to Section 506 of the Standard Specifications. The adjacent concrete panels shall be protected from over spray. The color shall closely match the color of the concrete panels, unless otherwise specified on the plans. Steel bolts, nuts, and washers shall be galvanized according to AASHTO M232.
- (g) Lifting inserts cast into the panels shall be hot dipped galvanized.
- (h) Non shrink grout shall be according to Section 1024 of the Standard Specifications.

- (i) The default color of both sides of the panels, posts and other visible elements shall be a light brown earth tone unless specified otherwise on the Contract Plans. Colors shall be achieved through the use of integral pigments or stains, which are in compliance with the environmental regulation of the State of Illinois. Components manufactured with integral pigment shall be tested and certified in conformance to ASTM C979. Stains shall be non film forming, penetrating stains. Stains shall be applied to concrete at the cured age of the manufacturer's recommendation. Surface preparation and application shall be according to manufacturer written recommendations. Coloring of concrete elements shall be accomplished using a single component water based, sound absorptive, penetrating, architectural stain that is weather resistant. Stains and/or pigments must be applied at the manufacturing plant; application in the field on site will not be allowed. The final color shall be consistent with the quality and appearance of the approved sample. The surface coating shall be tested for accelerated weathering as follows:
- (j) Submit to the engineer certification of compliance that all coatings on barrier components, with the exception of structural steel and wood components comply with the following requirements when tested according to ASTM Standard G155, G153, or G152 after 2400 hours of exposure on a cement based test specimens:
1. No checking when rated according to ASTM D660.
 2. No cracking when rated according to ASTM D661.
 3. No blistering when rated according to ASTM D714.
 4. No difference in adhesion between the unexposed control sample and an exposed sample when tested according to ASTM D3359, Method A.
 5. No chalking less than #7 rating when rated according to ASTM D4214.
 6. No color change greater than 5 NBS units when measured according to ASTM D2244, using illuminant D65 and the 1964 10-degree standard observer.
- (k) The finish pattern of the precast panels shall be as specified on the Contract Plans.
- (l) With the exception of the steel and Portland cement concrete elements of the wall, all materials shall be tested for flame spread and smoke density developed according to ASTM E84. The material must exhibit a flame-spread index less than 10 and a smoke density developed value of 10 or less.

Fabrication. All precast units shall be manufactured according to Section 504 of the Standard Specifications, and the following requirements and tolerances with respect to the dimensions shown on the approved shop drawings.

- (a) The minimum reinforcement bar cover shall be 1 1/2 in (40 mm).
- (b) Panel dimensions shall be within 1/4 in (6 mm).
- (c) All hardware embedded in panels or posts shall be within 1/4 in (6 mm).
- (d) Angular distortion with regard to panel squareness, defined as the difference between the two diagonals, shall not exceed 1/2 in (13 mm).
- (e) Surface defects on formed surfaces measured on a length of 5 ft (1.5 m) shall not be more than 0.10 in (2.5 mm).
- (f) Posts shall be installed plumb to within 1/2 in (13 mm) of vertical for every 15 ft (5 m) of height and to within 1/2 in (13 mm) of the station and offset indicated on the approved shop drawings.
- (g) Drilled shaft foundations shall be placed within 2 in (50 mm) of the station and offset indicated on the approved shop drawings.
- (h) Panel reinforcement and lifting devices shall be set in place to the dimension and tolerances shown on the plans and these special provisions prior to casting.

The date of manufacture, the production lot number, and the piece-mark shall be clearly noted on each panel.

Absorptive material shall be permanently attached to their supporting elements and no external mechanical fastening systems such as frames or clips shall be used. Any bolts or fasteners used shall be recessed or embedded below the surface.

Any chipping, cracks, honeycomb, or other defects, to be allowed, shall be within acceptable standards for precast concrete products according to Section 1042 of the Standard Specifications and as determined by the Engineer.

Construction. The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the contract unit price for Noise Abatement Wall. The instructions provided by the wall supplier are guidelines and do not relieve the contractor of the responsibility to adhere to contract requirements.

It is recommended that all bottom panels be installed for a length of wall prior to placing middle or top panels. After bottom panels are in-place, finish grading can be accomplished with heavy equipment by reaching over the in-place panels.

Site excavations and/or fill construction shall be completed to plan elevations and profiles prior to the start of wall foundation construction. All underground utility or drainage structure installation shall be completed prior to foundation installation. The ground elevations as shown on the plans and the approved noise wall shop drawings shall be verified by the contractor and discrepancies corrected prior to material fabrication. Buried utilities shall be marked to verify proper clearance from the drilled foundations. The Contractor should consider overhead obstruction such as electric and telephone wires prior to wall erection.

If the soils encountered during drilling of the foundations do not satisfy the design strengths shown on the Contract Plans, the Engineer shall be notified to evaluate the required foundation modifications. The shaft foundation will normally require additional length, which may be paid separately under Article 104.03 of the Standard Specifications. All drilled shaft excavations shall be filled with concrete within 6 hours of their initiation. The concrete for the drilled shaft foundations shall be placed against undisturbed, in-place soils. The concrete at the top of the shaft shall be shaped to provide the panels on each side of the post adequate bearing area and correct elevation per the approved shop drawings.

The panels shall be delivered to the project site in full truckload quantities. They may be off-loaded individually or by forklift with a solid steel plate spanning between the forks providing uniform, fully distributed bearing support to the underside of the panels. Units shall be shipped, handled and stored in such a manner as to minimize the danger of staining, chipping, spalling, development of cracks, fractures, and excessive bending stresses. Panels shall be stored and shipped in bundles, on edge. Any touch up and repair is at the Contractor's expense and shall be carried out according to the manufacturer's recommendations.

Method of Measurement. Noise abatement walls will be measured in square feet (square meters) from the wall envelope, defined by the theoretical top of wall line to the theoretical bottom of wall line for the length of the wall as shown on the Contract Plans.

Drilled shafts, concrete, reinforcement bars and other elements for supporting the ground mounted noise abatement walls will not be measured for payment.

Access doors shown on the Contract Plans will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for NOISE ABATEMENT WALL, GROUND MOUNTED.

The costs for drilled shafts, concrete, reinforcement bars and other elements supporting the noise abatement walls will not be paid for separately but will be included in the item for NOISE ABATEMENT WALL, GROUND MOUNTED.

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.”

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006

Revised: August 1, 2017

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

- Where: CA = Cost Adjustment, \$.
BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).
BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).
%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.
Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$
For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

- Where: A = Area of the HMA mixture, sq yd (sq m).
D = Depth of the HMA mixture, in. (mm).
G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
V = Volume of the bituminous material, gal (L).
SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

BLENDED FINELY DIVIDED MINERALS (BDE)

Effective: April 1, 2021

Revise the second paragraph of Article 1010.01 of the Standard Specifications to read:

“Different sources or types of finely divided minerals shall not be mixed or used alternately in the same item of construction, except as a blended finely divided mineral product according to Article 1010.06.”

Add the following article to Section 1010 of the Standard Specifications:

“1010.06 Blended Finely Divided Minerals. Blended finely divided minerals shall be the product resulting from the blending or intergrinding of two or three finely divided minerals. Blended finely divided minerals shall be according to ASTM C 1697, except as follows.

- (a) Blending shall be accomplished by mechanically or pneumatically intermixing the constituent finely divided minerals into a uniform mixture that is then discharged into a silo for storage or tanker for transportation.
- (b) The blended finely divided mineral product will be classified according to its predominant constituent or the manufacturer’s designation and shall meet the chemical requirements of its classification. The other finely divided mineral constituent(s) will not be required to conform to their individual standards.”

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."

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

- 1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.
- 2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices 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. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

Effective: September 1, 2000

Revised: March 2, 2019

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **22.00%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:
<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.
 - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
 - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

- (b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.
- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at DOT.DBE.UP@illinois.gov.
- (b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) SUBCONTRACT. The Contractor must provide copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
- (1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
 - (2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
 - (3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

- (e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.
- (6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;

- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.
- (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

- (h) **RECONSIDERATION.** Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of “Good Faith Effort Procedures” of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

FUEL COST ADJUSTMENT (BDE)

Effective: April 1, 2009

Revised: August 1, 2017

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate “Yes” for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked “Yes”, and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) **Category A: Earthwork.** Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) **Category B: Subbases and Aggregate Base Courses.** Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

Where: CA = Cost Adjustment, \$
 FPI_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.

HIGH TENSION CABLE MEDIAN BARRIER REMOVAL (BDE)

Effective: April 1, 2022

Replace Section 632 of the Standard Specifications with the following:

“SECTION 632. GUARDRAIL, CABLE ROAD GUARD, AND HIGH TENSION CABLE MEDIAN BARRIER REMOVAL

632.01 Description. This work shall consist of the removal and disposal of existing guardrail (including traffic barrier terminals), cable road guard, and high tension cable (HTC) median barrier.

CONSTRUCTION REQUIREMENTS

632.02 General. Posts and terminals shall be removed completely or cut off at least 6 in. (150 mm) below the ground surface. Socket foundations shall be removed at least 1 ft (300 mm) below the ground surface. All holes shall be filled and tamped. Pavement or paved mow strip shall be level and free of protrusions or loose pieces greater than 1 in. (25 mm).

HTC median barrier shall be disconnected at the nearest turnbuckle past the removal limits. Mow strip, anchorage system, and other appurtenances within the removal limits shall be removed.

Materials that are to be salvaged under the contract or which the Engineer deems fit for reuse shall be removed and stored at locations and in a manner approved by the Engineer. Materials that are not to be salvaged or materials unfit for reuse through no fault of the Contractor shall be removed and disposed of according to Article 202.03.

632.03 Method of Measurement. This work will be measured for payment in feet (meters), measured from the limits of removal as directed by the Engineer.

632.04 Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for GUARDRAIL REMOVAL, CABLE ROAD GUARD REMOVAL, or HIGH TENSION CABLE MEDIAN BARRIER REMOVAL.”

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: November 1, 2022

Add the following after the second sentence in the eighth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“If rain is forecasted and traffic is to be on the LJS or if pickup/tracking of the LJS material is likely, the LJS shall be covered immediately following its application with FA 20 fine aggregate mechanically spread uniformly at a rate of 1.5 ± 0.5 lb/sq yd (0.75 ± 0.25 kg/sq m). Fine aggregate landing outside of the LJS shall be removed prior to application of tack coat.”

Add the following after the first sentence in the ninth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“LJS half-width shall be applied at a width of 9 ± 1 in. (225 ± 25 mm) in the immediate lane to be placed with the outside edge flush with the joint of the next HMA lift. The vertical face of any longitudinal joint remaining in place shall also be coated.”

Add the following after the eleventh paragraph of Article 406.06(h)(2):

“LJS Half-Width Application Rate, lb/ft (kg/m) ^{1/}			
Lift Thickness, in. (mm)	Coarse Graded Mixture (IL-19.0, IL-19.0L, IL-9.5, IL-9.5L, IL-4.75)	Fine Graded Mixture (IL-9.5FG)	SMA Mixture (SMA-9.5, SMA-12.5)
3/4 (19)	0.44 (0.66)		
1 (25)	0.58 (0.86)		
1 1/4 (32)	0.66 (0.98)	0.44 (0.66)	
1 1/2 (38)	0.74 (1.10)	0.48 (0.71)	0.63 (0.94)
1 3/4 (44)	0.82 (1.22)	0.52 (0.77)	0.69 (1.03)
2 (50)	0.90 (1.34)	0.56 (0.83)	0.76 (1.13)
$\geq 2 \frac{1}{4}$ (60)	0.98 (1.46)		

1/ The application rate includes a surface demand for liquid. The thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application, provided the correct width and application rate are maintained.”

Add the following to the end of the second paragraph of Article 406.14 of the Standard Specifications:

“Longitudinal joint sealant (LJS) half-width will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT, HALF-WIDTH.”

PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

“1032.05 Performance Graded Asphalt Binder. These materials will be accepted according to the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.” The Department will maintain a qualified producer list. These materials shall be free from water and shall not foam when heated to any temperature below the actual flash point. Air blown asphalt, recycle engine oil bottoms (ReOB), and polyphosphoric acid (PPA) modification shall not be used.

When requested, producers shall provide the Engineer with viscosity/temperature relationships for the performance graded asphalt binders delivered and incorporated in the work.

- (a) Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans and the following.

Test	Parameter
Small Strain Parameter (AASHTO PP 113) BBR, ΔT_c , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5 °C min.

- (b) Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans.

Asphalt binder modification shall be performed at the source, as defined in the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.”

Modified asphalt binder shall be safe to handle at asphalt binder production and storage temperatures or HMA construction temperatures. Safety Data Sheets (SDS) shall be provided for all asphalt modifiers.

- (1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrene-butadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders		
Test	Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SB/SBS PG 76-22 SB/SBS PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

- (2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois Modified AASHTO T 27 “Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates” or AASHTO PP 74 “Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method”, a 50 g sample of the GTR shall conform to the following gradation requirements.

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
Test	Asphalt Grade GTR PG 64-28 GTR PG 70-22	Asphalt Grade GTR PG 76-22 GTR PG 76-28 GTR PG 70-28
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

- (3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: *.SPA, *.SPG, *.IRD, *.IFG, *.CSV, *.SP, *.IRS, *.GAML, *. [0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Table 4 - Requirements for Softener Modified Asphalt Binders	
Test	Asphalt Grade
	SM PG 46-28 SM PG 46-34 SM PG 52-28 SM PG 52-34 SM PG 58-22 SM PG 58-28 SM PG 64-22
Small Strain Parameter (AASHTO PP 113) BBR, ΔT_c , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5°C min.
Large Strain Parameter (Illinois Modified AASHTO T 391) DSR/LAS Fatigue Property, $\Delta G^* _{peak}$, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	$\geq 54\%$

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat"

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

“(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface ^{3/}
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.
 - 2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
 - 3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.
- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface ^{3/}
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	--	--	25
IL-4.75	--	--	35

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for GTR modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.”

Add the following to the end of Note 2 of Article 1030.03 of the Standard Specifications.

“A dedicated storage tank for the ground tire rubber (GTR) modified asphalt binder shall be provided. This tank shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ±0.40 percent.”

SEEDING (BDE)

Effective: November 1, 2022

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	100 (110)
	Perennial Ryegrass	60 (70)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	40 (50)
1A Salt Tolerant Lawn Mixture 1/	Kentucky Bluegrass	60 (70)
	Perennial Ryegrass	20 (20)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	20 (20)
	<i>Festuca brevipilla</i> (Hard Fescue)	20 (20)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60 (70)
1B Low Maintenance Lawn Mixture 1/	Turf-Type Fine Fescue 3/	150 (170)
	Perennial Ryegrass	20 (20)
	Red Top	10 (10)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	20 (20)
2 Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue)	100 (110)
	Perennial Ryegrass	50 (55)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	40 (50)
	Red Top	10 (10)
2A Salt Tolerant Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue)	60 (70)
	Perennial Ryegrass	20 (20)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	30 (20)
	<i>Festuca brevipilla</i> (Hard Fescue)	30 (20)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60 (70)
3 Northern Illinois Slope Mixture 1/	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	5 (5)
	Perennial Ryegrass	20 (20)
	Alsike Clover 4/	5 (5)
	<i>Desmanthus illinoensis</i> (Illinois Bundleflower) 4/ 5/	2 (2)
	<i>Schizachyrium scoparium</i> (Little Bluestem) 5/	12 (12)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	10 (10)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	30 (35)
	Oats, Spring	50 (55)
	Slender Wheat Grass 5/	15 (15)
	Buffalo Grass 5/ 7/	5 (5)
	3A Southern Illinois Slope Mixture 1/	Perennial Ryegrass
<i>Elymus canadensis</i> (Canada Wild Rye) 5/		20 (20)
<i>Panicum virgatum</i> (Switchgrass) 5/		10 (10)
<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/		12 (12)
<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/		10 (10)
<i>Dalea candida</i> (White Prairie Clover) 4/ 5/		5 (5)
<i>Rudbeckia hirta</i> (Black-Eyed Susan) 5/		5 (5)
Oats, Spring		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/
<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
	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>Symphotrichum 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>	<u>% By Weight</u>
	<i>Aster novae-angliae</i> (New England Aster)	5
	<i>Echinacea pallida</i> (Pale Purple Coneflower)	10
	<i>Helianthus mollis</i> (Downy Sunflower)	10
	<i>Heliopsis helianthoides</i> (Ox-Eye)	10
	<i>Liatris pycnostachya</i> (Prairie Blazing Star)	10
	<i>Ratibida pinnata</i> (Yellow Coneflower)	5
	<i>Rudbeckia hirta</i> (Black-Eyed Susan)	10
	<i>Silphium laciniatum</i> (Compass Plant)	10
	<i>Silphium terebinthinaceum</i> (Prairie Dock)	20
	<i>Oligoneuron rigidum</i> (Rigid Goldenrod)	10
5B Wetland Forb 2/ 5/ 6/	Forb Mixture (see below)	2 (2)
	<u>Species:</u>	<u>% By Weight</u>
	<i>Acorus calamus</i> (Sweet Flag)	3
	<i>Angelica atropurpurea</i> (Angelica)	6
	<i>Asclepias incarnata</i> (Swamp Milkweed)	2
	<i>Aster puniceus</i> (Purple Stemmed Aster)	10
	<i>Bidens cernua</i> (Beggarticks)	7
	<i>Eutrochium maculatum</i> (Spotted Joe Pye Weed)	7
	<i>Eupatorium perfoliatum</i> (Boneset)	7
	<i>Helenium autumnale</i> (Autumn Sneezeweed)	2
	<i>Iris virginica shrevei</i> (Blue Flag Iris)	2
	<i>Lobelia cardinalis</i> (Cardinal Flower)	5
	<i>Lobelia siphilitica</i> (Great Blue Lobelia)	5
	<i>Lythrum alatum</i> (Winged Loosestrife)	2
	<i>Physostegia virginiana</i> (False Dragonhead)	5
	<i>Persicaria pensylvanica</i> (Pennsylvania Smartweed)	10
	<i>Persicaria lapathifolia</i> (Curlytop Knotweed)	10
	<i>Pycnanthemum virginianum</i> (Mountain Mint)	5
	<i>Rudbeckia laciniata</i> (Cut-leaf Coneflower)	5
	<i>Oligoneuron riddellii</i> (Riddell Goldenrod)	2
	<i>Sparganium eurycarpum</i> (Giant Burreed)	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> (Fults 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/ Seeding shall be performed when the ambient temperature has been between 45 °F (7 °C) and 80 °F (27 °C) for a minimum of seven (7) consecutive days and is forecasted to be the same for the next five (5) days according to the National Weather Service.
- 2/ Seeding shall be performed in late fall through spring beginning when the ambient temperature has been below 45 °F (7 °C) for a minimum of seven (7) consecutive days and ending when the ambient temperature exceeds 80 °F (27 °C) according to the National Weather Service.
- 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 KNO₃ 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.”

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023

Add the following to Article 106.01 of the Standard Specifications:

“The final manufacturing process for construction materials and the immediately preceding manufacturing stage for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply that is or consists primarily of the following.

- (a) Non-ferrous metals;
- (b) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (c) Glass (including optic glass);
- (d) Lumber;
- (e) Drywall.

Items consisting of two or more of the listed construction materials that have been combined through a manufacturing process, and items including at least one of the listed materials combined with a material that is not listed through a manufacturing process shall be exempt.”

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: January 1, 2022

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Welded Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.
 The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

SUBMISSION OF PAYROLL RECORDS (BDE)

Effective: April 1, 2021

Revised: November 1, 2022

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

“STATEMENTS AND PAYROLLS

The payroll records shall include the worker’s name, the worker’s address, the worker’s telephone number when available, the worker’s social security number, the worker’s classification or classifications, the worker’s gross and net wages paid in each pay period, the worker’s number of hours worked each day, and the worker’s starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker’s hourly wage rate, the worker’s hourly overtime wage rate, the worker’s hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

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

STATE CONTRACTS. Revise Item 3 of Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

- “3. Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Illinois Prevailing Wage Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>. Payrolls shall be submitted in the format prescribed by the IDOL.

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

SURFACE TESTING OF PAVEMENTS – IRI (BDE)

Effective: January 1, 2021

Revised: January 1, 2023

Description. This work shall consist of testing the ride quality of the finished surface of pavement sections with new concrete pavement, PCC overlays, full-depth HMA, and HMA overlays with at least 2.25 in. (57 mm) total thickness of new HMA combined with either HMA binder or HMA surface removal, according to Illinois Test Procedure 701, “Ride Quality Testing Using the International Roughness Index (IRI)”. Work shall be according to Sections 406, 407, or 420 of the Standard Specifications, except as modified herein.

Hot-Mix Asphalt (HMA) Overlays

Add the following to Article 406.03 of the Standard Specifications:

“(n) Pavement Surface Grinding Equipment.....1101.04”

Revise Article 406.11 of the Standard Specifications to read:

“406.11 Surface Tests. Prior to HMA overlay pavement improvements, the Engineer will measure the smoothness of the existing high-speed mainline pavement. The Contractor shall measure the smoothness of the finished high-speed mainline, low-speed mainline, and miscellaneous pavements after the pavement improvement is complete but within the same construction season. Testing shall be performed in the presence of the Engineer and according to Illinois Test Procedure 701. The pavement will be identified as high-speed mainline, low-speed mainline, or miscellaneous as follows.

(a) Test Sections.

- (1) High-Speed Mainline Pavement. High-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit greater than 45 mph. These sections shall be tested with an inertial profiling system (IPS).
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit of 45 mph or less. These sections shall be tested using a 16 ft (5 m) straightedge or with an IPS analyzed using the rolling 16 ft (5 m) straightedge simulation in ProVAL.
- (3) Miscellaneous Pavement. Miscellaneous pavement are segments that either cannot readily be tested by an IPS or conditions beyond the control of the Contractor preclude the achievement of smoothness levels typically achievable with mainline pavement construction. This may include the following examples or as determined by the Engineer.
 - a. Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves;
 - b. Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities;
 - c. The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface;
 - d. Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return;
 - e. Variable width pavements;
 - f. Side street returns, to the end of radius return;
 - g. Crossovers;
 - h. Pavement connector for bridge approach slab;
 - i. Bridge approach slab;
 - j. Pavement that must be constructed in segments of 600 ft (180 m) or less;

- k. Pavement within 25 ft (7.6 m) of manholes, utility structures, at-grade railroad crossings, or other appurtenances;
 - l. Turn lanes; and
 - m. Pavement within 5 ft (1.5 m) of jobsite sampling locations for HMA volumetric testing that fall within the wheel path.
- Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge.
- (4) International Roughness Index (IRI). An index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h).
 - (5) Mean Roughness Index (MRI). The average of the IRI values for the right and left wheel tracks.
 - a. MRI_O . The MRI of the existing pavement prior to construction.
 - b. MRI_I . The MRI value that warrants an incentive payment.
 - c. MRI_F . The MRI value that warrants full payment.
 - d. MRI_D . The MRI value that warrants a financial disincentive.
 - (6) Areas of Localized Roughness (ALR). Isolated areas of roughness, which can cause significant increase in the calculated MRI for a given subplot.
 - (7) Sublot. A continuous strip of pavement 0.1 mile (160 m) long and one lane wide. A partial subplot greater than or equal to 264 ft (80 m) will be subject to the same evaluation as a whole subplot. Partial sublots less than 264 ft (80 m) shall be included with the previous subplot for evaluation purposes.
- (b) Corrective Work. Corrective work shall be completed according to the following.
- (1) High-Speed Mainline Pavement. For high-speed mainline pavement, any 25 ft (7.6 m) interval with an ALR in excess of 200 in./mile (3,200 mm/km) will be identified by the Engineer and shall be corrected by the Contractor. Any subplot having a MRI greater than MRI_D , including ALR, shall be corrected to reduce the MRI to the MRI_F , or replaced at the Contractor's option.
 - (2) Low-Speed Mainline Pavement. Surface variations in low-speed mainline pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

(3) Miscellaneous Pavements. Surface variations in miscellaneous pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed with pavement surface grinding equipment or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area perpendicular to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the data and reports to the Engineer within 2 working days after corrections are made. If the MRI and/or ALR still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

(c) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of high-speed mainline pavement per the Smoothness Assessment Schedule. Assessments will be based on the MRI of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the pavement. For pavement that is replaced, assessments will be based on the MRI determined after replacement.

The upper MRI thresholds for high-speed mainline pavement are dependent on the MRI of the existing pavement before construction (MRI_0) and shall be determined as follows.

Upper MRI Thresholds ^{1/}	MRI Thresholds (High-Speed, HMA Overlay)	
	$MRI_0 \leq 125.0$ in./mile ($\leq 1,975$ mm/km)	$MRI_0 > 125.0$ in./mile ^{1/} ($> 1,975$ mm/km)
Incentive (MRI_I)	45.0 in./mile (710 mm/km)	$0.2 \times MRI_0 + 20$
Full Pay (MRI_F)	75.0 in./mile (1,190 mm/km)	$0.2 \times MRI_0 + 50$
Disincentive (MRI_D)	100.0 in./mile (1,975 mm/km)	$0.2 \times MRI_0 + 75$

1/ MRI_0 , MRI_I , MRI_F , and MRI_D shall be in in./mile for calculation.

Smoothness assessments for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, HMA Overlay)	
Mainline Pavement MRI Range	Assessment Per Sublot ^{1/}
$MRI \leq MRI_I$	$+ (MRI_I - MRI) \times \$20.00$ ^{2/}
$MRI_I < MRI \leq MRI_F$	+ \$0.00
$MRI_F < MRI \leq MRI_D$	$- (MRI - MRI_F) \times \$8.00$
$MRI > MRI_D$	- \$200.00

1/ MRI, MRI_I, MRI_F, and MRI_D shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$300.00.

Smoothness assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.”

Hot-Mix Asphalt (HMA) Pavement (Full-Depth)

Revise the first paragraph of Article 407.03 of the Standard Specifications to read:

“407.03 Equipment. Equipment shall be according to Article 406.03.”

Revise Article 407.09 of the Standard Specifications to read:

“407.09 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The testing of the existing pavement prior to improvements shall not apply and the smoothness assessment for high-speed mainline pavement shall be determined according to the following table.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, Full-Depth HMA)	
Mainline Pavement MRI, in./mile (mm/km)	Assessment Per Sublot ^{1/}
≤ 45.0 (710)	$+ (45 - MRI) \times \$45.00$ ^{2/}
> 45.0 (710) to 75.0 (1,190)	+ \$0.00
> 75.0 (1,190) to 100.0 (1,580)	$- (MRI - 75) \times \$20.00$
> 100.0 (1,580)	- \$500.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$800.00.”

Portland Cement Concrete Pavement

Delete Article 420.03(i) of the Standard Specifications.

Revise Article 420.10 of the Standard Specifications to read:

“420.10 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows.

The testing of the existing pavement prior to improvements shall not apply. The Contractor shall measure the smoothness of the finished surface of the pavement after the pavement has attained a flexural strength of 250 psi (3,800 kPa) or a compressive strength of 1,600 psi (20,700 kPa).

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

- (a) Corrective Work. No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to areas ground according to Article 420.18 at no additional cost to the Department.

Jointed portland cement concrete pavement corrected by removal and replacement, shall be corrected in full panel sizes.

- (b) Smoothness Assessments. Smoothness assessment for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, PCC)	
Mainline Pavement MRI, in./mile (mm/km) ^{3/}	Assessment Per Sublot ^{1/}
≤ 45.0 (710)	+ (45 – MRI) × \$60.00 ^{2/}
> 45.0 (710) to 75.0 (1,190)	+ \$0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × \$37.50
> 100.0 (1,580)	– \$750.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$1200.00.

3/ If pavement is constructed with traffic in the lane next to it, then an additional 10 in./mile will be added to the upper thresholds.”

Removal of Existing Pavement and Appurtenances

Revise the first paragraph of Article 440.04 of the Standard Specifications to read:

“440.04 HMA Surface Removal for Subsequent Resurfacing. The existing HMA surface shall be removed to the depth specified on the plans with a self-propelled milling machine. The removal depth may be varied slightly at the discretion of the Engineer to satisfy the smoothness requirements of the finished pavement. The temperature at which the work is performed, the nature and condition of the equipment, and the manner of performing the work shall be such that the milled surface is not torn, gouged, shoved or otherwise damaged by the milling operation. Sufficient cutting passes shall be made so that all irregularities or high spots are eliminated to the satisfaction of the Engineer. When tested with a 16 ft (5 m) straightedge, the milled surface shall have no surface variations in excess of 3/16 in. (5 mm).”

General Equipment

Revise Article 1101.04 of the Standard Specifications to read:

“1101.04 Pavement Surface Grinding Equipment. The pavement surface grinding device shall have a minimum effective head width of 3 ft (0.9 m).

- (a) Diamond Saw Blade Machine. The machine shall be self-propelled with multiple diamond saw blades.
- (b) Profile Milling Machine. The profile milling machine shall be a drum device with carbide or diamond teeth with spacing of 0.315 in. (8 mm) or less and maintain proper forward speed for surface texture according to the manufacturer’s specifications.”

TRAFFIC SPOTTERS (BDE)

Effective: January 1, 2019

Revise Article 701.13 of the Standard Specifications to read:

“701.13 Flaggers and Spotters. Flaggers shall be certified by an agency approved by the Department. While on the job site, each flagger shall have in his/her possession a current driver’s license and a current flagger certification I.D. card. For non-drivers, the Illinois Identification Card issued by the Secretary of State will meet the requirement for a current driver’s license. This certification requirement may be waived by the Engineer for emergency situations that arise due to actions beyond the Contractor’s control where flagging is needed to maintain safe traffic control on a temporary basis. Spotters are defined as certified flaggers that provide support to workers by monitoring traffic.

Flaggers and spotters shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 or ANSI/ISEA 107-2010 for Conspicuity Class 2 garments. Flaggers shall be equipped with a stop/slow traffic control sign. Spotters shall be equipped with a loud warning device. The warning sound shall be identifiable by workers so they can take evasive action when necessary. Other types of garments may be substituted for the vest as long as the garments have a manufacturer's tag identifying them as meeting the ANSI Class 2 requirement. The longitudinal placement of the flagger may be increased up to 100 ft (30 m) from that shown on the plans to improve the visibility of the flagger. Flaggers shall not encroach on the open lane of traffic unless traffic has been stopped. Spotters shall not encroach on the open lane of traffic, nor interact with or control the flow of traffic.

For nighttime flagging, flaggers shall be illuminated by an overhead light source providing a minimum vertical illuminance of 10 fc (108 lux) measured 1 ft (300 mm) out from the flagger's chest. The bottom of any luminaire shall be a minimum of 10 ft (3 m) above the pavement. Luminaire(s) shall be shielded to minimize glare to approaching traffic and trespass light to adjoining properties. Nighttime flaggers shall be equipped with fluorescent orange or fluorescent orange and fluorescent yellow/green apparel meeting the requirements of ANSI/ISEA 107-2004 or ANSI/ISEA 107-2010 for Conspicuity Class 3 garments.

Flaggers and spotters shall be provided per the traffic control plan and as follows.

- (a) Two-Lane Highways. Two flaggers will be required for each separate operation where two-way traffic is maintained over one lane of pavement. Work operations controlled by flaggers shall be no more than 1 mile (1600 m) in length. Flaggers shall be in sight of each other or in direct communication at all times. Direct communication shall be obtained by using portable two-way radios or walkie-talkies.

The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer.

- (b) Multi-Lane Highways. At all times where traffic is restricted to less than the normal number of lanes on a multilane pavement with a posted speed limit greater than 40 mph and the workers are present, but not separated from the traffic by physical barriers, a flagger or spotter shall be furnished as shown on the plans. Flaggers shall warn and direct traffic. Spotters shall monitor traffic conditions and warn workers of errant approaching vehicles or other hazardous conditions as they occur. One flagger will be required for each separate activity of an operation that requires frequent encroachment in a lane open to traffic. One spotter will be required for each separate activity with workers near the edge of the open lane or with their backs facing traffic.

Flaggers will not be required when no work is being performed, unless there is a lane closure on two-lane, two-way pavement.”

TRAINING SPECIAL PROVISIONS (BDE)

Effective: October 15, 1975

Revised: September 2, 2021

This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 3. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor Employment Training Administration shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting its performance under this Training Special Provision.

For contracts with an awarded contract value of \$500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

Basis of Payment. This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price, and total price have been included in the schedule of prices.

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION

Effective: August 1, 2012

Revised: February 2, 2017

In addition to the Contractor's equal employment opportunity (EEO) affirmative action efforts undertaken as required by this Contract, the Contractor is encouraged to participate in the incentive program described below to provide additional on-the-job training to certified graduates of the IDOT pre-apprenticeship training program, as outlined in this Special Provision.

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at \$15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

Method of Measurement: The unit of measurement is in hours.

Basis of Payment: This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is 3.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of \$15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

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.”

WATERPROOFING MEMBRANE SYSTEM (BDE)

Effective: November 1, 2021

Revise Article 1061.05 of the Standard Specifications to read:

“**1061.05 Aggregate for Slurry Seal Top Coat.** The aggregate shall meet the requirements of Article 1003.01, be clean, hard, and shall contain a minimum of dust. It shall be graded as follows.

Sieve Size	Passing Percent
No. 8 (2.36 mm)	100
No. 30 (600 µm)	0 – 10”

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: November 1, 2021

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted to the Engineer on Department form “SBE 723” within ten business days following the reporting period. The reporting period shall be Sunday through Saturday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)



Illinois Department of Transportation

Storm Water Pollution Prevention Plan



Route	Marked Route	Section Number
Interstate 80: Ridge Rd. to River Rd.	FAI 80	2021-154-R
Project Number	County	Contract Number
C91-105-22	WILL	62P71

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Date	
	3/2/21	
Print Name	Title	Agency
Jose Rios, P.E.	Regional Engineer	Illinois Department of Transportation

Note: Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

I. Site Description:

A. Provide a description of the project location; include latitude and longitude, section, town, and range:

The project is located on Interstate 80 (I-80) from East of Ridge Road to East of River Road, near Minooka and Shorewood, Will County, Illinois. The project is located in Section 31, Township 35N, Range 9E. The approximate latitude is 41°28'32"N and the longitude is 88°14'9"W.

The design, installation, and maintenance of BMPs at these locations are within an area where annual erosivity (R value) is less than or equal to 160. Erosivity is less than 5 in all two-week periods between October 12 and April 15, which would qualify for construction rainfall erosivity waiver under the US Construction General Permit requirements. At these locations, erosivity is highest in spring to autumn, April 16 - October 11.

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:

The project consists of the full reconstruction of the existing I-80 interstate from east of Ridge Road to east of River Road in Will County. The work to be performed, concrete median barrier, grading work, drainage improvements, erosion control, pavement marking and signage installation, maintenance of traffic, construction layout, and landscaping. The total project length is approximately 2.77 miles (14,600 ft).

The work within each stage is detailed below:
 Stage 1: Reconstruct the eastbound lanes, eastbound inside and outside shoulders, and median barrier wall.
 Stage 2: Reconstruct the remaining westbound lanes.
 Stage 3: Remove the temporary crossover pavement and complete the balance of I-80 through the median inaccessible due to previous MOT configuration.

Erosion and Sediment Control measures include temporary ditch checks, perimeter erosion barrier, erosion control blanket, and temporary seeding. These items shall be installed according to the erosion and sediment control plans prior to commencing land disturbing activities. All erosion and sediment control measures shall be

maintained during the construction season as well as the winter months and other times when the project is closed down. Temporary erosion control measures shall be removed upon permanent stabilization.

Permanent stabilization measures include seeding Class 2A and Class 4 with nitrogen and potassium fertilizer nutrient along with erosion control blanket to be placed on disturbed areas once work is complete. Where possible permanent stabilization should be completed before work is moved to the subsequent stages. Seeding Class 4B will be used to provide the necessary buffers to existing wetlands and waters of the U.S. (WOUS).

C. Provide the estimated duration of this project:

The estimated duration of the project is 24 months (two construction seasons) with an anticipated start date of April 2024 and ending date of September 2025. Advanced work for the project may commence the fall of 2023.

D. The total area of the construction site is estimated to be 61.3 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 11.6 acres.

E. The following are weighted averages of the runoff coefficient for this project before and after construction activities are completed; see Section 4-102 of the IDOT Drainage Manual:

C=0.693(Proposed); C= 0.576 (Existing)

F. List all soils found within project boundaries; include map unit name, slope information, and erosivity:

Map unit symbol	Map unit name	K Factor
356A	Elpaso Silty clay loam, 0 to 2 percent slopes	0.24
541B	Graymont silt loam, 2 to 5 percent slopes	0.28
614A	Chenoa silty clay loam, 0 to 2 percent slopes	0.28
232A	Ashkum silty clay loam, 0 to 2 percent slopes	0.20
146B	Elliott silt loam, 2 to 4 percent slopes	0.32
293A	Andres silt loam, 0 to 2 percent slopes	0.24
294B	Symerton silt loam, 2 to 5 percent slopes	0.24
294C2	Symerton silt loam, 5 to 10 percent slopes	0.28
298B	Beecher silt loam, 2 to 4 percent slopes	0.37
314A	Joliet silt loam, 0 to 2 percent slopes	0.37
315A	Channahon silt loam, 0 to 2 percent slopes	0.32
315C2	Channahon silt loam, 4 to 6 percent slopes, eroded	0.43
317A	Millsdale silty clay loam, 0 to 2 percent slopes	0.32
318D2	Lorenzo loam, 6 to 12 percent slopes,eroded	0.28
327B	Fox silt loam, 2 to 4 percent slopes	0.37
327C2	Fox silt loam, 4 to 6 percent slopes,eroded	0.43
387B	Ockley loam, 2 to 4 percent slopes	0.32
403D	Elizabeth silt loam, 6 to 12 percent slopes	0.32
440B	Jasper loam, 2 to 5 percent slopes	0.43
531B	Markham silt loam, 2 to 4 percent slopes	0.37
531C2	Markham silt loam, 4 to 6 percent slopes,eroded	0.37
969E2	Chenoa silty clay loam, 0 to 2 percent slopes	0.32
8321A	DuPage silt loam, 0 to 2 percent slopes, occasionally flooded	0.32

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report:

WOUS W4: Area 0.0224 acres total / 0.007 acres of impact
 Wetlands 4A: Impacts coordinated in Contract 62N41 under Permit # LRC-2021-01154
 WOUS W5: Area 0.1195 acres total / 0.015 acres of impact
 WOUS W6: Area 0.4811 acres total / 0.028 acres of impact
 Wetlands 6A: Area 0.4604 acres total / 0.0 acres of impact
 WOUS W7: Area 0.0095 acres total / 0.0 acres of impact

WOUS W8: Area 0.0424 acres total / 0.025 acres of impact
Wetlands 8A: Area .0652 acres total / 0.0 acres of impact
Wetlands 9A: Area 0.0705 acres total / 0.031 acres of impact
Wetlands 12A: Area 0.01638 acres total / 0.060 acres of impact
Wetlands 14A: Area 1.4747 acres total / 0.000* acres of impact (Impacts to be permitted in Contract 62R28)
Wetlands 14C: Area 0.0289 acres total / 0.000 acres of impact
Wetlands 16A: Area 0.2015 acres total / 0.000 acres of impact

Total impact (Wetland + WOUS)= 0.166 Acres

H. Provide a description of potentially erosive areas associated with this project:

The pavement widening results in grading work of the existing ditches and sideslopes through the project limits. Potentially erosive areas may result until the surfaces are stabilized.

Additionally, the proposed median storm sewer may result in trench flow.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g., steepness of slopes, length of slopes, etc.):

Stage 1: The work area for this stage includes Eastbound I-80 and median. The scope includes pavement reconstruction of the eastbound pavement, reconstruction of the median, and mainline storm sewer sewer. Embankment during this stage will be installed with a maximum slope of 1:2.5 in limited application.

Stage 2: The work area for this stage includes Westbound I-80. The scope includes pavement reconstruction of the westbound pavement. Embankment during this stage will be installed with a maximum slope of 1:2.5 in limited application.

Stage 3: The work area for this stage includes the median and adjacent shoulders. The scope includes removal and restoration of the median pavement at the crossover location and where previously inaccessible due to MOT configurations and use of traffic crossover.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) , and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

IDOT

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located:

IDOT
Will County

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. In addition, include receiving waters that are listed as Biologically Significant Streams by the Illinois Department of Natural Resources (IDNR). The location of the receiving waters can be found on the erosion and sediment control plans:

The direct receiving water for the project is the DuPage River. The DuPage river is a tributary to the Des Plaines River whose ultimate receiving water is the Illinois River. DuPage River , the Des Plaines, and the Illinois River are not identified by the IDNR as "biologically significant streams".

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes (i.e., 1:3 or steeper), highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc. Include any commitments or requirements to protect adjacent wetlands.

For any storm water discharges from construction activities within 50-feet of Waters of the U.S. (except for activities for water-dependent structures authorized by a Section 404 permit, describe: a) How a 50-foot undisturbed natural buffer will be provided between the construction activity and the Waters of the U.S. or b) How additional erosion and sediment controls will be provided within that area.

All unimpaired Waters of the US located within the ROW adjacent to the ROW will be protected during construction.

O. Per the Phase I document, the following sensitive environmental resources are associated with this project and may have the potential to be impacted by the proposed development. Further guidance on these resources is available in Section 41-4 of the BDE Manual.

None Identified

303(d) Listed receiving waters for suspended solids, turbidity, or siltation.

The name(s) of the listed water body, and identification of all pollutants causing impairment:

DuPage River:
The Aquatic Life use of the Du Page River is being impaired by Phosphorus, Arsenic, Chloride, Methoxychlor, Sedimentation, Ploychlorinated biphenyls, Oxygen Dissolved. The Primary Contact Recreation is being impaired by Fecal Coliform. Fish Consumption is being impaired by Mercury, Ploychlorinated biphenyls.

Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

Soil Erosion and Sediment Control (SESC) practices such as temporary ditch checks, inlet filters, perimeter erosion barrier, temporary erosion control seeding, and temporary erosion control blankets shown on SESC plans will be used to prevent a discharge of sediment into the DuPage River.

Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

None Identified

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

None Identified

Applicable Federal, Tribal, State, or Local Programs

None Identified

Floodplain

None Identified

Historic Preservation

None Identified

Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation

TMDL (fill out this section if checked above)

The name(s) of the listed water body:

None Identified

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:

<input type="checkbox"/> Threatened and Endangered Species/Illinois Natural Areas (INA)/Nature Preserves
None Identified
<input type="checkbox"/> Other
None Identified
<input checked="" type="checkbox"/> Wetland
Refer to Item G for identified wetlands through the project limits.

P. The following pollutants of concern will be associated with this construction project:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Antifreeze / Coolants
<input checked="" type="checkbox"/> Concrete
<input checked="" type="checkbox"/> Concrete Curing Compounds
<input checked="" type="checkbox"/> Concrete Truck Waste
<input checked="" type="checkbox"/> Fertilizers / Pesticides
<input checked="" type="checkbox"/> Paints
<input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
<input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Solid Waste Debris
<input checked="" type="checkbox"/> Solvents
<input checked="" type="checkbox"/> Waste water from cleaning construction equipments
<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Other (Specify) _____ |
|---|---|

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in Section I.C above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls: At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. Stabilization Practices: Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II.B.1 and II.B.2, stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching | <input type="checkbox"/> Temporary Turf (Seeding, Class 7) |
| <input type="checkbox"/> Geotextiles | <input type="checkbox"/> Temporary Mulching |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Vegetated Buffer Strips |
| <input type="checkbox"/> Preservation of Mature Seeding | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Sodding | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (Specify) _____ |

Describe how the stabilization practices listed above will be utilized during construction:

Once the work is finished in Stage 1, temporary stabilization measures such as temporary erosion control seeding and erosion control blankets will be applied on the outside shoulders and adjacent slopes as work commences in Stage 2.

Where possible temporary stabilization of the initial stage should be completed before work is moved to the subsequent stages.

Stabilization controls runoff volume and velocity, peak runoff rates and volumes of discharge to minimize exposed soil, disturbed slopes, sediment discharges from construction, and provides for natural buffers and minimization of soil compaction. Existing vegetated areas where disturbance can be avoided will not require stabilization.

Protection of Trees will be used to protect vegetation from construction activities, natural barriers slow water velocity allow suspended particles to settle out of suspension, absorb energy and allow storm water adsorption, thereby reducing runoff.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Seeding class 2A and erosion control blanket will be utilized along the outside disturbed areas. All the outlets will be stabilized with permanent measures. Seeding class 4B will be used to provide the necessary buffers to existing wetlands and waters of the U.S (WOUS).

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- | | |
|--|---|
| <input type="checkbox"/> Aggregate Ditch | <input checked="" type="checkbox"/> Stabilized Construction Exits |
| <input type="checkbox"/> Concrete Revetment Mats | <input checked="" type="checkbox"/> Stabilized Trench Flow |
| <input checked="" type="checkbox"/> Dust Suppression | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Dewatering Filtering | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Gabions | <input checked="" type="checkbox"/> Temporary Ditch Check |
| <input checked="" type="checkbox"/> In-Stream or Wetland Work | <input type="checkbox"/> Temporary Pipe Slope Drain |
| <input type="checkbox"/> Level Spreaders | <input type="checkbox"/> Temporary Sediment Basin |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Temporary Stream Crossing |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Turf Reinforcement Mats |
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Retaining Walls | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Riprap | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Rock Outlet Protection | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Other (Specify) _____ |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Other (Specify) _____ |

Describe how the structural practices listed above will be utilized during construction:

Perimeter Erosion Barrier (PEB) is used along the areas where work areas are adjacent to non-disturbed areas. PEBs intercept sheet flow and settle out sediment upslope while allowing runoff to filter through slowly, and redirect water from slopes or areas of exposed soil. Silt fence should only be used as PEB in areas where work area is higher than the perimeter. Use of silt fence at the top of slope/elevations higher than the work area should always be avoided. If necessary, temporary fence should be used in these locations (where the top of slope/elevation is higher than the work area) in lieu of silt fence.

Temporary ditch checks are proposed along the re-graded ditches where concentrated flows are expected to occur. The spacing of ditch checks shall be as shown on the plans. The height of the ditch checks shall be one foot.

Inlet filters are used for all the inlets, catch basins, and manholes with open grates for the entire duration of the construction. These are installed directly on the drainage structure or undergrate of drainage structure resting on lip of frame. Fabric bag shall hang down into structure.

Stabilized Construction Entrances shall be provided at all points of construction ingress/egress where sediment can be tracked onto public roads.

Dust suppression shall be controlled with the use of irrigation or the application of Calcium Chloride. All work associated with installation and maintenance of Stabilized Construction Entrances, and concrete washouts are incidental to the contract.

Riprap outfall protection will remain in place after construction to provide velocity dissipation and minimize erosion at culvert locations.

Stabilized Trench Flow will be utilized along the entire length of the project to control the flow of water from the surrounding areas. Any disturbance to the flow will be fixed immediately. The Contractor should provide to the RE a plan to ensure that a stabilized flow line will be provided during storm sewer construction. The use of a stabilized flow line between installed storm sewer and open disturbance will reduce the potential for offsite discharge of sediment bearing waters, particularly when rain is forecasted so flow will not erode. Lack of an approved plan or failure to comply will result in an ESC Deficiency Deduction.

In-Stream or Wetland Work. This project requires a US Army Corp of Engineers (USACE) 404 permit that will be secured by the department. All conditions of the 404 permit, found in the special provisions, must be followed. As a condition of this permit, the contractor will need to submit an in-stream work plan (including work within wetlands) to the Department for approval. Guidelines on acceptable in-stream work techniques (including work within wetlands) can be found on the USACE website. The USACE defines and determines in-stream work. The cost of all materials and labor necessary to comply with the above provisions to prepare and implement an in-stream work plan (including work within wetlands) will not be paid for separately, but shall be considered as included in the unit bid prices of the contract and no additional compensation will be allowed with the exception of cofferdams, which will be paid for as Cofferdman (Type 1) (In-stream /Wetland work) with a basis of payment of each.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

D. Treatment Chemicals

Will polymer flocculants or treatment chemicals be utilized on this project: Yes No

If yes above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

E. Permanent (i.e., Post-Construction) Storm Water Management Controls: Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT BDE Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

No Storm Water Management Controls are identified for use in 62P71. Storm water detention is not required.

F. Approved State or Local Laws: The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the IEPA's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

None Identified

G. Contractor Required Submittals: Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342A.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:

- Approximate duration of the project, including each stage of the project
- Rainy season, dry season, and winter shutdown dates
- Temporary stabilization measures to be employed by contract phases
- Mobilization time-frame
- Mass clearing and grubbing/roadside clearing dates
- Deployment of Erosion Control Practices
- Deployment of Sediment Control Practices (including stabilized cons
- Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
- Paving, saw-cutting, and any other pavement related operations
- Major planned stockpiling operation
- Time frame for other significant long-term operations or activities that may plan non-storm water discharges as dewatering, grinding, etc
- Permanent stabilization activities for each area of the project

2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material Delivery, Storage and Use - Discuss where and how materials including chemicals, concrete curing

- compounds, petroleum products, etc. will be stored for this project.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The IDOT Erosion and Sediment Control Field Guide for Construction Inspection per the new website. It can now be found on the Construction tab at:
<http://www.idot.illinois.gov/transportation-system/environment/erosion-and-sediment-control>

Perimeter Erosion Barrier (PEB) is used to intercept sheet-flow and settle out sediment upslope while allowing runoff to filter through slowly and redirect water from slopes or areas of exposed soil. Silt fence should only be used as PEB in areas where the work area is higher than the perimeter. Any damaged or undermining of any erosion or sediment control structures shall be immediately repaired. Inspection shall take place once a week and within 24 hours following every rainfall of over half an inch. Any damage shall be immediately repaired.

Temporary ditch checks are proposed where concentrated flows are expected to occur. The spacing of ditch checks shall be as shown on the plans. The height of the ditch checks shall be one foot.

Inlet filters are used for all inlets, catch basins, and manholes with open grates for the entire duration of the construction. These are installed directly on the drainage structure or under grate of drainage structure resting on lip of frame. Fabric bag shall hang down into structure. Inlet filters, as specified in Article 1081-15(h) of the Standard Specification for Road and Bridge Construction (current edition) will be installed at all inlets catch basins, and manholes for the duration of construction. Inspection shall take place once a week and within 24 hours following every rainfall of over half an inch. Inlet filter bags that have accumulated sediment shall be removed, cleaned, and replaced. Any damage shall be immediately repaired.

Culvert Inlet Protection - Stone is used only for pipes that are along I-80, exact location are shown in ESC plans. They are installed prior to any earth-disturbing activities. Culvert Inlet Protection is detailed in the plans and incorporates aggregate in lieu of straw bales and/or silt fence. The Inlet and pipe protection shown on Highway Standard Sheet 28001 should be avoided and should be comprised of a combination of ditch checks, temporary erosion control blanket, and temporary seeding. Any damage shall be immediately repaired.

Stabilized Construction Entrances shall be provided of construction ingress/egress where sediment can be

tracked onto public roads. The locations of each construction entrance shall be installed as approved by the Engineer. Any observed damage shall be repaired immediately.

Riprap outfall protection is provided as a velocity dissipation device on upstream bank of the creek. Riprap will be replaced due to washout.

Stabilized flow line: The contractor shall provide to the RE a plan to ensure that a stabilized flow line will be provided during storm sewer construction. This is important where new storm sewer connects to existing culverts. The use of a stabilized flow line between installed storm sewer and open disturbance will reduce the potential for the off site discharge of sediment-bearing waters. Lack of approved plan or failure to comply will

Permanent seeding is used to stabilize disturbed areas, preventing soil from being carried off-site by storm water runoff or wind after construction is complete. Any damage to the area shall be immediately repaired and reseeded. The suggested areas are shown in the ESC plans.

Temporary erosion control seeding is used to establish quick growing plants to stabilize disturbed areas, preventing soil from being carried off-site by storm water runoff or wind. Stabilization measures must be initiated no more than seven days after construction activity has ceased regardless of when permanent stabilization is anticipated. The suggested areas are shown in the ESC plans.

If a contractor wishes to use a dedicated concrete plant, it is up to the contractor to secure an Industrial Permit for the dedicated concrete plant. The contractor must also submit a plan to the RE detailing how all stormwater associated with the dedicated concrete plant will be kept separate from the stormwater generated by the construction activities. The contractor has to ensure compliance with all requirements of the Industrial Permit.

All Offsite Borrow, Waste, and Use areas are part of the construction site and are to be inspected according to the language in this section.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site including Borrow, Waste, and Use Areas, which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report, BC 2259. Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:
Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties

under the Permit ILR10 which could be passed on to the Contractor.



Contractor Certification Statement



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	Marked Route	Section Number
Interstate 80: Ridge Rd. to River Rd.	FAI 80	2021-154-R
Project Number	County	Contract Number
C91-105-22	WILL	62P71

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Additionally, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
- Sub-Contractor

Signature	Date		
<input type="text"/>	<input type="text"/>		
Print Name	Title		
<input type="text"/>	<input type="text"/>		
Name of Firm	Phone		
<input type="text"/>	<input type="text"/>		
Street Address	City	State	Zip Code
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

U.S. ARMY CORPS OF ENGINEERS REGIONAL PERMIT



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, CHICAGO DISTRICT
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604-1437

February 28, 2023

Regulatory Branch (LRC-2022-00761)

SUBJECT: Nationwide Permit Authorization for I-80, Ridge Road to U.S. 30 Roadway Improvement Project near Shorewood and Minooka, Will County, Illinois (Latitude 41.4857287640105, Longitude -88.2201820992025)

Jose Rios
Illinois Department of Transportation
201 W Center Court
Schaumburg, Illinois 60196

Dear Mr. Rios:

This letter is in response to your pre-construction notification, dated August 30, 2022, for the above-referenced project. We have determined that activities in waters of the U.S. associated with the project is authorized by Nationwide Permit (NWP) Number 14 – Linear Transportation Projects.

This determination covers only your project as described above and in the approved project plans titled, "FAI Route 80 (Interstate 80) East of Ridge Road to East of River Road", dated July 27, 2022 prepared by Illinois Department of Transportation. Caution must be taken to prevent construction materials and activities from impacting waters of the United States beyond the scope of this authorization. If the design, location, or purpose of the project is changed, it is recommended that you contact this office to determine the need for further authorization.

The subject activity may be performed without further authorization from this office provided that the activity complies with the NWP terms and general conditions, the regional conditions for Illinois, the special conditions listed below, and the Section 401 Water Quality Certification ("WQC") conditions added by the Illinois Environmental Protection Agency ("IEPA"). The NWP Program terms, general conditions, and regional conditions are listed in the enclosed NWP Summary. The WQC conditions are listed in the enclosed Fact Sheet.

Specifically, we wish to draw your attention to General Condition 21, which requires permittees to notify our office immediately in the event of discovery of previously unknown human remains, Native American cultural items, or archaeological artifacts; and a term of the NWP program, which states that NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

In addition to the general, regional, and water quality conditions of this permit verification, the following special conditions also apply to this verification:

- 2 -

1. This authorization is contingent upon implementing and maintaining soil erosion and sediment controls in a serviceable condition throughout the duration of the project. You shall comply with the project's soil erosion and sediment control (SESC) plans and the installation and maintenance requirements of the SESC practices on-site. You shall notify this office any changes or modifications to the approved plan set. Please be aware that field conditions during project construction may require the implementation of additional SESC measures for further protection of aquatic resources. If you fail to implement corrective measures, this office may require more frequent site inspections to ensure the installed SESC measures are acceptable. Please be aware that work authorized herein may not commence until you receive written notification from this office that your plans meet technical standards.

As part of the SESC process, you are required to retain a qualified Independent SESC Inspector (ISI) to review the project's SESC plans and provide a detailed narrative that explains the measures to be implemented at the project site. The ISI is also required to perform site inspections of the implemented SESC measures to ensure proper installation and regular maintenance of the approved methods.

a. You shall contact this office and the ISI at least 10 calendar days prior to the preconstruction meeting so that a representative of this office may attend. The meeting agenda will include a discussion of the SESC plan and the installation and maintenance requirements of the SESC practices on the site;

b. Prior to commencement of any in-stream work, you shall submit construction plans and a detailed narrative to this office that disclose the contractor's preferred method of cofferdam and dewatering method;

c. The ISI will perform weekly inspections of the implemented SESC measures to ensure proper installation and regular maintenance of the approved methods. The ISI contact information form shall be submitted to this office via e-mail and/or hard copy prior to commencement of the permitted work; and

d. The ISI shall submit to the Corps an inspection report with digital photographs of the SESC measures on a weekly basis during the active and non-active phases of construction. An inspection report shall also be submitted at the completion of the project once the SESC measures have been removed and final stabilization has been completed.

2. Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.

- 3 -

3. The plan must be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.

4. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.

5. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.

6. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.

7. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.

8. The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or pre-construction conditions and fully stabilized prior to accepting flows.

Please note that IEPA has issued Section 401 Water Quality Certification for this NWP. The conditions of this WQC are automatically conditions of this NWP verification and are included in the enclosed Fact Sheet. If you have any questions regarding Section 401 certification, please contact IEPA's Division of Water Pollution Control, Permit Section #15, by telephone at (217) 785-6939.

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This verification is valid until March 14, 2026, when NWP14 – Linear Transportation Projects is scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date the NWP is modified, reissued, or revoked, you will have 12 months from the date of the modification, reissuance or revocation to complete the activity under the present terms and conditions. Failure to comply with the general and regional conditions of this NWP, or any project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization.

This office is in receipt of a letter from the Illinois Department of Transportation confirming your purchase of 0.260 acres of mitigation credit. This requirement was calculated by multiplying 0.173 acres by a ratio of 1.5:1, which equals 0.260 credits.

Once you have completed the authorized activity, please sign and return the enclosed compliance certification as required by general condition 30. If you have any questions, please contact Stasi Brown of this office by telephone at (312) 846-5544, or email at stasi.f.brown@usace.army.mil.

Sincerely,

**Teralyn
Pompeii** Digitally signed by
Teralyn Pompeii
Date: 2023.02.28
13:29:54 -06'00'

Teralyn Pompeii
Chief, Regulatory Branch

Enclosures

Illinois Department of Transportation (Alain Midy, Vanessa Ruiz, Alycia Klunenbergl)

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PERMIT COMPLIANCE
CERTIFICATION

Permit Number: LRC-2022-00761
Permittee: Jose Rios
Illinois Department of Transportation
Date: February 28, 2023

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit and if applicable, compensatory wetland mitigation was completed in accordance with the approved mitigation plan.¹

PERMITTEE

DATE

Within 30 days after completion of the activity authorized by this permit and any mitigation required by the permit, this certification must be signed and returned to the following address:

Email to: ChicagoRequests@usace.army.mil
Subject: Compliance Certification, LRC-2022-00761

Please note that your permitted activity is subject to compliance inspections by Corps of Engineers representatives. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.

¹ If compensatory mitigation was required as part of your authorization, you are certifying that the mitigation area has been graded and planted in accordance with the approved plan. You are acknowledging that the maintenance and monitoring period will begin after a site inspection by a Corps of Engineers representative or after thirty days of the Corps' receipt of this certification. You agree to comply with all permit terms and conditions, including additional reporting requirements, for the duration of the maintenance and monitoring period.

IEPA PERMIT



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

Corrected Copy

October 8, 2021

Corrected Copy Date: DEC 21 2021

U.S. Army Corps of Engineers, Rock Island
ATTN: Ms. Samantha Chavez, Regulatory Branch
Post Office Box 2004
Clock Tower Building
Rock Island, IL 61204-2004

Re: Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify
Nationwide Permits, September 15, 2020
CWA §401 Certification/Denial and applicable conditions
Illinois EPA Log no. C-0210-20

Dear Ms. Chavez:

On September 15, 2020 the Corps of Engineers issued the notice of proposed rulemaking concerning their determination to reissue and modify the current Nationwide Permits (NWP) that are set to expire on March 18, 2022. By letter dated August 19, 2021 your office extended the reasonable period of time to revise the §401 water quality certification to October 13, 2021 for thirty-two (32) NWP. The Agency has made modifications to the certification conditions issued on December 11, 2020. By this final determination document the Illinois EPA grants §401 water quality certification for NWP 3, 4, 5, 6, 7, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 27, 30, 31, 32, 33, 36, 37, 38, 41, 45, 53, and 54 with the special and/or general conditions specified below. This document also provides the certification conditions for NWP 12, 29, 39, 40, 42, 43, 51, 52, 57, and 58 and notice of the Agency determination to deny eight (8) of the proposed nationwide permits which are provided below with reasons in accordance with 40 CFR 121.7(e)(2).

CWA §401 certification is hereby granted, subject to General Conditions 1 through 12 below, for the following nationwide permits:

- NWP 3 – Maintenance
- NWP 4 – Fish and Wildlife Harvesting, Enhancement, and Attraction Device and Activities
- NWP 5 – Scientific Measurement Devices
- NWP 7 – Outfall Structures and Associated Intake Structures
- NWP 18 – Minor Discharges
- NWP 19 – Minor Dredging
- NWP 20 – Response Operations for Oil or Hazardous Substances
- NWP 22 – Removal of Vessels
- NWP 25 – Structural Discharges
- NWP 30 – Moist Soil Management for Wildlife
- NWP 31 – Maintenance of Existing Flood Control Facilities
- NWP 33 – Temporary Construction, Access and Dewatering
- NWP 36 – Boat Ramps
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 45 – Repair of Uplands Damaged by Discrete Events

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
2009 Mall Street Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

PLEASE PRINT ON RECYCLED PAPER

EPA Log No. C-0210-20, Section 401 Water Quality Certification with General and Special Conditions and Denial of 401 Certification Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits, September 15, 2020.

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CWA §401 certification is hereby granted, subject to General Conditions 1 through 12 below and the Special Conditions which are contained in the referenced attachment for the following identified nationwide permits:

NWP 6 – Survey Activities. Refer to Special Conditions for NWP 6 in Attachment.

NWP 12 – Oil or Natural Gas Pipeline Activities. Refer to Special Conditions for NWP 12 in Attachment.

NWP 13 – Bank Stabilization. Refer to Special Conditions for NWP 13 in Attachment.

NWP 14 – Linear Transportation Projects. Refer to Special Conditions for NWP 14 in Attachment.

NWP 15 – U.S. Coast Guard Approved Bridges. Refer to Special Conditions for NWP 15 in Attachment.

NWP 16 – Return Water from Upland Contained Disposal Areas. Refer to Special Conditions for NWP 16 in Attachment.

NWP 17 – Hydropower Projects. Refer to Special Conditions for NWP 17 in Attachment.

NWP 23 – Approved Categorical Exclusions. Refer to Special Conditions for NWP 23 in Attachment.

NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities. Refer to Special Conditions for NWP 27 in Attachment.

NWP 29 – Residential Developments. Refer to Special Conditions for NWP 29 in Attachment.

NWP 32 – Completed Enforcement Actions. Refer to Special Conditions for NWP 32 in Attachment.

NWP 37 – Emergency Watershed Protection and Rehabilitation. Refer to Special Conditions for NWP 37 in Attachment.

NWP 38 – Cleanup of Hazardous and Toxic Waste. Refer to Special Conditions for NWP 38 in Attachment.

NWP 39 – Commercial and Institutional Developments. Refer to Special Conditions for NWP 39 in Attachment.

NWP 40 – Agricultural Activities. Refer to Special Conditions for NWP 40 in Attachment.

NWP 42 – Recreational Facilities. Refer to Special Conditions for NWP 42 in Attachment.

NWP 43 – Stormwater Management Facilities. Refer to Special Conditions for NWP 43 in Attachment.

NWP 51 – Land-Based Renewable Energy Generation Facilities. Refer to Special Conditions for NWP 51 in Attachment.

NWP 52 – Water-Based Renewable Energy Generation Pilot Projects. Refer to Special Conditions for NWP 52 in Attachment.

NWP 53 – Removal of Low-Head Dams. Refer to Special Conditions for NWP 53 in Attachment.

NWP 54 – Living Shorelines. Refer to Special Conditions for NWP 54 in Attachment.

NWP 57 – Electric Utility Line and Telecommunications Activities. Refer to Special Conditions for NWP 12 in Attachment.

NWP 58 – Utility Line Activities for Water and Other Substances. Refer to Special Conditions for NWP 12 in Attachment.

CWA §401 certification is hereby denied with reasons provided in accordance with 401 CFR 121.7 for the following NWPs:

NWP 21 – Surface Coal Mining Activities. The Illinois EPA has determined that a case-specific review is warranted for all surface mining activities including carbon extraction because pursuant to 35 Ill. Admin. Code Section 401.102, mining activities are identified as having, when certain refuse materials are used, the capability to cause or threaten to cause a nuisance or render waters harmful or detrimental to public health and to all legitimate uses including but not limited to livestock and wildlife uses. The likelihood that contaminants related to coal extraction, particularly acid producing minerals in mine refuse, would be found within overburden and soil stockpiles and therefore present within fill materials warrant a facility specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Additionally, Illinois' Section 401 implementation rules at 35 Ill. Admin. Code Part 395 regarding material testing exemptions specifically exclude material with known sources of pollution. Therefore, Section 401 certification is denied for this nationwide permit (NWP21).

EPA Log No. C-0210-20, Section 401 Water Quality Certification with General and Special Conditions and Denial of 401 Certification Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits, September 15, 2020.

Page No. 3

NWP 34 – Cranberry Production Activities: The Illinois EPA has determined that the area of impact that is allowed by an authorization under this nationwide permit exceeds 1/2 acre. 1/2 acre is determined to be representative of the maximum threshold for minimal degradation of existing uses of aquatic resources. Consequently, any activity authorized under this nationwide permit must be subject to a case-specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Therefore, the Illinois EPA denies 401 certification for NWP 34.

NWP 44 – Mining Activities: The Illinois EPA has determined that a case-specific review is warranted for all surface mining activities because pursuant to 35 Ill. Admin. Code Section 401.102, mining activities are identified as having, when certain refuse materials are used, the capability to cause or threaten to cause a nuisance or render waters harmful or detrimental to public health and to all legitimate uses including but not limited to livestock and wildlife uses. Furthermore, all mining activities are regulated by the Illinois EPA under federal and state statute because of their potential to cause or threaten to cause water pollution. Therefore, for the above reasons, the Illinois EPA denies 401 certification for NWP 44.

NWP 46 – Discharges into Ditches: The Illinois EPA has determined that a case-specific review is warranted for all discharge activities into ditches because of the nationwide permit exceeds the 1/2 acreage determined to be the maximum threshold for minimal degradation of existing uses of aquatic resources. Consequently, any activity authorized under this nationwide permit must be subject to a case-specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Therefore, the Illinois EPA denies 401 certification for NWP 46.

NWP 48 – Commercial Shellfish Mariculture Activities: As proposed, the Illinois EPA believes this nationwide permit is inapplicable to waters of the U.S. that are found within the State of Illinois. Therefore, the Illinois EPA denies 401 certification for NWP 48.

NWP 49 – Coal Remining Activities: By reference to the certification denial explanation for NWP 21, the Illinois EPA denies 401 certification for NWP 49.

NWP 50 – Underground Coal Mining: By reference to the certification denial explanation for NWP 21, the Illinois EPA denies 401 certification for NWP 50.

NWP 59 – Water Reclamation and Reuse Facilities: As proposed in the Federal Register, this proposed nationwide permit would appear to allow utilization of existing natural waterbodies as treatment devices. According to 35 Ill. Admin. Code 301.440 such utilization is not permissible. Therefore, the Illinois EPA denies 401 certification for NWP 59.

401 Certification General Conditions

General Conditions 1 through 12 shall be applicable to all NWPs that are granted 401 certification.

General Condition 1: Waterbodies that Require Individual Certification

Pursuant to 35 Ill. Adm. Code Section 302.105(d)(6), an individual 401 water quality certification will be required for activities permitted under these Nationwide Permits for discharges to waters designated by the State of Illinois as waters of particular biological significance or Outstanding Resource Waters under 35 Ill. Adm. Code 302.105(b). Biologically Significant Streams (BSS) are cataloged in Illinois DNR's publication

IEPA Log No. C-0210-20, Section 401 Water Quality Certification with General and Special Conditions and Denial of 401 Certification Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits, September 15, 2020.

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“Integrating Multiple Taxa in a Biological Stream Rating System” and may be identified at:
<https://www2.illinois.gov/dnr/conservation/BiologicalStreamratings/Pages/default.aspx>.

General Condition 2: Water Quality Impairments

Pursuant to 35 Ill. Adm. Code Sections 302.105(a), 302.105(c)(2)(B), and 395.401(a), an individual 401 water quality certification will be required for activities permitted under these Nationwide Permits that may cause a discharge that, whether temporarily or permanently, may cause or contribute to additional loading of any pollutant, or deterioration of any water quality parameter, such as pH or dissolved oxygen, where such pollutant or parameter is also designated by the State of Illinois as a cause of water quality impairment of the particular segment of the receiving water body according to the Illinois Environmental Protection Agency’s Section 303(d) list. The most recent Illinois Integrated Water Quality Report and Section 303(d) List can be found at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx>.

General Condition 3: Threatened and Endangered Species

Pursuant to 35 Ill. Admin. Code Section 302.105(f)(1)(F), prior to proceeding with any work in furtherance of activities permitted under these Nationwide Permits, potential impacts to State threatened or endangered species and Natural Areas shall be determined in accordance with applicable consultation procedures established under 17 Ill. Admin Code Part 1075. The Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) is available to complete consultation at <http://dnr.illinois.gov/EcoPublic/>. If IDNR determines that adverse impacts to protected natural resources are likely, the applicant shall address those identified concerns with IDNR through the consultation process. Please contact IDNR, Impact Assessment Section at 217-785-5500 if you have any questions regarding consultation.

General Condition 4: TMDLs

Pursuant to 35 Ill. Admin. Code Sections 302.105(a), 302.105(c)(2)(B), and 395.401(a), activities permitted under these Nationwide Permits that may cause a discharge that, whether temporarily or permanently, may cause or contribute to additional loading of any pollutant, or deterioration of any water quality parameter, such as pH or dissolved oxygen, where such pollutant or parameter is addressed by a USEPA approved Total Maximum Daily Load (TMDL) report for the receiving water body shall develop and implement additional measures and or procedures which ensure consistency with the load allocations, assumptions and requirements of the TMDL report. TMDL program information and water listings are available at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/reports.aspx>.

General Condition 5: Prohibitions

Pursuant to 35 Ill. Admin. Code Section 395.401(a), the applicant shall not cause:

- violation of applicable provisions of the Illinois Environmental Protection Act;
- water pollution defined and prohibited by the Illinois Environmental Protection Act;
- violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
- interference with water use practices near public recreation areas or water supply intakes.

General Condition 6: Erosion and Sedimentation Control Measures

Pursuant to the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Sections 302.203 and 395.402(b)(2), the applicant shall implement all necessary sedimentation and erosion control measures consistent with the current edition of

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the "Illinois Urban Manual" found at <https://illinoisurbanmanual.org/>. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins, silt fencing and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. All areas affected by construction shall be seeded and stabilized as soon after construction as possible.

General Condition 7: NPDES Stormwater Construction Permit

Pursuant to the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Section 395.402(b)(2), the applicant shall be responsible for obtaining an NPDES Storm Water Permit required by the federal Clean Water Act prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be applied for at <https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx>.

General Condition 8: Spill Response Plan

Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.203, and 302.208, the applicant shall ensure that a spill avoidance and response plan has been developed and implemented for management of accidental releases of petroleum, oil, and lubricant products to the aquatic environment during construction and for emergency notification of applicable downstream water supply operators. Absorbent pads, containment booms and skimmers shall be available to facilitate the cleanup of petroleum spills. If floating hydrocarbon (oil and gas) products are observed, the applicant or his designated individual will be responsible for directing that work be halted so that appropriate corrective measures are taken in accordance with the plan prior to resuming work.

General Condition 9: Hydraulic Machinery

Pursuant to 35 Ill. Admin. Code Sections 302.203, 302.304, and 302.515, all hydraulic machinery utilized for the permitted activity and used in or immediately adjacent to waters of the State shall utilize biodegradable or bio-based hydraulic fluids to minimize pollution in the case of broken or leaking hydraulic equipment.

General Condition 10: Temporary Structures and Work

Pursuant to 35 Ill. Admin. Code Sections 302.203, 395.204, and 395.401(b), temporary work pads, cofferdams, access roads and other temporary fills are approved provided that such activities are constructed with clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities. Temporary fills within streams, creeks or rivers shall utilize adequate bypass measures (i.e. dam and pump, flumes, culverts, etc.) to minimize sedimentation and erosion and to maintain normal stream flow during construction.

General Condition 11: Construction Site Dewatering

Pursuant to Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Section 395.402(b)(2), dewatering of a construction site is authorized provided the dewatering activity is limited to the immediate work area within a cofferdam or otherwise isolated from waters of the State, and the work site is free from sources of contamination including those of natural origin. Dewatering activities shall incorporate Best Management Practices in accordance with the current edition of the "Illinois Urban Manual"

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<https://illinoisurbanmanual.org/>. Practice Standard for Dewatering (no. 813) or as otherwise appropriate to ensure that return flows from the dewatering activity are free of unnatural turbidity and floating debris and meet applicable water quality standards. Dewatering or discharge of flush water from construction of drilled piers or boreholes is not authorized and must be conducted in accordance with an NPDES permit issued by the Illinois EPA.

General Condition 12: Discharged Material Quality

Pursuant to 35 Ill. Admin. Code Sections 302.203, 302.208, and 395.401(b), any spoil material excavated, dredged or otherwise produced must not be returned to the water body but must be deposited in a self-contained area in compliance with all state statutes. Except as specifically allowed by special condition, any backfilling must be done with clean material that is predominantly sand or larger size material, with no more than 20% passing a #230 U. S. sieve and placed in a manner to prevent violation of applicable water quality standards.

401 Certification Special Conditions

Special Conditions including the conditional exclusions of 401 certification coverage that are listed within the Attachment: "Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits" shall be applicable as stated therein.

Should you have any questions or comments regarding the content of this nationwide certification, please contact Darren Gove at 217-782-3362.

Sincerely,

ORIGINAL SIGNED

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control

DEL:DRG:C-0210-20.docx

Attachment: Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits dated September 15, 2020

cc: Records Unit
CoE, Chicago District
CoE, Louisville District (Indianapolis Office)
CoE, Louisville District (Newburgh Regulatory Office)
CoE, Memphis District
CoE, St. Louis District
IDNR, Bartlett
IDNR, OWR, Chicago
IDNR, OWR, Springfield
USEPA, Region 5
USFWS, Rock Island, Barrington and Marion

IEPA Log No. C-0210-20: Attachment: Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits dated September 15, 2020

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**ILLINOIS EPA WATER QUALITY CERTIFICATION
SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 14
Linear Transportation Projects**

1. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for linear transportation activities that cause loss of greater than 500 linear feet of stream channel, as measured along the stream corridor.
2. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for linear transportation activities covered by this nationwide permit that include the temporary or permanent placement of steel or other painted structures within the waterbody as result of demolition work of previous structures.
3. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for new or expanded roadways that affect waterways which are designated by the State of Illinois as having water quality impairments caused by chloride. The most recent Illinois Integrated Water Quality Report and Section 303(d) List can be found at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx>
4. Pursuant to 35 Ill. Admin. Code Sections 302.203 and 395.401(b), any relocated stream channel authorized under this nationwide permit shall be constructed under dry conditions and allowed to fully stabilize prior to the diversion of flow to prevent erosion and sedimentation.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAI ROUTE 80 (INTERSTATE 80)
 EAST OF RIDGE ROAD TO EAST OF RIVER ROAD
 SECTION 2021-154-R
 PROJECT I4WJ(714)
 PAVEMENT RECONSTRUCTION AND CULVERT REPLACEMENT
 WILL COUNTY
 C-61-105-22

SUBSURFACE UTILITY ENGINEERING (S-UE)
 UTILIZED ON THIS PROJECT

FOR INDEX OF SHEETS, SEE SHEET NO. 3

PROJECT IS LOCATED IN THE VILLAGES
 OF SHOREWOOD AND MPOKKA

PROJECT ENDS
 STA. 305+50.00

PROJECT BEGINS
 STA. 158+73.00



LOCATION MAP

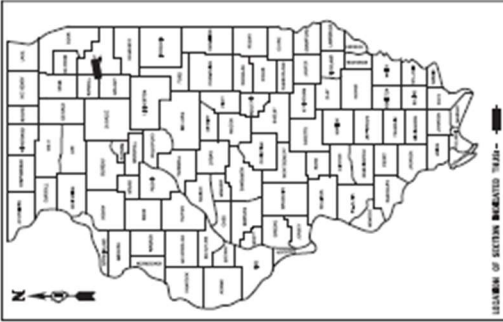
SCALE: 1" = 500'
 0.8333 INCHES = 14.07 FT. = 4.30 METERS
 NET LENGTH = 14.07 FT. = 4.30 MILE

FOR SEALS & SIGNATURES
 SEE SHEET NO. 2



NO. 1	NO. 2	NO. 3	NO. 4
158+73.00	200+00.00	250+00.00	305+50.00
158+73.00	200+00.00	250+00.00	305+50.00

MS-14142Z
 MS-14395-B



FUNCTIONAL CLASSIFICATION
 INTERSTATE

2019 ADT = 69,400
 P.V. = 63.87% S.J. = 4.13% M.U. = 32.00%

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUBMITTED: _____
 DESIGN ENGINEER: _____
 CHIEF ENGINEER OF HIGHWAY AND ENVIRONMENT: _____
 DIRECTOR OF ILLINOIS PROJECT MANAGEMENT: _____

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS

ALL UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY DATA. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS HAS BEEN VERIFIED BY FIELD SURVEY. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS HAS BEEN VERIFIED BY FIELD SURVEY. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS HAS BEEN VERIFIED BY FIELD SURVEY.

UTILITY LOCATION INFORMATION FOR EXAMINATION
 (SEE 611)

THESE PLANS HAVE BEEN PREPARED BY KEN PARK, P.E. (847)705-4594
 PROJECT ENGINEER: KEN PARK, P.E. (847)705-4594
 PROJECT MANAGER: SULEYMAN TULGAR, P.E. (847)705-4212
 CONTRACT NO. 62P71

PROJECT LABOR AGREEMENT

Effective: May 18, 2007

Revised: August 1, 2019

Description. The Illinois Project Labor Agreements Act, 30 ILCS 571, states that the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost. A project labor agreement (PLA) is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project that is intended to support this compelling interest. It has been determined by the Department that a PLA is appropriate for the project that is the subject of this contract. The PLA document, provided below, only applies to the construction site for this contract. It is the policy of the Department on this contract, and all construction projects, to allow all contractors and subcontractors to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.

Execution of Letter of Assent. A copy of the PLA applicable to this project is included as part of this special provision. As a condition of the award of the contract, the successful bidder and each of its subcontractors shall execute a "Contractor Letter of Assent", in the form attached to the PLA as Exhibit A. The successful bidder shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the subcontractor's performance of work on the project. Upon request, copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization at the pre-job conference.

Quarterly Reporting. Section 37 of the Illinois Project Labor Agreements Act requires the Department to submit quarterly reports regarding the number of minorities and females employed under PLAs. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the PLA of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <http://www.idot.illinois.gov/Assets/uploads/files/IDOT-Forms/BC/BC%20820.docx>.

The report shall be submitted no later than the 15th of the month following the end of each quarter (i.e., April 15 for the January – March reporting period). The form shall be emailed to DOT.PLA.Reporting@illinois.gov or faxed to (217) 524-4922.

Any costs associated with complying with this provision shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

Illinois Department of Transportation
PROJECT LABOR AGREEMENT

This Project Labor Agreement (“PLA” or “Agreement”) is entered into this day of , 2023, by and between the Illinois Department of Transportation (“IDOT” or “Department”) in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the “Unions”). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT’s Prime Contractor and each of its subcontractors of whatever tier (“Subcontractor” or “Subcontractors”) on Contract No. 62P71(hereinafter, the “Project”).

ARTICLE 1 - INTENT AND PURPOSES

- 1.1 This PLA is entered into in accordance with the Project Labor Agreement Act (“Act”, 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act’s goals and objectives.
- 1.2 As a condition of the award of the contract for performance of work on the Project, IDOT’s Prime Contractor and each of its Subcontractors shall execute a “Contractor Letter of Assent”, in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor’s Contractor Letter of Assent to the Department prior to the Subcontractor’s performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.

- 1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.
- 1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.
- 1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

- 1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.
- 1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS

- 2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.

- 2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together "Project Employment Objectives"). IDOT shall provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

- 2.9 The parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.
- 2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

ARTICLE III - ADMINISTRATION OF AGREEMENT

- 3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS

- 4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.
- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT

- 5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.
- 5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.

- 5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

ARTICLE VI –DISPUTES: GENERAL PRINCIPLES

- 6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.
- 6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.

The arbitrator is not authorized to award back pay or any other damages for a miss assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

- 6.3 The PLA Jurisdictional Dispute Resolution Process (“Process”) sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

DISPUTE PROCESS

- 6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL- CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.
- 6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor (“Federation”) from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.

- 6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:
- (a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)
 - (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
 - (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.
- 6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

- 6.8 Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a “bench” decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a “short form” decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union’s General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

- 6.9 In rendering a decision, the Arbitrator shall determine:
- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
 - (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,

- (c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.
- (d) The arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.

6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

6.12 The Order of Presentation in all Hearings before an Arbitrator shall be

- I. Identification and Stipulation of the Parties
- II. Unions(s) claiming the disputed work presents its case
- III. Union(s) assigned the disputed work presents its case
- IV. Employer assigning the disputed work presents its case
- V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
- VI. Rebuttal by union(s) claiming the disputed work
- VII. Additional submissions permitted and requested by Arbitrator
- VIII. Closing arguments by the parties

- 6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.
- 6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.
- 6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

ARTICLE VII - WORK STOPPAGES AND LOCKOUTS

- 7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.

7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.

7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.

7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

- 7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:
- 7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.
 - 7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.
 - 7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.
 - 7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.
 - 7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- 7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.
- 7.7 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- 7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

ARTICLE VIII – TERMS OF AGREEMENT

- 8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.
- 8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.
- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.
- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

Execution Page

Illinois Department of Transportation

Stephen Travia, Director of Highways Project Implementation

Vicki L. Wilson, Director of Finance & Administration

Yangu Kim, Chief Counsel

Omer Osman, Secretary

(Date)

Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the Unions listed below:

(Date)

List Unions:

Exhibit A - Contractor Letter of Assent

(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No. 62P71], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

(Authorized Company Officer)

(Company)

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

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

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

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

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

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

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

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

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

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

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

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

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

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

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

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

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

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

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

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

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

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

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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

1. Minimum wages (29 CFR 5.5)

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

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

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

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

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

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

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

2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally- assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics,

including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records (29 CFR 5.5)

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

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

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

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

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

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

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

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

4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

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

Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

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

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination.

Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

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

b. Trainees (programs of the USDOL).

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

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

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

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

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

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

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 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 shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

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

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

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages.

The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

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

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

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

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

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.

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

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

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.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

