214

Letting January 16, 2026

Notice to Bidders, Specifications and Proposal

Illinois Department of Transportation

Contract No. 91642
CHAMPAIGN County
Section 19-00314-00-PV (City Of Champaign)
Route FAU 7159 (Mattis Avenue)
Project E4QI-495 ()
District 5 Construction Funds

Prepared by

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Checked by

(Printed by authority of the State of Illinois)

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. January 16, 2026 at which time the bids will be publicly opened from the iCX SecureVault.

2. **DESCRIPTION OF WORK**. The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

   Contract No. 91642
   CHAMPAIGN County
   Section 19-00314-00-PV (City Of Champaign)
   Project E4QI-495 ()
   Route FAU 7159 (Mattis Avenue)
   District 5 Construction Funds

Pavement reconstruction, shared-use path, and traffic signal modernization on Mattis Avenue from Windsor Drive to Curtis Road in Champaign.

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

   (b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS**. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to re-advertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Gia Biagi,
Secretary

CONTRACT 91642

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2026

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

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

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

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

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

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BDE SPECIAL PROVISIONS

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

	File Name	Pg.		Special Provision Title	Effective	Revised
	80099	136	☒	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2022
	80274		☐	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2022
	80192		☐	Automated Flagger Assistance Device	Jan. 1, 2008	April 1, 2023
	80173		☐	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
	80426		☐	Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	Jan. 1, 2022
*	80475		☐	Bridge Deck Concrete Overlays	Jan. 1, 2026	
	80241		☐	Bridge Demolition Debris	July 1, 2009	
	5053I		☐	Building Removal	Sept. 1, 1990	Aug. 1, 2022
	5026I		☐	Building Removal with Asbestos Abatement	Sept. 1, 1990	Aug. 1, 2022
*	80460	138	☒	Cement, Finely Divided Minerals, Admixtures, Concrete, and Mortar	Jan. 1, 2025	Jan. 1, 2026
	80384	155	☒	Compensable Delay Costs	June 2, 2017	April 1, 2019
	80198		☐	Completion Date (via calendar days)	April 1, 2008	
	80199		☐	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
	80461		☐	Concrete Barrier	Jan. 1, 2025	
	80453		☐	Concrete Sealer	Nov. 1, 2023	
	80261		☐	Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2025
*	80476		☐	Deck Slab Repair	Jan. 1, 2026	
	80029		☐	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 2, 2025
	80467		☐	Erosion Control Blanket	Aug. 1, 2025	
	80229		☐	Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
	80452		☐	Full Lane Sealant Waterproofing System	Nov. 1, 2023	
	80433		☐	Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	Jan. 1, 2022
	80471		☐	Guardrail	Nov. 1, 2025	
	80472		☐	High Friction Surface Treatment	Nov. 1, 2025	
*	80456		☐	Hot-Mix Asphalt	Jan. 1, 2024	Jan. 1, 2026
	80446		☐	Hot-Mix Asphalt – Longitudinal Joint Sealant	Nov. 1, 2022	Aug. 1, 2023
	80438		☐	Illinois Works Apprenticeship Initiative – State Funded Contracts	June 2, 2021	April 2, 2024
*	80477	159	☒	Longitudinal Tining	Jan. 1, 2026	
	80450		☐	Mechanically Stabilized Earth Retaining Walls	Aug. 1, 2023	Aug. 1, 2025
*	80478	160	☒	Modified Longitudinal Construction Joint	Jan. 1, 2026	
	80464	161	☒	Pavement Marking	April 1, 2025	Nov. 1, 2025
	80468		☐	Pavement Patching	Aug. 1, 2025	
	80441		☐	Performance Graded Asphalt Binder	Jan 1, 2023	
	80459		☐	Preformed Plastic Pavement Marking	June 2, 2024	
	3426I		☐	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2022
	80473		☐	Raised Reflective Pavement Markers	Nov. 1, 2025	
	80455	162	☒	Removal and Disposal of Regulated Substances	Jan. 1, 2024	April 1, 2024
	80474		☐	Residential Driveway Temporary Signal	Nov. 1, 2025	
	80445	164	☒	Seeding	Nov. 1, 2022	
	80457		☐	Short Term and Temporary Pavement Markings	April 1, 2024	April 2, 2024
*	80462	170	☒	Sign Panels and Appurtenances	Jan. 1, 2025	Jan. 1, 2026
*	80479		☐	Sinusoidal Rumble Strips	Jan. 1, 2026	
	80469		☐	Slope Wall	Aug. 1, 2025	
*	80448	172	☒	Source of Supply and Quality Requirements	Jan. 2, 2023	Jan. 1, 2026
	80340		☐	Speed Display Trailer	April 2, 2014	Jan. 1, 2022
	80127	174	☒	Steel Cost Adjustment	April 2, 2004	Nov. 1, 2025
*	80480		☐	Structural Repair of Concrete	Jan. 1, 2026	
	80397	176	☒	Subcontractor and DBE Payment Reporting	April 2, 2018	
	80391	177	☒	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
	80463	178	☒	Submission of Bidders List Information	Jan. 2, 2025	Mar. 2, 2025
	80437	179	☒	Submission of Payroll Records	April 1, 2021	Nov. 2, 2023

	File Name	Pg.		Special Provision Title	Effective	Revised
	80435		☐	Surface Testing of Pavements – IRI	Jan. 1, 2021	Jan. 1, 2023
	80465	181	☒	Surveying Services	April 1, 2025	
*	80481		☐	Temporary Concrete Barrier	Jan. 1, 2026	
	80466		☐	Temporary Rumble Strips	April 1, 2025	
	80470		☐	Traffic Signal Backplate	Aug. 1, 2025	
	20338	183	☒	Training Special Provisions	Oct. 15, 1975	Sept. 2, 2021
	80429		☐	Ultra-Thin Bonded Wearing Course	April 1, 2020	Jan. 1, 2022
	80439	186	☒	Vehicle and Equipment Warning Lights	Nov. 1, 2021	Nov. 1, 2022
	80458		☐	Waterproofing Membrane System	Aug. 1, 2024	
	80302		☐	Weekly DBE Trucking Reports	June 2, 2012	Jan. 2, 2025
	80454	187	☒	Wood Sign Support	Nov. 1, 2023	
*	80427	188	☒	Work Zone Traffic Control Devices	Mar. 2, 2020	Jan. 1, 2026
	80071		☐	Working Days	Jan. 1, 2002	

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: January 16, 2026 Letting

Pg #	√	File Name	Title	Effective	Revised
	☐	*GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	Oct 17, 2025
	☐	GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	June 28, 2024
	☐	GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	April 13, 2018
	☐	GBSP 16	Jacking Existing Superstructure	Jan 11, 1993	April 13, 2018
	☐	GBSP 18	Modular Expansion Joint	May 19, 1994	Oct 27, 2023
	☐	GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Oct 23, 2020
	☐	*GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Oct 17, 2025
	☐	GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Apr 22, 2016
	☐	GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	Oct 27, 2023
	☐	*GBSP 34	Concrete Wearing Surface	June 23, 1994	Oct 17, 2025
	☐	GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	June 28, 2024
	☐	GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
	☐	GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	April 15, 2022
	☐	GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Apr 22, 2016
	☐	GBSP 61	Slipform Parapet	June 1, 2007	April 15, 2022
	☐	GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	Oct 5, 2015
	☐	GBSP 71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011
	☐	GBSP 78	Bridge Deck Construction	Oct 22, 2013	Dec 21, 2016
	☐	GBSP 79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Mar 29, 2017
191	☒	GBSP 81	Membrane Waterproofing for Buried Structures	Oct 4, 2016	March 1, 2019
	☐	GBSP 82	Metallizing of Structural Steel	Oct 4, 2016	Oct 20, 2017
	☐	GBSP 83	Hot Dip Galvanizing for Structural Steel	Oct 4, 2016	June 28, 2024
	☐	GBSP 85	Micropiles	Apr 19, 1996	Oct 23, 2020
	☐	GBSP 86	Drilled Shafts	Oct 5, 2015	Oct 27, 2023
	☐	GBSP 87	Lightweight Cellular Concrete Fill	Nov 11, 2001	Apr 1, 2016
	☐	GBSP 88	Corrugated Structural Plate Structures	Apr 22, 2016	April 13, 2018
	☐	GBSP 89	Preformed Pavement Joint Seal	Oct 4, 2016	March 24, 2023
	☐	GBSP 90	Three Sided Precast Concrete Structure (Special)	Dec 21, 2016	March 22, 2024
	☐	GBSP 91	Crosshole Sonic Logging Testing of Drilled Shafts	Apr 20, 2016	March 24, 2023
	☐	GBSP 92	Thermal Integrity Profile Testing of Drilled Shafts	Apr 20, 2016	March 24, 2023
	☐	GBSP 93	Preformed Bridge Joint Seal	Dec 21, 2016	June 28, 2024
	☐	GBSP 94	Warranty for Cleaning and Painting Steel Structures	Mar 3, 2000	Nov 24, 2004
	☐	GBSP 96	Erection of Bridge Girders Over or Adjacent to Railroads	Aug 9, 2019	
	☐	GBSP 97	Folded/Formed PVC Pipeliner	April 15, 2022	
	☐	GBSP 98	Cured-in-Place Pipe Liner	April 15, 2022	
	☐	GBSP 99	Spray-Applied Pipe Liner	April 15, 2022	
	☐	GBSP 100	Bar Splicers, Headed Reinforcement	Sept 2, 2022	Oct 27, 2023
	☐	*GBSP 101	Noise Abatement Wall, Ground Wall	Dec 9, 2022	Oct 17, 2025
	☐	*GBSP 102	Noise Abatement Wall, Structure Mounted	Dec 9, 2022	Oct 17, 2025
	☐	GBSP 103	Noise Abatement Wall Anchor Rod Assembly	Dec 9, 2022	

An * indicates a new or revised special provision.

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 FAU Route 7159 (South Mattis Ave) Project E4QI(495), Section 19-00314-00-PV, Champaign County and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAU Route 7159 (South Mattis Ave)
Project E4QI(495)
Section 19-00314-00-PV
Champaign County
Contract No. 91642

LOCATION OF PROJECT

This project is located along South Mattis Ave in the Southwest corner of the City of Champaign. The work will begin on the North side of Curtis Road and move north along Mattis Ave approximately 5,150 ft to the intersection of Windsor Rd. Work will continue approximately 265 ft north along north of the intersection with Windsor. Work along will also be undertaken along Windsor approximately 590 ft west and 165 ft east of the intersection with Mattis Ave. The project will also include the replacement of roughly 90 ft for Kenney Ave, west of the intersection with Mattis Ave. The gross/net length of the improvements is 6,299.7 feet (1.193 miles).

DESCRIPTION OF PROJECT

The proposed work consists of pavement removal, new concrete pavement, curb & gutter, concrete shared use path, new box culverts, installation of new drainage structures and storm sewers, traffic signal modification, placement of pavement markings, and all incidental and collateral work necessary to complete the project as shown on the plans and as described therein.

AVAILABILITY OF ELECTRONIC FILES

Electronic files of this project will be made available to the Contractor after contract award. Contractor shall coordinate obtaining electronic files through the project resident engineer. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold

the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the sole responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

STATUS OF UTILITIES

AGENCY	TYPE	LOCATION	Adjustments
AT&T	Telephone and Fiber Optic (Buried)	West side of Mattis from Curtis to Windsor; Crosses Mattis and goes from one Cell Tower to the other.	Watch and Protect / Utility is relocating their lines that will be conflict. (Facilities will be relocated prior to commencement of construction)
I3 Broadband	Fiber Optic (Buried)	East Side of Mattis from Windsor to Cell tower on East side.	Watch and Protect / Utility looking to relocate or adjust at Sta 38+50 RT. (Utility noted they may adjust as needed during construction.)
Comcast Communications	Communications (Buried)	East side of Mattis from Windsor to Kenney Ave.	Watch and Protect / (Facilities will be relocated prior to commencement of construction)
Windstream Communications	Communications (Aerial and Buried)	Aerial – East side of Mattis from Windsor to East Cell Tower. Buried – East Cell Tower to West Cell tower.	Watch and Protect
Ameren Illinois	Aerial and Buried Electric	Buried – West side of Mattis from Curtis to roughly cell tower than cross Matter to substations. Aerial – East side of Mattis from Curtis to Windsor; West side of Mattis from Windsor to Substation where it crosses Mattis to Substation	Watch and Protect (Facilities will be relocated prior to commencement of construction)
Illinois American Water	Underground Water	South side of Windsor Rd & North side of Curtis Rd	Watch and Protect
Urbana & Champaign Sanitary District	Underground Sewer	South side of Windsor and along Mattis North of the intersection with Windsor	Watch and Protect

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 105 and Articles 105.07 and 107.39 of the Standard Specifications for Road and Bridge Construction shall apply.

If any utility adjustment or removal has not been completed when required by the Contractor's operation, the Contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's operations were affected.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

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

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications for Road and Bridge Construction and the following traffic control related Highway Standards.

Traffic Control Highway Standards:

701001 701006 701301 701602 701701 701801 BLR 21-9 BLR 22-7

As illustrated in the plans the proposed project will include the complete closure of Mattis Ave between Windsor and Curtis Ave. This also results in the closure of Kenny Ave at Mattis and the closure of the two (2) entrances form Christie Clinic to Mattis. These closures should help to expedite the construction of the project. Traffic Control sheets illustrate locations of the proposed road closed signage and the proposed detour route, which will be in place during the duration of the project. Work is also proposed along Windsor Ave and Mattis Ave north of Windsor, which will require lanes to be closed to complete necessary improvements. These closures shall only be utilized while construction activities warrant and the lanes shall be reopened as soon as possible. If at all possible, lane closures shall not extend into the weekend or holiday if possible. The contractor shall gain approval from the City and Engineer before starting work that may require an extend closure.

Pedestrian access along Windsor shall be maintained during construction. It is understood, work will required quadrants of the intersection to be closed, however the Contractor shall work to maintain access as much as possible throughout the project. Contractor shall work with the Engineer and City to make sure the public is notified a minimum of 72 hours before noted sidewalk and or lane closures.

The contractor shall be aware there are two (2) cell towers and an Ameren Substation located along Mattis Ave which will warrant access by the utilities from time to time. The contractor shall work with these utilities to gain access to their facilities in time of need. Along with this there are a few farmers, which access their property from Mattis as well that will need access in the spring to complete farming activities, Prior to the road being closed, the contractor shall select a liaison to coordinate with the utility providers and farmers to coordinate weekly regarding access needs for the utilities and farmers, so access can be scheduled and minimize disruptions to all parties.

As noted above, it is intended for traffic to be closed on the Mattis during construction activities to help expediate construction. This project is a **Completion Date plus Working Days** contract.

See **Completion Date plus Working Days** special provisions for information related to completion dates and associated activities.

Method of Measurement and Payment. The work will be paid as a lump sum for Traffic Control and Protection (Special) for the duration of the project. This shall include all necessary signage, barrels, cones, arrow boards, flagging, surveillance, setting up, moving, removal and any other activities or items necessary to install, maintain and remove traffic control during the project.

ACCESSIBLE PEDESTRIAN SIGNALS

Description. This work shall consist of furnishing and installing an accessible pedestrian signal (APS) unit in accordance with Section 888 of the Standard Specifications, the details in the plans and the following additions or exceptions.

Materials. Each APS unit shall be a 2-wire APS unit manufactured by Polara or Carmanah, meeting current PROWAG and MUTCD requirements. The City shall be furnished with a certification from the equipment manufacturer stating that the equipment furnished under this specification complies with all provisions of this specification. If there are any items that do not comply with this specification, then a list of those exceptions must be detailed on the certification.

For all proposed APS units, the audible walk indication shall be an 880 Hz percussive tone with multiple frequencies and 8-10 ticks per second if the pushbuttons at a given corner have 10 feet of separation. If less than 10 feet of separation, a clear, verbal message shall be used to communicate the pedestrian walk interval. This message shall sound throughout the WALK interval only. The verbal message shall be modeled to ensure complete compliance with standards set forth in the MUTCD and PROWAG. A pushbutton locator tone shall sound at each pushbutton. Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

The City reserves the right to modify any and all volume settings based upon field conditions, within specified limitations outlined in the MUTCD and PROWAG. During the programming and installation of the proposed APS units, the Contractor shall ensure that a representative of the City is present to approve the volume settings of each APS unit. The Contractor shall be responsible for programming each APS unit to the satisfaction of the City.

Each APS unit shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, a direction specific R10-3 informational sign, a light emitting diode (LED) indicator light, a solid state electronic control board, a power supply, wiring, mounting hardware, and (where applicable) extension brackets, as well as any other material or labor activity necessary to provide a fully operational APS unit. Each APS unit housing shall be black in color.

All APS Unit components shall be weatherproof and of sturdy design, and in complete accordance with manufacturer specifications. The entire assembly shall be weather tight, secure against electrical shock, and able to withstand continuous usage.

Each pedestrian pushbutton shall be mounted 42” above the adjacent pedestrian path and be accessible within a maximum unobstructed side-reach distance of 10”.

Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N). A red LED shall be located on, or near, the pushbutton which, when activated, acknowledges the pedestrians request to cross the street. A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided either on the pushbutton or its sign. The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

The sign shall be one of the following standard MUTCD designs: R10-3ER or R10-3EL, depending upon orientation of the respective pushbutton as shown in the plans. Signs shall be 9" x 15" in size and manufactured to be compatible with, and securely attach to, the APS units.

Each pedestrian pushbutton shall be accessible within a maximum unobstructed side-reach distance of 10". Where these maximum side-reach distances are exceeded, the Contractor shall provide an extension bracket that securely attaches to the APS unit and signal pole. Each extension bracket shall be powder coated black.

The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

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

AGGREGATE SURFACE COURSE, TYPE B SPECIAL

Description. This item shall consist of the placement of AGGREGATE SURFACE COURSE,TYPE B (SPECIAL) on the driveways as illustrated in the plans or as directed by the Engineer.

General. This item shall consist of the placement of aggregate surface course in accordance with Section 402 of the Standard Specifications at the locations indicated on the plans. The average depth of the aggregate shall be 8".

Basis of Payment. This work will be paid for at the contract unit price per SQUARE YARD for AGGREGATE SURFACE COURSE,TYPE B (SPECIAL) which price shall include all labor, materials, and equipment needed to complete the work as specified above.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)

Description: This work shall consist of the construction of combination concrete curb and gutter of the type specified in the plans. The proposed curb and gutter shall be constructed as a "dry" gutter in that the pan shall slope at 2% away from curb. The work shall conform to the applicable portions of Section 606 of the Standard Specifications.

Measurement and Payment: This work will be measured and paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED).

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 the following:

Substantial Completion Phase 1; September 4th, 2026

This will be for the area North of Station 41+50, (which is the south edge of the residential subdivision on the west side of the project), to Windsor Ave, including Kenny Ave. This area shall be opened to traffic by end of day on Sept 4th. Temporary striping shall be in place and signal work at Windsor shall be completed and operational. Restoration, tree plantings, final striping and lighting may be completed after this date.

Completion Date; December 4th, 2026

The remaining portion of Mattis Ave shall be completed and open to traffic by the end of the day on December 4th, 2026. The contractor will be allowed to complete final restoration, tree plantings/landscaping and final striping into 2027, if needed. It shall be noted traffic signals at Curtis shall be completed and operation prior to opening to traffic. Along with this, the area North of Sta 41+50, shall have restoration completed, to avoid additional disturbances to the landowners and businesses during final completion.

Work on or before the completion date(s) of this contract which will be based upon Phase 1 being 126 calendar days and Completion being 217 calendar days. After the completion date, an additional 30 working days will be allowed to complete the remaining items.

Final Completion; 30 working days in 2027

The remaining restoration, tree plantings, final striping and any other related items may be completed in 2027. During this time, the area will be open to traffic and if lane closures are required to complete work, the contractor shall use the appropriate traffic control and flaggers. The contractor may request temporary road closure to complete certain tasks, but it shall be limited to the hours of 9 am to 3:30 pm and limited to a total of 5 days.

The completion date will be determined by adding the specified number of calendar days to the date the Contractor begins work, or to the date ten days after execution of the contract, whichever is the earlier, unless a delayed start is granted by the Engineer.

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

CONCRETE GUTTER (SPECIAL)

Description: This work shall consist of the construction of concrete gutter matching the existing. The existing gutter is a 24 inch “V” gutter located along Kenny Ave. The work shall conform to the applicable portions of Section 606 of the Standard Specifications.

Measurement and Payment: This work will be measured and paid for at the contract unit price per foot for CONCRETE GUTTER (SPECIAL).

CONFIRMATION BEACON

Description. This work shall consist of furnishing and installing a confirmation beacon in accordance with Section 887 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Construction Requirements. The Contractor shall furnish and install confirmation beacons at the locations shown on the plans. This work shall include all necessary connections, load switches, backpanel wiring, mounting hardware, and other miscellaneous materials required for proper operation of the beacons. The confirmation beacons shall be in accordance with Section 1072 of the Standard Specifications. It should include a 150-watt equivalent LED Lamp rather than incandescent lamp. Approximately 1550 lumens 5000K exterior rated lamp.

The Contractor shall test each confirmation beacon, and ensure each is activated for the appropriate approaches per preemption call approach.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

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

ELECTRIC CABLE IN CONDUIT

Description. This work shall be performed in accordance with Section 817 and 873 of the Standard Specifications with the following additions or exceptions, which apply to the wire and cable for roadway lighting.

Materials. Revise the second sentence of the first paragraph of Article 1066.02 to read:

“The cable shall be rated at a minimum of 90°C dry and 75°C wet, shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals.”

Add the following to Article 1066.03 of the Standard Specifications:

" The cable designated 600V, shall be rated 600 volts and shall be UL Listed Type RHH/RHW/USE."

Construction Requirements. All electric cable shall be tagged with wiring identification markers at each point of access. All handholes, gulfbox junctions, junction boxes, pole handholes, and controller cabinets shall be considered as points of access. Wiring identification markers shall be in accordance with Article 1066.07 of the Standard Specifications.

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

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C, of the size specified, which price shall include all labor, equipment, and material necessary to complete the work as specified.

ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING, NO. 6 1C

Description. This work shall consist of furnishing and installing electric cables in conduit, complete with all splicing, identifications, and terminations, in accordance with Section 873 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Construction Requirements. Equipment grounding conductors shall be made continuous by splicing. Splices shall only be permitted in handholes, double handholes, post bases, and pole handholes unless otherwise directed by the Engineer. All splices shall be irreversible hydraulic compression splices in accordance with Article 1066.06 of the Standard Specifications. No other types of splices shall be permitted. All compression splices shall be neat and direct to the path of ground. Equipment grounding conductors shall be connected to each grounding electrode conductor in the traffic signal system with irreversible hydraulic compression splices or connected to each ground rod in the traffic signal system with exothermic welds. All required compression splices and heavy-duty ground rod clamps and all exothermic welds not included in the cost of a concrete foundation shall be included in the cost of the equipment grounding conductor. The grounding wire shall be bonded to the grounded conductor at the service disconnect in accordance with the requirements of Ameren Illinois, the NEC, and the NESC. When the lighting system is supplied by the same source as the traffic signal system, the bonded ground system for the luminaires may utilize the bonded ground system for the traffic signals. All luminaires that are a part of the traffic signal system shall be grounded.

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

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C, which price shall include all labor, equipment, and material necessary to complete the work as specified.

ELECTRIC SERVICE INSTALLATION

Description. This work shall consist of furnishing and installing a new electric service for proposed street lighting improvements along Mattis Avenue between Curtis Road and Windsor

Road, and shall be performed in accordance with Section 804 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The Contractor shall provide a meter socket in accordance with Ameren Illinois requirements. Service size shall be as shown on plans.

The Contractor shall provide 2" diameter conduit from the meter socket to the power utility company transformer as shown on the plans. The Contractor shall stub the conduits into the transformer base or attach to the designated Ameren Illinois power pole in accordance with Ameren Illinois requirements. All exposed conduits above grade shall be rigid galvanized steel. All elbows in service conduits shall be long radius, rigid galvanized steel.

The meter socket shall be mounted to the lighting controller cabinet as shown on the plans. The Contractor shall ground and bond the service in accordance with the NEC. Minimum ground rod size shall be 5/8" dia. X 10' copper. The ground rod shall be located adjacent to the concrete pad, below the meter socket. Provide a PVC sleeve with grounding conductor from the meter socket to the ground rod. The ground conductor shall be exothermically welded to the ground rod.

Service conductors shall be XLP-type USE, sized as indicated in the plans, and shall be of sufficient length to connect to the Ameren Illinois transformers located in the transformer vault or on the identified power pole. Final connection of the conductors to the transformers shall be by Ameren Illinois. Coordinate requirements on length and transformer stub-ups with Ameren Illinois.

Construction Requirements. The Contractor shall be responsible for coordinating all requirements for the service installation with Ameren Illinois.

The Contractor shall coordinate all requirements and fees for the electric service installation with Ameren Illinois. No additional compensation will be allowed for work required for the electric service or utility connection fees, even though not explicitly shown on the plans, or specified herein.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each. Service conduits, service conductors, meter sockets, ground rods, and other equipment required by the utility company shall be included in this pay item.

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

ELECTRIC SERVICE INSTALLATION (SPECIAL)

Description. This work shall consist of furnishing and installing new meter and disconnect cabinets on the side of the proposed traffic signal cabinet assemblies to provide electrical service to traffic signals at the intersections of Mattis Avenue at Curtis Road and Windsor Road, and shall be performed in accordance with Sections 805 and 863 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The Contractor shall provide a meter socket in accordance with Ameren Illinois requirements. Service size shall be as shown on plans.

Construction Requirements. The intersections of Mattis Avenue at Curtis Road and Windsor Road are currently signalized, with existing meters and disconnect cabinets attached to the sides of the existing traffic signal cabinets. The power source for to each existing meter and disconnect cabinet is provided by a service installation attached to an Ameren Illinois power pole mounted transformer, located within the same quadrant as the traffic signal controller cabinet.

The intent of the design for proposed traffic signal related improvements at the project intersections is to replace the existing traffic signal cabinet assemblies with new traffic signal cabinet assemblies, and to attach new meter and disconnect cabinets to the side of the new traffic signal cabinets. The existing concrete controller foundation for traffic signal cabinet assemblies are to be used in place. The existing power sources located on adjacent Ameren Illinois power poles are also to be used in place, as well as underground conduit connections between the existing concrete controller foundations and the Ameren Illinois power sources, if possible.

The Contractor shall be responsible for coordinating all requirements for the service installation with Ameren Illinois and shall adhere to latest standards as provided by Ameren Illinois. The Contractor shall coordinate all requirements and fees for the electric service installation with Ameren Illinois. No additional compensation will be allowed for work required for the electric service or utility connection fees, even though not explicitly shown on the Drawings, or specified herein.

Meter and disconnect cabinets shall be securely mounted to the side of the traffic signal cabinet. The cabinets shall be secured with a padlock with CAT15 keying.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. Service conduits, NEMA cabinets, lockable disconnect switches, meter socket, ground rods, service conductors, miscellaneous connectors and hardware, and other equipment required by the utility company shall be included in this pay item. This work will be paid for at the contract unit price each for ELECTRIC SERVICE INSTALLATION, SIGNAL (SPECIAL), which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified.

EMERGENCY VEHICLE PRIORITY SYSTEM

Description. This work shall consist of furnishing and installing an emergency vehicle priority (EVP) system that uses Global Positioning System (GPS) technology and 2.4GHz radio communication in accordance with the details in the plans and as specified herein.

Materials. The emergency vehicle priority system shall be the Opticom GPS System with matched components, manufactured by Miovision. The system shall include a pole-mounted Model 3100 GPS (or newer) radio unit containing a GPS receiver with antenna and a 2.4 GHz

spread spectrum transceiver with antenna. A 764 Multimode Phase Selector with Ethernet port be included with a compatible card rack with 120V power supply, which shall power the radio unit. If more than four (4) channel outputs are required for operation of the system at an individual intersection, a 768 Auxiliary Interface Panel shall be installed and configured for up to 12 additional outputs.

Construction Requirements. The GPS radio unit shall be mounted in accordance with the details in the plans and the manufacturer's installation requirements, or as otherwise directed by the Engineer. The installation cable shall be a continuous unbroken run from the GPS radio unit to the phase selector. Splices in the installation cable are not allowed. Furnishing and installing the installation cable shall be included in the cost of the emergency vehicle priority system.

The Contractor shall arrange for testing of the emergency vehicle priority system with emergency vehicle operators to confirm preemption calls are received and applied to the appropriate preemption plan in the controller, which shall be witnessed by the City's representative (Mr. John Rose – 217.403.4700).

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for EMERGENCY VEHICLE PRIORITY SYSTEM, which price shall include all labor, equipment, and material necessary to complete the work as specified. All cables, terminations, connectors, and miscellaneous hardware required for the installation of the Opticom GPS System shall be included in the cost of the EVP system.

FIBER OPTIC CABLE AND CONNECTIONS

Description. This work shall consist of installing, splicing and terminating fiber optic cables. All work and materials shall comply with Section 871 of standard specs as modified by the following.

Materials.

- Fiber optic cable shall be loose tube, single mode dielectric cable. The cable shall be listed in the latest edition of the Rural Utilities Service (RUS) *List of Materials Acceptable for Use on Telecommunications Systems of RUS Borrowers*, category oc-d-F, and shall have a short-term tensile rating of at least 600 lbs. The cable sheath shall have length markings in feet and shall indicate that the unit of measure is feet. The cable shall have an operating temperature range of -40º C to 70º C.
- All fibers shall be suitable for transmission using both 1310 nm and 1550 nm wavelengths. Attenuation shall not exceed 0.35 dB/km and 0.25 dB/km for 1310 nm and 1550 nm signals, respectively.
- The cables shall be constructed with 12 fibers per tube, 4 tubes per cable (48 SMFO).
- Connectors shall be ST compatible, with ceramic ferrules. They shall be suitable for use in traffic cabinets and shall be designed for single mode fibers.

- Pigtails shall be factory-made, buffered, and strengthened with aramid yarn to reduce the possibility that accidental mishandling will damage the fiber or connection. Pigtails shall be yellow. They must use the type of connector specified in this provision. Each must contain one fiber. Length shall suffice to provide two feet of slack after installation.

- Jumpers shall meet the requirements for pigtails but shall have a connector on each end. The second connector shall be as specified in this provision except where a different connector is required for compatibility with the equipment to which the jumper connects. Length shall suffice to provide approximately five feet of slack after installation. Jumper cables contain a pair of fibers.

- Splice trays shall be 11.7” long, 3.9” wide, and 0.2” tall. They shall be aluminum, designed for outdoor use. Each shall accommodate 24 fusion splices. The trays shall have a black powder coat finish. The trays shall have both perforations for cable ties and crimpable metal tabs for buffer tube strain relief. No direct payment will be made for splice trays and will be subsidiary to cabinet and fiber bid items.

- Wall-Mounted Interconnect Center - The enclosure shall be designed for wall or panel mounting and occupy no more than 350 square inches of wall space. It shall be made of powder coated aluminum and have a gasketed, hinged door. It shall have provisions for cable strain relief and for connector labeling. It shall have a patch panel with at least 24 positions compatible with the connectors specified in this provision. It shall accommodate at least six splice trays as specified in provision and shall be equipped with enough trays for all the splices made in the interconnect center.

- Underground Splice Enclosure - Splice enclosures, if needed, shall provide capacity for 72 fiber splices. Enclosure shall be: suitable for outdoor applications with a temperature range of -30 to 60 degrees Celsius, protect splices from moisture and damage, non-reactive and not support galvanic cell action, waterproof, re-enterable, sealed with a gasket, permit selective splicing to allow one or more fiber strands to be cut and spliced without disrupting other fibers, equipped with a basket to accommodate the slack from all fibers routed into the enclosure, capable of holding splice trays from various manufacturers, input/output capacity of four 18 mm cables, equipped with a termination block to terminate the central strength members of the fiber optic cables.

- Splice trays shall be compatible with fiber splices and splice enclosure, equipped with polyethylene tubes to protect exposed individual fibers within the enclosure, stackable within the splice enclosure. Vinyl markers shall be supplied to identify each fiber to be spliced. Each splice shall be individually mounted and mechanically protected on the splice tray. Loose tube buffers shall be secured with a tube guide or channel snap. Slack fiber shall be placed in an oval shape along an inside wall of the tray.

- Certifications - The fiber optic cable shall be factory certified to meet the requirements in this specification. In addition, the manufacturer shall certify that the fiber optic cable has a life expectancy of 20 years.

- Documentation. Provide IDOT with a copy of the final plans in Visio and/or Microstation formats and any relevant notes that would aid in the understanding of the fiber configuration.

Construction Requirements. Prior to installation, perform such tests as indicated in this provision to confirm that the cable is in good condition and complies with the specifications. Any defects found after installation will be deemed the fault of the contractor. Install the cable such that the optical and mechanical characteristics of the fiber are not degraded. Do not violate the minimum bend radius or the maximum tension, both during and after installation.

Before any cable installation is performed, provide the Engineer with digital and hard copies of the cable manufacturer's recommended maximum pulling tensions for each cable size. These pulling tensions shall be specified for pulling from the cable's outer jacket. Also, provide a list of the minimum allowable cable bending radius and the cable manufacturer's approved pulling lubricants. Only those lubricants approved by the cable manufacturer will be permitted. If the cable is pulled by mechanical means, use a clutch device to ensure the allowable pulling tension is not exceeded. Also, attach a strain gauge to the pulling line at the cable exit location, and at a sufficient distance from the take-up device, such that the strain gauge can be read throughout the entire cable pulling operation. Do not leave the let-off reel unattended during a pull, in order to minimize the chance of applying excess force, center pull, or back feeding. Use an approved lubricant, in the amount recommended by the cable manufacturer, to facilitate pulling the cable. After the cable has been installed, wipe the exposed cable in a pull box, junction box, or field terminal cabinet clean of cable lubricant with a cloth before leaving the pull box, junction box, or cabinet.

In every intermediate pull box, store 30 feet of slack fiber optic cable for every cable that passes through the pull box. Store slack cable neatly on the walls of the pull box using racking hardware acceptable to the Engineer. Additional slack cable that is included in the pay quantity includes 60' at the splice point within the adjacent pull box.

Seal the fiber optic cable ends to prevent the escape of the filling compound and the entry of water. Label every cable immediately upon installation. Label the cables at every point of access, including junction boxes, pull boxes, and termination points. Use self-laminating vinyl labels at least 1.5" wide and long enough that the translucent portion of the label completely covers the white area bearing the legend. The vinyl shall have a layer of pressure sensitive acrylic adhesive. The labels shall resist oil, water, and solvents and shall be self-extinguishing. The legend shall be machine printed in letters at least 3/32" high. Consult with the Engineer concerning the desired method of identifying each cable. Labeling cables is incidental to the installing the cable and will not be paid separately. Splice all optical fibers, including spares, to provide continuous runs where indicated in the plans.

Splices shall be allowed only in equipment cabinets and splice enclosures except where shown on the plans. Make all splices using a fusion splicer that automatically positions the fibers using either the Light Injection and Detection (LID) system or the High-resolution Direct Core Mounting (HDCM) system. Provide all equipment and consumable supplies. Secure each spliced fiber in a protective groove. Completely re-coat bare fibers with a protective room temperature vulcanizing (RTV) coating, gel or similar substance, prior to insertion in the groove, so as to protect the fiber from scoring, dirt or microbending. Prior to splicing to a fiber installed by others, measure and record the optical loss over that fiber. Use a different splice tray for each buffer tube color. If an enclosure contains multiple buffer tubes of the same color, but none of the fibers in one of the tubes are spliced to fibers in other tubes of the same color, use a separate splice tray for that tube. Terminate fibers by splicing them to factory-made pigtails. Cap all connectors that are not connected to a mating connector. If the existing termination panel

does not have the capacity to conform to the project documents and specifications, it is the contractor's responsibility to replace the termination panel at no additional cost to the project. Pigtails are subsidiary to this bid item. Use spiral wrap to guide and protect bundles of jumpers between the patch panel and equipment. Affix the spiral wrap to the wall of the field terminal cabinet or vertical member of the rack. Label the jumpers at each end, numbering them sequentially.

Test the fiber after installation, including all splicing and terminations. For each fiber optic link terminated at the field terminal cabinet patch panels, determine whether the optical loss is within the limits permitted by these specifications. A link is a continuous segment of fiber between one connector (or unterminated end) and another connector (or unterminated end).

Test Procedure. For each fiber link, follow this procedure:

(a) Calculate the maximum allowable losses for the contractor installed fiber link, both at 1310 nm and at 1550 nm. Use the following formula:

Maximum link loss = (Fiber length in km) x (0.35 for 1310 nm and 0.25 for 1550 nm)
+ (Number of fusion splices) x (0.05)
+ (Number of mechanical splices [for temp. connection]) x (0.3)
+ (Number of connections) x (0.5) Provide this calculation to the engineer along with the test results.

(b) Provide the engineer documentation that the optical time domain reflectometer to be used in testing has been calibrated and is working properly.

(c) Use an optical time domain reflectometer to assess the losses along the contractor furnished and installed fiber paths. Record the result at both 1310 nm and 1550 nm. Arrange for the engineer or his representative to witness these tests.

(d) Use an optical time domain reflectometer and other test equipment to troubleshoot the link. Take whatever corrective action is required, including cable replacement, to achieve a loss less than the calculated maximum.

Prepare a diagram showing all of the links tested in this project. For the portions installed in this project, show the field terminal cabinets, splices, and pigtails. On each line representing a link, show the maximum allowable loss and the actual loss. The actual loss shall be the one measured after all corrective actions have been taken. Submit this diagram to the Engineer, along with the calculations for the maximum allowable loss. Submit the diagrams and calculations in an electronic format acceptable to the Engineer.

Basis of Payment. Measurement and payment for items covered by this specification include the documentation and acceptance testing, in addition to all materials and equipment necessary for a fully operational system.

Payment for the following bid items will be made as follows:

Item No.	Type	Description
X1400217	Each	Terminate Fiber in Cabinet
X8710030	LF	Fiber Optic Cable 48 Fibers, Single Mode
X8710071	Each	Fiber Optic Fusion Splice

X8710072	Each	Fiber Optic Splice Enclosure

FIELD OFFICE EQUIPMENT

Description. This item shall consist of the placement of additional FIELD OFFICE EQUIPMENT in the ENGINEERS FIELD OFFICE. The additional equipment shall include laptops and mobile internet for the use of City Staff during construction.

General. This item shall consist of the placement of 1 mobile workstations \ laptop computer with associated accessories. The contractor shall be responsible for maintenance, repair, or replacement including warranty work of for damage incurred as a result of vandalism, theft or other criminal activities. If warranty work is required for the mobile workstation \ laptop computer that requires the machine to be out of service for more than two working days the contractor shall provide an approved temporary replacement. The mobile wireless internet service device and mobile workstation \ laptop computer shall be returned to the contractor 30 day after Final Walk through. Below is a list of the minimum specifications required for the mobile workstation \ laptop computer and wireless internet device.

Operating system: Microsoft Windows 10 Professional 64-bit

CPU Type: Minimum of Intel Core I7 (2.66 GHz)

Monitor: 15 inch

Memory: 16 GB DDR5

Hard Drive: 500 GB SSD

Optical Drive: DVD Super Multi

Graphics Card: Minimum of Dedicated 4GB GDDR5

Wireless Connectivity: 2x2 wireless card 2.4/5/6 GHz Wi-FI 6/6E, Bluetooth

Supplemental Drive: Multi-in-1 card reader

Audio: Integrated sound card with microphone

Camera: 720p at 30 fps, HD camera

Ports: 3 x USB 2.0, 1 x VGA, 1 x HDMI, 1 x Universal audio port

Battery: 8-9 Cell Lithium-Ion

Mice/Keyboard: Wireless Laser Mouse / Standard Keyboard

Carrying Case: Nylon Deluxe Carry Case

Software: Microsoft Office 2021 Professional or newer

Car Inverter: 400w power inverter with cigarette/power source plug-in, capable of effectively supplying AC power for laptop

Mobile Wireless Internet Service: 5G service with a minimum of 25 GB minimum monthly data package (this can be incorporated into the laptop – instead of standalone unit)

Basis of Payment. This work will be paid for at the contract unit price per CALENDAR MONTH for FIELD OFFICE EQUIPMENT which price shall include all labor, materials, and equipment needed to supply the material as specified above.

FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)

Description. This work shall consist of furnishing and installing a full-actuated controller in a controller cabinet in accordance with Section 857 and 863 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The cabinet and controller assembly shall meet, as a minimum, all applicable sections of the latest revisions as found in the NEMA TS2 Standard Publication. Where differences occur, this specification shall govern.

1. Cabinet. The controller cabinet shall be equal or similar in size to the Stretch Size P (ELS1008) base mounted cabinet. The cabinet shall be constructed from aluminum with a minimum thickness of 0.125 inches. The cabinet shall be capable of flexible design and manufacturing with materials that will allow rigid mounting, whether intended for pole, base or pedestal mounting. For base mounted installations, all mounting points where the cabinet is bolted to the foundation shall be reinforced at the factory by welding in an additional layer of material equal to the thickness of the material that the cabinet is constructed from. Triangular gussets are also required when the base plate and cabinet walls are welded together vs. continuous rolled material. A rain channel shall be incorporated into the design of the main door opening to prevent liquids from entering the enclosure. All external hardware shall be stainless steel. Unless otherwise specified, the cabinet exterior shall be supplied with a natural aluminum finish. Unless otherwise specified, the interior of the cabinet shall not be painted. Sufficient care shall be taken in handling to ensure that scratches are minimized. All surfaces shall be free from welding flash. Welds shall be smooth, neatly formed, free from cracks and other irregularities. All sharp edges shall be ground smooth. The cabinet shall be equipped with (2) lifting brackets for installation and removal purposes.
2. Cabinet Doors. The cabinet shall include a front door of NEMA type 3R construction with rain tight gaskets. A stiffener plate shall be welded across the inside of the main door to prevent flexing. Doors shall include a mechanism capable of holding the door open at approximately 90 and 165 degrees under windy conditions. Manual placement of the mechanism shall not be required by field personnel. Only the main door shall have ventilation louvers. A plaque designation “Traffic Control” shall be affixed to each main cabinet door.

3. The controller cabinet shall contain two (2) engraved laminated plastic nameplates with the following messages: “CAUTION - TRAFFIC SIGNAL MAST ARM POLES HAVE TWO SOURCES OF POWER. The nameplates shall be red with white letters, and the letters shall be ¼” high. The nameplate shall be mounted with corrosion-resistant screws in a prominent location inside the controller cabinet.

4. Door Alarm. The front and rear doors shall be equipped with switches wired to the traffic signal controller alarm with 1 input for logging and reporting of a door open condition.

5. Shelves. No less than (2) shelves shall be provided, and each shall have the ability to be independently removed, relocated, and adjusted. The front edge of each shelf shall have holes predrilled at a spacing of no greater than 8 inches to accommodate tie-wrapping to secure cables/harnesses.

6. Mounting Rails. A minimum of one set of vertical "C" channels shall be mounted on each interior wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. All mounting rails shall extend to within 7 inches of the top and bottom of the cabinet.

7. Pull-out Drawer. The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1½ inch deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one complete set of cabinet prints and manuals. This drawer shall support 50 pounds in weight when fully extended. The drawer shall open and close smoothly. The drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 18 inches wide.

8. Police Door. The police door shall contain a switch used for flash/auto operations, as well as an actuator to allow the ability to cycle field indications.

9. Lighting. The cabinet shall include no less than (3) field replaceable LED light assemblies along the top and sides of the cabinet. The LED panels shall be controlled by a manually activated toggle switch on the door panel.

10. Fans/Ventilation. The components of the system as well as the CFM requirements shall be in compliance with the IDOT Section 863 specifications.

11. Heater. The cabinet shall be supplied with a 200 Watt fan heater with thermostat control that is designed to protect electronics from the effects of low temperatures such as corrosion, freezing or condensation, which can damage critical components within a control enclosure. Housing shall be constructed of aluminum. Overall dimensions including mounting areas shall be approximately: 4inch depth, 4inch width, 5.50inch height.

12. Switch Guards. All switches shall include switch guards. All switches shall be clearly labeled.

13. Receptacles and power strip(s). One 8-outlet IP-addressable power strip shall be provided with the cabinet. The installation of the power strip shall be included in the cost of the cabinet assembly. The main door tech panel shall contain a 15 amp duplex GFI receptacle. A separate grounded service outlet shall be provided in the controller cabinet

for supplying power to the video detection monitor. The use of the grounded service outlet located on the cabinet door will not be permitted for this function. A manual on/off switch shall also be provided and mounted to the main door tech panel.

14. 16-Position Back Panel Wiring. All new signal cabinets shall have a 16-position load switch back panel and conform to the following specifications. Regardless of the number of phases specified on the plans, all load switch positions shall be completely wired for use. The load switch back panel shall be configured for NEMA Configuration “A” or “G” as designated on the signal plans. Vehicle phases, overlaps (including FYA configurations), and pedestrian phases shall be wired such that it must work with a Type 16 MMU. The cabinet shall include both a DT panel and a CTB (SDLC) panel with 6 harnesses. The back panel shall be mounted such that the maximum amount of space is allowed below the bottom of back panel and the bottom of the cabinet.

15. Intersections with Video Detection. For intersections with video detection, the cabinet shall be wired to automatically power on the video monitor when the cabinet door is open.

16. Load Switch. The front of the load switch shall be provided with (3) indicators to show the output to the field devices. The full complement of load switches shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

17. SDLC. All connection points shall be protected by a BIU 15 pin surge suppressor used for the protection of any devices on Port 1 Synchronous Data Link Control (SDLC). Each cabinet shall be provided with a SDLC hub assembly and (6) SDLC cables unless otherwise noted on the order form. All mechanical connections shall be soldered.

18. Surge Protection. Surge protection shall be a modular plug in type product.

19. AC Line Filter. The AC line filter shall protect equipment from malfunctions due to conducted interference coming into the equipment from line, especially line to ground (common mode) noise and transients. Overall dimensions including mounting areas shall be approximately: 4.17inch width and 3.53inch height.

20. Signal Buss Relay. The relay shall be a direct “drop-in” replacement for existing mercury displacement relays. The relay shall be a single pole solid state or hybrid relay. Overall dimensions including mounting areas shall be approximately: 2.5inch depth, 2inch width, 5 inch height.

21. Field Wiring Termination. All field wires shall be attached to the back panel terminal strips via a mechanical copper lug, which can accommodate wire sizes from 14AWG - 6AWG. Lugs shall be provided for all field outputs to maximize the cabinet design.

22. Flash Transfer Relays. The full complement of relays shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

23. Cabinet Wiring Prints. Paper cabinet prints as well as electronic media shall be provided with each cabinet. (4) paper copies shall be provided (22” X 34”) and (1) electronic copy in pdf format. All flash program wiring configurations shall be represented on the cabinet print (Red, Amber, No Flash, FYA, Ped, FYA & Ped).

24. Generator Attachment. A generator plug shall be installed on each cabinet unless otherwise noted. The access door shall be hinged, lockable and watertight. The plug shall conform to the (NEMA L5-30 configuration). An automatic transfer switch shall be provided which will switch power to/from “line”, “UPS” or “generator” when power from one of the sources has been lost or gained. The unit shall be rated for 30 amps and shall contain either a LCD display or indicator lights that validate the following: Line in, Line out, UPS in, UPS out and “from” generator. The unit shall contain a main breaker (on/off switch), a UPS bypass breaker (switch) and a Generator breaker (switch). To minimize the impact of the presence of the auto transfer switch, the dimensions shall be no greater than 12” wide X 6” deep X 4” high. The unit shall be constructed of either aluminum or stainless steel.

25. Anchor Bolts. Where replacing existing cabinets on existing foundations, the contractor shall measure existing bolt dimensions and layout prior to procuring new cabinets to allow for the manufacturer to ensure compatibility with the existing anchor bolts and foundation. Alternately, the contractor may field drill to set new anchor bolts, utilizing an epoxy resin filler approved by the engineer.

26. Controller. The traffic signal controller shall be NEMA Type compatible with the cabinet described in this specification. Yunex M60 or newer model shall be installed and programmed for intended operation by the Contractor. Controllers shall include an Ethernet port for networking and USB port for database upload/download. A City representative or approved designee shall be present on-site prior to activating a new signal controller to ensure operations will be acceptable, and witness the new signal turn-on or conversion from existing.

27. Each controller and cabinet assembly shall be tested as a complete entity under signal load for a minimum of 30 days after installation.

28. Each assembly shall be delivered with a signed document detailing the cabinet final tests performed. The cabinet shall be assembled and tested by the controller manufacturer or authorized local distributor to ensure proper component integration and operation.

Warranty. If a Controller and/or Malfunction Management Unit are ordered with a cabinet assembly, the Controller and Malfunction Management Unit shall be warranted by the manufacturer against mechanical and electrical defects for a period of 2 years from date of shipment. The manufacturer’s warranty shall be supplied in writing with each cabinet and controller. Second party extended warranties are not acceptable. The cabinet assembly and all other components shall be warranted for a period of one year from date of shipment. Any defects shall be corrected by the manufacturer or supplier at no cost to the owner.

Construction Requirements. The Contractor shall submit a detailed plan of the cabinet and all peripheral equipment included in the cabinet to the City for verification and approval prior to placing any material order.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

GRANULAR BACKFILL FOR STRUCTURES

Description. This work shall consist of furnishing and placing granular material under the precast box culverts and behind the retaining wall as shown on the plans. The work shall be according to Section 586 of the Standard Specifications except as modified herein.

Materials. The material shall be limited to CA 6 coarse aggregate.

Construction Requirements. Lifts and mechanical compaction shall be according to applicable portions of Article 502.10.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of cubic yards, as described in Article 586.04.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard for GRANULAR BACKFILL FOR STRUCTURES.

GROUT FOR USE WITH RIPRAP

Description. This work shall consist of furnishing and placing material to grout riprap in place. The riprap, bedding, and filter fabric shall be placed and paid for according to Sections 281 and 282 of the Standard Specifications.

Materials. The grout shall consist of a mixture of 490 lbs. cement, 1976 lbs. (dry weight) FA 01, 1039 lbs. (dry weight) CA 16, and 27.5 gallons of water per cubic yard. Alternatively, a mixture of 430 lbs. cement, 115 lbs. fly ash, 1937 lbs. FA 01, 1028 lbs. CA 16, and 27.5 gallons of water per cubic yard may be used. In either mixture, a high-range water reducer shall be used to attain desired consistency of the mix. The hardened grout shall have a minimum compressive strength of 2,000 pounds per square inch at 28 days.

Construction Requirements. The grout shall be pumped and placed throughout the riprap to a depth determined by the Engineer. A uniform rate of 0.22 cubic yards of grout per square yard of riprap was assumed to estimate a quantity. The grout shall fill the lower voids in the riprap and bond the riprap together.

Method of Measurement. The quantity of grout for use with riprap shall be measured in cubic yards, based on the volumes from the individual truck tickets used for the work.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard for GROUT FOR USE WITH RIPRAP.

GULFBOX JUNCTION, COMPOSITE CONCRETE

Description. This work shall consist of furnishing and installing a gulfbox junction in accordance with Section 815 of the Standard Specifications and the following additions or exceptions.

Materials. The gulfbox shall be composite concrete and manufactured by Armorcast Products Company, CDR Systems, or NewBasis. The gulfbox dimensions shall be 16 ¼"W x 25 ¾"L x 12"D.

The gulfbox cover shall be constructed of the same material as the gulfbox. The gulfbox cover and collar shall be standard concrete grey color in sidewalks, and shall be the manufacturer's dark green color in grass areas.

Gulfboxes used for the roadway lighting system shall have the words "STREET LIGHTING" cast into the cover.

Construction Requirements. The gulfbox shall be installed in accordance with Section 815 of the Standard Specifications. When installed in turf areas, the top surface of the gulfbox shall be set level and flush with the surrounding turf.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

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

HANDHOLE, PORTLAND CEMENT CONCRETE

Description. This work shall consist of furnishing and installing precast concrete handholes in accordance with Section 814 of the Standard Specifications and the following additions or exceptions. Composite concrete handholes are not allowed.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

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

INLETS, TYPE B, TYPE 3 OR TYPE 3V FRAME AND GRATE

Description. This work consists of the construction of Type B Inlets with Type 3 Frame and Grate or Type 3V Frame and Grate at locations shown on the plans, as directed by the Engineer, and in accordance with Sections 602 and 604 of the Standard Specifications, except as herein specified.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for INLETS, TYPE B, TYPE 3 FRAME AND GRATE or INLETS, TYPE B, TYPE 3V FRAME AND GRATE, which price shall be payment in full for all labor, equipment and materials required to complete the work as herein specified.

JUNCTION BOX (SPECIAL)

Description. This work shall consist of furnishing and installing a junction box in accordance with Section 815 of the Standard Specifications and the following additions or exceptions.

Materials. The junction box shall be composite concrete and manufactured by Armorcast Products Company, CDR Systems, or NewBasis. The junction box dimensions shall be 12”W x 12”L x 18”D with flared walls.

The junction box cover shall be constructed of the same material as the junction box. The junction box cover and collar shall be standard concrete grey color in sidewalks and shall be the manufacturer’s dark green color in turf areas.

Junction boxes used for the roadway lighting system shall have the words “STREET LIGHTING” cast into the cover.

Construction Requirements. The junction box shall be installed in accordance with Section 815 of the Standard Specifications. When installed in turf areas, the top surface of the junction box shall be set level and flush with the surrounding turf.

The grounding electrode for the light pole foundation shall be installed in the junction box adjacent to the foundation to be provided for the light pole. The grounding electrode shall be a 5/8” diameter x 10’ long copper-clad steel ground rod in accordance with Section 806 of the Standard Specifications. The grounding electrode conductor shall be connected by hydraulic crimp connections to the grounding electrode in the junction box.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for JUNCTION BOX (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified. The grounding electrode and hydraulic crimp connections shall be included in the cost of the junction box.

LED INTERNALLY ILLUMINATED STREET NAME SIGN

Description. This work shall consist of furnishing and installing LED internally illuminated street name signs in accordance with the details in the plans and as specified herein.

Materials. The LED internally illuminated street name signs shall be LED internally illuminated single sided Razor signs manufactured by Temple, Inc., Southern Manufacturing, or Carmanah Technologies Corporation.

The sign legend will be white on a green background with a 1" wide border. Sign lettering for the street name signs will be Series C with 12" uppercase letters and 9" lowercase letters. For signs with two street names, sign lettering shall have 9" uppercase and 6" lowercase letters. The sign shall not have an individual photocell and will always be illuminated or controlled from the traffic signal cabinet. The housing shall have a standard black finish.

Construction Requirements. The street name signs shall be suspended below a traffic signal mast arm. The mounting hardware shall allow swinging of the sign to reduce mast arm wind loads. Brackets shall be adjustable for leveling the sign for use on any size mast arm or pole. Brackets shall be cleaned, prepared, primed, and finished with a standard black finish. The wiring from the mast arm to the sign shall be flexible outdoor rated SO cord such as CCI Legend CCI SEOPRENE 105 16 AWG (1.31mm2) 3/C SEOOW E54864 (UL) 600V -50C TO 105C CSA LL39753 STOOW(TPE) -50C TO 105C FT2 WATER RESISTANT. No disconnect cabinets shall be used outside of the signs for splices. The sign legend and overall layout shall be approved by the City of Champaign prior to installation of the internally illuminated street name signs.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for LED INTERNALLY ILLUMINATED STREET NAME SIGN, which price shall include all labor, equipment, and material necessary to complete the work as specified.

LIGHT POLE, ALUMINUM, 35 FT. M.H., 8 FT. MAST ARM

Description. This work shall consist of furnishing and installing light poles with single 8 ft. luminaire mast arms and accessories, in accordance with Section 830 of the Standard Specifications, Highway Standard 830001, the details in the plans, and the following additions or exceptions.

Materials.

A. Materials and fabrication shall be according to Articles 830.02, 1069.01 and 1069.02 of the Standard Specifications.

B. The light pole shall consist of a round, aluminum, tapered, 4-bolt anchor base pole with a single 8-foot mast arm. The light pole shall be manufactured by Valmont or Hapco.

C. The pole shaft shall be spun tapered with a minimum 8-inch outside diameter at the pole base to a 4.5-inch outside diameter at the top for a 35-foot mounting height. The pole wall thickness shall be 0.25-inch minimum and shall be increased as required to withstand wind loading. The pole shaft shall be fitted with an internally mounted vibration damper. The pole shall have an aluminum pole cap that is fastened to the pole with stainless steel fasteners.

D. The mast arm shall be from seamless 6063-T6 alloy extruded aluminum tube. The fixture end of the mast arm shall be a 2⅜ inch outside diameter (2-inch pipe size) tenon. The mast arm shall have an 8-foot span. The mast arm shall mount to the tapered pole with stainless steel fasteners.

E. The pole shall include a peripherally reinforced flush covered handhole centered 18 inches above the bottom of the base. The handhole cover shall match the pole finish and be secured with stainless steel Allen head (not pinned) fasteners. The handhole opening shall be oriented 90 degrees from the single mast arm.

F. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the outside top and inside bottom of the anchor base. Nut covers manufactured from aluminum shall be included with each anchor base. Bolt openings shall be slotted to accommodate an 11.5-inch bolt circle for an 8-inch outside diameter at the pole base.

G. The mast arm, aluminum pole, and all mounting hardware shall have a factory applied powder coating, black in color. Powder coating shall be polyester powder coated in a black finish with a UV resistant powder designed for outdoor use without color fade. The polyester powder coating shall be electrostatically applied thermosetting polyester resin powder coating to a minimum thickness of 100 microns.

H. The standard product warranty for the aluminum light pole and truss arm shall be full parts and labor at job site for one-year following the date of final completion. In addition to the standard product warranty, all surfaces featuring a powder-coat finish shall carry a full 5-year Finish Warranty. The coatings on all new poles shall carry this 5-year Finish Warranty from the date of shipment. The finish warranty shall provide for the full cost of refinishing in the event of a coating failure. The Contractor or the pole manufacturer shall submit full warranty information with a specific letter for this work, detailing the warranty terms and conditions in accordance with this specification. The finish warranty shall provide protection against:

1. Peeling and Cracking.

2. Fading and Tint: UV damage and fading of more than 5% of the original color (tint).

3. Discoloration: Discoloration in excess of 5 E units (CIE 1976 CIELAB) as measured using procedure ASTM D 2244, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

4. Gloss retention: in accordance with procedure ASTM D 523, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

5. Corrosion and lack of adhesion: Corrosion and lack of adhesion as measured using procedure ASTM D 610, latest revision, based on the complete product assembly (for the purpose of this warranty, this procedure applies to both aluminum and steel).

Construction Requirements.

A. The light poles shall be installed according to Article 830.03.

B. Poles shall be delivered with a factory applied shipping wrap of cardboard or other material to fully protect against scratches and coating stain. Poles shall be blocked and bundled in groups of multiple poles or use other means to prevent shifting and damage during transport.

C. The Contractor shall provide a sticker permanently attached to the light pole below the handhole indicating the circuit and pole number as shown on the plans. The Contractor shall also provide a sticker permanently attached to the light pole below the handhole indicating the product identification and part number. After assembly, a stainless-steel mesh shall be placed to enclose the void between the foundation and the pole base as specified on Highway Standard 830001.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHT POLE, ALUMINUM, 35 FT. M.H., 8 FT. MAST ARM, which price shall include all labor, equipment, and material necessary to complete the work as specified.

LIGHT POLE (SPECIAL)

Description. This work shall consist of furnishing and installing light poles with twin 8 ft. luminaire mast arms and accessories, in accordance with Section 830 of the Standard Specifications, Highway Standard 830001, the details in the plans, and the following additions or exceptions.

Materials.

A. Materials and fabrication shall be according to Articles 830.02, 1069.01 and 1069.02 of the Standard Specifications.

B. The light pole shall consist of a round, aluminum, tapered, 4-bolt anchor base pole with twin 8-foot mast arms. The light pole shall be manufactured by Valmont or Hapco.

C. The pole shaft shall be spun tapered with a minimum 8-inch outside diameter at the pole base to a 4.5-inch outside diameter at the top for a 35-foot mounting height. The pole wall thickness shall be 0.25-inch minimum and shall be increased as required to withstand wind loading. The pole shaft shall be fitted with an internally mounted vibration damper. The pole shall have an aluminum pole cap that is fastened to the pole with stainless steel fasteners.

D. The mast arms shall be from seamless 6063-T6 alloy extruded aluminum tube. The fixture end of the mast arm shall be a 2⅜ inch outside diameter (2-inch pipe size) tenon. The mast arms shall have an 8-foot span. The mast arm shall mount to the tapered pole with stainless steel fasteners.

E. The pole shall include a peripherally reinforced flush covered handhole centered 18 inches above the bottom of the base. The handhole cover shall match the pole finish and be secured with stainless steel Allen head (not pinned) fasteners. The handhole opening shall be oriented 90 degrees from the single mast arm.

F. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the outside top and inside bottom of the anchor base. Nut covers manufactured from aluminum shall be included with each anchor base. Bolt openings shall be slotted to accommodate an 11.5-inch bolt circle for an 8-inch outside diameter at the pole base.

G. The mast arms, aluminum pole, and all mounting hardware shall have a factory applied powder coating, black in color. Powder coating shall be polyester powder coated in a black finish with a UV resistant powder designed for outdoor use without color fade. The polyester powder coating shall be electrostatically applied thermosetting polyester resin powder coating to a minimum thickness of 100 microns.

H. The standard product warranty for the aluminum light pole and truss arms shall be full parts and labor at job site for one-year following the date of final completion. In addition to the standard product warranty, all surfaces featuring a powder-coat finish shall carry a full 5-year Finish Warranty. The coatings on all new poles shall carry this 5-year Finish Warranty from the date of shipment. The finish warranty shall provide for the full cost of refinishing in the event of a coating failure. The Contractor or the pole manufacturer shall submit full warranty information with a specific letter for this work, detailing the warranty terms and conditions in accordance with this specification. The finish warranty shall provide protection against:

1. Peeling and Cracking.

2. Fading and Tint: UV damage and fading of more than 5% of the original color (tint).

3. Discoloration: Discoloration in excess of 5 E units (CIE 1976 CIELAB) as measured using procedure ASTM D 2244, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

4. Gloss retention: in accordance with procedure ASTM D 523, latest revision, comparing an unexposed sample to an exposed surface after removal of dirt and chalk.

5. Corrosion and lack of adhesion: Corrosion and lack of adhesion as measured using procedure ASTM D 610, latest revision, based on the complete product assembly (for the purpose of this warranty, this procedure applies to both aluminum and steel).

Construction Requirements.

A. The light poles shall be installed according to Article 830.03.

B. Poles shall be delivered with a factory applied shipping wrap of cardboard or other material to fully protect against scratches and coating stain. Poles shall be blocked and bundled in groups of multiple poles or use other equivalent means to prevent shifting and damage during transport.

C. The Contractor shall provide a sticker permanently attached to the light pole below the handhole indicating the circuit and pole number as shown on the plans. The Contractor shall also provide a sticker permanently attached to the light pole below the handhole indicating the product identification and part number. After assembly, a stainless-steel mesh shall be placed to enclose the void between the foundation and the pole base as specified on Highway Standard 830001.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHT POLE (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

LIGHTING CONTROLLER (SPECIAL)

Description. This work shall consist of furnishing and installing a lighting controller in accordance with Section 825 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The lighting controller cabinet shall be an aluminum, Type III cabinet, single door, painted black in accordance with Article 1068.01 of the Standard Specifications. Provide a concrete Type D foundation for the lighting controller. The foundation shall be in accordance with Standard 878001 and Section 878 of the Standard Specifications.

Provide all control components as shown on the plans and as specified herein:

Panelboard Interior: Provide panelboard interior with main breaker and bus ratings as shown in the plans. Panelboard interior shall have copper bus and shall be service entrance rated. Provide bolt on circuit breakers, quantity, rating, and number of poles as shown in the plans. Panelboard interior shall include an equipment ground bus and bonded to controller cabinet.

HOAT Switch: Provide Hand-Off-Auto-Timer switch in controller cabinet as shown in the plans. Switch shall be connected such that the lights are on in the “Hand” position, are off in the “Off” position, are controlled by the photocell in the “Auto” position, and are controlled by the timer in the “Timer” position.

Light, Switch, and GFCI: Provide a light fixture with clear globe and protective guard mounted from top of cabinet. Lamp shall be a 26 watt, spiral fluorescent lamp. Provide a 120VAC, 20A, single pole switch, plunger type, mounted such that it turns on the controller light when door is opened. Provide 120 VAC, 20A, Ground Fault Circuit Interrupting duplex receptacle.

Photocell: Photocell shall provide automatic switching of the lighting controller. The photocell shall have built-in delay to ensure that the controlled lighting does not switch off due to momentary change in ambient light or lightening flash. Photocell shall be UL listed and function over a temperature range of – 20°F to 140°F. Mount photocell in underside of cabinet drip hood, over cabinet panel door, facing down.

Lighting Contactors: Provide quantity of lighting contactors as shown in the plans. Lighting contactors shall be a minimum of 6 pole, 30 amp, 240VAC with 120VAC electrically held coil.

Terminal Strips. Provide terminal strips as shown on the plans for all incoming wiring. Quantity of terminals shall be such that there is a minimum of 50% spare terminals. Provide separate terminal block for control wiring.

All equipment listed herein and shown on the plans shall be mounted to a steel installation mounting plate to be installed in the controller cabinet.

Provide all wiring required in the controller cabinet to connect the control components as indicated in the plans. All wiring in the controller cabinet shall be neatly trained and bundled. All wiring shall be clearly marked at each termination.

The controller cabinet shall contain an engraved laminated plastic nameplate with the following message: "CAUTION - LIGHT POLES ARE FED FROM THIS CONTROLLER CABINET." The nameplate shall be red with white letters, and the letters shall be 4" high. The nameplate shall be mounted with corrosion-resistant screws in a prominent location inside the controller cabinet.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each. The control cabinet, all control components shown in the plans and specified above, interconnecting wiring, concrete foundation, and installation shall be included in this pay item.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHTING CONTROLLER (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

LUMINAIRE, TYPE A (SPECIAL)

Description. This work shall consist of furnishing and installing street light pole truss mounted luminaires for each LIGHT POLE, ALUMINUM, 35 FT. M.H., 8 FT. MAST ARM assembly shown in the plans, in accordance with Sections 801, 821, and 1067 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The luminaire shall contain the following general characteristics: 120-277 Voltage; 21,000 Initial Lumens; Type 2 Medium Enhanced Backlight Distribution; 3,000K Color Temperature; ANSI 7-wire photocontrol receptacle; Black finish; internal bubble level; and tool-less entry.

Construction Requirements. The Contractor shall submit shop drawings for luminaire fixtures to the City and Engineer for review and approval, prior to purchase.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for LUMINAIRE, TYPE A (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

LUMINAIRE, TYPE B (SPECIAL)

Description. This work shall consist of furnishing and installing street light pole truss mounted luminaires for each LIGHT POLE (SPECIAL) assembly shown in the plans, in accordance with Sections 801, 821, and 1067 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The luminaire shall contain the following general characteristics: 120-277 Voltage; 21,000 Initial Lumens; Type 2 Narrow Distribution; 3,000K Color Temperature; ANSI 7-wire photocontrol receptacle; Black finish; internal bubble level; and tool-less entry.

Construction Requirements. The Contractor shall submit shop drawings for luminaire fixtures to the City and Engineer for review and approval, prior to purchase.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for LUMINAIRE, TYPE B (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

LUMINAIRE, LED, SPECIAL

Description. This work shall consist of furnishing and installing a luminaire as part of the proposed steel combination mast arm assembly, in accordance with Section 821 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The full cut-off luminaire shall have a structured LED array to provide 23,000 initial lumens at 4,000K. Distribution shall be asymmetric medium. Luminaire shall utilize a 4-bolt slip fitter with +/- 5 degrees of adjustment for leveling. Provide luminaire with optional level and tool less entry. Luminaire shall be suitable for use at voltages ranging from 120V-277V. It shall not have an individual photocell. The luminaire shall have a black finish.

Construction Requirements. The Contractor shall adjust the luminaire such that light trespass on adjacent properties is minimized or eliminated. The luminaire shall be grounded as shown in the plans and per NEC requirements.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

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

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

Description. This work shall consist of maintaining the existing traffic signal installation that has been designated to remain in operation during construction, in accordance with Section 850 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Construction Requirements. The energy charges for the operation of the traffic signals will be paid for by the City of Champaign. At least one week prior to beginning construction within 400 ft of the signalized intersection, the Contractor shall conduct a signal inspection with a representative of the City. The signal inspection shall reveal defective existing traffic signal items such as pedestrian push buttons, video detectors, emergency vehicle priority detectors, and so forth, and the Contractor shall not be held responsible for these items. If the Contractor fails to contact the City to conduct the signal inspection, the Contractor shall be held responsible for all the signal items remaining defective at the completion of the construction.

The Contractor shall become responsible for the maintenance of the existing signalized intersection at a date mutually agreed upon between the Contractor and the City, but no later than the beginning of construction by the Contractor within 400 ft of the intersection. The Contractor's signal maintenance responsibility shall cease upon the issuance of a Signal Acceptance Notice by the Engineer.

The maintenance shall be according to Article 801.11 and the following.

The Contractor shall be responsible for the controller programming to provide for safe and efficient signal operation during construction. The Contractor may seek assistance from the Engineer or the City's representative (Mr. John Rose – 217.403.4700).

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL), which price shall be payment in full for providing all labor, material and equipment necessary to do the work described above.

PAVEMENT PATCHING (SPECIAL)

Description. This work shall consist of patching the existing pavement that was removed to install the new curb and gutter and ADA ramps at the NW and NE corners of the intersection of Mattis and Windsor. The existing pavement section consists of 2' of HMA surface over approximately 9" of the HMA binder. The proposed pavement pavement patch shall consist of 9" of PPC Pavement and 2" of HMA Surface, with tack coat applied between the PCC and HMA.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of SQ YD.

Basis of Payment. This work will be paid for at the contract unit price of SQ YD for PAVEMENT PATCHING (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work described above.

PEDESTRIAN PUSH-BUTTON POST, TYPE I

Description. This work shall consist of constructing a concrete foundation and furnishing and installing a pedestrian push-button post in accordance with Section 876 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The pedestrian push-button post shall be a 48-inch tall; 4-inch square steel post with a 10-inch multidirectional slip base. The post and base shall be finished in a black powder coated or anodized material at the manufacturer's plant.

Construction Requirements. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly. The foundation shall be made of Class SI concrete in accordance with Section 1020 of the Standard Specifications. The foundation shall have a minimum diameter of 12 inches and a minimum depth of 30 inches. The concrete foundation shall be included in the cost of the pedestrian push-button post.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for PEDESTRIAN PUSH-BUTTON POST, TYPE I, which price shall include all labor, equipment, and material necessary to complete the work as specified.

PEDESTRIAN RAILING

Description:

This work shall consist of constructing a PEDESTRIAN RAILING in accordance with Section 509 of the Standard Specifications and the detail drawings show in the plans. The railing system shall be galvanized and painted.

Painting Requirements. All weld flux and other contaminants shall be mechanically removed. All surfaces shall be degreased, cleaned and air dried to assure all moisture is removed. All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocynurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. The painting shall be in accordance with the applicable Articles of Sections 506 and 509 of the Standard Specifications. The paint finish shall be the powder type and the color shall be black. Any damage to the finish after leaving the shop facility shall be repainted to the satisfaction of the Engineer using a method approved by the Engineer.

Method of Measurement. The quantity for this shall be measured as linear foot of the railing.

Basis of Payment. This work shall be paid for at the contract unit price per foot for PEDESTRIAN RAILING which price shall include all labor, material and equipment necessary to complete the work and no additional compensation will be allowed.

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

Description. This work shall consist of furnishing and installing a light emitting diode (LED) pedestrian signal head with count down timer in accordance with Section 881 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. Each directional unit shall consist of one LED pedestrian signal module and one LED count down pedestrian signal module. The nominal dimensions of each module shall be 16” by 18” as detailed in the plans. The pedestrian signal module shall have the two-symbol overlay configuration. The symbols for the walking person (“WALK”) and the upraised hand (“DON’T WALK”) shall be full symbols. All pedestrian signal modules shall be manufactured by Dialight Corporation or GELcore. The polycarbonate pedestrian signal head housing shall be black in color. Displays shall allow for focused viewing by pedestrians near the appropriate curb ramp area.

Construction Requirements. Pedestrian signal heads shall be mounted with black polycarbonate or natural galvanized metal brackets fastened to the pole or post with stainless steel banding, 3/4” wide by 0.025” thick, or as otherwise directed by the Engineer. Pedestrian signal heads shall be mounted a minimum of 7’ clear from the adjacent grade and no more than 5’ laterally from the closest crosswalk line extended. Prior to being put into operation, each pedestrian signal head shall be tested to confirm WALK and flashing DON’T WALK intervals reflect values in the signal controller programming.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER, which price shall include all labor, equipment, and material necessary to complete the work as specified.

PIPE CULVERT REMOVAL

Description. This work consists of removing existing pipe culverts at locations indicated on the plans. All pipe culvert removal shall be in accordance with Section 501. Existing pipe, concrete, etc. shall be disposed of by the Contractor. The Contractor shall furnish and install CLSM backfill material to proposed subgrade elevation, when new pavement/sidewalk is proposed in the location of the pipe culvert removal in accordance with Section .

Method of Measurement. This work shall be paid for at the contract unit price per foot.

Basis of Payment. This work shall be paid for at the contract unit price per foot for PIPE CULVERT REMOVAL. The CLSM shall be considered as included in the unit price and no additional compensation will be allowed.

PLANT SOIL MIX FURNISH AND PLACE

Description: This work shall consist of soil testing and excavation of all landscape planting beds including tree pits to receive planting mixtures to the specified depths.

Materials:

Subgrade Fill Material: Where site conditions require a layer of fill below the specified bed depth, provide a clean, debris-free mineral material with a brown sandy clay content and granular material with no stones measuring larger than one inch in diameter. The pH should range between 5.5 to 6.5 with no limestone present. Gray clay soils shall not be accepted.

Planting Mixture Materials:

Native Topsoil

- Topsoil shall be a loam-clay organic rich soil, uniform in color and texture; corresponding to native soils; containing no gray clay and free from grass roots, sod, weeds, rocks, stiff clay, clods, or any other substance undesirable to plant growth. The soil shall be loose, friable, and of good tilth.
- The pH shall rage between 5.5 to 6.6.
- The topsoil should not be screened or processed in a manner that breaks down the soil peds. Soil peds of 2" dia. or greater should be visible in throughout the source pile and of the same color and texture throughout each clump.
- Nutrient data as follows. All soil sampling and testing shall comply with prodedures in the USDA Ag. Handbook 60: Diagnosis and Improvement of Saline and Alkali Soils.

Phosphorus	Min. 75 lbs./ac.
Potassium	Min. 300 lbs./ac.
Calcium	Min. 1,500 ppm
Cation Exchange Capacity	Min. 20 mea/100g
Soluble Salt	Max. 1,000 ppm

- Organic content will be 2 to 8 percent by volume and not greater than 10 percent determined by loss of ignition.
- Gradation:

Sieve Designation	Percent Passing
No. 4 (4.76 mm)	100
No. 10 (2.00 mm)	95 - 100
No. 18 (1.00 mm)	90 - 100
No. 35 (500 micron)	65 - 100
No. 60 (250 micron)	0 - 50
No. 140 (105 micron)	0 -20
No. 270 (53 micron)	0 -10

- Textural Grades (by volume):

Gravel	<10%
Fine gravel, course sand, medium sand	30 - 70 %
Silt	10 - 50 %
Clay*	10 - 25 %

*Clay content shall be determined by Bouyoucous hydrometer Test.

- Compost: Commercially prepared compost meeting the requirements of the US Composting "Architecture/Design Specification for Compost Use", section *Compost as a Landscape Backfill Mix Componen*t with the following additional requirements. Well-composted, stable, and weed-free organic matter, pH range of 6.0 to 7.5; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4 inch (19 mm) sieve; soluble salt content of 4 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings. Organic Matter Content: 50 to 60 percent of dry weight. Compost shall not be derived from biosolids or industrial residuals.

Planting Mixtures: All street tree plantings areas shall be backfilled with a pre-blended planting mixture described below. All soil mixtures shall be mixed with amendments and other materials by hand or mechanical methods prior to placement. All topsoil shall be tested and amended per test results prior to preparing mixing.

- Street Trees: Sandy loam topsoil (50%) and compost (50%)
- Shrubs and Ornamental Grasses: Sandy loam topsoil (50%) and compost (50%)

pH Adjustment: Soil pH adjustments will be made based on soil test lab recommendations.

- Limestone: Calcium carbonate (ground limestone) with 50% passing a No. 200 mesh sieve, 90% passing a N0.100 mesh sieve and 100% passing a No.10 mesh sieve. Total carbonates shall not be less than 80%.
- Sulfur: Granular sulfur.

<u>Construction Requirements:</u>

Protection of Site Improvements: Protect all existing site improvements during excavation. If any existing improvements are damaged, replace or make arrangements with the proper authorities for repair.

Planting Bed Preparation: Prior to installation of any plant material, ensure all tree pits and planting beds to be free of debris and not in a muddy condition prior to backfill with specified planting mixture. Loosen the bottom of the pit or bed and ensure that all stones larger than 1" diameter and that all limestone has been removed from the subgrade to a depth of 12 inches.

Landscape Excavation and Backfill: Excavate existing planting areas and tree soil trenches as indicated on the drawings and to the following depths and back fill with the specified planting medium:

- Tree Pits Excavate and backfill 3' depth in entire tree pit with soil mix
- Shrubs and Grasses Excavate and backfill 24" depth in planting bed with soil mix

Soil Installation: Compact subgrade in planting beds to 95% proctor density. Where pavement and other structures have been removed, bring planting bed to sub-grade with subgrade fill meeting the specifications of this section. The planting soil mixture and layers must be compacted in lifts. Demonstrated compaction of each sand and soil layer is critical to the structural performance of the reinforced soil. Place 8" of sand in bottom of the soil trench (See drawings) Wet the sand, allow to drain and compact to 95% proctor density. Place the planting soil mixtures and compact the soil in the street tree planting areas in 8" lifts and changing to 4" lifts at the top third. Compact each lift to 95% proctor density. Install the tree at the appropriate level for the depth of the root ball accounting for the top reinforced soil and paver layers.

Cleanup and Protection:

Clean Up: Debris and excess material shall be removed from the site immediately. When an excavation or backfill area is completed, completely clean up all soil piles and sweep all walks and drives. All existing sidewalks and driveways providing access to on-site buildings shall be kept clean and free of obstructions. Other paved areas shall be cleaned when work in adjacent areas is completed.

Protection: Protect all completed work from disturbance from operations of other trades and trespassers. Replace damaged work to specified conditions.

Documentation:
Submittals: For each type of product including:

Topsoil, Sand and Compost Data: Provide, to the Landscape Architect, the location(s) and name(s) of topsoil sources from which supplemental topsoil, sand and compost will be obtained for the project. Provide quantities obtained at each site, depth at which soil was taken and indicate whether crops had grown on site(s).

Soil Testing: The Contractor shall provide soil tests of supplemental topsoil prior to delivery of any topsoil to the site. Employ an independent testing lab that uses methods approved by the Association of Agricultural Chemists to test two (2) samples of the on-site topsoil and two (2) samples of the proposed supplemental topsoil. Submit a report to the Landscape Architect containing soil tests, lab analysis stating whether topsoil meets specification requirements and lab suggestions for amendment. The Landscape Architect will review the suggestions for amendment.

Soil Tests:

- Chemical Analysis: include pH, Cation Exchange Capacity (CEC), Organic Matter (OM), phosphorus, potassium (K), soluble salts, essential nutrients and any harmful chemicals.

- Mechanical Analysis: include percentages of sand, silt and clay.
- Lab recommendations for amendments.

Qualifications:
Qualifications: The contractor shall be a company specializing in landscape construction with a minimum of five (5) years of experience on comparable projects.

Code and Standards Compliance: All materials and work shall comply with applicable codes, standards and with the requirements of local agencies. The Contractor shall obtain all permits required.

Method of Measurement: This work will be measured for payment, complete in place and accepted, in cubic yard for planting mix.

Basis of Payment: This work will be paid for at the contract unit price per cubic yards for PLANTING SOIL MIX FURNISH AND PLACE which price be payment in full for all labor, equipment and materials required to complete the work as herein specified.

POWDER COATING TRAFFIC SIGNAL EQUIPMENT

Description. All new traffic signal posts, poles, mast arm assemblies, signal head brackets, and APS extension brackets shall be powder coated black to match other existing signal equipment at each project intersection. New traffic signal cabinet assemblies, new uninterruptible power supply cabinet assemblies, and new electric service installation assemblies shall not be painted black.

The Contractor shall provide paint specifications and samples for approval to the City of Champaign prior to ordering equipment.

The color shall be Ebony Black. The powder coating process shall conform to the following criteria:

Materials. The powder coat finish shall consist of a Urethane, Triglycidyl Isocyanurate (TGIC) Polyester Powder.

1. Surface Preparation: Prior to being incorporated into an assembled product, steel plates 0.75” or more in thickness shall be blast cleaned when required to remove rolled-in mill scale, impurities and non-metallic foreign materials. After assembly, all weld flux shall be mechanically removed. The exterior steel surface shall be blast cleaned to Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6) requirements utilizing cast steel abrasives conforming to the Society of Automotive Engineers (SAE) Recommended Practice J827. The blast method used shall be a recirculating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.
2. Interior Coating: Interior surfaces (pole shafts only) at the base end for a length of approximately 2.0’ shall be mechanically cleaned and coated with a zinc rich epoxy powder. The coating shall be electrostatically applied and cured in a gas fired convection

oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit.

3. Exterior Coating: All exterior surfaces shall be coated with a Urethane or a Triglycidyl Isocyanurate (TGIC) Polyester Powder to a minimum film thickness of 2.0 mils (0.002”). The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit. The thermosetting powder resin shall provide both intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D3359.
4. Packaging: Prior to shipment, the equipment shall be packaged appropriately to protect the product from being damaged during transit.

Basis of Payment. The powder coating of proposed equipment and all associated costs shall be included in the unit cost of the new traffic signal posts, poles, mast arm assemblies, signal head brackets, and APS extension brackets. No additional payment will be made.

PRECAST REINFORCED CONCRETE FLARED END SECTIONS, 12” AND 15”

Description. This work consists of the construction of PRECAST REINFORCED CONCRETE FLARED END SECTIONS at locations shown on the plans, as directed by the Engineer, and in accordance with Sections 542 of the Standard Specifications, except as herein specified. The noted end sections shall fitted with grating in accordance with Sections 1006 of the Standard Specifications.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12” OR CONCRETE FLARED END SECTIONS 15”, which price shall be payment in full for all labor, equipment and materials required to complete the work as herein specified.

PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER

Description. This work shall consist of connecting an existing storm sewer to a proposed manhole, catch basin, or other storm water drainage structure. All materials required to construct the connection, including concrete, reinforcement, gaskets, and other materials shall be included in the cost of the proposed storm sewer connection. Construction Requirements. Flow shall be maintained during construction. The hole in the catch basin or manhole may be precast or drilled on site as approved by the Engineer, and must be 3” minimum to 6” maximum larger than the outside diameter of the existing storm sewer. The elevation of the existing storm sewer shall be maintained. It is up to the contractor to furnish any details and drawings necessary to construct the connection, including “doghouse” construction if applicable, to be approved by the Engineer. The connection may be completed using rubber or elastomeric boots per ASTM C-923. Concrete bonding agent must be applied to all interfaces of precast concrete with cast-in-place concrete. Concrete strength shall be minimum 4000 PSI at 28 days using non-shrink mix. The contractor shall verify the completed connection is a watertight seal. Any portion of an existing storm sewer or proposed drainage structure damaged by the contractor

during construction of the connection shall be replaced by the contractor at no additional cost to the contract.

Method of Measurement. This work will be measured for payment, in place, in units of EACH connection installed as specified herein.

Basis of Payment. This work will be paid for at the contract unit price per EACH for PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER which price shall include all labor, materials, and equipment needed to complete the work as specified above.

PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE

Description. Work under this item shall be performed according to Section 602 of the Standard Specifications, except as herein modified. Where new sewer pipes are to be connected to existing manholes, opening holes of the proper size and at the proper location shall be cored into the existing manholes. Other methods in lieu of coring may be used per the Engineer's approval. If the manhole cannot satisfactorily be cored due to its condition, a hole shall be cut into the existing manhole. The sewer pipe shall be inserted into the hole cut in the manhole so that the end of the pipe will be flush with the inside of the manhole. The pipe shall be made smooth and water-tight with mortar.

Method of Measurement. This work will be measured for payment in units of each, regardless of pipe diameter or depth of installation.

Basis of Payment. This work will be paid for at the contract unit price per each for PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE. The price shall include all labor, excavation, materials and equipment necessary for making the connection complete, including cutting the hole in the manhole structure, grouting around the pipe.

PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER

Description. This work shall consist of connecting a proposed storm sewer to an existing storm sewer by means of constructing a reinforced concrete collar in accordance with Article 542.08 of the Standard Specifications and as designated in the plans. All materials required to construct the concrete collar, including concrete, reinforcement, expansion bolts, and other materials shall be included in the cost of the proposed storm sewer connection. Construction Requirements. Concrete collar widths shall be according to the plans. Any existing or proposed storm sewers damaged by the contractor during construction of the connection shall be replaced by the contractor at no additional cost to the contract.

Method of Measurement. This work will be measured for payment, in place, in units of EACH connection installed as specified herein regardless of pipe diameter, which price shall include all labor, materials, and equipment needed to complete the work as specified above.

Basis of Payment. This work will be paid for at the contract unit price per EACH for PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER, which price shall include all labor, materials, and equipment needed to complete the work as specified above.

RELOCATE CIVIL DEFENSE WARNING SIREN

Description:

The Contractor shall RELOCATE CIVIL DEFENSE WARNING SIREN at the location shown in the plans. Currently the City of Champaign has an existing storm siren located at approximately Sta 15+40. The existing siren is located on a power pole with power being provided by Ameren Electric. The contractor shall set a new power pole, relocate guy wires and associated equipment to the new pole and then coordinate with Ameren to reconnect power service to the new pole.

Method of Measurement. The quantity for this shall be measured as LUMP SUM for RELOCATE CIVIL DEFENSE WARNING SIREN.

Basis of Payment. This work shall be paid for at the contract unit price per LUMP SUM for RELOCATE CIVIL DEFENSE WARNING SIREN which price shall include all labor, material, equipment and coordination necessary to complete the work and no additional compensation will be allowed.

REMOVE EXISTING FLARED END SECTION

Description. This work consists of furnishing equipment, labor, tools, and materials necessary for the removal and satisfactory disposal of existing flared end sections and grates, if applicable, at the locations shown on the plans or as directed by the Engineer and in accordance with Section 551 and 605 of the Standard Specifications.
Method of Measurement. This work shall be paid for at the contract unit price per each.

Basis of Payment. This work shall be paid for at the contract unit price per each for REMOVE EXISTING FLARED END SECTION, regardless of size, location or material and shall include all labor, excavation, backfill, material, and equipment necessary to complete this work as specified.

REMOVE EXISTING HANDHOLE

Description. This work shall be in conformance with Section 895 of the Standard Specifications, and consist of removing an existing single concrete handhole where shown on the plans.

Construction Requirements.

Add the following to Article 895.05(b) of the Standard Specifications:

The entire depth of all walls of the existing single concrete handhole shall be removed. The existing single concrete handhole which is to be removed shall become the property of the Contractor, and be disposed of in accordance with Article 202.03 at the Contractor's expense.

Method of Measurement. This work will be measured for payment, complete and accepted, in units of each.

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

REMOVE EXISTING JUNCTION BOX

Description. This work shall consist of the removal and disposal of existing junction boxes in accordance with the applicable portions of Section 895 of the Standard Specifications and the following additions or exceptions.

Construction Requirements. The junction box shall be removed in its entirety. Portions of the existing cables and conduits that interfere in any way with the proposed construction shall be removed. Existing cables that do not interfere with the proposed construction shall be abandoned in place unless otherwise directed by the Engineer. Existing conduits that do not interfere with the proposed construction shall be capped and abandoned in place unless otherwise directed by the Engineer. Removal of the existing cables and conduits will not be paid for separately but shall be included in the cost of Remove Existing Junction Box, and no additional compensation will be allowed.

Removed material shall be disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications.

Voids created by the removals shall be backfilled with controlled low-strength material unless otherwise directed by the Engineer. All required excavation and backfill shall be included in the cost of Remove Existing Junction Box, and no additional compensation will be allowed.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVE EXISTING JUNCTION BOX, which price shall include all labor, equipment, and material necessary to complete the work as specified, including all excavation and backfill.

REMOVE EXISTING TRAFFIC CONTROLLER AND CABINET

Description. This work shall be in conformance with Section 895 of the Standard Specifications, and consist of removing the existing traffic signal controller with respective traffic signal cabinet assembly, attached meter and disconnect cabinet, and attached uninterruptible power supply cabinet, where shown on the plans.

Construction Requirements.

Add the following to Article 895.05(a) of the Standard Specifications:

The existing traffic signal cabinet assemblies and uninterruptible power supply cabinets which are to be removed shall become the property of the City of Champaign. The Contractor shall be responsible for setting up the time and location for turning over equipment to the City of Champaign. The Contractor is responsible for delivering the equipment to the City of Champaign, including unloading and placing the equipment into City storage.

The existing meter and disconnect cabinet assemblies which are to be removed shall become the property of the Contractor, and be disposed of in accordance with Article 202.03 at the Contractor's expense. During removal of the existing meter and disconnect, the Contractor shall ensure that the underground conduit leading to the existing power source is not damaged, so as to allow the existing underground conduit be reused when the new meter and disconnect is mounted to the new traffic signal cabinet assembly.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVE EXISTING TRAFFIC CONTROLLER AND CABINET, which price shall include all labor, equipment, and material necessary to complete the work as specified.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Description. This work shall be in conformance with Section 895 of the Standard Specifications, and consist of removing the following items, at the following locations, where shown on the plans:

- Intersection of Mattis Avenue & Windsor Road
  - Northwest Quadrant: 5 – Signal Heads; 2 – Pedestrian Signal Heads; 2 – Push Buttons with Signs; 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign; 1 – 15-foot Signal Post; 1 – Electric Service Installation (Special)
  - Northeast Quadrant: 4 – Signal Heads; 2 – Pedestrian Signal Heads; 2 – Push Buttons with Signs; 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign; 1 – 15-foot Signal Post
  - Southeast Quadrant: 5 – Signal Heads; 2 – Pedestrian Signal Heads; 2 – Push Buttons with Signs; 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign; 1 – 15-foot Signal Post
  - Southwest Quadrant: 1 – 44-foot Steel Combination Mast Arm Assembly and Pole; 4 – Signal Heads; 2 – Pedestrian Signal Heads; 2 – Push Buttons with Signs; 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign; 1 – 15-foot Signal Post
- Intersection of Mattis Avenue & Curtis Road
  - Northwest Quadrant: 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign
  - Northeast Quadrant: 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign; 1 – Electric Service Installation (Special)
  - Southeast Quadrant: 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign
  - Southwest Quadrant: 1 – Video Detection Camera; 1 – Emergency Vehicle Priority (EVP) Confirmation Beacon; 1 – Illuminated Street Name Sign

Construction Requirements.

Add the following to Article 895.05(a) of the Standard Specifications:

The traffic signal equipment which is to be removed shall become the property of the Contractor, and be disposed of in accordance with Article 202.03 at the Contractor's expense.

Method of Measurement. This work will be measured for payment at respective project intersections, complete and accepted, in units of each. Removal of any existing concrete foundation; signal handhole; traffic signal controller with respective traffic signal cabinet assembly, and attached uninterruptible power supply cabinet; or signal cabling will be paid for separately.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT, which price shall include all labor, equipment, and material necessary to complete the work as specified, at respective project intersections.

REMOVING INLETS

Description. This work consists of removing existing storm sewer inlets at locations indicated on the plans. All inlet removals shall be in accordance with Section 605. Existing castings, rings, concrete, etc. shall be disposed of by the Contractor. The Contractor shall furnish and install CLSM backfill material to proposed subgrade elevation.

Method of Measurement. This work shall be paid for at the contract unit price per each.

Basis of Payment. This work shall be paid for at the contract unit price each for REMOVING INLETS. The CLSM shall be considered as included in the unit price and no additional compensation will be allowed.

REMOVING MANHOLES

Description. This work consists of removing existing storm sewer manholes at locations indicated on the plans. All manhole removals shall be in accordance with Section 605. Existing castings, rings, concrete, etc. shall be disposed of by the Contractor. The Contractor shall furnish and install CLSM backfill material to proposed subgrade elevation.

Method of Measurement. This work shall be paid for at the contract unit price per each.

Basis of Payment. This work shall be paid for at the contract unit price each for REMOVING MANHOLES. The CLSM shall be considered as included in the unit price and no additional compensation will be allowed.

SALVAGEABLE MATERIALS

All materials deemed salvageable by the Engineer shall remain the property of the City of Champaign and shall be delivered by the Contractor to a location designated by the City of Champaign representative (Mr. John Rose – 217.403.4700). Any materials that the Engineer determines should not be salvaged shall be disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications or as otherwise directed by the Engineer. This

work will not be paid for separately but shall be included in the cost of the various removal pay items, and no additional compensation will be allowed.

SIGNAL HEAD, POLYCARBONATE, LED

Description. This work shall consist of furnishing and installing a light emitting diode (LED) signal head in accordance with Section 880 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. All circular and arrow LED signal modules shall measure 12” in diameter. The lens for a red or yellow signal module shall be tinted red or yellow. The lens for a green signal module shall be clear. All signal modules shall be manufactured by Dialight Corporation or GELcore, and have a full 15-year warranty and internal conformal coated 48VDC power supply module. The polycarbonate signal head shall be black in color. The signal head shall include a 3” yellow retroreflective strip around the entire perimeter. All indications shall meet or exceed the ITE requirements for intensity, color, and uniformity.

Construction Requirements. Brackets for mast arm mounted signal heads shall be unpainted and installed to prevent any slippage. Post mounted signal heads shall be mounted with black polycarbonate or natural galvanized metal brackets fastened to the pole or post with stainless steel banding, 3/4” wide by 0.025” thick, or as otherwise directed by the Engineer. The signal head shall allow for either vertical or horizontal mounting, as indicated in the plans. Individual lenses shall be able to rotate within the signal head to change orientation of arrow indications.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for SIGNAL HEAD, POLYCARBONATE, LED, of the number of signal faces, the number of signal sections in each signal face, and the method of mounting specified, which price shall include all labor, equipment, and material necessary to complete the work as shown in the plans or other bidding materials.

SLEEPER SLAB

Description: This work shall consist of constructing a cast-in-place concrete sleeper slab to support the precast concrete box culverts as shown in the plans.

Materials: Materials shall conform to Article 503.02 of the Standard Specifications. Construction Requirements: The work shall be performed according to Section 503 of the Standard Specifications except the surface shall be a smooth, trowel finish. Grades and dimensions shall be as detailed in the plans.

Method of Measurement: This work will be measured for payment in place, and the area computed in square yards.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE YARD for SLEEPER SLAB.

SPECIAL GRATE NO. 1

Description:

The Contractor shall install SPECIAL GRATE NO. 1 at the locations shown in the plans. As illustrated in the plans, grates are to be installed in front of the orifices and attached to the concrete block and wall of the detention outlet structures. The trash rack shall be Neenah R-7512 or Trashracks LPG-12.

Method of Measurement. The quantity for this shall be measured as EACH for SPECIAL GRATE NO. 1.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for SPECIAL GRATE NO. 1, which price shall include all labor, material, grates and equipment necessary to complete the work and no additional compensation will be allowed.

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE

Description. This work shall consist of furnishing and installing a steel combination mast arm assembly and pole in accordance with Section 877 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The steel combination mast arm assembly and pole manufacturer shall be Valmont or Hapco. The pole, base, pole cap, signal arm, and luminaire arm shall have a powder coated black paint finish over galvanized steel. The stainless-steel mesh and band at the pole base shall be unpainted stainless steel. The luminaire mounting height as measured from the pole base shall be 35 feet. The luminaire arm lengths shall be 15 feet, unless otherwise indicated in the plans.

Construction Requirements. The luminaire arm shall be installed either parallel to or perpendicular to the signal mast arm as shown in the plans. Brackets at luminaire arm connections shall be drilled and pinned to prevent rotation of the luminaire arm. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly. A 72” x 36” mast arm dampening device shall be furnished and installed on all mast arms that are 40 feet in length or more in accordance with the details shown in the plans. The dampening device shall be installed equidistant between the two outermost signal heads. The dampening device shall consist of a 72” x 36” Type 1 unpainted aluminum sign stock mounted horizontally on top of the mast arm with the 36” length perpendicular to the arm. Furnishing and installing the mast arm dampening device shall be included in the cost of the respective mast arm pay item, and no additional compensation will be allowed.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, of the signal arm length specified, which price shall include all labor, equipment, and material necessary to complete the work as specified.

STORM SEWER REMOVAL 12”

Description. This work consists of removing existing storm sewer at locations indicated on the plans. All storm sewer removal shall be in accordance with Section 551. Existing pipe, concrete, etc. shall be disposed of by the Contractor. The Contractor shall furnish and install CLSM backfill material to proposed subgrade elevation, when new pavement/sidewalk is proposed in the location of the pipe culvert removal.

Method of Measurement. This work shall be paid for at the contract unit price per each.

Basis of Payment. This work shall be paid for at the contract unit price each for STORM SEWER REMOVAL 12”. The CLSM shall be considered as included in the unit price and no additional compensation will be allowed.

TRAFFIC SIGNAL POST, ALUMINUM

Description. This work shall consist of furnishing and installing a traffic signal post in accordance with Section 875 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials. The post and base shall be made of aluminum. The post shall be schedule 80 and shall be furnished with an aluminum pole cap. The base shall be furnished with an aluminum reinforcing collar or an extended neck square base such as Component Products CPI-BAS-1-PXDP, Square Aluminum Base with 1" extended neck, 3 stainless steel set screws, plastic door. It shall include a grounding lug suitable for connecting a copper equipment grounding conductor. The post, cap, base, and collar shall be finished with a black powder coated material at the manufacturer’s plant.

Construction Requirements. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for TRAFFIC SIGNAL POST, ALUMINUM, of the length specified in the plans or other bidding materials, which price shall include all labor, equipment, and material necessary to complete the work as specified.

TREE, CARPINUS BETULUS, (EUROPEAN HORNBEAM) 2" CALIPER, BALLED AND BURLAPPED; TREE, TAXODIUM DISTICHUM SHAWNEE BRAVE (SHAWNEE BRAVE BALD CYPRESS), 2-1/2" CALIPER, BALLED AND BURLAPPED;TREE, QUERCUS ALBA X ROBUR CRIMSCHMIDT (CRIMSON SPIRE OAK), 2-1/2" CALIPER, BALLED AND BURLAPPED AND MULCH PLACEMENT 3”

Description: This work shall consist of providing and installing plant materials.

Plant Material: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated

on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots are unacceptable. Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

- Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- Labeling: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

Mulches: Compost Mulch: Well-composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-inch (25-mm) sieve; soluble-salt content of 2 dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and organic matter content 60 percent of dry weight.

Trunk-Stabilization Materials:

- Guy Stakes: Rough-sawn, sound, new hardwood free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated, pointed at one end.
- Guys and Tie Wires: ASTM A641/A641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch (2.7 mm) in diameter.
- Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
- Flags: Standard surveyor's plastic flagging tape, white, 6 inches (150 mm) long.

Construction Requirements:

Examination: Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.

- Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
- Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.

- Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
- Uniformly moisten excessively dry soil that is not workable or which is dusty.
- If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination and replace with new planting soil.
- Proceed with installation only after unsatisfactory conditions have been corrected.

Preparation: Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways. Prepare planting area for soil placement and mix planting soil.

- Placing Planting Soil: Backfill prepared planting excavations with specified planting mix.
- Before planting, verify that finish grading has been completed; restore planting areas if eroded or otherwise disturbed after finish grading.

Excavation for Trees and Shrubs: Planting Pits and Trenches: Excavate circular and rectangular planting pits.

- Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation. Scarify sides of planting pit smeared or smoothed during excavation.
- Excavate approximately three times as wide as ball diameter for balled and burlapped, balled and potted and container-grown stock.
- Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
- If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
- Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
- Maintain supervision of excavations during working hours.
- Keep excavations covered or otherwise protected when unattended by Installer's personnel.
- Backfill Soil: Backfill with specified planting mix. Subsoil and topsoil removed from excavations may not be used as backfill soil unless specific for inclusion in the planting mix.
- Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

<u>Tree, Shrub, And Vine Planting:</u>

- Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball

to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

- Roots: Removae stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
- Backfill: Specified planting soil mix. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Revise first subparagraph below to suit sizes and varieties of plants and planting tablets. Continue backfilling process. Water again after placing and tamping final layer of soil.
- Balled and Potted and Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
- Backfill: Specified planting soil mix. Carefully remove root ball from container without damaging root ball or plant. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Continue backfilling process. Water again after placing and tamping final layer of soil.
- Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

Tree, Shrub, And Vine Pruning:

- Remove only dead, dying, or broken branches. Do not prune for shape.
- Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- Do not apply pruning paint to wounds.

Ground Cover and Plant Planting:

- Set out and space ground cover and plants other than trees, shrubs, and vines per spacing on plant list or as indicated on the drawings in even rows with triangular spacing.
- Backfill with specified planting soil mix.
- Dig holes large enough to allow spreading of roots.
- Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

- Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

Planting Area Mulching:

- Mulch backfilled surfaces of planting areas and other areas indicated.
- Trees and Treelike Shrubs in Turf Areas: Apply organic mulch ring of 3-inch average thickness, with 36” to 48” radius around trunks or stems. Do not place mulch within 3 inches distance of trunks or stems.
- Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades.

Tree Stabilization:

- Trunk Stabilization by Upright Staking and Tying: Install trunk stabilization for trees that fail to remain plumb.
- Trunk Stabilization by Staking and Guying: Install trunk stabilization as follows unless otherwise indicated on Drawings.
- Site-Fabricated, Staking-and-Guying Method: Install no fewer than three guys spaced equally around tree.
- Securely attach guys to stakes 24” long, driven to grade. Adjust spacing to avoid penetrating root balls or root masses. Provide turnbuckle or compression spring] for each guy wire and tighten securely.
- Paint guy wires, turnbuckles and compression springs with luminescent clear paint.
- Do not distort or bend root barrier during construction activities.
- Do not install root barrier surrounding the root ball of tree. Insert article here for installation of miscellaneous products such as tree protection devices (tree guards) if required.

Plant Maintenance:

- Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

Repair And Replacement:

- General: Repair or replace existing or new trees and other plants that are damaged by construction operations. Replace any plantings with damaged trunks, branches, and roots. Replace trees and other plants that cannot be repaired and restored to full-growth status.

- Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before substantial completion or are damaged during construction operations.
- Provide new trees of same size as those being replaced for each tree. Species of Replacement Trees: Same species being replaced except where species is determined to be incompatible with the site conditions.

Cleaning And Protection

- During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

Documentation:

Submittals: For each type of product including:

- Quantities, sizes, quality, and sources for plant materials.
- Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 10 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

Verification and Submittals: For each of the following:

- Trees and Shrubs: Arrange for nursery visits in Indiana or arrange for review of trees and shrubs on the project site prior to installation.
- Compost Mulch: 1 pint volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup. Provide cutsheet information from supplier.
- Mineral Mulch: 1 pint of each mineral mulch required, in sealed plastic bags labeled with source of mulch. Sample shall be typical of the lot of material to be delivered and installed on-site; provide an accurate indication of color, texture, and makeup of the material. Provide cutsheet information from supplier.

Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants. With ten years' experience in commercial landscape installation.

Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period. Failures include, but are not limited to, the following:

Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.

Structural failures including plantings falling or blowing over. Faulty performance of planting accessories.

Deterioration of metals, metal finishes, and other materials beyond normal weathering.

Warranty Periods:

- Warranty periods in "Trees, Shrubs, Vines, and Ornamental Grasses," "Ground Covers, Biennials, Perennials, and Other Plants," and "Annuals" subparagraphs below are examples only for some categories of plants; revise or insert other plant categories to suit Project.
- Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
- Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
- Annuals: within growing season.
- Include the following remedial actions as a minimum:
- Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
- Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
- A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
- Provide extended warranty for period equal to original warranty period, for replaced plant material.

Method of Measurement: This work will be measured for payment, complete in place and accepted, in units of each for trees and square yard for mulch.

Basis of Payment: This work will be paid for at the contract unit price per each for TREE, CARPINUS BETULUS, (EUROPEAN HORNBEAM) 2" CALIPER, BALLED AND BURLAPPED; TREE, TAXODIUM DISTICHUM SHAWNEE BRAVE (SHAWNEE BRAVE BALD CYPRESS), 2-1/2" CALIPER, BALLED AND BURLAPPED; TREE, QUERCUS ALBA X ROBUR CRIMSCHMIDT (CRIMSON SPIRE OAK), 2-1/2" CALIPER, BALLED AND BURLAPPED and square yards for MULCH PLACEMENT 3" which price be payment in full for all labor, equipment and materials required to complete the work as herein specified.

UNDERGROUND CONDUIT

Description. This work shall consist of furnishing and installing conduit of the type and size

specified in accordance with Sections 810 and 1088 of the Standard Specifications and the following additions or exceptions.

When PVC conduit is required to be spliced to steel conduit sections, a heavy wall set screw connector with PVC female adapter shall be installed and sealed by duct seal and plastic tape. Intercepting existing conduit, including all required adapters, will not be paid for separately but shall be included in the cost of the respective conduit pay item, and no additional compensation will be allowed.

A ¼" polypropylene pull rope shall be installed in all conduit runs. A minimum of 3 feet of rope shall be provided at each end of a conduit run.

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

UNINTERRUPTABLE POWER SUPPLY (SPECIAL)

Description. This work shall consist of furnishing and installing a battery backup system (BBS) in accordance with Section 862 and 1074.04 of the Standard Specifications, the details in the plans, and the following additions or exceptions.

Materials.

1. PRODUCT
    a. The Contractor shall install a Mini BBS 1000 model from Alpha Traffic, mounted to the side of an existing or new signal controller cabinet, meeting the requirements and functionality noted below.
2. REQUIREMENTS
    a. Compatibility – The BBS shall be compatible with the City's current traffic controller cabinet, controller and cabinet components, including the malfunction management unit, for full time operation. The BBS shall include all necessary cables to connect Inverter/Controller and battery panel(s).
    b. Run-time – The BBS shall provide a 2-amp cabinet load a minimum run-time of three (3) hours of full color operation.
    c. Output Capacity – BBS must provide a minimum of 1000W @ +74°C, continuous active output capacity, with a 80% minimum inverter efficiency while running in battery backup mode.
    d. Output Voltage – When under battery power, the BBS output voltage shall be 120 VAC, pure sine wave output, ±3%, 50/60 Hz ±0.5%.
    e. Transfer Time – The maximum transfer time allowed, from disruption of utility line voltage to stabilized inverter line voltage from batteries shall be eight (8) milliseconds. The maximum transfer time when switching from inverter line voltage to utility line voltage after the line-qualifying period shall be ten (10) milliseconds. The BBS shall be capable of allowing the user to change the transfer time in eight (8) millisecond increments up to 200 milliseconds if needed by the cabinet equipment.

f. Operating Environment – Operating temperature for the Inverter/Controller, Automatic Transfer Switch and AGM 12V Batteries shall be -40°F to +165°F (-40° to +74°C).
g. Surge Protection – The BBS transient protection shall be able to handle a minimum of 480 joules of energy and 39kA peak current. In addition, the Contractor shall provide and install an RF filter for the input circuit, which provides attenuation of line noise of 25 dB at 10 KHz, 65 dB at 100 KHz and 100 dB at 1 MHz
h. Power & Control Connections – The BBS shall have the capability to be replaced by utilizing single connectors for AC input, AC output and the battery panel(s).
    - AC Connection – The AC input and output shall be separate panel mounted plug/receptacles that allow no possibility of accidental exposure to dangerous voltages. The plug/receptacles shall utilize some form of locking mechanism to prevent accidental disconnect.
    - Battery Connection – The battery panel shall utilize a single circular barrel type connector for connecting to the Inverter/Controller, or other method for quick disconnect/connect as approved by the Engineer.
i. Battery –
    - The BBS battery panel(s) must utilize Absorbent Glass Mat (AGM) battery technology. Lead-Acid, Gel Cell, or similar battery technologies will not be accepted.
    - The charging/battery monitoring circuitry shall be incorporated within the battery panel.
    - The BBS must allow the user to 'Hot Swap' the battery panel(s) while on utility power or battery backup power.
    - The Inverter/Controller must allow the connection of four (4) battery panels directly to the Inverter/Controller.
    - The Inverter/Controller must be capable of accepting battery panel(s) of different capacities at once, giving the user the ability to utilize different battery sizes to achieve required run-times.
    - The Inverter/Controller shall accept up to sixteen (16) battery panels when utilizing a battery HUB(s).
    - Charge – The BBS must recharge to full charge capacity within four (4) hours of complete discharge when AC utility line voltage is available. The number of battery panels connected to the Inverter/Controller shall have NO effect on the four (4) hour recharge time. The BBS must not require trickle/float charging.
j. Unit failure – The BBS must have a fail-safe utility tie feature that automatically cuts back to the utility line in the event of an Inverter/Controller failure, battery panel(s) failure or complete battery panel(s) discharge.
k. Cabinet – An outdoor-rated NEMA 3R cabinet shall be mounted to the side of the existing or new signal cabinet using hardware recommended by the manufacturer and approved by the Engineer. Nominal dimensions of the cabinet shall be 34"H x 16"W x 12"D, and be constructed of high-strength corrosion resistant aluminum with a natural finish. The cabinet shall be lockable by a standard Corbin #2 lock integral to a hinged cabinet door. Total weight of the cabinet with all hardware and batteries installed shall not exceed 65lbs. A bottom

battery shelf shall be removable for ease of wiring connections. The inverter/controller unit shall be rack or shelf mounted.

3. FUNCTIONALITY AND OPERATIONAL REQUIREMENTS
    a. LCD Display – The BBS Inverter/Controller shall have a LCD or similar display with an LED back light. From the main screen, the display shall provide the following information: 1. Utility line voltage 2. BBS status 3. Cabinet current consumption 4. Battery charge percentage 5. Available backup time in hours and minutes
    b. LCD Display Menu – The LCD Display Menu shall provide the user the ability to program and monitor the following parameters: 1. Voltage threshold parameters 2. Programmable relays 3. Depth of Discharge (high and normal) 4. Event log
    c. LED Indicators – The controller unit shall include color-coded LED indicators displaying when the unit is in Line Mode, Inverter Mode, and Alarm or Fault status.
    d. Keypad – The BBS Inverter/Controller shall include a 4-way navigational keypad to allow users the ability to navigate the menu and program user set parameters.
    e. Voltage thresholds
        - 1. The BBS shall allow the user to set high and low AC line voltage thresholds to determine parameters to transfer from utility line power to battery backup power.
        - 2. The BBS shall bypass utility line power if the utility line voltage is outside of the set high and low voltage parameters.
        - 3. The BBS shall qualify the utility line power for a minimum of three (3) minutes from the moment the utility line voltage is within the set high and low voltage parameters.
    f. Programmable Relays – The BBS Inverter/Controller shall include eight (8) programmable relays, which are controlled by power line conditions, and user selected settings of the BBS. These relay contacts shall be rated for 2 amps @ 120 VAC. Each relay shall have the ability to trigger by multiple conditions simultaneously. The programming options are as follows:
        - 1. Loss of utility line voltage
        - 2. Low battery
        - 3. Time of day
        - 4. Temperature
        - 5. Time delay (for red flash)
    g. Depth of Discharge – The BBS shall allow the user to control the depth of discharge of the batter panel(s) by choosing a “High” or “Normal” capacity mode in the menu setting of the Inverter/Controller.
    h. Event Log – The BBS shall provide an event log, which will allow the user to view the date time and duration of a given event. The event log shall provide the user with an image of the waveform from the given event. The data shall be recorded in a FIFO format so the oldest event is purged as the newest is entered.
    i. Manual Bypass Switch – The BBS Inverter / Controller must include a Manual Bypass switch to allow the user to manually bypass the inverter while allowing the utility line voltage through to the cabinet.
    j. Circuit Breakers – The BBS Inverter / Controller must be equipped with two (2) 20A circuit breakers, one (1) each for the AC Input and Output.

k. Force On – The BBS shall be equipped with “Force On” capabilities, which provides the user the ability to turn the BBS on and supply backup power when no utility line voltage is available. This allows the user the ability to install a BBS and provide backup AC power at an intersection that has no utility line voltage available.

4. COMMUNICATION
    a. The BBS must have the capability to provide Ethernet and IP addressing communications with the capability for remote monitoring and programming. This capability must be provided through a web-based interface while connected locally via a laptop computer or remotely via the City’s Ethernet network.
    b. The BBS shall be equipped with an Ethernet port. The Ethernet port shall be an RJ45, EIA 568B pin out type connector. The data rate shall be a minimum of 100mbps.
5. GRAPHICAL USER INTERFACE
    a. The Graphical User Interface (GUI) shall be via a web-browser and shall be password protected and require a user ID, password and the BBS IP address to access.
    b. The GUI shall have a status area that details the BBS status, location, available runtime in hours and minutes, AC line voltage status and real-time cabinet power consumption. The status area must be displayed on every page.
    c. The GUI shall have a Home screen with clickable icons and tabs, which will allow the user to navigate the GUI with ease. The home screen shall allow the user to view real-time graphical charts of the cabinet power consumption and AC line voltage status. The home screen must allow the user the ability to view a live waveform from the AC utility line in the cabinet.
    d. The GUI shall have an Event Log page to allow the user to view the time, date and duration of a given event. The GUI must provide the user the capability of viewing the waveform of the given event.
    e. The GUI shall have a relay Configuration page to allow the user to program the relay contacts.
    f. The GUI shall have a System Configuration page that allows the user to configure the following; BBS location, depth of discharge, AC line voltage high and low thresholds, AC switch delay, time and date, network settings (IP address, gateway address and subnet), user ID / password and SNMP settings.
    g. The GUI shall communicate notification and alerts through SNMP protocol. The City will provide e-mail addresses or other contact information of appropriate City maintenance staff for the Contractor to program as recipients of alarms from the BBS. Triggers that generate notifications shall be; absence of utility line voltage, battery capacity below set threshold, remaining run-time below set threshold, low/high temperature; and BBS heartbeat status.
6. WARRANTY
    a. The BBS, as a complete system including battery panel(s), must be warranted to be free from defects in material and workmanship for a minimum of 5 years from the date of original receipt.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for UNINTERRUPTABLE POWER SUPPLY (SPECIAL), which price shall include all labor, equipment, and material necessary to complete the work as specified.

VIDEO VEHICLE DETECTION SYSTEM

Description. This work shall consist of furnishing and installing a complete video detection system in accordance with Sections 801, 806, 857, 1073, and 1074 of the current Standard Specifications, as shown in the plans, and following additions or exceptions noted below. The video vehicle detection system shall be an Iteris Vantage Next series video vehicle detection system. All video detection system components shall be current production equipment produced by the same manufacturer.

Materials.

1. Video Detector Camera Assembly: The Contractor shall furnish video detection camera assemblies at locations shown in the plans, including incidental work necessary to complete the installation and make the video vehicle detection system fully operational. The camera units shall meet IP 67 environmental requirements and operate at temperatures between -35 to 165 degrees F at up to 95% humidity, including cable connections, with adjustable sunshield and internal heater. It shall allow for up to 12X optical zoom with 1.0 Lux minimum illumination. Total weight of the camera unit shall not exceed 5 lbs, excluding mounting brackets and associated hardware. The camera unit shall operate at 48VDC with a maximum of 10W usage.

2. Video Processor and Communications Unit: The Contractor shall furnish one (1) Video Processor and Communications unit per cabinet and incidental work necessary to complete the installation and make the video vehicle detection system fully operational. The unit shall provide a compressed digital stream of each camera in the system via Ethernet communications using either MPEG-4 or H.264 standards with a minimum of 720x480 pixel resolution, and operate at temperatures between -35 to 165 degrees F at up to 95% humidity. The unit shall include a port for SDLC communications and a minimum of two (2) USB Type A ports.

3. Video Detector Cable: The Contractor shall furnish the specified cable type, all connectors, sealing tape, and incidental work necessary to complete the installation of the Video Detector Cable between the Video Detector Camera Assembly with the interface unit in the traffic control cabinet. The cameras shall be connected to a POE unit located in the controller cabinet via Ethernet cable recommended by the manufacturer. No direct pay will be allowed for Ethernet cabling between the signal cabinet and each camera unit.

4. Video Detector Camera Mounting Bracket: The Contractor shall furnish one (1) Video Detector Camera Mounting Bracket and all associated equipment, labor, materials, tools, and incidental work necessary to attach the camera mounting bracket to a mast arm or camera extension bracket, complete the installation, and make the video vehicle detection system fully operational. Mounting heights shall follow manufacturer guidelines for optimal performance. Installation of an extension bracket shall be incidental to the unit price for each video detection system.

Construction Requirements. All work associated with Video Vehicle Detection System shall be completed prior to removal of the existing vehicular detection, if applicable. The Contractor shall be responsible for furnishing all training, labor, materials, cables, connectors, tools, equipment, shipping, and incidental items necessary to complete the installation and make the video vehicle detection system fully operational. Installation of the video vehicle detection system at each intersection shall include the installation of any and all associated equipment, including, but not limited to, the following:

The Contractor shall install the Video Detection System to meet the desired field of detection as shown on the Plans or as directed by the Engineer. All equipment shall be installed and wired in a neat and orderly manner in conformance with the manufacturer's instructions. The camera shall be affixed to the support structure in accordance with the manufacturer's instructions to provide the optimal field of detection.

The Contractor shall perform a site survey with a representative of the manufacturer of the video vehicle detection system at all project locations. The purpose of the survey shall be to optimize the performance of the video vehicle detection equipment when it is installed at the various overhead and side-mounted locations and ensure that it will meet the accuracy requirements specified herein. The results of this survey shall be submitted to the Engineer in a report which lists all locations with any recommended location shifts, sensor mounting adjustments, camera angle lens adjustments, and desired detection zone locations. The cost of the site survey, including the use of a bucket truck or other method to obtain an elevated vantage point, shall be included in the cost for each intersection's respective video vehicle detection system pay item.

When conductors and cables are pulled into conduits, all ends of conductors and cables shall be taped to exclude moisture, and shall be so kept until they are attached to hardware in the traffic control cabinet. Wiring within handholes and cabinets shall be neatly arranged and tagged to indicate which camera is connected via each cable.

Conductors entering the traffic signal controller cabinet shall be neatly dressed and laced along the base and back of the traffic cabinet to the terminal hardware. At least 3 feet of slack shall be left for each cable in the traffic signal controller cabinet. At each video detection camera mounting location, routing of the Ethernet cable shall provide a drip loop for protection of the camera and connector. The cable shall be installed continuous with no splices from the cameras to the POE units in the traffic signal controller cabinet.

The Contractor shall configure data collection settings to continually store vehicle turning movement counts, pedestrian counts, and bicycle counts for each approach to the intersection. The count data shall be stored locally in each camera or in the processor unit in the cabinet for download by City staff. Up to 30 days of data shall be stored at each intersection. Data formats shall configurable during or after initial setup of the system, allowing for count data to be binned in increments as set by the user, with directional and street names included in the data reports. The Contractor shall test each approach for accuracy, using manual counts as a baseline, to ensure a minimum of 95% accuracy. Count testing shall include a minimum of 15 minutes of time during a peak period. The Contractor shall submit testing reports for each intersection prior to acceptance of the work.

Method of Measurement. This work will be measured for payment, complete in place and accepted, in units of each.

Basis of Payment. This work will be paid for at the contract unit price each for VIDEO VEHICLE DETECTION SYSTEM, which price shall include all labor, equipment, and material necessary to speech message “Wait”.

I shortened when emergency vehicle approaches” shall be used after the speech walk message.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

City of Champaign

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR CONSTRUCTION AND MAINTENANCE SIGNS

Effective: January 1, 2004
Revised: June 1, 2007

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

701.14. Signs. Add the following paragraph to Article 701.14:

All warning signs shall have minimum dimensions of 1200 mm x 1200 mm (48" x 48") and have a black legend on a fluorescent orange reflectorized background, meeting, as a minimum, Type AP reflectivity requirements of Table 1091-2 in Article 1091.02.

Midwest Engineering and Testing, Inc.
geotechnical · environmental · materials engineers
501 Mercury Drive
Champaign, IL 61822-9649
Phone 217-359-2128
FAX 217-359-8446
www.metgeotech.com

January 12, 2022

Kate Swinford, PE, PTOE
Senior Traffic Engineer
Lochmueller Group
201 W Springfield Avenue, Suite 1012
Champaign, Illinois 61820

Re: Subsurface Exploration and Geotechnical Evaluation
Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois
MET Project No. 213144

Dear Ms. Swinford:

In accordance with your request, Midwest Engineering and Testing, Inc. (MET) has completed soil borings and an evaluation of the subsurface conditions at the above-referenced site. The geotechnical report, which includes our findings and recommendations, is being submitted via e-mail in .pdf format. Hard copies can be provided, if so desired.

MET appreciates the opportunity to be of service during this phase of the project. If there are any questions or comments you may have regarding the content of this report or if we may be of any further service, please contact us at your convenience.

Sincerely,

Midwest Engineering and Testing, Inc.

Nicholas D. Wendling, P.E.
Geotechnical Department Manager

Daniel E. Tappendorf
Digitally signed by Daniel E. Tappendorf
DN: cn=Daniel E. Tappendorf, o=President, ou=Midwest Engineering and Testing, Inc., email=dtappendorf@metgeotech.com, c=UY
Date: 2022.01.12 16:44:42 -06'00'

Daniel E. Tappendorf, P.E.
President

SUBSURFACE EXPLORATION
AND
GEOTECHNICAL EVALUATION

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

PREPARED FOR

Lochmueller Group
201 W Springfield Avenue, Suite 1012
Champaign, Illinois 61820

January 12, 2022

MET File No. 213144

TABLE OF CONTENTS

INTRODUCTION

General

This report presents the results of a subsurface exploration for the proposed Mattis Avenue Reconstruction project which is planned to occur between Windsor Road and Curtis Road in southwestern Champaign, Illinois. The purpose of this study was to determine and evaluate the subsurface conditions existing at the subject site and to establish related parameters for consideration by the design engineers. Included herein are the results of the subsurface exploration, field and laboratory soil test data, and a summary of the geotechnical evaluation.

Scope

The scope of services included a reconnaissance of the site, subsurface exploration, field and laboratory testing of the soil samples collected, and evaluation of the data. Additionally, area specific geologic maps and literature related to the site were reviewed.

Authorization

Authorization to perform this subsurface exploration and analysis was in the form of a fully executed Subconsultant Agreement for Professional Services between Lochmueller Group, Inc. and Midwest Engineering and Testing, Inc. (MET). The Agreement was sent in response to and included the scope of services outlined in MET Proposal No. 21209, dated September 13, 2021.

PROJECT AND SITE DESCRIPTION

The project site is located in southwestern Champaign, Illinois, and includes the existing Mattis Avenue corridor between Windsor Road and Curtis Road. It is understood the proposed project involves reconstruction and widening of Mattis Avenue. We anticipate this will include complete replacement of the existing pavement and grading and drainage improvements throughout the existing right of way. Additionally, it is understood that a new box culvert will be installed to replace an existing culvert approximately 0.3 miles south of Windsor Road.

GEOLOGY OF THE AREA

Bedrock Geology

Bedrock in the Champaign area is generally found at depths in excess of 200 feet below the ground surface and consists primarily of Pennsylvanian Age deposits associated with the Spoon Formation. Shale, coal, sandstone and limestone are the predominant rock types comprising the formation in this area.

Surficial Geology

The subject site is located in southwest Champaign, Illinois and the surficial geology likely consists of a thin layer of wind deposited and water worked loessial material overlying extensive deposits of glacial drift. The drift is comprised primarily of glacial till, a heterogeneous mixture of sand and pebbles bound in a compact matrix of clay to silt, but can also contain inclusions of granular outwash material. Pockets, lenses, seams and tubes of water sorted gravels, sands, and silts are commonly found in these geologic formations.

Seismic Considerations

Lacking soil strength and density information through a depth of 100 feet, it is our opinion that **Site Class D**, as defined in ASCE 7-16, be utilized for the project site. The proposed new box culvert will be located at approximate latitude 40.0792°N and longitude 88.2763°W. At this location, the 0.2 second period (S_S) and 1.0 second period (S_1) spectral acceleration values, as determined from the OSHPD Web Application, are 0.175 g and 0.092 g, respectively.

FIELD EXPLORATION

Scope

In order to evaluate the significant engineering characteristics of the soils, a field exploratory program was undertaken. A total of twelve (12) pavement cores and six (6) soil borings were performed for the project. Four (4) of the borings were performed through depths of 6.5 feet to aid in characterization of the roadway subgrade, while the remaining two (2) borings were advanced to depth of 31.5 feet in the vicinity of the proposed box culvert. The approximate core and boring locations are shown on the Boring Location Diagrams, Figures 2.1 through 2.6, included in the Appendix. The following sections provide a description of field drilling and testing procedures utilized.

Drilling and Sampling Procedures

The soil borings were performed with a truck-mounted drilling rig equipped with a rotary head. Conventional, continuous-flight, hollow-stem augers were used to advance the holes with representative samples obtained employing split-barrel sampling techniques in general accordance with ASTM Procedure T206. The cores were advanced with an electric coring machine, and a hand auger was used to further advance the hole through any existing subbase materials and retrieve a sample of the subgrade soils for classification.

Field Tests and Measurements

Standard Penetration Tests: During the sampling procedure, Standard Penetration Tests (SPTs) were performed at regular intervals through the depth of the borings. The SPT value ("N" or blow counts) is defined as the number of blows required to advance a 2-inch O.D., split-barrel sampler a distance of one foot by a 140-pound hammer falling 30-inches. These values provide a useful preliminary indication of the consistency or relative density of most soil deposits and are included on the Soil Boring Logs.

Dynamic Cone Penetrometer (DCP) Tests: At the core locations, DCP tests were performed through three (3) consecutive 6-inch intervals on the subgrade soils beginning below the surface of the existing pavement or topsoil materials. The DCP consists of a hand-held rod with a conical tip that is driven into the subgrade with a sliding drop hammer. The penetration data has been correlated to Illinois Department of Transportation (IDOT) Immediate Bearing Values (IBV). The DCP and IBV results are shown on Table 1, Subgrade Dynamic Cone Penetrometer (DCP) Test Results, found in the Appendix.

Water Level Measurements: Water level observations were made during and upon completion of the soil boring operations. All groundwater information is noted on the Soil Boring Logs included in the Appendix.

LABORATORY TESTING

General

Additional significant characteristics of the foundation materials were determined in the laboratory to provide data on which to classify and quantitatively assess the engineering properties of the soil samples obtained. The types of soils encountered were identified and logged on the boring records. The results of the field and laboratory tests are presented on the Soil Boring Logs found in the Appendix. Representative samples of

the soils encountered in the field were placed in clean, glass sample jars and are now stored in the laboratory for further analysis, if desired.

Laboratory Tests and Measurements

Visual Classification: A soils engineer visually classified all samples in accordance with the Unified Soil Classification System (ASTM D-2488) terminology. An explanation of the symbols used in this system is included in the Appendix to this report.

Moisture Content Tests: The natural moisture content of all samples was determined by ASTM method D-2216 and is recorded on the Soil Boring Logs as a percentage of dry weight of soil.

Unconfined Compression Test: The undrained shear strength of the cohesive soils was determined from unconfined compression tests (Q_U) on specimens obtained from the split-barrel samplers. The strength values of soil samples obtained by the SPT method must also be considered, recognizing that this sampling technique provides a representative, but somewhat disturbed sample.

Hand Penetrometer Tests: Cohesive specimens extracted from the split-barrel sampler were tested in the laboratory with a calibrated soil penetrometer. This device provides an approximation of the unconfined compressive strength of the soils, and is useful, along with other soil parameters, in evaluating the soil strength characteristics. The results are listed on the Soil Boring Logs beneath the column labeled "Q_P".

Dry Density Determination: The dry density was determined on the cohesive soils where intact samples were available. The results are listed on the Soil Boring Logs beneath the column labeled "Dd".

Grain Size Analysis: The grain size distribution of the soil particles was determined for selected samples in accordance with AASHTO T 88. The data is included on the Report of Soil Grain Size Analysis sheets in the Appendix.

Atterberg Limits: The plasticity characteristics of selected cohesive soils were determined by performing Atterberg Limit tests (AASHTO T 89 and T 90). This data was used to aid in the soil classification and in the evaluation of engineering properties. The data is included on the Report of Soil Grain Size Analysis sheets in the Appendix.

Moisture Density Relationships: The moisture density relationship of a bulk sample was determined using the Standard Proctor method of test (AASHTO T99). The maximum dry density and optimum moisture content for compaction are provided on the Moisture Density Relationship Report in the Appendix.

The laboratory testing was performed in general accordance with the respective ASTM and AASHTO Methods, as applicable. The results are included on the Soil Boring Logs and respective report sheets which are included in the Appendix to this report. Unless notified to the contrary, all samples will be disposed of after one (1) month.

DESCRIPTION OF SUBSURFACE CONDITIONS

General

The types of foundation materials encountered at the test boring locations are described on the Soil Boring Logs. The lines delineating the changes in strata on the logs represent an approximate boundary between the various soil classifications. These soil descriptions and delineations are representative for the specific test-hole location. Variations in the soil profile and the engineering properties of the soil deposits may occur between boring locations. A summary of the major soil profile components is described in the following paragraphs. A more detailed description and supporting data for each boring location can be found on the individual Soil Boring Logs.

Soil Conditions

The surface at the coring and boring locations was covered either with existing pavement materials or a thin layer of vegetation and topsoil. The surficial materials were underlain by fill materials which predominantly consisted of black silty to sandy clay soils with some brown and gray silty to sandy clays intermingled. The darker color of the soil typically indicates elevated organic contents and increased plasticity.

The fill materials were typically underlain by loessial brown and brown and gray mottled silty clay with some sand which extended through depths of 5 to 10 feet below surface grade. The loess possessed a soft to stiff consistency and moisture contents between 19 and 33 percent. Samples of the loess were also subjected to Atterberg Limits testing and had an average Liquid and Plastic Limit of 40 and 20 percent, respectively.

Below the loess, the borings encountered variably colored glacial drift deposits which extended through the terminus of each boring. The drift was primarily comprised of very stiff to hard silty clay glacial till.

Groundwater Observations

During the drilling operations, groundwater was encountered in boring B-6 at a depth of about 10 feet below grade, while all other borings remained dry during the drilling operations. It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics. The geology in the site vicinity commonly manifests a perched groundwater condition, where precipitation is able to infiltrate into the more pervious loessial soils but is prevented from further downward migration by the dense and relatively impermeable glacial till. Groundwater levels and seepage can sometimes be encountered as shallow as 1 to 2 feet below surface grade during wetter periods of the year. Monitoring standpipes should be installed and periodically checked where it is necessary to more accurately assess prevailing water levels preceding or during construction.

GEOTECHNICAL EVLAUATION

Roadway Subgrade

As documented on the Subgrade DCP Test Results sheet included in the Appendix, cores C-1 and C-2 were advanced through about 12.5 to 13 inches of concrete pavement, while all other cores were advanced through asphalt pavement which varied in thickness from 3 to 17 inches. Photos of each of the cores are included in the Appendix. A sandy gravel subbase was encountered below the asphalt pavement at core locations C-3 through C-9, while at all other core locations the pavements were placed directly on subgrade soils.

Based upon the soil samples obtained at the pavement core and soil boring locations, it is likely that the majority of the subgrade soils are comprised of fill materials or former topsoil that appear to consist predominantly of black silty to sandy clay soils with trace amounts brown and gray soils intermingled. The darker color typically indicates increased organic content and plasticity characteristics. These soils are likely representative of reworked topsoil materials. Based upon out past experience, the reworked topsoil materials are a poor subgrade material and IDOT guidance would recommend that such soils not be included within the upper 24 inches of the subgrade soil profile.

Samples of the brown and brown and gray mottled loessial soils which were encountered below the darker colored fill materials were obtained at boring locations B-1 through B-4 and were subjected to Particle Size Analysis and Atterberg Limits testing. Additionally, a moisture density relationship plot was obtained using the Standard Proctor method of test on the sample taken at boring B-3. Based upon the particle size analysis, each of the samples would plot within the Fair portion of the Subgrade Support

Rating (SSR) Chart provided in the IDOT Geotechnical Manual. Also, the Atterberg Limits testing indicates each sample possessed low to moderate plasticity, with associated low shrink/swell potential. IDOT would typically characterize the loessial soils as having poor drainage characteristics and high frost susceptibility.

Based upon past experience and research, subgrades consisting of the native loessial silty clay soils which are compacted to 95 percent of their Standard Proctor dry density exhibit a California Bearing Ratio (CBR) of at least 6 percent, which is sufficient to support the loads exerted by paving equipment. However, over time the CBR typically drops to about 3 percent on these types of soils due to climatological factors. It should be noted that based upon moisture content data, and the moisture density relationship plot, the native loessial soils will likely require moisture conditioning to allow proper compaction.

If subgrade preparation is attempted in the early spring or late fall months, it may not be possible to adequately aerate the subgrade to achieve the required densities. In this case, the use of geotextile fabrics or lime modification, depending on the size of the area and type of subgrade materials present, might be considered to facilitate construction. Such an evaluation should be made in consultation with the geotechnical engineer at the time of construction.

Box Culvert Replacement

Soils borings B-5 and B-6 were advanced in the vicinity of the proposed new box culvert which will be installed to replace an existing culvert. Each of the borings were advanced through existing pavement materials, which were underlain by darker colored silty clay fill materials that extended through depths of about 5 feet below surface grade and are not recommended for subgrade to support the box culvert.

Below the unsuitable fill materials, the borings encountered native brown and brown mottled gray silty clay of loessial origin that is considered suitable for direct box culvert support or as subgrade on which to construct structural fill to reestablish proposed bearing grade. Relatively soft deposits of the loess were encountered in boring B-5 at a depth of about 7 to 10 feet below surface grade which will limit the safe allowable bearing pressure to 1,500 PSF for foundations supported in the 5 to 10 ft. depth range.

If a higher allowable bearing capacity is required to support the culvert, it is recommended that the culvert excavation be extended to the very stiff to hard silty clay glacial till. The glacial till was encountered at a depth of 7 feet in boring B-6 and at a depth of about 10 feet in boring B-5 and is considered capable of supporting net allowable bearing capacities in excess of 3,500 PSF.

Where overexcavation to more suitable bearing soils is required, the replacement backfill should be a well-graded granular material, such as IDOT gradation CA-6, and placed in lifts of eight (8) inches or less in loose thickness and compacted to a minimum of 95 percent of the material's maximum Standard Proctor dry density (ASTM D-698). It is also recommended that the footing excavations should be widened at least eight (8) inches in all directions from the edge of the footing for each foot of excavation depth below the design footing base elevation.

All exterior footings must be placed at a depth of at least 3.0 feet below the finished grade for frost protection. All footings must be protected from the effects of frost if construction is carried out during winter months.

Based upon the boring information significant groundwater seepage is not anticipated in shallow excavations, however perched groundwater may be encountered seasonally. It is recommended that site runoff and potential seepage water be diverted around the construction area to facilitate construction and reduce the potential for the softening and possible erosion of the embankment foundation subgrade soils.

All excavations should be performed in accordance with the requirements detailed in the OSHA Excavation Regulations and Procedures, Section 1926 Subpart P. Based upon the soil boring data, Type A, Type B and Type C soils were all encountered through a depth of 30 ft. The maximum allowable slopes for these soils types are shown in the following table.

Soil Type	Maximum Allowable Slopes for Excavations Less than 20 ft. deep Horizontal : Vertical (H:V)
A	¾ : 1
B	1: 1
C	1 ½ : 1

GENERAL COMMENTS

This subsurface exploration and geotechnical evaluation has been conducted to aid in the evaluation of the subsurface conditions for the Mattis Avenue Reconstruction project in Champaign, Illinois. The recommendations presented herein are based on the available soil information obtained and the design information provided. Any changes in the soil conditions encountered during construction should be brought to the attention of the soils engineer to determine if modifications to the recommendations are required. The final design plans and specifications should also be reviewed by the soils engineer to determine that the recommendations presented herein have been interpreted and implemented as intended. It is recommended that the earthwork and site preparation operations be monitored by the soils engineer.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations, and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology.

APPENDIX

Midwest Engineering and Testing, Inc. geotechnical*environmental*materials engineers	Figure 1 - Vicinity Map Mattis Avenue Reconstruction Windsor Road to Curtis Road Champaign, Illinois	**SCALE:** Shown Above **PROJECT NO.:** 213144 **DATE:** December 23, 2021 **DRAWN BY:** NDW

Midwest Engineering and Testing, Inc.

geotechnical*environmental*materials engineers

Figure 2.1 - Boring Location Diagram

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

SCALE: Shown Above

PROJECT NO.: 213144

DATE: December 23, 2021

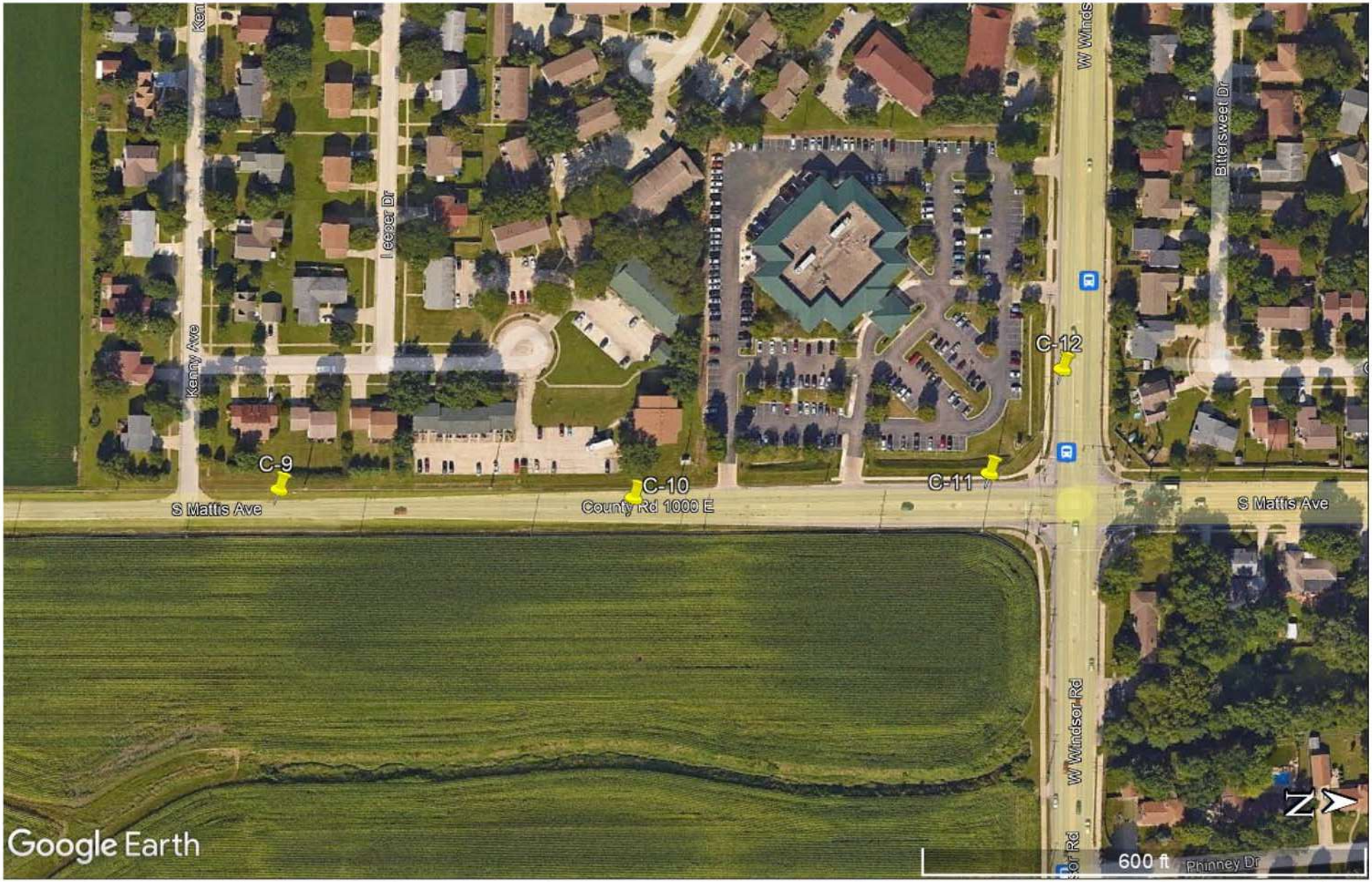
DRAWN BY: NDW

Midwest Engineering and Testing, Inc.
geotechnical*environmental*materials engineers

Figure 2.2 - Boring Location Diagram

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

SCALE: Shown Above
PROJECT NO.: 213144
DATE: December 23, 2021
DRAWN BY: NDW



Midwest Engineering and Testing, Inc.
geotechnical*environmental*materials engineers

Figure 2.3 - Boring Location Diagram

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

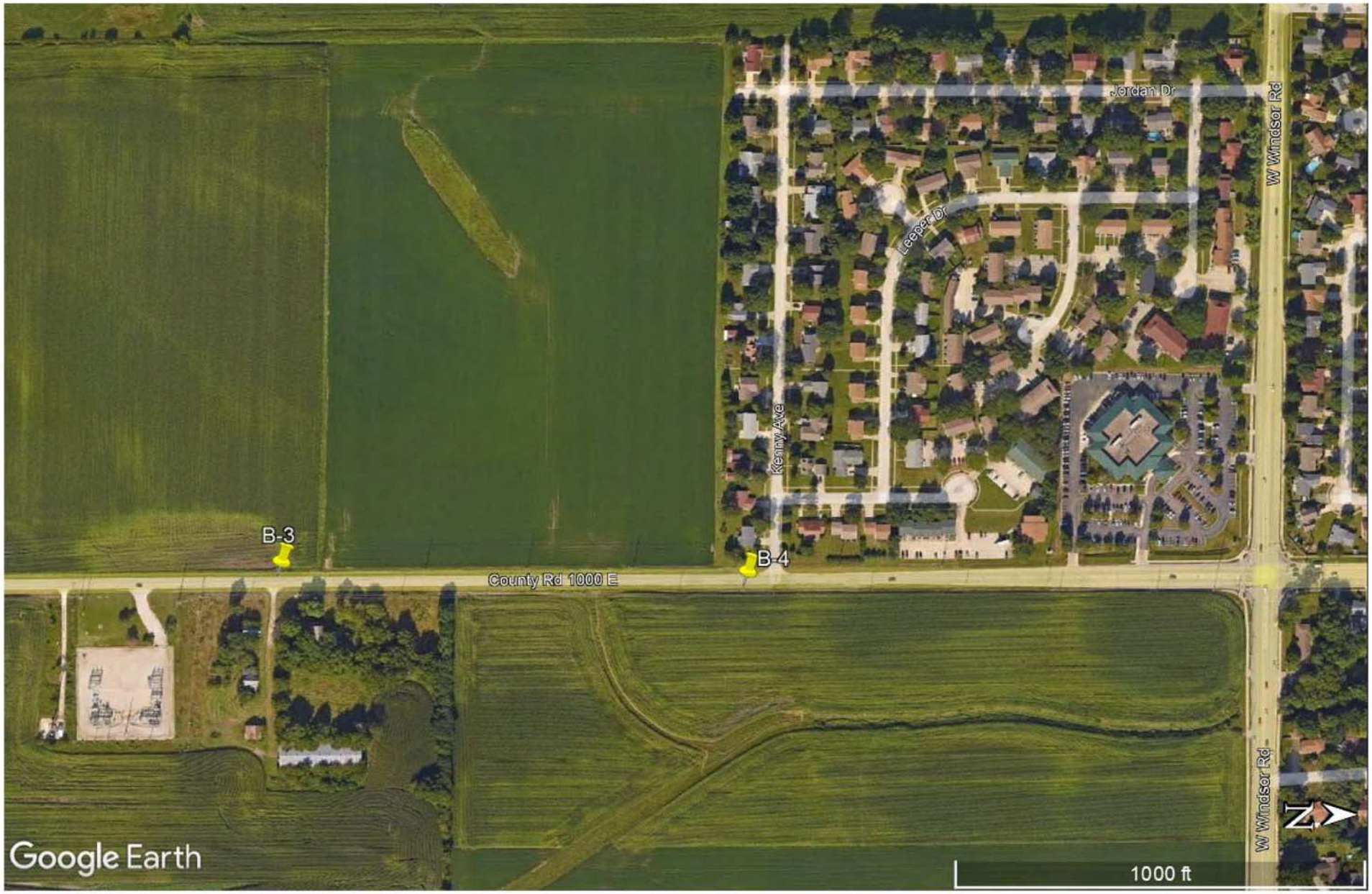
SCALE: Shown Above
PROJECT NO.: 213144
DATE: December 23, 2021
DRAWN BY: NDW

Midwest Engineering and Testing, Inc.
geotechnical*environmental*materials engineers

Figure 2.4 - Boring Location Diagram

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

SCALE: Shown Above
PROJECT NO.: 213144
DATE: December 23, 2021
DRAWN BY: NDW



Midwest Engineering and Testing, Inc.
geotechnical*environmental*materials engineers

Figure 2.5 - Boring Location Diagram

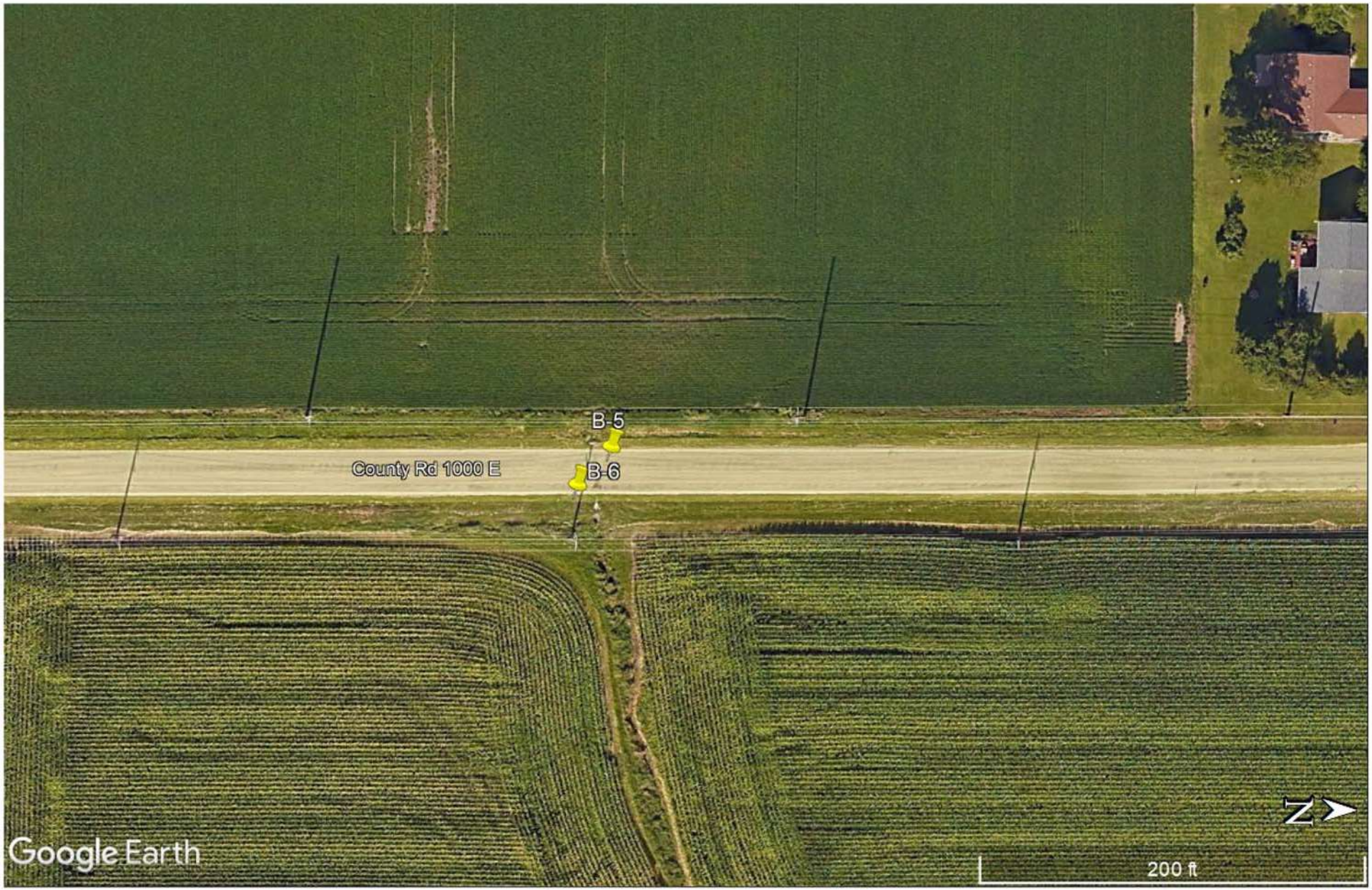
Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

SCALE: Shown Above

PROJECT NO.: 213144

DATE: December 23, 2021

DRAWN BY: NDW



Midwest Engineering and Testing, Inc. geotechnical*environmental*materials engineers	Figure 2.6 - Boring Location Diagram Mattis Avenue Reconstruction Windsor Road to Curtis Road Champaign, Illinois	**SCALE:** Shown Above **PROJECT NO.:** 213144 **DATE:** December 23, 2021 **DRAWN BY:** NDW

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring:	B-1
Page:	Page 1 of 1
Date of Boring:	December 15, 2021
Drilled By:	Nick Schneider
Checked By:	Nick Wendling
MET Project No:	213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: Dry
at completion: Dry

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	2 3 4	2.6B	26	6" Black silty CLAY (OH) Topsoil / Fill
				Black and brown mixed silty CLAY (OH-CL) Fill
	2 2 3	1.2B	25	Brown and gray silty CLAY (CL) with sand
5				
	2 2 4	1.8B	18	Brown and gray silty CLAY (CL) with sand and small gravel - Till
				END OF BORING @ 6.5 FEET
10				
15				
20				
25				
30				
35				
40				
45				
50				

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure
Qu test

B-Bulge
S-Shear
P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring: B-2
Page: Page 1 of 1
Date of Boring: December 15, 2021
Drilled By: Nick Schneider
Checked By: Nick Wendling
MET Project No: 213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: Dry
at completion: Dry

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	2 2 3	2.0P	26	8" Black silty CLAY (OH) Topsoil / Fill
				Black silty CLAY (OH) with sand - Fill
	0 1 4	1.3P	28	Brown and gray silty CLAY (CL)
5	2 3 4	0.3B	19	Brown and gray sandy CLAY (CL)
				END OF BORING @ 6.5 FEET

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test
B-Bulge
S-Shear
P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring: B-3 (Hand Auger Boring)
Page: Page 1 of 1
Date of Boring: December 15, 2021
Drilled By: Nick Schneider
Checked By: Nick Wendling
MET Project No: 213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: Dry
at completion: Dry

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	- - -	0.7B	20	3" Black silty CLAY (OH) Topsoil / Fill
				Black silty CLAY (OH) with gravel - Fill
	- - -	1.8P	28	Brown with dark brown silty CLAY (CL)
5				
	- - -	0.6B	30	Dark gray silty CLAY (CL-CH)
				END OF BORING @ 6.5 FEET
10				
15				
20				
25				
30				
35				
40				
45				
50				

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test
B-Bulge
S-Shear
P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring: B-4
Page: Page 1 of 1
Date of Boring: December 15, 2021
Drilled By: Nick Schneider
Checked By: Nick Wendling
MET Project No: 213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: Dry
at completion: Dry

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	2 3 4	1.8P	36	6" Black silty CLAY (OH) Topsoil / Fill
				Black with brown silty CLAY (OH) - Fill
	2 2 2	0.4B	29	Brown and gray silty CLAY (CL)
5				
	1 2 3	1.4B	17	Brown silty CLAY (CL) with sand
				END OF BORING @ 6.5 FEET

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test
B-Bulge
S-Shear
P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring: B-5
Page: Page 1 of 1
Date of Boring: December 17, 2021
Drilled By: Nick Schneider
Checked By: Nick Wendling
MET Project No: 213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: Dry
at completion: Dry

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	- - -	2.3P	29	8" Asphalt over 13" Sand and Gravel
				Black silty CLAY (OH)
	3 3 2	3.3P	25	Dark gray silty CLAY (CL-CH) - Fill
5	2 3 2	1.2B	33	Brown and gray silty CLAY (CL)
	0 0 1	0.3P	25	
10	2 4 6	2.4B	14	Gray silty CLAY (CL) with sand and small gravel - Till
	4 7 10	3.8B	12	
15	7 10 13	3.8P	12	
	6 9 13	4.4B	11	
20	7 9 12	4.6B	12	
	6 8 11	3.8B	12	
25	4 7 10	2.6B	12	
	5 6 9	2.6B	13	Gray silty CLAY (CL) with sand and small gravel - Till
30	3 6 8	2.6B	13	
35				END OF BORING @ 31.5 FEET
40				
45				
50				

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test
B-Bulge
S-Shear
P-Penetrometer

BRIDGE FOUNDATION SOIL BORING LOG

MET Midwest Engineering and Testing, Inc.

Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Boring: B-6
Page: Page 1 of 1
Date of Boring: December 17, 2021
Drilled By: Nick Schneider
Checked By: Nick Wendling
MET Project No: 213144

Surface Water Elevation:
Ground Water Elevation:
when drilling: 10 FEET B.G.S
at completion: 5 FEET B.G.S.

DEPTH (ft.)	BLOWS (6")	Q_u (tsf)	MC (%)	Description
0	- - -	2.0P	26	7" Asphalt over 12" Crushed Stone
				Black with brown silty CLAY (OH-CL) Fill
	3 4 4	2.5P	22	
5				
	2 3 2	1.6B	25	Brown and gray silty CLAY (CL)
	1 2 5	2.4B	17	Brown silty CLAY (CL) with sand and small gravel - Till
10				
	4 7 10	3.0B	14	
	4 7 9	3.4B	13	Gray silty CLAY (CL) with sand and small gravel - Till
15				
	4 7 11	3.8B	12	
	7 11 20	3.6B	12	
20				
	8 11 14	4.8B	11	
	6 8 10	-	-	- No Recovery
25				
	4 6 8	2.6B	13	
30				Gray silty CLAY (CL) with sand and small gravel - Till
	2 5 8	2.0B	13	
	6 9 12	3.0B	13	
				END OF BORING @ 31.5 FEET
35				
40				
45				
50				

N - Standard Penetration Test (SPT) = Sum of last two blow values in sample
MC- Moisture Content - Percent of dry weight
Qu- Unconfined Compressive Strength- tons per square foot (tsf)

Type Failure Qu test
B-Bulge
S-Shear
P-Penetrometer

Midwest Engineering and Testing, Inc.
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Champaign, IL 61822
217-359-2128
Fax 217-359-8446
www.metgeotech.com

Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois
MET Project No. 213144

Table 1
Subgrade Dynamic Cone Penetrometer (DCP) Test Results

DCP Number	Pavement	Subbase	Subgrade	DCP Blows 0" - 6"	DCP Blows 6" - 12"	DCP Blows 12" - 18"	Subgrade IBV Value 0"- 12"	Subgrade IBV Value 6"- 18"
C-1	12.5" Concrete	Absent	Gray sandy clay	6	3	5	4.8	4.2
C-2	13" Concrete	Oil and Chip**	-	-	-	-	-	-
C-3	12.5" Asphalt	4" Sand and gravel	Dark brown sandy clay	12	4	4	9.9	4.2
C-4	6" Aspahlt	8" Sand and gravel	Black clay	12	16	12	20.1	20.1
C-5	6" Asphalt	6" Sand and gravel	Black clay	10	6	4	9.9	5.5
C-6	6" Aspahlt	8" Sand and gravel	Black clay	10	7	4	10.7	6.2
C-7	7" Asphalt	6" Sand and gravel	Dark brown sandy clay	12	4	6	9.9	5.5
C-8	7" Asphalt	6" Sand and gravel	Black clay	7	7	5	8.4	6.9
C-9	3" Asphalt	9" Sand and gravel	Black clay	5	5	5	5.5	5.5
C-10	10" Asphalt	Absent	Black clay	3	3	5	2.9	4.2
C-11	11" Asphalt	Absent	Dark brown sandy clay	4	4	6	4.2	5.5
C-12	17" Asphalt	Absent	Gray sandy clay	2	3	6	2.3	4.8

Note: DCP tests started immediately below subbase materials on the soil subgrade

** Core Hole could not be further advanced with typical equipment, refusal on oil and chip

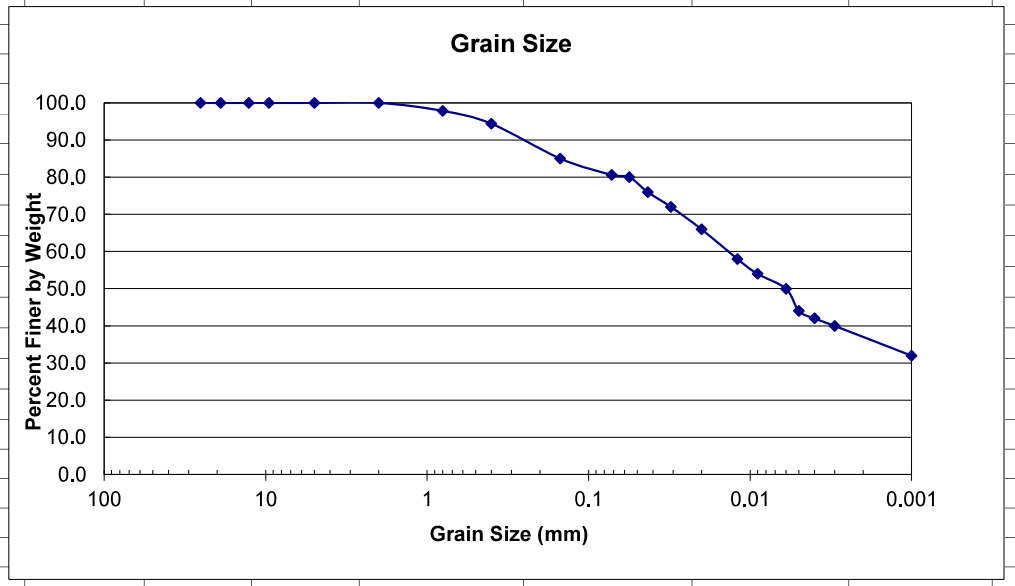
Report of Soil Grain Size Analysis (AASHTO T 88)

Client:	Lochmueller Group	**Project:**	Mattis Avenue Reconstruction	**Project No:**	213144
	201 W Springfield Avenue, Suite 1012		Windsor Road to Curtis Road	**Date:**	12/27/21
	Champaign, IL 61820		Champaign, Illinois		
Soil ID:	B-1, from 3-4 Ft. Below Grade	**Description:**	Brown and gray silty CLAY (CL) with sand		

Original	Correction Factor +	Correction Factor -	Corrected	Diameter	Percent %
45	0	5	40	0.056	80.0
43	0	5	38	0.043	76.0
41	0	5	36	0.031	72.0
38	0	5	33	0.02	66.0
34	0	5	29	0.012	58.0
32	0	5	27	0.009	54.0
30	0	5	25	0.006	50.0
27	0	5	22	0.005	44.0
26	0	5	21	0.004	42.0
25	0	5	20	0.003	40.0
21	0	5	16	0.001	32.0

Sieve		Ind. Wt.	Cum. Wt.	% Retained	% Passing
1	25.4	0.0	0.0	0.00	100.0
3/4	19.05	0.0	0.0	0.00	100.0
1/2	12.7	0.0	0.0	0.00	100.0
3/8	9.525	0.0	0.0	0.00	100.0
4	5	0.0	0.0	0.00	100.0
10	2	0.0	0.0	0.00	100.0
20	0.8	1.1	1.1	2.2	97.8
40	0.4	1.7	2.8	5.6	94.4
100	0.15	4.7	7.5	15.0	85.0
200	0.072	2.2	9.7	19.4	80.6

25.4	100.0		
19.05	100.0		
12.7	100.0		
9.525	100.0		
5	100.0		
2	100.0		
0.8	97.8		
0.4	94.4		
0.15	85.0		
0.072	80.6	**Liquid Limit:**	38%
0.056	80.0	**Plastic Limit:**	20%
0.043	76.0	**Plasticity Index:**	18%
0.031	72.0		
0.02	66.0		
0.012	58.0		
0.009	54.0		
0.006	50.0		
0.005	44.0		
0.004	42.0		
0.003	40.0		
0.001	32.0		



Total Sample Weight	250.00
Weight Passing # 10	250.00
Percent Passing # 10	100.0%

SAND (2-.072 mm)	SILT (.072 - .002)	CLAY (<.002)
19.4	44.6	36.0

Report of Soil Grain Size Analysis (AASHTO T 88)

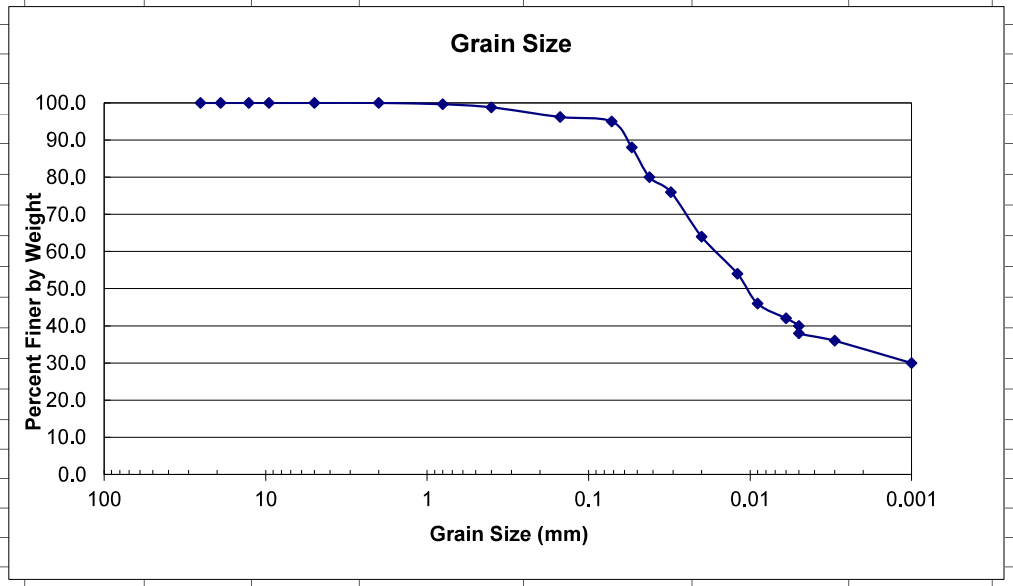
Client:	Lochmueller Group	**Project:**	Mattis Avenue Reconstruction	**Project No:**	213144
	201 W Springfield Avenue, Suite 1012		Windsor Road to Curtis Road	**Date:**	12/27/21
	Champaign, IL 61820		Champaign, Illinois		
Soil ID:	B-2, from 2-3 Ft. Below Grade	**Description:**	Brown and gray silty CLAY (CL)		

Original	Correction Factor +	Correction Factor -	Corrected	Diameter	Percent %
49	0	5	44	0.054	88.0
45	0	5	40	0.042	80.0
43	0	5	38	0.031	76.0
37	0	5	32	0.02	64.0
32	0	5	27	0.012	54.0
28	0	5	23	0.009	46.0
26	0	5	21	0.006	42.0
25	0	5	20	0.005	40.0
24	0	5	19	0.005	38.0
23	0	5	18	0.003	36.0
20	0	5	15	0.001	30.0

Sieve		Ind. Wt.	Cum. Wt.	% Retained	% Passing
1	25.4	0.0	0.0	0.00	100.0
3/4	19.05	0.0	0.0	0.00	100.0
1/2	12.7	0.0	0.0	0.00	100.0
3/8	9.525	0.0	0.0	0.00	100.0
4	5	0.0	0.0	0.00	100.0
10	2	0.0	0.0	0.00	100.0
20	0.8	0.2	0.2	0.4	99.6
40	0.4	0.4	0.6	1.2	98.8
100	0.15	1.3	1.9	3.8	96.2
200	0.072	0.6	2.5	5.0	95.0

25.4	100.0
19.05	100.0
12.7	100.0
9.525	100.0
5	100.0
2	100.0
0.8	99.6
0.4	98.8
0.15	96.2
0.072	95.0
0.054	88.0
0.042	80.0
0.031	76.0
0.02	64.0
0.012	54.0
0.009	46.0
0.006	42.0
0.005	40.0
0.005	38.0
0.003	36.0
0.001	30.0

Liquid Limit:	40%
Plastic Limit:	24%
Plasticity Index:	16%



Total Sample Weight	250.00
Weight Passing # 10	250.00
Percent Passing # 10	100.0%

SAND (2-.072 mm)	SILT (.072 - .002)	CLAY (<.002)
5.0	62.0	33.0

06

Report of Soil Grain Size Analysis (AASHTO T 88)

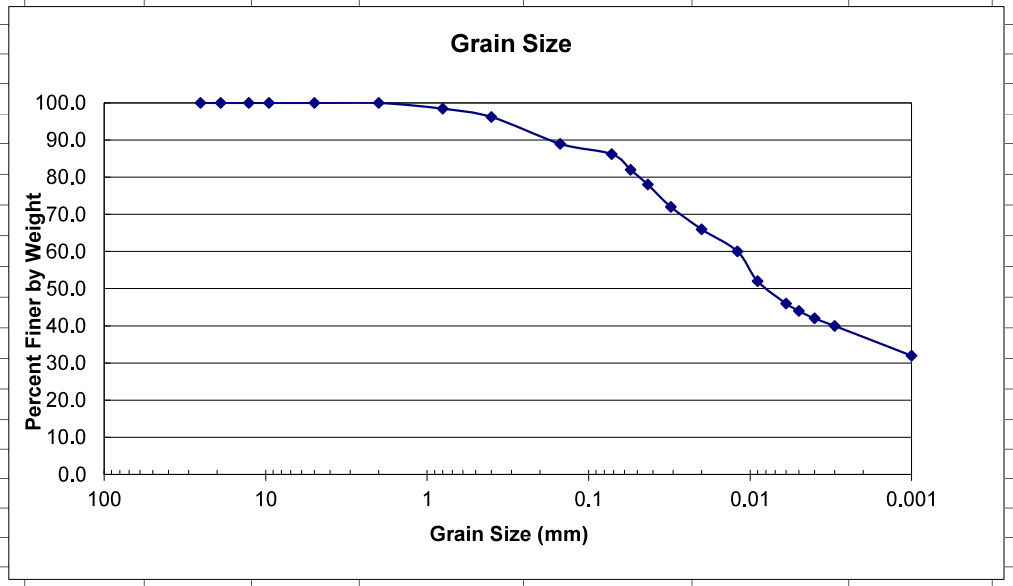
Client:	Lochmueller Group	**Project:**	Mattis Avenue Reconstruction	**Project No:**	213144
	201 W Springfield Avenue, Suite 1012		Windsor Road to Curtis Road	**Date:**	12/27/21
	Champaign, IL 61820		Champaign, Illinois		
Soil ID:	B-3, from 2-4 Ft. Below Grade	**Description:**	Brown and dark brown silty CLAY (CL)		

Original	Correction Factor +	Correction Factor -	Corrected	Diameter	Percent %
46	0	5	41	0.055	82.0
44	0	5	39	0.043	78.0
41	0	5	36	0.031	72.0
38	0	5	33	0.02	66.0
35	0	5	30	0.012	60.0
31	0	5	26	0.009	52.0
28	0	5	23	0.006	46.0
27	0	5	22	0.005	44.0
26	0	5	21	0.004	42.0
25	0	5	20	0.003	40.0
21	0	5	16	0.001	32.0

Sieve		Ind. Wt.	Cum. Wt.	% Retained	% Passing
1	25.4	0.0	0.0	0.00	100.0
3/4	19.05	0.0	0.0	0.00	100.0
1/2	12.7	0.0	0.0	0.00	100.0
3/8	9.525	0.0	0.0	0.00	100.0
4	5	0.0	0.0	0.00	100.0
10	2	0.0	0.0	0.00	100.0
20	0.8	0.8	0.8	1.6	98.4
40	0.4	1.1	1.9	3.8	96.2
100	0.15	3.6	5.5	11.0	89.0
200	0.072	1.4	6.9	13.8	86.2

25.4	100.0
19.05	100.0
12.7	100.0
9.525	100.0
5	100.0
2	100.0
0.8	98.4
0.4	96.2
0.15	89.0
0.072	86.2
0.055	82.0
0.043	78.0
0.031	72.0
0.02	66.0
0.012	60.0
0.009	52.0
0.006	46.0
0.005	44.0
0.004	42.0
0.003	40.0
0.001	32.0

Liquid Limit:	39%
Plastic Limit:	18%
Plasticity Index:	21%



Total Sample Weight	250.00
Weight Passing # 10	250.00
Percent Passing # 10	100.0%

SAND (2-.072 mm)	SILT (.072 - .002)	CLAY (<.002)
13.8	50.2	36.0

Report of Soil Grain Size Analysis (AASHTO T 88)

Client:	Lochmueller Group	**Project:**	Mattis Avenue Reconstruction	**Project No:**	213144
	201 W Springfield Avenue, Suite 1012		Windsor Road to Curtis Road	**Date:**	12/27/21
	Champaign, IL 61820		Champaign, Illinois		
Soil ID:	B-4, from 2-3 Ft. Below Grade	**Description:**	Brown and gray silty CLAY (CL)		

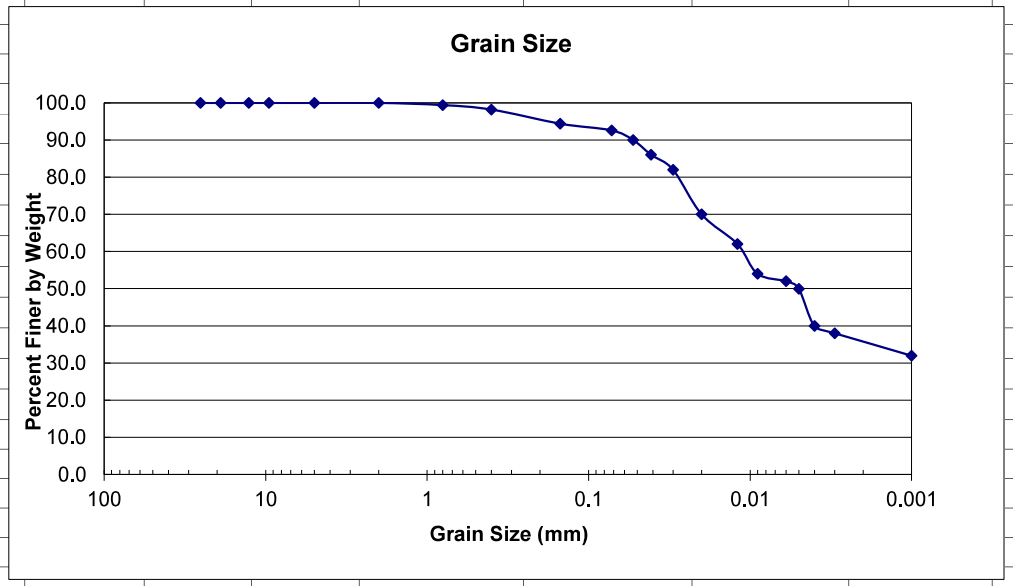
Original	Correction Factor +	Correction Factor -	Corrected	Diameter	Percent %
50	0	5	45	0.053	90.0
48	0	5	43	0.041	86.0
46	0	5	41	0.03	82.0
40	0	5	35	0.02	70.0
36	0	5	31	0.012	62.0
32	0	5	27	0.009	54.0
31	0	5	26	0.006	52.0
30	0	5	25	0.005	50.0
25	0	5	20	0.004	40.0
24	0	5	19	0.003	38.0
21	0	5	16	0.001	32.0

Sieve		Ind. Wt.	Cum. Wt.	% Retained	% Passing
1	25.4	0.0	0.0	0.00	100.0
3/4	19.05	0.0	0.0	0.00	100.0
1/2	12.7	0.0	0.0	0.00	100.0
3/8	9.525	0.0	0.0	0.00	100.0
4	5	0.0	0.0	0.00	100.0
10	2	0.0	0.0	0.00	100.0
20	0.8	0.3	0.3	0.6	99.4
40	0.4	0.6	0.9	1.8	98.2
100	0.15	1.9	2.8	5.6	94.4
200	0.072	0.9	3.7	7.4	92.6

25.4	100.0
19.05	100.0
12.7	100.0
9.525	100.0
5	100.0
2	100.0
0.8	99.4
0.4	98.2
0.15	94.4
0.072	92.6
0.053	90.0
0.041	86.0
0.03	82.0
0.02	70.0
0.012	62.0
0.009	54.0
0.006	52.0
0.005	50.0
0.004	40.0
0.003	38.0
0.001	32.0

Liquid Limit: 42%
Plastic Limit: 18%
Plasticity Index: 24%

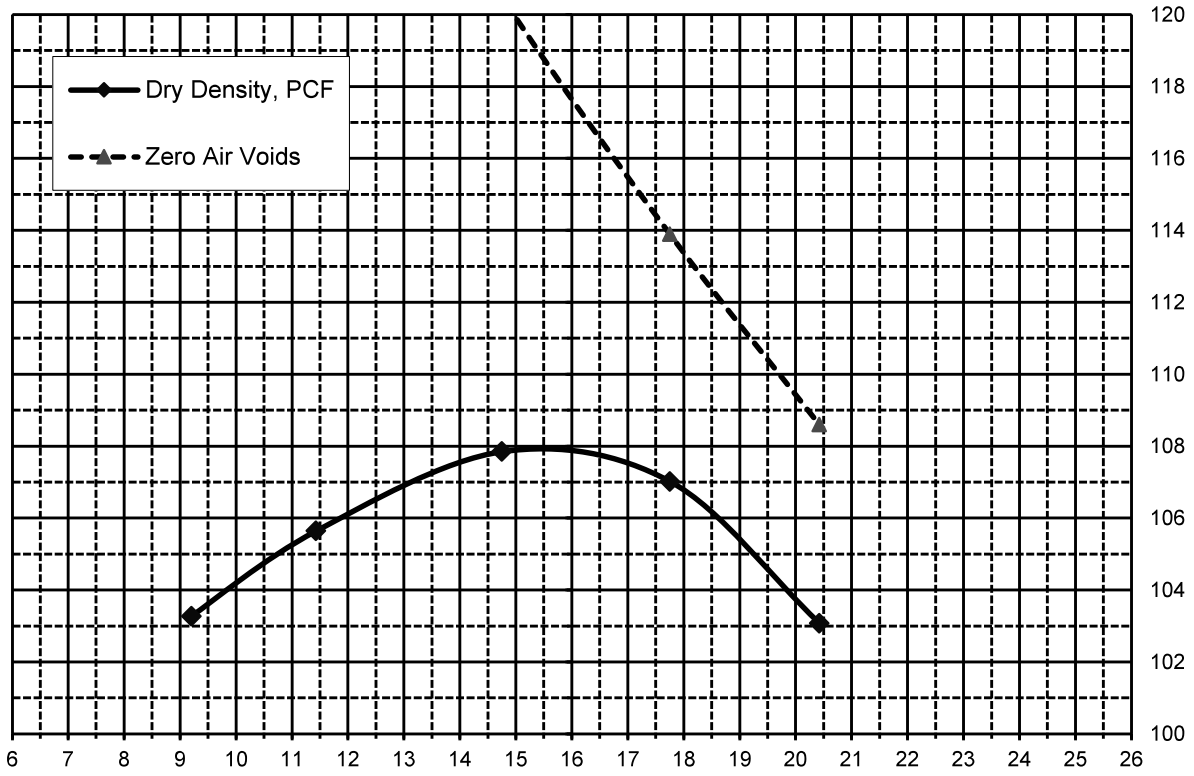
Total Sample Weight	250.00
Weight Passing # 10	250.00
Percent Passing # 10	100.0%



SAND (2-.072 mm)	SILT (.072 - .002)	CLAY (<.002)
7.4	57.6	35.0

92

MOISTURE DENSITY RELATIONSHIP
ASTM D - 698



SOIL I.D. NUMBER: 1

SAMPLE LOCATION: B-3 , 2'-4' depth

VISUAL CLASSIFICATION: Brown to dark brown silty CLAY

MAXIMUM DRY DENSITY, PCF: 108.0

OPTIMUM MOISTURE CONTENT, %: 15.5

Client: Lochmueller Group
201 W Springfield Avenue, Suite 1012
Champaign, IL 61820

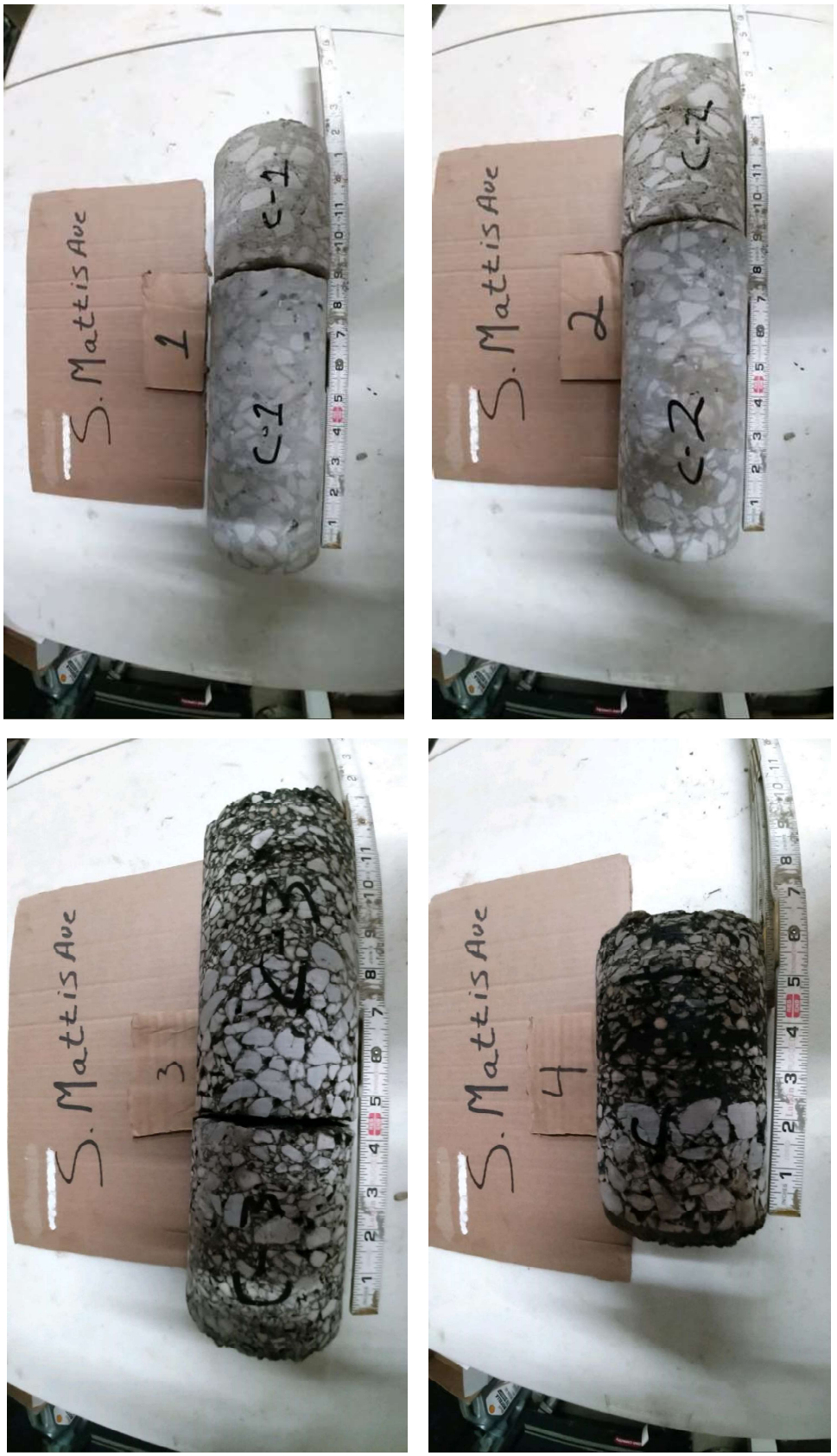
Project: Mattis Avenue Reconstruction
Windsor Road to Curtis Road
Champaign, Illinois

Date: December 20, 2021

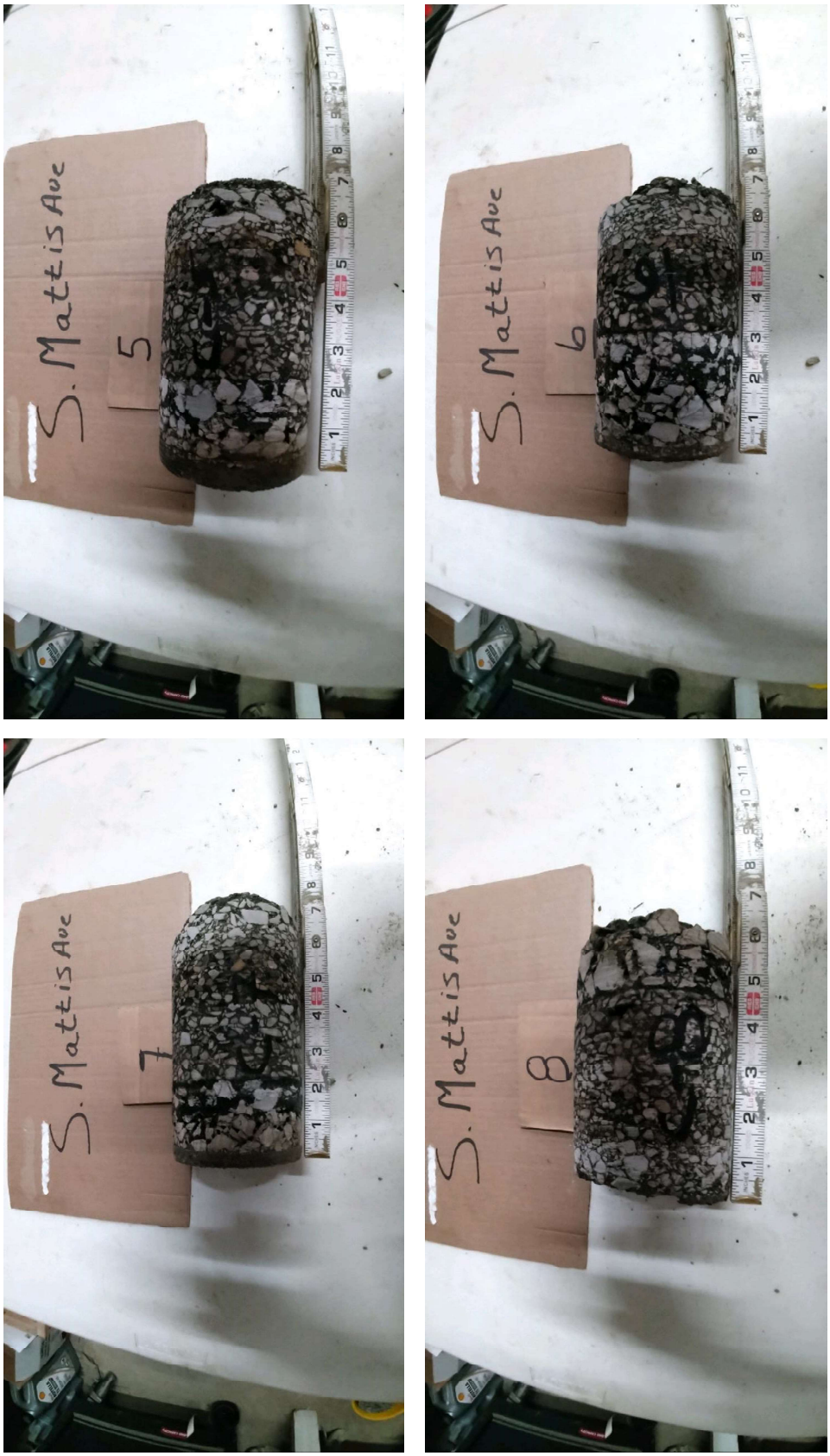
Project Number: 213144

MET **Midwest Engineering and Testing, Inc.**

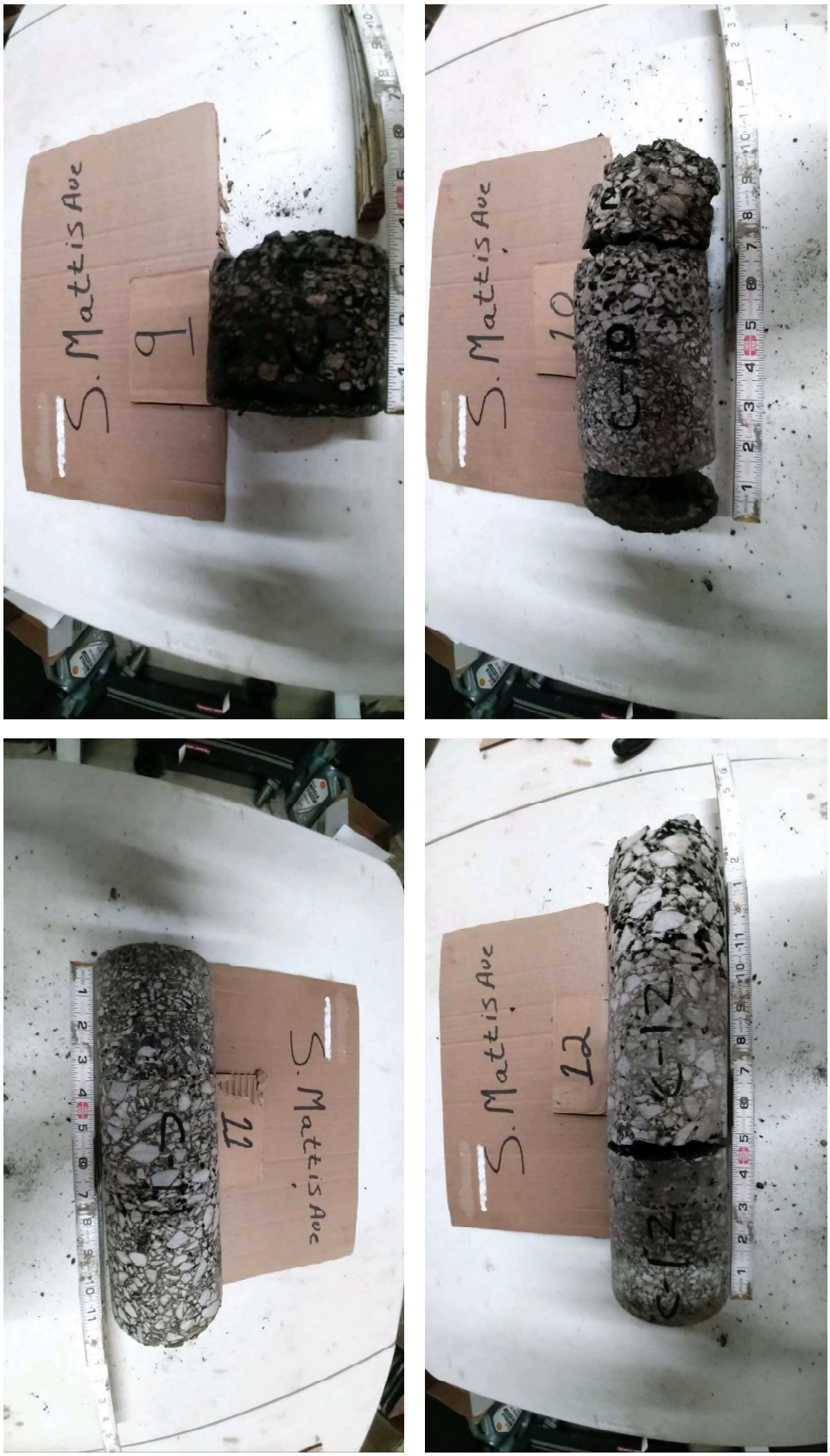
Mattis Avenue Reconstruction Core Photos – MET Project 213144



Mattis Avenue Reconstruction Core Photos – MET Project 213144



Mattis Avenue Reconstruction Core Photos – MET Project 213144



GENERAL NOTES

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the Unified Soil Classification System on the basis of textural and particle size categorization, and various soil behavior characteristics. Visual classifications should be substantiated by appropriate laboratory testing when a more exact soil identification is required to satisfy specific project applications criteria.

PARTICLE SIZE ±

Boulders: 8 inches	Coarse Sand: 2 mm to 4 mm	Silt: 0.005 mm to 0.074 mm
Cobbles: 3 to 8 inches	Medium Sand: 0.42 mm to 2 mm	Clay: - 0.005 mm
Gravel: 5 mm to 3 inches	Fine Sand: 0.074 to 0.42 mm	

DRILLING & SAMPLING SYMBOLS

SS: Split-spoon, 2" O.D. by 1 3/8" I.D.
ST: Shelby Tube, 2" O.D. or 3" O.D., as noted in test
AU: Auger Sample
DB: Diamond Bit
CB: Carbide Bit
RB: Roller Bit
WS: Wash Sample
BS: Bag Sample
HA: Hand Auger

SOIL PROPERTY SYMBOLS

N: Standard penetration count, indicating number of blows of a 140 lb. Hammer with a 30-inch drop, required to advance a split-spoon sampler one (1) foot.
Qu: Unconfined compressive strength, tons per square foot (tsf).
Qp: Calibrated hand penetrometer resistance, tsf.
MC: Moisture Content, %
LL: Liquid Limit PL: Plastic Limit PI: Plasticity Index
Dd: Dry density, pounds per cubic foot (pcf).
PID Photoionization Detector (Hnu meter) volatile vapor level, ppm

SOIL RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

NON-COHESIVE SOILS		COHESIVE SOILS		
Classifier	N-Value Range	Classifier	Qu Range (tsf)	N-Value Range
very loose	0 – 3	very soft	0 – 0.25	0 – 2
loose	3 – 7	soft	0.25 – 0.5	2 – 5
medium dense	7 – 15	medium stiff	0.5 – 1.0	5 – 10
dense	15 – 38	stiff	1.0 – 2.0	10 – 14
very dense	38 +	very stiff	2.0 – 4.0	14 – 32
		hard	4.0 +	32 +

GROUNDWATER

Approximate Groundwater level at time noted on soil boring log, measured in open bore hole unless otherwise noted. Groundwater levels often vary with time, and are affected by soil permeability characteristics, weather conditions, and lateral drainage conditions.

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISIONS			SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS	Gravel and Gravelly Soils	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures
			GP	Poorly-graded gravels and gravel-sand mixtures
		Gravels with Fines	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	Sand and Sandy Soils	Clean Sands	SW	Well-graded sands and gravelly sands
			SP	Poorly-graded sands and gravelly sands
		Sands with Fines	SM	Silty sands and sand-silt mixtures
			SC	Clayey sands and sand-clay mixtures
FINE GRAINED SOILS	Silts and Clays of Low Plasticity		ML	Inorganic silts or clayey silts of slight plasticity
			CL	Inorganic clays of low to medium plasticity
			OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays of High Plasticity		MH	Inorganic silts of high plasticity
			CH	Inorganic clays of medium to high plasticity
			OH	Organic clays of medium to high plasticity
Highly Organic Soils			PT	Peat, humus and swamp soils with high organic contents

Note: Dual symbols are used to indicate borderline classifications.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

September 12, 2024

Regulatory Division
File Number: MVS-2024-450

City of Champaign, Illinois
David Happ
702 Edgebrook Drive
Champaign, Illinois 61820
Via Email: David.Happ@champaignil.gov

Dear David Happ:

This letter is in response to the Pre-Construction Notification (PCN) submitted on your behalf by Lochmueller Group on August 16, 2024, for as IDOT LPA - South Mattis Ave - BDE Seq. 24983. A review of the information provided indicates that the proposed work includes the permanent discharge of fill material into 0.46 acres of wetland for the road improvements along the section of South Mattis Avenue between Windsor Road and Curtis Road (approximately 1-mile) to accommodate anticipated future residential and commercial development. Proposed improvements include roadway reconstruction, intersection improvements, and a curb and gutter system. The project area is located at Latitude 40.0767° and Longitude -88.2768°; in Champaign, Champaign County, Illinois.

The Corps of Engineers has determined that the proposed work is authorized by NWP 14, Linear Transportation Projects pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C. § 1344). The proposed work must be accomplished in strict accordance with the enclosed general conditions, any regional conditions, special conditions listed in this letter, and the submitted application materials. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 14, 2026, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP. In accordance with General Condition 30 of the NWP, a compliance certification must be completed within 30 days of project completion, or the permit issuance may be revoked and considered null and void.

Special Conditions:

1) The Permittee shall compensate for the loss of 0.46-acre of emergent wetland by purchasing 0.92 wetland credits from the Bartelso Bottoms Wetland Mitigation Bank. Documentation of obtaining the required mitigation from the above options must be provided to our office prior to the impact to the waters of the United States. Once the credits have been purchased and the required documentation for the purchase has been provided to our office, the permit will be considered valid.

The Illinois Environmental Protection Agency Division of Water Pollution Control (IEPA/WPC) has conditionally issued general Section 401 Water Quality Certification for the nationwide permit, subject to the general and special conditions (see enclosures). These conditions are part of the Corps permit. If you have any questions regarding the water quality certification conditions, you may contact Darin LeCrone, with IEPA, at 217-782-0610.

This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other federal, state, or local approvals before beginning work. This permit verification does not convey property rights, nor authorize any injury to property or invasion of other rights.

If you have any questions, please contact me at (314) 331-8574 or Kamren.Metzger@usace.army.mil. Please refer to file number MVS-2024-450. The St. Louis District Regulatory Division is committed to providing quality and timely service to our customers. Please take a moment to complete our customer satisfaction survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Kamren Metzger
Illinois Project Manager
Regulatory Division

Enclosures
Nationwide Permit Summary

Copy Furnished (electronically):
Bryan Cross, Lochmueller Group (via bcross@lochgroup.com)

Compliance Certification Form

File Number: MVS-2024-450 **County:** Champaign

Permittee: City of Champaign, Illinois; Attn: David Happ

Project Name: IDOT LPA - South Mattis Ave - BDE Seq. 24983

Date Verification Issued: 9/12/2024

Project Manager: Kamren Metzger

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification, and return it to the following address or electronically to MVS-Regulatory@usace.army.mil:

U.S. Army Corps of Engineers
St. Louis District
Attn: Regulatory Division
1222 Spruce Street
St. Louis, Missouri 63103-2833

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the permit, and required mitigation was completed in accordance with the permit conditions.

Construction End Date: _____

_____ _____
Signature of Permittee Date

No. 14. Linear Transportation Projects

(NWP Final Notice, 86 FR, 73574)

Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, driveways, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge of dredged or fill material cannot cause the loss of greater than 1/2 -acre of waters of the United States. For linear transportation projects in tidal waters, the discharge of dredged or fill material cannot cause the loss of greater than 1/3 -acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge of dredged or fill material in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404).

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges of dredged or fill material for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer's Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

C. Nationwide Permit General Conditions

(NWP Final Notice, 86 FR 2867-2874)

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act

Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical

habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and

available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to

notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to

ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by

the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites;

and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects

(temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

F. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently

adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes

characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due

to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section Number
FAU 7159 (South Mattis Ave)	Mattis Ave	19-000314-00-PV
Project Number	**County**	**Contract Number**
E4QI(495)	Champaign	

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Permittee Signature & Date

David A Happ

Digitally signed by David A Happ
Date: 2025.09.25 11:17:12 -05'00'

SWPPP Notes

Preparing BDE 2342 (Storm Water Pollution Prevent Plan)

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

The Notice of Intent contains the following documents:

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

Non-applicable information
If any section of the SWPPP is not applicable put “N/A” in box rather than leaving blank.

National Pollutant Discharge Elimination System (NPDES) Compliance

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

NPDES COMPLIANCE REQUIREMENTS

Part I: Site Description

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

The Mattis Avenue improvements entail storm sewer, box culverts and street reconstruction as well as the addition of a shared use path from W Curtis Road to W Windsor Road including portions of Kenny Avenue and W Windsor Road, within the City of Champaign. T19N, R8E, Sec 26 & 27 (40° 4'34.63"N, 88°16'34.61"W)

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

Project will consist of removing the existing roadway and construction of a now urban concrete street consisting of curb & gutter, storm sewer and shared use path.

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

Project site will be closed to thru traffic, allowing for removal of existing roadway, earthwork and drainage work and then proposed aggregate and paving. The contractor may elect to stockpile topsoil onsite but it is anticipated the remaining material will be brought to the site as needed. Once paving is completed seeding/sod and landscaping will be completed.

4. The total area of the construction site is estimated to be 16 acres.

5. The total area of the site estimated to be disturbed by excavation, grading or other activities is 16 acres.

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

0.57

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

Water from the site is currently collected in the adjacent roadside ditches and leave the site in two locations on the east side of Mattis Ave. Both discharge points are via swales thru existing farm fields.

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

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

152A Drummer silty clay loam, 0 to 2 percent slopes. 154A Flanagan silt loam, 0 to 2 percent slopes. 198A Elburn silt loam, 0 to 2 percent slopes.

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

City of Champaign

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

Part II: Waters of the US

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

Phinney Branch.

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

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

Wetlands have been identified onsite and will be mitigated off-site at an approved mitigation bank.

3. Natural buffers:

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

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

☐ Yes ☐ No; and/or

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

☐ Yes ☐ No; and Describe: N/A

Part III. Water Quality

1. Water Quality Standards

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

- ☒ Fertilizer (check as appropriate)
  - ☒ Nitrogen
  - ☒ Phosphorus, and/or
  - ☒ Potassium
- ☐ Herbicide
- ☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
- ☒ Waste water for concrete washout station
- ☐ Coal tar Pitch Emulsion
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Table 1: Common chemicals/potential pollutants used during construction

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

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

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

☒ There are chemicals on site that if spilled could potentially cause an exceedance of a Water Quality Standard. The Department shall implement Pollution Prevention/Good Housekeeping Practices as described in the Department's ILR40 Discharge for Small Municipal Separate Storm Sewer Systems (MS4) reiterated below and Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures:

Pollution Prevention:

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

(a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.

(b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, chemical storage tanks, deicing material storage facilities and temporary stockpiles, detergents, sanitary waste, and other materials present on the site exposed to precipitation and to storm water.

(c) Minimize the discharge of pollutants from spills, leaks and vehicle and equipment maintenance and repair activities and implement chemical spill and leak prevention and response procedures;

(d) Minimize the exposure of fuel, oil, hydraulic fluids, other petroleum products, and other chemicals by storing in covered areas or containment areas. Any chemical container with a storage of 55 gallons or more must be stored a minimum of 50 feet from receiving waters, constructed or natural site drainage features, and storm drain inlets. If infeasible due to site constraints, store containers as far away as the site permits and document in your SWPPP the specific reasons why the 50-foot setback is infeasible and how the containers will be stored.

(e) The contractor is to provide regular inspection of their construction activities and Best Management Practices (BMPs). Based on inspection findings, the contractor shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of structural storm water BMPs. Necessary maintenance shall be completed as soon as conditions allow to prevent or reduce the discharge of pollutants to storm water or as ordered by the Engineer. The Engineer shall conduct inspections required in Section XI Inspections, and report to the contractor deficiencies noted. These Department conducted inspections do not relieve the contractor from their responsibility to inspect their operations and perform timely maintenance; and

(f) In addition, all IDOT projects are screened for Regulated Substances as described in Section 27-3 of the BDE Manual and implemented via Section 669: Removal and Disposal of Regulated substances in the Standard Specifications for Road and Bridge Construction.

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

2. 303(d) Impaired Waterways

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

- suspended solids
- turbidity, and or
- siltation

☐ Yes ☒ No

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

303(d) waterbody	Impairments(s)

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

3. Total Maximum Daily Load (TMDL)

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

If yes, List TMDL waterbodies below and describe associated TMDL

TMDL waterbody	TMDL

TMDL waterbody	TMDL

Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL

If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet that allocation

Part IV. Temporary Erosion and Sediment Controls

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

(i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures must be initiated as soon as practicable,

(ii) On areas where construction activities have temporarily ceased and will resume after 14 days, a temporary stabilization method can be used (temporary stabilization techniques must be described), and

(iii) Stabilization is not required for exit points at linear utility construction site that are used only episodically and for very short durations over the life of the project, provided other exit point controls are implemented to minimize sediment track-out.

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

At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity.
2. Minimize the disturbance of steep slopes.
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible.
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

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

1. Erosion Control:

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

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

2. Sediment Control:

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

- ☒ Ditch Checks
- ☒ Inlet and Pipe protection
- ☐ Hay or Straw bales
- ☒ Perimeter Erosion Barrier
- ☒ Rolled Excelsior
- ☒ Silt Filter Fence

- [x] Above grade inlet filters (fitted)
- [x] Above grade inlet filters (non-fitted)
- [x] Inlet filters
- [ ] Urethane foam/geotextiles
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

3. Structural Practices:

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

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

4. Polymer Flocculants

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

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

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

Part V. Other Conditions

1. Dewatering

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

If yes, the following applies:

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

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

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

Practices may include but are not limited to the following:

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

Describe these practices below

Detention pond/ditch will be utilized on the west side of Mattis Ave, which will collect water from the roadway and west side of the ROW.

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

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

N/A

Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures

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

Part IX. Contractor Required Submittals

Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342A.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:

- Approximate duration of the project, including each stage of the project
- Rainy season, dry season, and winter shutdown dates
- Temporary stabilization measures to be employed by contract phases
- Mobilization time-frame
- Mass clearing and grubbing/roadside clearing dates
- Deployment of Erosion Control Practices
- Deployment of Sediment Control Practices (including stabilized construction entrances and exits to be used and how they will be maintained)
- Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
- Paving, saw-cutting, and any other pavement related operations
- Major planned stockpiling operation
- Time frame for other significant long-term operations or activities that may plan non-storm water discharges as dewatering, grinding, etc.
- Permanent stabilization activities for each area of the project

2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material Delivery, Storage and Use- Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project. Specifically, any chemical stored in a 55 gallon drum provided by the contractor.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill.
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure

containment and spill prevention.

- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.

Additional measures indicated in the plan

N/A

Part X. Maintenance

It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications. However, when requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Any damage or undermining shall be repaired immediately.

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

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

N/A

Part XI. Inspections

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

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

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

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

Dewatering

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

- The inspection date;
- Names and titles of personnel performing the inspection;
- Approximate times that the dewatering discharge began and ended on the day of inspection;
- Estimates of the rate (in gallons per day) of discharge on the day of inspection;
- Whether or not any of the following indications of pollutant discharge were observed at the point of discharge: a sediment plume, suspended solids. unusual color, presence of odor, decreased clarity, or presence of foam; and/or a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

Frozen Conditions

Inspections may be reduced to once per month when all construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities resume, either temporarily or continuously, or if there is 0.5” or greater rain event, or a discharge due to snowmelt occurs.

Flooding or unsafe conditions

Areas that are inaccessible during required inspections due to flooding or other unsafe conditions must be inspected within 72 hours of

becoming accessible.

Part XII. Incidence of Noncompliance (ION)

The Department shall notify the appropriate Agency Field Operations Section office by email as described on the IEPA ION form, within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit.

The Department shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any Inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the IEPA and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified non-compliance issue(s}.

Illinois EPA
2520 W. Iles Ave./P.O. Box 19276
Springfield, IL 62794-9276

Please note that if these are delivered via FedEx or UPS, these carriers cannot deliver to our P.O. Box and this number must be excluded from the mailing address.

Part XIII. Corrective Actions

Corrective actions must be taken when:

- A storm water control needs repair or replacement;
- A storm water control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
- Discharges are causing an exceedance of applicable water quality standards; or
- A prohibited discharge has occurred.

Corrective Actions must be completed as soon as possible and documented within 7 days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within 7 calendar days, it must be documented in the records why it is infeasible to complete the installation or repair within the 7 day time-frame and document the schedule for installing the storm water control(s) and making it operational as soon as feasible after the 7-day time-frame.. In the event that maintenance is required for the same storm water control at the same location three or more times, the control must be repaired in a manner that prevents continued failure to the extent feasible, and it must be documented the condition and how it was repaired in the records. Alternatively, it must be documented why the specific re-occurrence of this same issue must continue to be addressed as a routine maintenance fix.

Part XIV. Retention of Records

The Department must retain copies of the SWPPP and all reports and notices required by this permit, records of all data used to complete the NOI to be covered by this permit, and the Agency Notice of Permit Coverage letter for at least three years from the date that the permit coverage expires or is terminated. the permittee must retain a copy of the SWPPP and any revisions to the SWPPP required by this permit at the construction site from the date of project initiation to the date of final stabilization. Any manuals or other documents referenced in the SWPPP must also be retained at the construction site.

Part XV. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the contractor (See Article 105.03 Conformity with Contract)

Part XVI. Keeping the SWPPP (“plan”) Current

IDOT shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to Waters of the United States and which has not otherwise been addressed in the

plan or if the plan proves to be ineffective in eliminating or significantly minimizing sediment and/or pollutants identified under paragraph Part II. Water Quality or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity.

In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the plan. Amendments to the plan may be reviewed by the IEPA the same manner as the SWPPP and Erosion and Sediment Control Plan (ESCP) submitted as part of the Notice of Intent (NOI). The SWPPP and site map must be modified within 7 days for any changes to construction plans, storm water controls or other activities at the site that are no longer accurately reflected in the SWPPP.

In addition, the NOI shall be modified using the CDX system for any substantial modifications to the project such as:

- address changes
- new contractors
- area coverage
- additional discharges to Waters of the United States, or
- other substantial modifications (e.g. addition of dewatering activities.

The notice of intent shall be modified within 30 days of the modification to the project.

Part XVII: Notifications

In addition to the NOI submitted to IEPA, all MS4 permittees identified in Part I. Site Description shall receive a copy of the NOI.

Part XVIII. Notice of Termination

Where a site has completed final stabilization and all storm water discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination (NOT) that is signed in accordance with ILR10 permit.

Method of Measurement: NPDES Compliance shall not be measured for payment separately. Measurement for payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be measured for payment in accordance with their respective provisions in the contract.

Basis of Payment: NPDES Compliance shall not be paid for separately. Payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be paid for in accordance with their respective payment provisions in the contract.

Soil Map—Champaign County, Illinois
(Mattis Ave (City of Champaign))

Map Scale: 1:10,100 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 100 200 400 600

Feet
0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Champaign County, Illinois
Survey Area Data: Version 18, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2023—Aug 31, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
152A	Drummer silty clay loam, 0 to 2 percent slopes	50.4	50.5%
154A	Flanagan silt loam, 0 to 2 percent slopes	27.8	27.9%
198A	Elburn silt loam, 0 to 2 percent slopes	21.5	21.6%
Totals for Area of Interest		**99.7**	**100.0%**

Illinois Department of Transportation

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 Part IX. Contractor Required Submittals of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	Marked Route	Section Number
FAU 7159 (South Mattis Ave)	Mattis Ave	19-000314-00-PV

Project Number	County	Contract Number
E4QI(495)	Champaign	

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

Print Name	Title

Name of Firm	Phone

Street Address	City	State	Zip Code

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

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 __5__.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of $15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE)

Effective: April 1, 2003
Revised: January 1, 2022

Description. This work shall consist of furnishing and installing accessible pedestrian signals (APS). Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Electrical Requirements. The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29 to +160 °F (-34 to +70 °C).

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Audible Indications. A pushbutton locator tone shall sound at each pushbutton and shall be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Pushbutton locator tones shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. Each actuation of the pushbutton shall be accompanied by the speech message "Wait".

If two accessible pedestrian pushbuttons are placed less than 10 ft (3 m) apart or placed on the same pole, the audible walk indication shall be a speech walk message. This message shall sound throughout the WALK interval only. The verbal message shall be modeled after: "'Street Name.' Walk Sign is on to cross "Street Name'." For signalized intersections utilizing exclusive pedestrian phasing, the verbal message shall be "Walk sign is on for all crossings". In addition, a speech pushbutton information message shall be provided by actuating the APS pushbutton when the WALK interval is not timing. This verbal message shall be modeled after: "Wait. Wait to cross 'Street Name' at 'Street Name'".

Where two accessible pedestrian pushbuttons are separated by at least 10 ft (3 m), the walk indication shall be an audible percussive tone. It shall repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz.

Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

At locations with railroad interconnection, an additional speech message stating "Walk time shortened when train approaches" shall be used after the speech walk message. At locations with emergency vehicle preemption, an additional speech message "Walk time shortened when emergency vehicle approaches" shall be used after the speech walk message.

Pedestrian Pushbutton. Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N).

A red LED shall be located on or near the pushbutton which, when activated, acknowledges the pedestrians request to cross the street.

Signage. A sign shall be located immediately above the pedestrian pushbutton and parallel to the crosswalk controlled by the pushbutton. The sign shall conform to one of the following standard MUTCD designs: R10-3, R10-3a, R10-3e, R10-3i, R10-4, and R10-4a.

Tactile Arrow. A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided on the pushbutton.

Vibrotactile Feature. The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

Method of Measurement. This work will be measured for payment as each, per pushbutton.

Basis of Payment. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS.

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

Effective: January 1, 2025
Revised: January 1, 2026

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

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

Revise Article 302.02 of the Standard Specifications to read:

"**302.02 Materials.** Materials shall be according to the following.

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

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

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

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

"(c) Cement ..... 1001"

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

"(i) Ground Granulated Blast Furnace (GGBF) Slag ..... 1010"

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

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

Revise Article 352.02 of the Standard Specifications to read:

"**352.02 Materials.** Materials shall be according to the following.

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

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

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

Revise Article 404.02 of the Standard Specifications to read:

"**404.02 Materials.** Materials shall be according to the following.

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

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

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

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

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

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

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

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

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

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

Revise Article 583.01 of the Standard Specifications to read:

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

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

"(a) Cement .....1001"

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

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

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

"(h) Fibers (Note 1) .....1014"

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

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

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

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

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

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

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

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

Revise Article 1002.02 of the Standard Specifications to read:

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

OPTION 1.

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

(1) Acidity -- 0.1 Normal NaOH ..... 2 ml max.*
(2) Alkalinity -- 0.1 Normal HCl..... 10 ml max.*
*To neutralize 200 ml sample.

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

(1) Organic (ITP T 26)..... 0.02% max.
(2) Inorganic (ITP T 26)..... 0.30% max.
(3) Sulfate (SO4) (ASTM D 516-82)..... 0.05% max.
(4) Chloride (ASTM D 512) ..... 0.06% max.

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

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

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

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

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

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

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

"The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater."

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

"The ASTM C 1293 test shall be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.80 percent or greater."

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

"The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($Na_2O + 0.658K_2O$) of 0.90 percent or greater."

Add the following Section to the Standard Specifications.

"**SECTION 1014. FIBERS FOR CONCRETE**

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

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

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

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

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

1014.05 Bridge Deck Latex Concrete Overlay. Fibers shall be Type II or III. Fibers shall have a minimum length of 0.75 in. (19 mm), a maximum length of 1.75 in. (45 mm), and an aspect ratio (length divided by the equivalent diameter of the fiber) of between 70 and 100. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field

demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb/cu yd (1.2 kg/cu m)."

Add the following Section to the Standard Specifications:

"**SECTION 1015. HIGH PERFORMANCE SHOTCRETE**

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

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

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

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

Revise Section 1017 of the Standard Specifications to read:

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

1017.01 Mortar. The mortar shall be high-strength according to ASTM C 387 and shall have a minimum 80.0 percent relative dynamic modulus of elasticity when tested according to AASHTO T 161. For prestressed concrete applications, the mortar shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM C 387, AASHTO T 161, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results

shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the high-strength mortar shall be according to the manufacturer's specifications.

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

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

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

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

Revise Article 1018.01 of the Standard Specifications to read:

"**1018.01 Requirements.** The rapid hardening mortar or concrete shall be according to ASTM C 928 and shall have successfully completed and remain current with the AASHTO Product Eval and Audit Rapid Hardening Concrete Patching Materials (RHCP) testing program. R1, R2, or R3 concrete shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). For prestressed concrete applications, the mortar or concrete shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260;

and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The Department will maintain a qualified product list. Mixing of the mortar or concrete shall be according to the manufacturer's specifications.."

Revise Article 1019.02 of the Standard Specifications to read:

"**1019.02 Materials.** Materials shall be according to the following.

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

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

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

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

Revise Article 1019.05 of the Standard Specifications to read:

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

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

Mix 2	
Cement	125 lb (74 kg)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Revise Article 1021.01 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

Revise Article 1021.03 of the Standard Specifications to read:

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

(a) Retarding admixtures shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).

(b) Water-reducing admixtures shall be according to AASHTO M 194, Type A.

(c) High range water-reducing admixtures shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding)."

Revise Article 1021.05 of the Standard Specifications to read:

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

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

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

Revise Article 1021.06 of the Standard Specifications to read:

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

Revise Article 1021.07 of the Standard Specifications to read:

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

(a) Calcium Nitrite. Corrosion inhibitors shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution and shall comply with either the requirements of AASHTO

M 194, Type C (accelerating) or the requirements of ASTM C 1582. The corrosion inhibiting performance requirements of ASTM C 1582 shall not apply.

(b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.

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

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

Add Article 1021.08 of the Standard Specifications as follows:

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

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

Add Article 1021.09 of the Standard Specifications as follows:

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

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

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

Revise Article 1024.01 of the Standard Specifications to read:

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

Materials for the grout shall be according to the following.

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

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

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

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

Revise Article 1029.02 of the Standard Specifications to read:

"**1029.02 Materials.** Materials shall be according to the following.

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

(g) Foaming Agent (Note 1)

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

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

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

Revise Article 1103.04 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

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

80460

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017
Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

"(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

(1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.

(2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.

(3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days."

Revise Article 107.40(c) of the Standard Specifications to read:

"(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

(1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

(2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

(3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

"(b) No working day will be charged under the following conditions.

(1) When adverse weather prevents work on the controlling item.

(2) When job conditions due to recent weather prevent work on the controlling item.

(3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.

(4) When delays caused by utility or railroad adjustments prevent work on the controlling item.

(5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.

(6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited."

Add the following to Section 109 of the Standard Specifications.

"**109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

(a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.

(b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.

(1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to $5,000,000	One Project Superintendent
Over $ 5,000,000 - up to $25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over $25,000,000 - up to $50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over $50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

80384

LONGITUDINAL TINING (BDE)

Effective: January 1, 2026

Revise the first three paragraphs of Article 420.09(e)(1) of the Standard Specifications to read:

"(1) Type A. Type A final finish shall be obtained by the use of a carpet drag composed of an artificial turf followed immediately by a mechanically operated metal comb longitudinal tining device.

The artificial turf shall be made of molded polyethylene with synthetic turf blades approximately 0.85 in. (20 mm) long and contain approximately 7,200 individual blades per 1 sq ft (0.1 sq m). The artificial turf shall be attached to a device that will permit control of the time and rate of texturing. The artificial turf carpet shall be full pavement width and of sufficient size that during the finishing operation, approximately 2 ft (600 mm) of carpet in the direction of drag (i.e., parallel to the pavement centerline) will be in contact with the pavement surface over the entire pavement width. The drag shall be operated in a longitudinal direction to produce a uniform appearing finish. If necessary for maintaining contact with the pavement surface, the carpet may be weighted.

The metal comb shall consist of a single line of tempered spring steel tines uniformly spaced at 3/4 in. (19 mm). The tines shall be flat and of a size and stiffness sufficient to produce a groove of the specified dimensions in the plastic concrete without tearing of the pavement surface. The mechanically operated metal comb shall be either an exclusive piece of equipment which is mechanically self-propelled or shall be combined with the curing equipment. The artificial turf carpet drag may be attached to this piece of equipment provided a surface texture is produced satisfactory to the Engineer. The tining device shall be operated to produce a pattern of grooves, 1/8 to 3/16 in. (3 to 5 mm) deep and 1/10 to 1/8 in. (2.5 to 3 mm) wide along the pavement in a single pass. The tining shall be operated parallel to the longitudinal joint or edge of pavement and shall not deviate more than 1 in. (25 mm) in 25 ft (8 m). Tining shall be withheld 1 to 1 1/2 in. (25 to 38 mm) from a longitudinal joint or pavement edge.

Hand tining or tining with a mechanically operated comb combined with the curing equipment specified in Article 1101.09 will be permitted where the specifications permit hand finishing or screeds, one lane construction up to 16 ft (5 m) wide, gaps, projects with a net length of 1/2 mile (800 m) or less, and where the production rate on any paving day will be less than 1,500 cu yd (1200 cu m) per day. A foot bridge shall be provided for the hand tining operation for all pavement over 12 ft (3.6 m) wide, unless it can be demonstrated that an alternate texturing operation produces satisfactory results."

80477

MODIFIED LONGITUDINAL CONSTRUCTION JOINT (BDE)

Effective: January 1, 2026

Add the following to Article 420.05 to the Standard Specifications:

"(f) Modified Longitudinal Construction Joint. Modified longitudinal construction joints shall be according to Article 420.05(b), except a 3/4 in. (19 mm) dowel bar shall be used in place of the tie bar and the minimum pull-out strength criteria and testing is not applicable. In addition, the face of the slab shall be coated with a bond breaking application of curing compound, and a light coating of oil shall be uniformly applied to the dowel bar."

80478

PAVEMENT MARKING (BDE)

Effective: April 1, 2025
Revised: November 1, 2025

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

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

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

"The Contractor shall install the preformed plastic pavement markings according to the manufacturer's recommendations."

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

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

80464

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2024
Revised: April 1, 2024

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

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

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

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

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

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

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

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

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

Topsoil for re-use as final cover which has been field screened and found not to exhibit PID readings over daily background readings as documented on the BDE 2732, visual staining or

odors, and is classified according to Articles 669.05(a)(2), (a)(3), (a)(4), (b)(1), or (c) may be temporarily staged at the Contractor's option."

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

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

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

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

80455

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)
		Festuca rubra ssp. r*ubra* (Creeping Red Fescue)	40 (50)
1A	Salt Tolerant Lawn Mixture 1/	Kentucky Bluegrass	60 (70)
		Perennial Ryegrass	20 (20)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	20 (20)
		Festuca brevipilla (Hard Fescue)	20 (20)
		Puccinellia distans (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)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	20 (20)
2	Roadside Mixture 1/	*Lolium arundinaceum* (Tall Fescue)	100 (110)
		Perennial Ryegrass	50 (55)
		Festuca rubra ssp. r*ubra* (Creeping Red Fescue)	40 (50)
		Red Top	10 (10)
2A	Salt Tolerant Roadside Mixture 1/	*Lolium arundinaceum* (Tall Fescue)	60 (70)
		Perennial Ryegrass	20 (20)
		Festuca rubra ssp. *rubra* (Creeping Red Fescue)	30 (20)
		Festuca brevipila (Hard Fescue)	30 (20)
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	60 (70)
3	Northern Illinois Slope Mixture 1/	*Elymus canadensis* (Canada Wild Rye) 5/	5 (5)
		Perennial Ryegrass	20 (20)
		Alsike Clover 4/	5 (5)
		Desmanthus illinoensis (Illinois Bundleflower) 4/ 5/	2 (2)
		Schizachyrium scoparium (Little Bluestem) 5/	12 (12)
		Bouteloua curtipendula (Side-Oats Grama) 5/	10 (10)
		Puccinellia distans (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	20 (20)
		Elymus canadensis (Canada Wild Rye) 5/	20 (20)
		Panicum virgatum (Switchgrass) 5/	10 (10)
		Schizachyrium scoparium (Little Blue Stem) 5/	12 (12)
		Bouteloua curtipendula (Side-Oats Grama) 5/	10 (10)
		Dalea candida (White Prairie Clover) 4/ 5/	5 (5)
		Rudbeckia hirta (Black-Eyed Susan) 5/	5 (5)
		Oats, Spring	50 (55)

Class – Type		Seeds	lb/acre (kg/hectare)
4	Native Grass 2/ 6/	*Andropogon gerardi* (Big Blue Stem) 5/	4 (4)
		Schizachyrium scoparium (Little Blue Stem) 5/	5 (5)
		Bouteloua curtipendula (Side-Oats Grama) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	1 (1)
		Panicum virgatum (Switch Grass) 5/	1 (1)
		Sorghastrum nutans (Indian Grass) 5/	2 (2)
		Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Perennial Ryegrass	15 (15)
4A	Low Profile Native Grass 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Bouteloua curtipendula (Side-Oats Grama) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	1 (1)
		Sporobolus heterolepis (Prairie Dropseed) 5/	0.5 (0.5)
		Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Perennial Ryegrass	15 (15)
4B	Wetland Grass and Sedge Mixture 2/ 6/	Annual Ryegrass	25 (25)
		Oats, Spring	25 (25)
		Wetland Grasses (species below) 5/	6 (6)

Species:	% By Weight
Calamagrostis canadensis (Blue Joint Grass)	12
Carex lacustris (Lake-Bank Sedge)	6
Carex slipata (Awl-Fruited Sedge)	6
Carex stricta (Tussock Sedge)	6
Carex vulpinoidea (Fox Sedge)	6
Eleocharis acicularis (Needle Spike Rush)	3
Eleocharis obtusa (Blunt Spike Rush)	3
Glyceria striata (Fowl Manna Grass)	14
Juncus effusus (Common Rush)	6
Juncus tenuis (Slender Rush)	6
Juncus torreyi (Torrey's Rush)	6
Leersia oryzoides (Rice Cut Grass)	10
Scirpus acutus (Hard-Stemmed Bulrush)	3
Scirpus atrovirens (Dark Green Rush)	3
Bolboschoenus fluviatilis (River Bulrush)	3
Schoenoplectus tabernaemontani (Softstem Bulrush)	3
Spartina pectinata (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:

Coreopsis lanceolata (Sand Coreopsis)
Leucanthemum maximum (Shasta Daisy)
Gaillardia pulchella (Blanket Flower)
Ratibida columnifera (Prairie Coneflower)
Rudbeckia hirta (Black-Eyed Susan)

Forb Mixture - Mixture not exceeding 5 % by weight PLS of any one species, of the following:

Amorpha canescens (Lead Plant) 4/
Anemone cylindrica (Thimble Weed)
Asclepias tuberosa (Butterfly Weed)
Aster azureus (Sky Blue Aster)
Symphyotrichum leave (Smooth Aster)
Aster novae-angliae (New England Aster)
Baptisia leucantha (White Wild Indigo) 4/
Coreopsis palmata (Prairie Coreopsis)
Echinacea pallida (Pale Purple Coneflower)
Eryngium yuccifolium (Rattlesnake Master)
Helianthus mollis (Downy Sunflower)
Heliopsis helianthoides (Ox-Eye)
Liatris aspera (Rough Blazing Star)
Liatris pycnostachya (Prairie Blazing Star)
Monarda fistulosa (Prairie Bergamot)
Parthenium integrifolium (Wild Quinine)
Dalea candida (White Prairie Clover) 4/
Dalea purpurea (Purple Prairie Clover) 4/
Physostegia virginiana (False Dragonhead)
Potentilla arguta (Prairie Cinquefoil)
Ratibida pinnata (Yellow Coneflower)
Rudbeckia subtomentosa (Fragrant Coneflower)
Silphium laciniatum (Compass Plant)
Silphium terebinthinaceum (Prairie Dock)
Oligoneuron rigidum (Rigid Goldenrod)
Tradescantia ohiensis (Spiderwort)
Veronicastrum virginicum (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)
		Species:	% By Weight
		Aster novae-angliae (New England Aster)	5
		Echinacea pallida (Pale Purple Coneflower)	10
		Helianthus mollis (Downy Sunflower)	10
		Heliopsis helianthoides (Ox-Eye)	10
		Liatris pycnostachya (Prairie Blazing Star)	10
		Ratibida pinnata (Yellow Coneflower)	5
		Rudbeckia hirta (Black-Eyed Susan)	10
		Silphium laciniatum (Compass Plant)	10
		Silphium terebinthinaceum (Prairie Dock)	20
		Oligoneuron rigidum (Rigid Goldenrod)	10
5B	Wetland Forb 2/ 5/ 6/	Forb Mixture (see below)	2 (2)
		Species:	% By Weight
		Acorus calamus (Sweet Flag)	3
		Angelica atropurpurea (Angelica)	6
		Asclepias incarnata (Swamp Milkweed)	2
		Aster puniceus (Purple Stemmed Aster)	10
		Bidens cernua (Beggarticks)	7
		Eutrochium maculatum (Spotted Joe Pye Weed)	7
		Eupatorium perfoliatum (Boneset)	7
		Helenium autumnale (Autumn Sneeze Weed)	2
		Iris virginica shrevei (Blue Flag Iris)	2
		Lobelia cardinalis (Cardinal Flower)	5
		Lobelia siphilitica (Great Blue Lobelia)	5
		Lythrum alatum (Winged Loosestrife)	2
		Physostegia virginiana (False Dragonhead)	5
		Persicaria pensylvanica (Pennsylvania Smartweed)	10
		Persicaria lapathifolia (Curlytop Knotweed)	10
		Pychanthemum virginianum (Mountain Mint)	5
		Rudbeckia laciniata (Cut-leaf Coneflower)	5
		Oligoneuron riddellii (Riddell Goldenrod)	2
		Sparganium eurycarpum (Giant Burreed)	5
6	Conservation Mixture 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	2 (2)
		Buffalo Grass 5/ 7/	5 (5)
		Vernal Alfalfa 4/	15 (15)
		Oats, Spring	48 (55)
6A	Salt Tolerant Conservation Mixture 2/ 6/	*Schizachyrium scoparium* (Little Blue Stem) 5/	5 (5)
		Elymus canadensis (Canada Wild Rye) 5/	2 (2)
		Buffalo Grass 5/ 7/	5 (5)
		Vernal Alfalfa 4/	15 (15)
		Oats, Spring	48 (55)
		Puccinellia distans (Fults Saltgrass or Salty Alkaligrass)	20 (20)
7	Temporary Turf Cover Mixture	Perennial Ryegrass	50 (55)
		Oats, Spring	64 (70)

Notes:

1/ Seeding shall be performed when the ambient temperature has been between 45 ºF (7 ºC) and 80 ºF (27 ºC) 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 ºF (7 ºC) for a minimum of seven (7) consecutive days and ending when the ambient temperature exceeds 80 ºF (27 ºC) 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 KNO_3 to break dormancy and dyed to indicate such.

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

80445

SIGN PANELS AND APPURTENANCES (BDE)

Effective: January 1, 2025
Revised: January 1, 2026

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

"(c) Aluminum Epoxy Mastic .....1008.03"

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

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

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

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

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

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

"The backs of all sign panels shall be marked in a manner designed to last as long as the sign face material, in letters and numerals at least 3/8 in. (9.5 mm) but no more than 3/4 in. (19 mm) in height with the month and year of manufacture, the name of the sign manufacturer, the name of the sign sheeting manufacturer, the method of manufacture ("screened", "EC film", "direct applied", or "digital print"), and the initials IDOT."

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

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

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

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

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

"Digitally printed signs may omit protective overlay film."

80462

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023
Revised: January 1, 2026

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

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

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

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

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

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

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

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

(1) Non-ferrous metals;

(2) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);

(3) Glass (including optic glass);

(4) Fiber optic cable (including drop cable);

(5) Optical fiber;

(6) Lumber;

(7) Drywall;

(8) Engineered wood.

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

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

80448

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004
Revised: November 1, 2025

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of $10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. The following documentation shall be furnished to the Engineer.

(a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.

(b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$SCA = Q \times D$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$D = MPI_M - MPI_L$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items will be derived from submitted documentation.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

80127

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

"**109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.** The Contractor shall report all payments made to the following parties:

(a) first tier subcontractors;

(b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;

(c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment."

80397

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017
Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

"This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than $10,000	25%
$10,000 to less than $20,000	20%
$20,000 to less than $40,000	18%
$40,000 to less than $60,000	16%
$60,000 to less than $80,000	14%
$80,000 to less than $100,000	12%
$100,000 to less than $250,000	10%
$250,000 to less than $500,000	9%
$500,000 to $750,000	8%
Over $750,000	7%"

80391

SUBMISSION OF BIDDERS LIST INFORMATION (BDE)

Effective: January 2, 2025
Revised: March 2, 2025

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

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

80463

SUBMISSION OF PAYROLL RECORDS (BDE)

Effective: April 1, 2021
Revised: November 2, 2023

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

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

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.”

80437

SURVEYING SERVICES (BDE)

Effective: April 1, 2025

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

Delete Section 668 of the Standard Specifications.

80465

TRAFFIC SIGNAL BACKPLATE (BDE)

Effective: August 1, 2025

Revise the second sentence of the third paragraph of Article 1078.03 of the Standard Specifications to read:

"Retroreflective sheeting shall be Type AZ or Type ZZ according to Article 1091.03 and applied in the preferred orientation for the maximum angularity according to the manufacturer's recommendations."

80470

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 5. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor Employment Training Administration shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting its performance under this Training Special Provision.

For contracts with an awarded contract value of $500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

Basis of Payment. This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price, and total price have been included in the schedule of prices.

20338

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021
Revised: November 1, 2022

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

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

80439

WOOD SIGN SUPPORT (BDE)

Effective: November 1, 2023

Add the following to Article 730.02 of the Standard Specifications:

"(c) Preservative Treatment .....1007.12"

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

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

80454

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020
Revised: January 1, 2026

Add the following to Article 701.03 of the Standard Specifications:

"(q) Temporary Sign Supports ..... 1106.02"

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

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

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

"For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer's specifications."

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

"**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer's self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device."

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

"**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices shall be MASH compliant.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices shall be MASH compliant.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as sign supports, speed feedback displays, arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019."

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

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

Revise Articles 1106.02(g), 1106.02(k), 1106.02(l), and 1106.02(m) of the Standard Specifications to read:

"(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department's qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department's qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The

Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.

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

80427

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 will work will be paid for at the contract unit price, per square yard (square meter) for MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

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

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

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

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

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

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

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

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

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

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

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

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

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

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

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

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

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

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

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

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

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

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

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. **Instructions for Certification – First Tier Participants:**

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

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

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

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

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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 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).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

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

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

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

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

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

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

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

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

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

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

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

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

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