14

Letting January 16, 2026

Notice to Bidders, Specifications and Proposal



Contract No. 61L99
WILL-COOK Counties
Section 05-00017-00-LS (University Park)
Route FAP 350 (II 50)
Project S7J2-575 ()
District 1 Construction Funds

Prepared by

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. 61L99
WILL-COOK Counties
Section 05-00017-00-LS (University Park)
Project S7J2-575 ()
Route FAP 350 (II 50)
District 1 Construction Funds

Decorative lighting, landscaping and parkway restoration on IL 50 from Bruce Street Road to Steger Drive in University Park.

- 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 61L99

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

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

RECURRING SPECIAL PROVISIONS

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

CHE	CK SH	<u>IEET#</u> <u>F</u>	PAGE	E NO.
1	\boxtimes	Additional State Requirements for Federal-Aid Construction Contracts		87
2	\boxtimes	Subletting of Contracts (Federal-Aid Contracts)		90
3	\boxtimes	EEO		91
4		Specific EEO Responsibilities Non Federal-Aid Contracts		101
5		Required Provisions - State Contracts		106
6		Asbestos Bearing Pad Removal		112
7		Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal		113
8		Temporary Stream Crossings and In-Stream Work Pads		114
9	\boxtimes	Construction Layout Stakes		
10		Use of Geotextile Fabric for Railroad Crossing		
11		Subsealing of Concrete Pavements		120
12		Hot-Mix Asphalt Surface Correction		124
13		Pavement and Shoulder Resurfacing		126
14		Patching with Hot-Mix Asphalt Overlay Removal		
15		Polymer Concrete		
16		Reserved		131
17		Bicycle Racks		132
18		Temporary Portable Bridge Traffic Signals		134
19	\boxtimes	Nighttime Inspection of Roadway Lighting		136
20		English Substitution of Metric Bolts		137
21		Calcium Chloride Accelerator for Portland Cement Concrete		138
22		Quality Control of Concrete Mixtures at the Plant		139
23	\boxtimes	Quality Control/Quality Assurance of Concrete Mixtures		147
24		Reserved		163
25		Reserved		164
26		Temporary Raised Pavement Markers		165
27		Restoring Bridge Approach Pavements Using High-Density Foam		166
28		Portland Cement Concrete Inlay or Overlay		
29		Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching		173
30		Longitudinal Joint and Crack Patching		176
31		Concrete Mix Design – Department Provided		178
32		Station Numbers in Pavements or Overlays		

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Table of Contents

CHECK	SHEE	<u>T #</u>	PAGE NO.
LRS 1		Reserved	181
LRS 2		Furnished Excavation	182
LRS 3		Work Zone Traffic Control Surveillance	
LRS 4		Flaggers in Work Zones	184
LRS 5		Contract Claims	185
LRS 6		Bidding Requirements and Conditions for Contract Proposals	186
LRS 7		Bidding Requirements and Conditions for Material Proposals	192
LRS 8		Reserved	
LRS 9		Bituminous Surface Treatments	199
LRS 1	0	Reserved	203
LRS 1	1 🔲	Employment Practices	204
LRS 1	2 🗌	Wages of Employees on Public Works	206
LRS 1	3 🗌	Selection of Labor	
LRS 1	4	Paving Brick and Concrete Paver Pavements and Sidewalks	209
LRS 1	5	Partial Payments	212
LRS 1	6 🗌	Protests on Local Lettings	
LRS 1	7	Substance Abuse Prevention Program	
LRS 1	8 🔲	Multigrade Cold Mix Asphalt	215
LRS 1	9 🗌	Reflective Crack Control Treatment	

INDEX OF SPECIAL PROVISIONS

	PAGE NO.
LOCATION OF PROJECT	1
DESCRIPTION OF WORK	
MAINTENANCE OF ROADWAYS	1
STATUS OF UTILITIES (D-1)	2
AVAILABLE REPORTS (D1 LR)	6
FAILURE TO COMPLETE PLANT CARE AND ESTABLISHMENT WORK ON TIME	Ξ7
COMPOST FURNISH AND PLACE	8
SUPPLEMENTAL WATERING	9
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES	10
TRAFFIC CONTROL PLAN (D1)	12
GENERAL ELECTRICAL REQUIREMENTS	13
ELECTRIC UTILITY SERVICE CONNECTION	34
ELECTRIC SERVICE INSTALLATION	35
UNDERGROUND RACEWAYS	36
HANDHOLES	37
UNIT DUCT	38
WIRE AND CABLE	40
ROADWAY LUMINAIRE, LED	40
TRAFFIC SIGNAL GENERAL REQUIREMENTS	53
ELECTRIC CABLE	70
LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAM! SIGNAL HEAD	
LED SIGNAL FACE, LENS COVER	75
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	
REBUILD EXISTING HANDHOLE	76
PLANTING WOODY PLANTS	77
PLANTING PERENNIAL PLANTS	85
PERENNIAL PLANT CARE	88
GENERAL REQUIREMENTS FOR WEED CONTROL SPRAYING	89
WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE	92

INDEX OF SPECIAL PROVISIONS (CONT.)

	<u>PAGE NO</u> .
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	93
PEDESTRIAN SIGNAL POST	96
WEED CONTROL, NATIVE LANDSCAPE REMEDIATION	98
SELECTIVE CLEARING	100
CURB OR COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT	(D1)101
MEDIAN SURFACE REMOVAL	103
CLEANOUTS	103
MEDIAN INLET (604101), SPECIAL	103
TEMPORARY INFORMATION SIGNING	104
ACCESSIBLE PEDESTRIAN SIGNALS	105
CONCRETE FOUNDATIONS	109
DECORATIVE LIGHTING UNIT, TYPE "D1"	109
DECORATIVE LIGHTING UNIT, TYPE "D2"	110
HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D1)	113
FRICTION AGGREGATE (D1)	121
DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)	125
HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (D1)	127
LOCAL ROAD SPECIAL PROVISION 107-4	129
LOCAL ROADS SPECIAL PROVISION 1030-2	130
LPC 663 – UNCONTAMINATED SOIL CERTIFICATION	132
LPC 663 - IDOT ROW UNCONTAMINATED SOIL CERTIFICATION	136

BDE SPECIAL PROVISIONS

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

<u>F</u>	ile Name	Pg.		Special Provision Title	Effective	Revised
	80099			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	
	50531			Building Removal	Sept. 1, 1990	Aug. 1, 2022
	50261			Building Removal with Asbestos Abatement	Sept. 1, 1990	Aug. 1, 2022
*	80460	162	\boxtimes	Cement, Finely Divided Minerals, Admixtures, Concrete, and Mortar	Jan. 1, 2025	Jan. 1, 2026
	80384	179	$\overline{\boxtimes}$	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	183	\boxtimes	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	185	\boxtimes	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		Ш.	High Friction Surface Treatment	Nov. 1, 2025	
*	80456		Щ	Hot-Mix Asphalt	Jan. 1, 2024	Jan. 1, 2026
	80446		Ш	Hot-Mix Asphalt – Longitudinal Joint Sealant	Nov. 1, 2022	Aug. 1, 2023
	80438		Ш	Illinois Works Apprenticeship Initiative – State Funded Contracts	June 2, 2021	April 2, 2024
*	80477		Ц	Longitudinal Tining	Jan. 1, 2026	
	80450		\perp	Mechanically Stabilized Earth Retaining Walls	Aug. 1, 2023	Aug. 1, 2025
*	80478		닏	Modified Longitudinal Construction Joint	Jan. 1, 2026	
	80464		닏	Pavement Marking April 1, 2025		Nov. 1, 2025
	80468	400	Ц	Pavement Patching	Aug. 1, 2025	
	80441	188	\boxtimes	Performance Graded Asphalt Binder	Jan 1, 2023	
	80459		닏	Preformed Plastic Pavement Marking	June 2, 2024	1 4 0000
	34261		님	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2022
	80473	400	닖	Raised Reflective Pavement Markers	Nov. 1, 2025	A!! 4 000 4
	80455	193		Removal and Disposal of Regulated Substances	Jan. 1, 2024	April 1, 2024
	80474	105	片	Residential Driveway Temporary Signal	Nov. 1, 2025	
	80445	195		Seeding	Nov. 1, 2022	A
*	80457		H	Short Term and Temporary Pavement Markings	April 1, 2024	April 2, 2024
*	80462		H	Sign Panels and Appurtenances	Jan. 1, 2025	Jan. 1, 2026
	80479		H	Sinusoidal Rumble Strips	Jan. 1, 2026	
*	80469	201		Slope Wall	Aug. 1, 2025	lan 1 2026
	80448	201		Source of Supply and Quality Requirements Speed Display Trailer	Jan. 2, 2023	Jan. 1, 2026
	80340		H		April 2, 2014	Jan. 1, 2022
*	80127		H	Steel Cost Adjustment Structural Repair of Concrete	April 2, 2004	Nov. 1, 2025
	80480 80397	203		•	Jan. 1, 2026	
	80391	203		Subcontractor and DBE Payment Reporting Subcontractor Mobilization Payments	April 2, 2018 Nov. 2, 2017	April 1 2010
	80463	204		Submission of Bidders List Information	Jan. 2, 2017	April 1, 2019 Mar. 2, 2025
	80437	206		Submission of Payroll Records	April 1, 2021	Nov. 2, 2023
	00401	200	\triangle	Oubtilission of Fayroli Necolus	ημιι I, 202 I	1404. 2, 2023

File Name	Pg.	Special Provision Title	Effective	Revised
80435		Surface Testing of Pavements – IRI	Jan. 1, 2021	Jan. 1, 2023
80465	208	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		Training Special Provisions	Oct. 15, 1975	Sept. 2, 2021
80429		Ultra-Thin Bonded Wearing Course	April 1, 2020	Jan. 1, 2022
80439	209 🗵		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] Wood Sign Support	Nov. 1, 2023	
* 80427	210	Work Zone Traffic Control Devices	Mar. 2, 2020	Jan. 1, 2026
80071	213	Working Days	Jan. 1, 2002	

County:Will

STATE OF ILLINOIS SPECIAL PROVISIONS

CONTRACT NO: 61L99

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 Route: FAP 350 Cicero Avenue (IL Route 50); Section: 05-00017-00-LS; Project: S7J2(575), Job: C-91-321-07; County: Will; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located on Cicero Avenue, from University Parkway to Bruce Drive, in the Village of University Park, Will County, Illinois. A location map is shown on the cover of the Plans. The gross and net length of the project is 7,658.21 ft (1.450 miles).

DESCRIPTION OF WORK

The work consists of furnishing all labor, materials, equipment, and other incidentals necessary for the completion of curb and gutter repair; concrete median; lighting; landscaping; parkway restoration; and other incidental and miscellaneous items of work in accordance with the Plans, Standard Specifications, and these Special Provisions.

MAINTENANCE OF ROADWAYS

Effective: September 30, 1985 Revised: November 1, 1996

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

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

Contract: 61L99 County:Will

STATUS OF UTILITIES (D-1)

Effective: June 1, 2016 Revised: April 1, 2025

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

UTILITIES TO BE ADJUSTED

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

No conflicts to be resolved

UTILITIES TO BE WATCHED AND PROTECTED

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

County:Will

Pre-Stage

<u>Pre-Stage</u>				
STAGE / LOCATION	TYPE	DESCRIPTION	OWNER	
University Parkway - North parkway Cicero Avenue - East parkway from Steger Rd to End	Underground Fiber Optic	No conflict anticipated, Contractor shall watch and protect.	MCI-Verizon	
University Parkway – North parkway	Underground Cable	No conflict anticipated, Contractor shall watch and protect.	AT&T	
Cicero Avenue – West parkway from University Parkway to STA 213+00 East and West Parkway from Steger Rd to End University Parkway – South parkway	Aerial Telephone Cabel	No conflict anticipated, Contractor shall watch and protect	AT&T	
University Parkway - South parkway Cicero Avenue - West parkway from University Parkway to Steger Road	Underground Gas Main	No conflict anticipated, Contractor shall watch and protect.	Nicor	
Cicero Avenue – West parkway from University Parkway to Steger Road East parkway from Steger Rd to End Crossing Sta 238+00, 242+25, 249+40	Aerial Electric Cable	No conflict anticipated, Contractor shall watch and protect.	ComEd	
Cicero Avenue – West parkway University Parkway to Sta 229+50	Underground Gas Main	No conflict anticipated, Contractor shall watch and protect.	Nicor	

Contract: 61L99 County:Will

STAGE / LOCATION			OWNER
Cicero Avenue – West parkway from University Parkway to Steger Road East parkway from Steger Rd to End University Parkway – South parkway	Underground Cable	No conflict anticipated, Contractor shall watch and protect.	Crown Castle
Cicero Avenue – West Parkway	Underground Cable	No conflict anticipated, Contractor shall watch and protect.	AT&T
University Parkway – North parkway	Underground Fiber Optic	No conflict anticipated, Contractor shall watch and protect.	S. Suburban Mayors/Mngrs
University Parkway Underground - North parkway Fiber Optic		No conflict anticipated, Contractor shall watch and protect.	Zayo Fiber Solutions

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

Agency/Company Responsible to	Name of contact	Phone	E-mail address
Resolve Conflict			
AT&T Distribution			g11629@att.com
ComEd	Simone Harris	779-231-2671	Simone.Harris@Exeloncorp.com
Aqua Illinois Kankakee	Steve Palinski	815-614-2047	sipalinski@aquaamerica.com
Comcast (xfinity)	Martha Gieras	224-229-5862	martha gieras@cable.comcast.com
Crown castle	Fiber Dig Team	800-654-3110	fiber.dig@crowncastle.com
MCI/Verizon	Investigations		investigations@verizon.com
	Team		
Zayo Fiber Solutions	John Ferraresi	847-417-9609	<u>john.ferraresi@zayo.com</u>
Nicor Gas	Charlie	(630) 353-	cmcpherson@entrustsol.com
	McPherson	7784	
Buckeye Partners	Brandon Allen	216-318-2124	<u>ballen@buckeye.com</u>
S. Suburban Mayors/Mngrs	Rusty Winchel	847-421-6231	rwinchel@csfn.us

The above represents the best information available to the Department and is included for the

Contract: 61L99 County:Will

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

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

The estimated relocation duration must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor, and the utility companies when necessary.

The contractor is responsible for contacting JULIE (or DIGGER within the City of Chicago) prior to any excavation work. Please note that IDOT electrical facilities are not part of the one-call locating services, such as JULIE or DIGGER.

If the contract requires the services of an electrical contractor, it is the contractor's responsibility, at their own expense, to locate existing IDOT electrical facilities before commencing work. For contracts that do not require an electrical contractor, the contractor may request one free locate of IDOT electrical facilities by contacting the Department's Electrical Maintenance Contractor. Additional locate requests will be at the contractor's expense.

The Department's Electrical Maintenance Contractor must be notified at least 72 hours in advance of the work by calling 773-287-7600 or emailing dispatch@meade100.com to arrange for the locating of underground electrical facilities.

Please note, the marking of underground facilities does not absolve the contractor of their responsibility to repair or replace any facilities damaged during construction at their expense.

Contract: 61L99 County:Will

AVAILABLE REPORTS (D1 LR)

Effective: July 1, 2021
□ No project specific reports were prepared.
When applicable, the following checked reports and record information is available for Bidders' reference upon request:
☐ Record structural plans
☑ Preliminary Site Investigation (PSI) (IDOT ROW)
☑ Preliminary Site Investigation (PSI) (Local ROW)
☑ Preliminary Environmental Site Assessment (PESA) (IDOT ROW)
☑ Preliminary Environmental Site Assessment (PESA) (Local ROW)
☐ Soils/Geotechnical Report
☐ Boring Logs
□ Pavement Cores
☐ Location Drainage Study (LDS)
☐ Hydraulic Report
☐ Noise Analysis
☐ Other:
These eacking these reports should request escape from:

Those seeking these reports should request access from:

Baxter & Woodman, Inc. Attn: Jonathan Miller Phone: 815-444-4412

Email: jmiller@baxterwoodman.com

Contract: 61L99 County:Will

FAILURE TO COMPLETE PLANT CARE AND ESTABLISHMENT WORK ON TIME

Should the Contractor fail to complete the plant care and/or supplemental watering work as per the standard specifications or within 36 hours notification from the Engineer, or within such extended times as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of:

- \$50.00 per tree/per day
- \$40.00 per large shrub/per day
- \$35.00 per small shrub/per day
- \$20.00 per vine/per day
- \$20.00 per perennial/per day
- \$20.00 per sq yd sod/per day

not as penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

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

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

Contract: 61L99 County:Will

COMPOST FURNISH AND PLACE

<u>Description</u>: This work shall consist of preparation of the shrub and perennial beds to receive soil amendments, including placement and incorporation of an approved soil conditioner into the shrub and perennial beds.

<u>Submittals</u>: The Contractor shall submit a 5-pound bag sample to the Engineer for approval prior to the delivery and installation of this material.

<u>Materials</u>: Soil Conditioner shall be a mixture of Compost, Peat, Sand, Wood Derivatives, and Manure as an amendment to available topsoil, to create a moist, well drained planting mix:

- 1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve. (1 part)
- 2. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent. (1 part)
- 3. Sand: Clean, washed, FA2 (coarse sand), free of toxic materials (2 parts)
- 4. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials. (4 parts)
- 5. Manure: Well-rotted, unbleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth. (1 part)

Soil Conditioner shall also include a commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.

Construction: The soil conditioner installation shall only begin after all removals, including vegetation removals, are completed. Clean planting areas of all trash and debris before placement of the approved soil conditioner.

Remove and legally dispose of all removals and debris offsite in accordance with Article 202.03. Remove existing vegetation, add topsoil as described elsewhere in these special provisions, and prepare soil surface by gently loosening the top 6 inches of the placed topsoil. Apply a 6-inch deep layer of soil conditioner within the planting beds. The Engineer will verify that the proper soil conditioner depth has been applied. After verification of proper depth, the Contractor shall completely incorporate the soil conditioner into the loosened topsoil by tilling.

Contract: 61L99 County:Will

Rake smooth and finish grade all planted areas. Grading shall be to a tolerance of +/- 0.10 foot of the design grades. Any grade disturbed by any other operations shall be restored to the finish grade and raked smooth at no additional cost.

All debris litter, tire tracks, and unintended materials shall be removed, swept, or washed off all landscape, adjacent walls and surfaces, curbs, gutters, and pavement daily, to the approval and directive of the Engineer.

<u>Method of Measurement</u>: The contract unit price shall include providing soil conditioner to a 6-inch depth for all planting beds including all placement, finish grading, materials, labor, or equipment required to complete this work.

Basis of Payment: This item shall be paid for at the contract unit price per square yard for COMPOST FURNISH AND PLACE, of the thickness specified, which price shall be payment in full for performing the work as specified herein and as determined by the Engineer.

SUPPLEMENTAL WATERING

Modified July 16, 2025

This work will include watering sod, trees, shrubs, vines, and perennials at the rates specified and as directed by the Engineer.

<u>Schedule:</u> Watering will only begin after the successful completion of all period of establishment requirements. Water trees, shrubs, and vines every 7 days throughout the growing season (April 1 to November 30). Water perennials, plugs, and sod a minimum of twice a week. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 24 hours of notice. The Contractor shall give an approximate time window of when they will begin at the work location to the Engineer. The Engineer shall be present during the watering operation. A minimum of 10 units of water per day must be applied until the work is complete.

Should the Contractor fail to complete the work on a timely basis or within such extended times as may have been allowed by the Department, the Contractor shall be liable to the Department liquidated damages as outlined in the "Failure to Complete Plant Care and Establishment Work on Time" special provision.

In fixing the damages as set out herein, the desire is to establish a mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would

Contract: 61L99 County:Will

be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of the trees if the watering is delayed. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

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

<u>Source of Water</u>: The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

<u>Rate of Application</u>: The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

3 gallons per square yard for perennial beds 27 gallons per square yard for Sodded Areas

Method of Application: A spray nozzle that does not damage small plants must be used when watering all vegetation. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. An open hose may be used to water trees, shrubs, and seedlings if mulch and soil are not displaced by watering. The water shall be applied to individual plants in such a manner that the plant hole shall be saturated without allowing the water to overflow beyond the earthen saucer. Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing the water flow beyond the periphery of the bed. Water shall slowly infiltrate into soil and completely soak the root zone. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

<u>Method of Measurement</u>: Supplemental watering will be measured in units of 1000 gallons of water applied as directed.

<u>Basis of Payment</u>: This work will be paid for at the contract unit price per unit of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment and labor needed to complete the work specified herein and to the satisfaction of the Engineer.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

Contract: 61L99 County:Will

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

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

Site. 4034V-2: Residential Building, 4815 Bruce Drive and 22857-23029 East Drive, Richton Park, Cook County

- Station 251+70 to Station 252+10 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.
- Station 252+10 to Station 258+05 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1).
- Station 258+05 to Station 262+25 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Iron.

Site. 4034V-6: Right of Way, 23200 Block of S. Cicero Avenue, University Park Cook/Will County

• Station 248+10 to Station 251+70 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.

Site. 4034V-8: Vacant Land, 23200 Block of S. Cicero Avenue, University Park, Will County

• Station 241+35 to Station 245+00 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.

Contract: 61L99 County:Will

Site. 4034V-11: Agricultural Land, 23200-23400 Blocks of S. Cicero Avenue, University Park and Unincorporated Monee Township, Will County

- Station 231+45 to Station 234+25 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.
- Station 239+85 to Station 243+10 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Manganese.

Site. 4034V-13: Vacant Land, 23500 Block of S. Cicero Avenue, Unincorporated Monee Township Will County

• Station 227+70 to Station 231+35 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1).

Site. 4034V-15: Applied Systems, Inc., 200 Applied Parkway, University Park, Will County

- Station 203+25 to Station 206+15 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Iron.
- Station 210+55 to Station 213+35 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.
- Station 216+00 to Station 218+30 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene.
- Station 218+30 to Station 221+10 (CL IL 50), 0 to 65 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1).

Site. 4034V-16: Carvana University Park Inspection Center, 23619 S. Cicero Avenue, University Park, Will County

- Station 200+00 to Station 202+35 (CL IL 50), 0 to 175 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Lead.
- Station 204+85 to Station 207+55 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Managenese and iron.
- Station 207+55, to Station 209+50 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene and iron.

County:Will

- Station 209+50 to Station 211+80 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene.
- Station 211+80 to Station 214+80 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene and iron.
- Station 214+80 to Station 218+10 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.
- Station 222+00 to Station 225+55 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic.

ISGS 4034V-18: Agricultural Land, 23900 Block of S. Cicero Avenue, University Park, Will County

- Station 195+60 to Station 196+90 (CL IL 50), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Arsenic and Manganese.
- Station 196+90 to Station 200+00 (CL IL 50), 0 to 175 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(b)(1).

Work Zones

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

County:Will

TRAFFIC CONTROL PLAN (D1)

Effective: September 30, 1985 Revised: January 1, 2007

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

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

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

<u>STANDARDS</u>: 701006, 701101, 701301, 701311, 701421, 701422, 701426, 701501, 701502, 701701, 701801, 701901

DETAILS:

Traffic Control and Protection for Side Roads, Intersections, and Driveways (TC-10) Typical Pavement Markings (TC-13) Arterial Road Information Sign (TC-22)

SPECIAL PROVISIONS:

Maintenance of Roadways (D1)
Temporary Information Signing
Work Zone Traffic Control Surveillance (LRS 3)
Vehicle and Equipment Warning Lights (BDE)
Work Zone Traffic Control Devices (BDE)

Contract: 61L99 County:Will

GENERAL ELECTRICAL REQUIREMENTS

Effective: February 1, 2025

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

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

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

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

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

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

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

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

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

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

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

> Contract: 61L99 County:Will

the satisfaction of the Engineer.

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

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

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

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, through the method as directed in the pre-construction meeting. Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

Submittals shall be provided for all items used, temporary and permanent, for review and approval.

Equipment which will be owned and maintained by a local agency other than the State shall be reviewed and approved by that agency prior to submittal to the State. The submittal to the State shall include any comments made by the local agency.

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

The submittal must clearly identify the specific model number or catalog number of the item being proposed. Submittals must be the Manufacturers current published information. Out of date submittal material will be grounds for rejection.

The submittal shall be properly identified by Pay Item Number, Contractor, route, section, county, and contract number.

> Contract: 61L99 County:Will

The Contractor shall have reviewed the submittal material and affixed the Contractor's stamp of approval, with date and signature, for each individual item prior to submittal. The Contractor's approval stamp shall be the first page of the submittal.

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

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

The Department may provide a list of pay items broken out by discipline upon request for a particular contract. In general, the disciplines are as follows:

Discipline	Typical Items
Discipline	Typical items
	CCTV
	CCTV structures
ITS	Communication vaults
11.0	Fiber optic
	Fiber optic duct
	Network equipment
	Breakaway devices
	Light poles
	Light tower
Lighting	Lighting cables
	Lighting controllers
	Luminaires
	Unit duct
Pump Station	All pump station equipment
Signing	Signing
	Loop cables
	Detector equipment & associated structures
	Ramp metering & associated structures
Surveillance	Wireless pavement sensors and assoc. structures
	Radar detection
	Data Probing
	Handholes
	Dynamic Message Signs (DMS)
	Controllers/Cabinets
	Handholes
Traffic Circus!	Illuminated signs
Traffic Signal	Pedestrian Push Buttons
	Signal Datastars
	Signal Lleads
	Signal Heads

> Contract: 61L99 County:Will

Discipline	Typical Items
	Signal Loop Cable Signal Modules
	Signal Structures
Local Roads Lighting	Same as lighting
Local Roads Traffic Signal	Same as traffic signal
Discipline with the predominate amount of work in contract or ask Engineer.	Raceways Electric cables Junction boxes

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

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

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

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

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

<u>General.</u> Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any electrical systems (lighting, ITS, Pump Station, Surveillance, and traffic

County:Will

control systems) which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than fourteen (14) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

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

Establish the approximate location and operating condition of the electrical systems which may be affected by the work.

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

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

Maintenance and Responsibility During Construction.

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

Contract: 61L99 County:Will

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

<u>Electrical Infrastructure During Construction.</u> The scope of work shall include locating and marking the proposed underground infrastructure installed in this contract.

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

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

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

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

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

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

Contract: 61L99 County:Will

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

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

Testing.

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

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

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Resistance of Grounding Electrodes
- Detector Loop Tests

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.
- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet shall be measured and recorded with all loads disconnected. Prior to performance of the insulation resistance test, the Contractor shall remove all fuses within all light pole bases on a circuit to segregate the luminaire loads.

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

On tests of cable runs which include cables which were existing in service prior to this

Contract: 61L99 County:Will

contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

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

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

- (1) Detector Loops. Before and after permanently securing the loop in the pavement, the resistance, inductance, resistance to ground, and quality factor for each loop and leadin circuit shall be tested.
- (2) The loop and lead-in circuit shall have an inductance between 20 and 2500 microhenries.
- (3) The resistance to ground shall be a minimum of 50 megohms under any conditions of weather or moisture.
- (4) The continuity test of the loop and loop lead-in shall not have a resistance greater than two (2) ohms
- (5) The quality factor (Q) shall be 5 or greater.

Loops which fail to test satisfactorily shall be repaired or replaced.

Telecommunication Cable. Once the telecommunication cable is installed complete with all cable terminations complete the Contractor shall request an end-to-end test. The Contractor shall request the end-to-end test at least 7 days in advance to the TSC Engineer. Any lane closures and/or any other safety measures that need to be taken shall be provided for by the Contractor and shall be considered incidental to the cost of this

Contract: 61L99 County:Will

item. The type of test performed shall be an end-to-end test with Halcyon type equipment transmitting and receiving at each end of the cable. Each pair shall be tested, and the results shall be recorded and submitted to the Engineer. If any results don't fall within the requirements set forth in (REA) PE-39, the Contractor shall correct and re-test that cable pair. Traffic Systems will tolerate only one pair out of every 100 pair of cable that doesn't meet or exceed specifications set forth in (REA) PE-39.

Wireless In-Pavement Detection Systems shall be tested in accordance with the approved testing procedures provided in the catalog cut submittal.

Fiber Optic Systems.

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

Fibers which are not to be terminated shall be tested with a temporary fusion spliced pigtail fiber. **Mechanical splice or bare fiber adapters are not acceptable**.

The Contractor shall provide the date, time and location of any tests required by this specification to the Engineer at least 5 working (7 calendar) days before performing the test. Included with the notification shall be a record drawing of the installed fiber optic cable system. The drawings shall indicate actual installed routing of the cable, the locations of splices, and locations of cable slack with slack quantities identified.

Upon completion of the cable installation, splicing, and termination, the Contractor shall test all fibers for continuity, events above 0.1 dB, and total attenuation of the cable. The test procedure shall be as follows:

A Certified Technician utilizing an Optical Time Domain Reflectometer (OTDR) and Optical Source/Power Meter shall conduct the installation test. The test equipment used shall have been calibrated within the last two years. Documentation shall be provided. The Technician is directed to conduct the test using the standard operating procedures defined by the manufacturer of the test equipment. All fibers installed shall be tested in both directions.

A fiber ring or fiber box shall be used to connect the OTDR to the fiber optic cable under test at both the launch and receive ends. The tests shall be conducted at 1310 and 1550 nm for all fibers.

Contract: 61L99 County:Will

All testing shall be witnessed by the IDOT Engineer, and a copy of the test results (CD ROM or USB Drive) shall be submitted on the same day of the test. Hardcopies shall be submitted as described herein with copies on CD ROM or USB Drive.

At the completion of the test, the Contractor shall provide copies of the documentation of the test results to the Project Engineer. The test documentation shall be submitted as two bound copies and three CD ROM, or USB drive copies, and shall include the following:

Cable & Fiber Identification:

- Cable ID
- Cable Location beginning and end point
- Fiber ID, including tube and fiber color
- Wavelength
- Pulse width (OTDR)
- Refractory index (OTDR)

- Operator Name
- Date & Time
- Setup Parameters
- Range (OTDR)
- Scale (OTDR)
- Setup Option chosen to pass OTDR "dead zone"

Test Results shall include:

- OTDR Test results
- Total Fiber Trace
- Splice Loss/Gain
- Events > 0.10 dB
- Measured Length (Cable Marking)
- Total Length (OTDR)
- Optical Source/Power Meter Total Attenuation (dB/km)

Sample Power Meter Tabulation:

	Power Meter Measurements (dB)									
Location		Fiber	Cable Length	A to B		B to A		Bidirectional Average		
Α	В	No.	(km)	1310 nm	1550 nm	1310 nm	1550 nm	1310 nm	1550 nm	
		1								
		2								
	Maximum Loss									
	Minimum Loss									

The OTDR test results file format must be Bellcore/Telcordia compliant according to GR-196-CORE Issue 2, OTDR Data Standard, GR 196, Revision 1.0, GR 196, Revision 1.1, GR 196, Revision 2.0 (SR-4731) in a ".SOR" file format. A copy of the

> Contract: 61L99 County:Will

test equipment manufacture's software to read the test files, OTDR and power, shall be provided to the Department. These results shall also be provided in tabular form, see sample below:

Sample OTDR Summary									
Cable Designation:	TCF-IK-03	OTDR Location:	Pump Sta. 67	Date: 1/1/00					
Fiber	Event	Event	Event Loss (dB)						
Number	Type	Location	1310 nm	1550 nm					
1	Splice	23500 Ft.	.082	.078					
1	Splice	29000 Ft.	.075	.063					
2	Splice	29000 Ft.	.091	.082					
3	Splice	26000 Ft.	.072	.061					
3	Bend	27000 Ft.	.010	.009					

The following shall be the criteria for the acceptance of the cable:

Upon completing all splicing operations for a cable span, the Contractor shall measure the mean bi-directional loss at each splice using an Optical Time Domain Reflectometer.

When splices are made between identical cables (same manufacturer and cable type) the average optical loss of each splice shall not exceed 0.10 dB. The average is determined by measuring the splice loss in both directions with an OTDR, adding the two readings, and dividing by two. Testing should be performed for both the 1310 and 1550 nm wavelengths. No individual splice loss measured in a single direction shall exceed 0.15 dB.

When splices are made between cables containing fibers of different mode field diameters, the average optical loss of each splice shall not exceed 0.50 dB. The average is determined by measuring the splice loss in both directions with an OTDR, adding the two readings, and dividing by two. Testing should be performed for both the 1310 and 1550 nm wavelengths. No individual splice loss measured in a single direction shall exceed 0.6 dB.

The Contractor shall measure the end-to-end attenuation of each fiber, from connector to connector, using an optical power meter and source. This loss shall be measured at from both directions and shall not exceed 0.5 dB per installed kilometer of single mode cable. Measurements shall be made at both 1300 and 1550 nm for single mode cable.

For multimode cable, power meter measurements shall be made at 850 and 1300 nm. The end-to-end attenuation shall not exceed 3.8 dB/installed kilometers at 850nm or 1.8

Contract: 61L99 County:Will

dB per installed kilometer at 1300nm for multimode fibers.

If the total loss exceeds these specifications, the Contractor shall replace or repair the cable run at the no additional cost to the state, both labor and materials. Elevated attenuation due to exceeding the pulling tension, or any other installation operation, during installation shall require the replacement of the cable run at no additional cost to the State, including labor and materials.

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

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

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

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

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

Contract: 61L99 County:Will

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

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

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

The inventory shall include:

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

The following electronic inventory forms are available from the Engineer:

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

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

When the work is complete, and seven days before the request for a final inspection, the set of contract drawings, marked "**RECORD DRAWINGS**", shall be submitted to the Engineer for review

> Contract: 61L99 County:Will

and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or Electrician. The record drawings shall be submitted in PDF format via a mutually agreed to electronic format for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents (bookmarks) the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible.

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

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

A total of three hardcopies and two CD-ROMs or USB Drives of the final documentation shall be submitted. The identical material shall also be submitted in the same manner as the catalog cut submittals utilizing the following final documentation pay item numbers:

Pay Code	Description	Discipline
FDLRD000	Record Drawings - Lighting	Lighting
FDSRD000	Record Drawings - Surveillance	Surveillance
FDTRD000	Record Drawings - Traffic Signal	Traffic Signal
FDIRD000	Record Drawings - ITS	ITS
FDLCC000	Catalog Cuts - Lighting	Lighting
FDSCC000	Catalog Cuts – Surveillance	Surveillance
FDTCC000	Catalog Cuts – Traffic Signal	Traffic Signal
FDICC000	Catalog Cuts - ITS	ITS
FDLWL000	Warranty - Lighting	Lighting
FDSWL000	Warranty - Surveillance	Surveillance
FDTWL000	Warranty - Traffic Signal	Traffic Signal
FDIWL000	Warranty - ITS	ITS
FDLTR000	Test Results - Lighting	Lighting

> Contract: 61L99 County:Will

FDSTR000	Test Results - Surveillance	Surveillance
FDTTR000	Test Results - Traffic Signal	Traffic Signal
FDITR000	Test Results - ITS	ITS
FDLINV00	Inventory - Lighting	Lighting
FDSINV00	Inventory - Surveillance	Surveillance
FDTINV00	Inventory - Traffic Signal	Traffic Signal
FDIINV00	Inventory - ITS	ITS
FDLGPS00	GPS - Lighting	Lighting
FDSGPS00	GPS - Surveillance	Surveillance
FDTGPS00	GPS - Traffic Signal	Traffic Signal
FDIGPS00	GPS - ITS	ITS

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

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

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

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

Contract: 61L99 County:Will

markings shall be documented as cable marking into enclosure and marking out of enclosure.

• All wireless in-pavement vehicle detectors

Datum to be used shall be North American 1983.

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

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

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

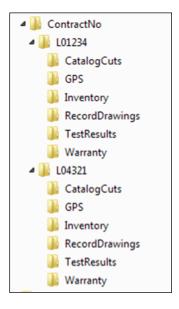
Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have minimum 5 meter accuracy after post processing.

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

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

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

County:Will



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

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

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

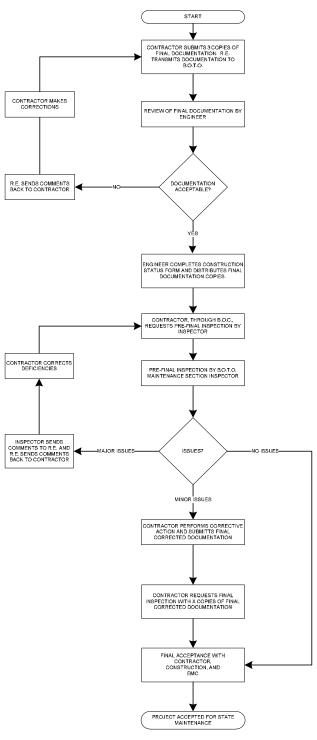
If CD's are used they shall be labeled as illustrated in the CD Label Template contained herein.

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

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

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

County:Will



Contract: 61L99 County:Will

Final Acceptance Documentation Checklist

LOCATION				
Route		Common Name	;	
Limits		Section		
Contract #		County		
Controller Designation(s)		EMC Database Location Number(s)		
ITEM		ntractor (Verify)	Resident Engineer (Verify)	
Record Drawings				
-Three hardcopies (11" x 17")				
-PDFs as required elsewhere				
Field Inspection Tests				
-Voltage				
-Amperage				
-Cable Insulation Resistance				
-Continuity				
-Controller Ground Rod Resistance				
(Three Hardcopies & PDFs as required)				
GPS Coordinates				
-Excel file				
(Check Special Provisions, Excel file required.)				
Job Warranty Letter				
(Three Hardcopies & PDFs as required)				
Catalog Cut Submittals				
-Approved & Approved as Noted				
(PDFs as required)				
Lighting Inventory Form (Three Hardcopies & PDFs as required)				
Lighting Controller Inventory Form (Three Hardcopies & PDFs as required)				
Light Tower Inspection Form (If applicable Three Hardcopies & PDEs as required)				

County:Will

Three Hardcopies & PDFs as required shall be submitted for all items above. If a CD ROM is used it shall be labeled as shown in the example contained herein.

General Notes:

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

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

<u>GPS Coordinates</u> – Check special provisions "General Electrical Requirements". Submit electronic "EXCEL" file.

<u>Job Warranty Letter</u> – See standard specifications.

<u>Cutsheet Submittal</u> – See special provisions "General Electrical Requirements". Scan Approved and Approved as Noted cutsheets.

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

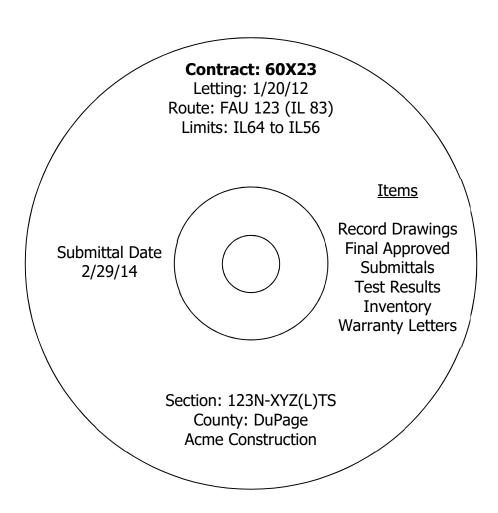
<u>Lighting Controller Inventory Form</u> – Form should be filled out for only proposed lighting controllers.

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

Contract: 61L99 County:Will

CD LABEL FORMAT TEMPLATE.

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



Contract: 61L99 County:Will

ELECTRIC UTILITY SERVICE CONNECTION

Effective: July 1, 2025

<u>Description.</u> This item shall consist of payment for work performed by the Electric Service Provider (Utility Company) in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE LOCATION.

CONSTRUCTION REQUIREMENTS

<u>General.</u> It shall be the Contractor's responsibility to contact the Electric Service Provider. The Contractor shall coordinate his work fully with the Electric Service Provider both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement.

For those locations served by ComEd; please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.

For locations served by other electric service providers, that utility shall be contacted.

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

<u>Documentation.</u> The Contractor shall provide copies of all correspondence with the Electric Service Provider including as a minimum:

- A copy of the request for service to the Electric Service Provider.
- Service Entrance Sketch
- Electric Service Account Number
- Electric Meter Number
- Size of Utility transformer and available fault current.
- GPS coordinates of the service, format as described in the General Electrical Provisions.

All correspondence for State owned and maintained installations must include the pertinent contract number and Electrical Maintenance database number

Certain state-maintained electrical systems may have energy paid by local agencies, but unless otherwise established, energy billing for state-maintained electrical systems shall be directed to:

Contract: 61L99 County:Will

Illinois Department of Transportation District 1 201 West Center Court Schaumburg, Illinois 60196 Attn: Financial Services

Electric service correspondence for Non-State owned systems shall be directed to the respective agency assuming maintenance with a copy of the final service agreement submitted to IDOT.

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

For bidding purposes, this item shall be estimated as \$5,000

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

ELECTRIC SERVICE INSTALLATION

Effective: January 1, 2012

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

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

CONSTRUCTION REQUIREMENTS

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

County:Will

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

<u>Method Of Measurement.</u> Electric Service Installation shall be counted, each.

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

UNDERGROUND RACEWAYS

Effective: May 22, 2002 Revised: March 1, 2024

810.02TS

Revise Article 810.04 of the Standard Specifications to read:

"Installation. All underground conduits shall have a minimum depth of 30 in. (700 mm) below the finished grade and shall be installed to avoid existing and proposed utilities within the project limits."

Add the following to Article 810.04 of the Standard Specifications:

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

All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 1 ft (300 mm) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.

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

The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 1/8 in. (3 mm) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring."

County:Will

HANDHOLES

Effective: January 01, 2002 Revised: November 1, 2023 814.01TS

Description.

Add the following to Section 814 of the Standard Specifications:

All conduits shall enter the handhole at a depth of 30 in. (762 mm) except for the conduits for detector loops when the handhole is less than 5 ft (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

Steel cable hooks shall be epoxy coated and must meet the specifications set forth in 1006.10. Hooks shall be a minimum of 5/8 in. (16 mm) diameter with 90-degree bend and extend into the handhole at least 6 in. (152 mm). Hooks shall be placed a minimum of 12 in. (305 mm) below the lid or lower if additional space is required.

Precast round handholes shall not be used unless called out on the plans.

The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters. Only handholes serving IDOT traffic signal equipment shall have this label. Handhole covers for Red Light Running Cameras shall be labeled "RLRC".

Revise the third paragraph of Article 814.03 of the Standard Specifications to read:

"Handholes shall be constructed as shown on the plans and shall be cast-in-place or precast concrete units. Heavy duty handholes shall be either cast-in-place or precast concrete units."

Revise Article 814.03(c) of the Standard Specifications to read:

"Precast Concrete. Precast concrete handholes shall be fabricated according to Article 1042.17. Where a handhole is contiguous to a sidewalk, preformed joint filler of 1/2 in. (13 mm) thickness shall be placed between the handhole and the sidewalk."

Add the following to Section 814 of the Standard Specifications:

Cast-In-Place Handholes.

All cast-in-place handholes shall be concrete with minimum inside dimensions of 21-1/2 in. (546 mm). Frames and lid openings shall match this dimension.

Contract: 61L99 County:Will

For grounding purposes, the handhole frame shall have provisions for a 7/16 in. (11 mm) diameter stainless steel bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 1 ft (305mm).

Precast Round Handholes.

All precast handholes shall be concrete with an inside diameter of 30 in. (762mm). Frames and covers shall have a minimum opening of 26 in. (660mm) and no larger than the inside diameter of the handhole.

For grounding purposes, the handhole frame shall have provisions for a 7/16 in. (11 mm) diameter stainless steel bolt cast into the frame. For the purpose of attaching the grounding conductor to the handhole cover, the covers shall either have a 7/16 in. (11 mm) diameter stainless steel bolt cast into the cover or a stainless steel threaded stint extended from an eye hook assembly. A hole may be drilled for the bolt if one cannot be cast into the frame or cover. The head of the bolt shall be flush or lower than the top surface of the cover.

The minimum wall thickness for precast heavy duty hand holes shall be 6 in. (152 mm).

Precast round handholes shall be only produced by an approved precast vendor.

UNIT DUCT

Effective: January 1, 2012

Revise the first paragraph of Article 810.04 to read:

"The unit duct shall be installed at a minimum depth of 30-inches (760 mm) unless otherwise directed by the Engineer."

Revise Article 1088.01(c) to read:

"(c) Coilable Nonmetallic Conduit.

General:

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and

Contract: 61L99 County:Will

uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

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

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

Nominal Size		Pulled Tensile	
mm	in	N	lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Performance Tests:

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the

> Contract: 61L99 County:Will

installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
35	1.25	4937	1110
41	1.5	4559	1025

WIRE AND CABLE

Effective: January 1, 2012

Add the following to the first paragraph of Article 1066.02(a):

"The cable shall be rated at a minimum of 90°C dry and 75°C wet and 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(b) of the Standard Specifications:

"Cable sized No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE."

Revise the second paragraph of Article 1066.05 to read:

"The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing."

ROADWAY LUMINAIRE, LED

Effective: April 1, 2025

Description.

This work shall consist of furnishing and installing a roadway LED luminaire as shown on the plans, as specified herein.

General.

The luminaire including the housing, driver and optical assembly shall be assembled in the U.S.A. The luminaire shall be assembled by and manufactured by the same manufacturer. The luminaire

Contract: 61L99 County:Will

shall be mechanically strong and easy to maintain. The size, weight, and shape of the luminaire shall be designed so as not to incite detrimental vibrations in its respective pole and it shall be compatible with the pole and arm. All electrical and electronic components of the luminaire shall comply with the requirements of Restriction of Hazardous Materials (RoHS) regulations. The luminaire shall be listed for wet locations by an NRTL and shall meet the requirements of UL 1598 and UL 8750

Submittal Requirements.

The Contractor shall also submit the following manufacturer's product data for each type of luminaire:

- Descriptive literature and catalogue cuts for luminaire, LED driver, and surge protection device. Completed manufacturer's luminaire ordering form with the full catalog number provided
- 2. LED drive current, total luminaire input wattage and total luminaire current at the system operating voltage or voltage range and ambient temperature of 25 C.
- 3. LED efficacy per luminaire expressed in lumens per watt (I/w).
- 4. Initial delivered lumens at the specified color temperature, drive current, and ambient temperature.
- 5. IES file associated with each submitted luminaire in the IES LM-63 format.
- Computer photometric calculation reports as specified and in the luminaire performance table.
- TM-15 BUG rating report.
- 8. Isofootcandle chart with max candela point and half candela trace indicated.
- 9. Documentation of manufacturers experience and verification that luminaires were assembled in the U.S.A. as specified.
- 10. Written warranty.

Upon request by the Engineer, the submittals shall also include any or all the following:

Contract: 61L99 County:Will

- a. TM-21 calculator spreadsheet (XLSX or PDF format) and if available, TM-28 report for the specified luminaire or luminaire family. Both reports shall be for 50,000 hours at an ambient temperature of 77 °F (25 °C).
- b. LM-79 report with National Voluntary Laboratory Accreditation Program (NVLAP) current at the time of testing in PDF format inclusive of the following: isofootcandle diagram with half candela contour and maximum candela point; polar plots through maximum plane and maximum cone; coefficient of utilization graph; candela table; and spectral distribution graph and chromaticity diagram.
- c. LM-80 report for the specified LED package in PDF format and if available, LM-84 report for the specified luminaire or luminaire family in PDF format. Both reports shall be conducted by a laboratory with NVLAP certification current at the time of testing.
- d. AGi32 calculation file matching the submittal package.
- e. In Situ Temperature Measurement Test (ISTMT) report for the specified luminaire or luminaire family in PDF format.
- f. Vibration test report in accordance with ANSI C136.31 in PDF format.
- g. ASTM B117/ASTM D1654 (neutral salt spray) test and sample evaluation report in PDF format.
- h. ASTM G154 (ASTM D523) gloss test report in PDF format.
- i. LED drive current, total luminaire input wattage, and current over the operating voltage range at an ambient temperature of 77 °F (25 °C).
- j. Power factor (pf) and total harmonic distortion (THD) at maximum and minimum supply and at nominal voltage for the dimmed states of 70%, 50%, and 30% full power.
- k. Ingress protection (IP) test reports, conducted according to ANSI C136.25 requirements, for the driver and optical assembly in PDF format.
- I. Installation, maintenance, and cleaning instructions in PDF format, including recommendations on periodic cleaning methods.
- m. Documentation in PDF format that the reporting laboratory is certified to perform the required tests.

Contract: 61L99 County:Will

A sample luminaire shall also be provided upon request of the Engineer. The sample shall be as proposed for the contract and shall be delivered by the Contractor to the District Headquarters. After review, the Contractor shall retrieve the luminaire.

Manufacturer Experience.

The luminaire shall be designed to be incorporated into a lighting system with an expected 20 year lifetime. The luminaire manufacturer shall have a minimum of 15 years' experience manufacturing LED roadway luminaires; parking lot, architectural, or residential luminaires are not applicable to this requirement. The manufacturer shall have a minimum of 100,000 total LED roadway luminaires installed on a minimum of 100 separate installations, all within the U.S.A.

Housing.

All external surfaces shall be cleaned in accordance with the manufacturer's recommendations and be constructed in such a way as to discourage the accumulation of water, ice, and debris.

Material. The luminaire shall be a single device not requiring on-site assembly for installation. The driver for the luminaire shall be integral to the unit.

Finish. The luminaire shall have a baked acrylic enamel finish. The color of the finish shall be gray, unless otherwise indicated.

The finish shall have a rating of six or greater according to ASTM D1654, Section 8.0 Procedure A – Evaluation of Rust Creepage for Scribed Samples after exposure to 1000 hours of testing according to ASTM B117 for painted or finished surfaces under environmental exposure.

The luminaire finish shall have less than or equal to 30% reduction of gloss according to ASTM D523 after exposure of 500 hours to ASTM G154 Cycle 6 QUV® accelerated weathering testing.

The luminaire shall slip-fit on a mounting arm with a 2" diameter tenon (2.375" outer diameter), and shall have a barrier to limit the amount of insertion. The slip fitter clamp shall utilize four (4) bolts to clamp to the tenon arm. The luminaire shall be provided with a leveling surface and shall be capable of being tilted ±5 degrees from the axis of attachment in 2.5 degree increments and rotated to any degree with respect to the supporting arm.

All external surfaces shall be cleaned in accordance with the manufacturer's recommendations and be constructed in such a way as to discourage the accumulation of water, ice, and debris.

The effective projected area (EPA) of the luminaire shall not exceed 1.6 sq ft (0.149 sq m) and the weight, including accessories, shall not exceed 40 lb (18.14 kg). If the weight of the

Contract: 61L99 County:Will

luminaire is less than 20 lb (9.07 kg), weight shall be added to the mounting arm or a supplemental vibration damper installed as approved by the Engineer.

A passive cooling method with no moving, rotating parts, or liquids shall be employed for heat management.

The luminaire shall include a fully prewired, 7-pin twist lock ANSI C136.41-compliant receptacle. Unused pins shall be connected as directed by the Manufacturer and as approved by the Engineer. A shorting cap shall be provided with the luminaire that is compliant with ANSI C136.10.

Vibration Testing. All luminaires shall be subjected to and pass vibration testing requirements at "3G" minimum zero to peak acceleration in accordance with ANSI C136.31 requirements using the same luminaire. To be accepted, the luminaire housing, hardware, and each individual component shall pass this test with no noticeable damage and the luminaire must remain fully operational after testing.

Labels. An internal label shall be provided indicating the luminaire is suitable for wet locations and indicating the luminaire is an NRTL listed product to UL1598 and UL8750. The internal label shall also comply with the requirements of ANSI C136.22.

An external label consisting of two black characters on a white background with the dimensions of the label and the characters as specified in ANSI C136.15 for HPS luminaires. The first character shall be the alphabetical character representing the initial lumen output as specified in Table 1 of Article 1067.06(c). The second character shall be the numerical character representing the transverse light distribution type as specified in IES RP-8 (i.e. Types 1, 2, 3, 4, or 5).

Hardware. All hardware shall be stainless steel or of other corrosion resistant material approved by the Engineer.

Luminaires shall be designed to be easily serviced, having fasteners such as quarter-turn clips of the heavy spring-loaded type with large, deep straight slot heads, complete with a receptacle and shall be according to military specification MIL-f-5591.

All hardware shall be captive and not susceptible to falling from the luminaire during maintenance operations. This shall include lens/lens frame fasteners as well hardware holding the removable driver and electronic components in place.

Provisions for any future house-side external or internal shielding should be indicated along with means of attachment.

Circuiting shall be designed to minimize the impact of individual LED failures on the operation of the other LED's.

Contract: 61L99 County:Will

Wiring. Wiring within the electrical enclosure shall be rated at 600v, 105°C or higher.

Driver.

The driver shall be integral to the luminaire shall be capable of receiving an indefinite open and short circuit output conditions without damage.

The driver shall incorporate the use of thermal foldback circuitry to reduce output current under abnormal driver case temperature conditions and shall be rated for a lifetime of 100,000 hours at an ambient temperature exposure of 77 °F (25 °C) to the luminaire. If the driver has a thermal shut down feature, it shall not turn off the LEDs when operated at 104 °F (40 °C) or less.

The driver shall have an input voltage range of 120 to 277 volts (\pm 10%) or 347 to 480 volts (\pm 10%) according to the contract documents. When the driver is operating within the rated input voltage range and in an un-dimmed state, the power factor measurement shall be not less than 0.9 and the THD measurement shall be no greater than 20%.

The driver shall meet the requirements of the FCC Rules and Regulations, Title 47, Part 15 for Class A devices with regard to electromagnetic compatibility. This shall be confirmed through the testing methods in accordance with ANSI C63.4 for electromagnetic interference.

The driver shall be dimmable using the protocol listed in the Luminaire Performance Table shown in the contract.

Surge Protection. The luminaire shall comply the requirements of ANSI C136.2 for electrical transient immunity at the "Extreme" level (20KV/10KA) and shall be equipped with a surge protective device (SPD) that is UL1449 compliant with indicator light. An SPD failure shall open the circuit to protect the driver.

LED Optical Assembly

The optical assembly shall have an IP 65 or higher rating in accordance with ANSI C136.25. The circuiting of the LED array shall be designed to minimize the effect of individual LED failures on the operation of other LEDs. All optical components shall be made of glass or a UV stabilized, non-yellowing material.

The optical assembly shall utilize high brightness, long life, minimum 70 CRI, 4,000K color temperature (+/-300K) LEDs binned in accordance with ANSI C78.377. Lenses shall be UV-stabilized acrylic or glass.

Contract: 61L99 County:Will

Lumen depreciation at 50,000 hours of operation shall not exceed 15% of initial lumen output at the specified LED drive current and an ambient temperature of 25° C.

The luminaire may or may not have a glass lens over the LED modules. If a glass lens is used, it must be a flat lens. Material other than glass will not be acceptable. If a glass lens is not used, the LED modules may not protrude lower than the luminaire housing.

The assembly shall have individual serial numbers or other means for manufacturer tracking.

Photometric Performance.

Luminaires shall be tested according to IESNA LM-79. This testing shall be performed by a test laboratory holding accreditation from the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) for the IESNA LM-79 test procedure.

Data reports as a minimum shall yield an isofootcandle chart, with max candela point and half candela trace indicated, maximum plane and maximum cone plots of candela, a candlepower table (house and street side), a coefficient of utilization chart, a luminous flux distribution table, spectral distribution plots, chromaticity plots, and other standard report outputs of the above mentioned tests.

The luminaire shall have a BUG rating of Back Light B3 or less, Up Light rating of U0, and a Glare rating of G3 or less unless otherwise indicated in the luminaire performance table.

Photometric Calculations.

Calculations. Submitted report shall include a luminaire classification system graph with both the recorded lumen value and percent lumens by zone along with the BUG rating according to IESNA TM-15.

Complete point-by-point luminance and veiling luminance calculations as well as listings of all indicated averages and ratios as applicable shall be provided in accordance with IESNA RP-8 recommendations. Lighting calculations shall be performed using AGi32 software with all luminance calculations performed to one decimal place (i.e. x.x cd/m2). Uniformity ratios shall also be calculated to one decimal place (i.e. x.x:1). Calculation results shall demonstrate that the submitted luminaire meets the lighting metrics specified in the project Luminaire Performance Table(s). Values shall be rounded to the number of significant digits indicated in the luminaire performance table(s).

All photometry must be **photopic**. Scotopic or mesopic factors will not be allowed. The AGi32 file shall be submitted at the request of the Engineer.

Contract: 61L99 County:Will

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE ROADWAY LIGHTING

GIVEN CONDITIONS

Roadway Data	Pavement Width Number of Lanes Left of Median Number of Lanes Right of Median Lane Width Median Width IES Surface Classification Q-Zero Value	66 3 3 11 0 R3 0.07	Ft Ft Ft
Mounting Data	Mounting Height Mast Arm Length Pole Set-Back from Edge of Pavement	45 12 3	Ft Ft Ft
Luminaire Data	Source Color Temperature Lumens Pay Item Lumen Designation BUG Rating IES Vertical Distribution IES Control of Distribution IES Lateral Distribution Total Light Loss Factor	LED 4000 20200 G B3-U0-G3 II Very Short	°K Min
Pole Layout Data	Spacing Configuration Luminaire Overhang over E.O.P.	260 Opposite 4	Ft Ft

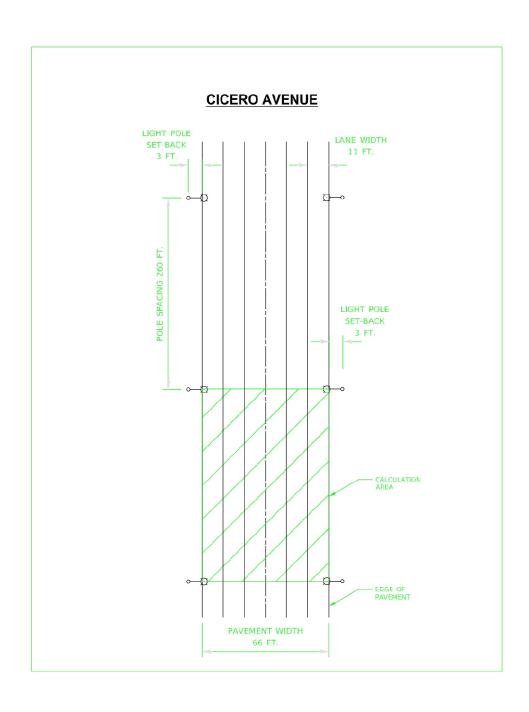
NOTE: Variations from the above specified I.E.S. distribution pattern may be requested, and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

Average Luminance, L _{AVE} (Max)	0.9	Cd/m ²
Average Luminance, Lave (Min)	0.6	Cd/m ²
Uniformity Ratio, Lave/Lmin	3.5	Max
Uniformity Ratio, L _{MAX} /L _{MIN}	6.0	Max
Veiling Luminance Ratio, L _V /L _{AVE}	0.3	Max
	Average Luminance, L _{AVE} (Min) Uniformity Ratio, L _{AVE} /L _{MIN} Uniformity Ratio, L _{MAX} /L _{MIN}	Average Luminance, Lave (Min) Uniformity Ratio, Lave/Lmin Uniformity Ratio, Lmax/Lmin 6.0

County:Will



Contract: 61L99 County:Will

Independent Testing

When a contract has 50 or more luminaires of the same type (distribution type and lumen output/wattage), that luminaire type shall be independently tested, unless otherwise noted. The quantity of luminaires to be tested shall be as specified in the following table.

Contract Quantity	Luminaires to be Tested	
1-49	0 (unless otherwise noted)	
50-100	2	
101-150	3	
151-200	4	
201-250	5	
251-300	6	
301-350	7	

The Contractor shall coordinate the testing with the contract schedule considering submittal, manufacturing, testing, and installation lead-times and deadlines.

The Electrical Engineer shall select from all the project luminaires at the Contractor's or distributor's storage facility, within District 1, the luminaires for testing. In all cases, the selection of luminaires shall be a random selection from the entire completed lot of luminaires required for the contract. Selections from partial lots will not be allowed. An additional luminaire shall also be selected for physical inspection by the Engineer at the District Headquarters. This luminaire will be available for the Contractor to pick up at a later date to be installed under this contract. This luminaire is in addition to the luminaire required as a part of the submittal process specified elsewhere.

Alternative selection process. With the Engineer's prior approval, the Contractor shall provide a list of luminaire serial numbers for all the luminaires. The Engineer shall make a random selection of the required number of luminaires for testing from the serial numbers. That luminaire must then be photographed clearly showing the serial number prior to shipment to the selected and approved testing laboratory. The testing laboratory shall include a photograph of the luminaire along with the test results directly to the Engineer.

Luminaires shall be tested at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory approved for each of the required tests. The testing facility shall not be associated in any way, subsidiary or otherwise, with the luminaire manufacturer. All costs associated with luminaire testing shall be included in the bid price of the luminaire.

Contract: 61L99 County:Will

The selection of the proposed independent laboratory shall be presented with the information submitted for review and approval.

The testing performed shall include photometric and electrical testing.

All tests shall be conducted at the luminaire system operating voltage of 240 volts unless specified differently in the contract plans.

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Photometric testing shall be according to IES recommendations, performed with a goniophotometer and as a minimum, shall yield an isofootcandle chart, with max candela point and half candela trace indicated, an isocandela diagram, maximum planned and maximum cone plots of candela, a candlepower table (House and street side), a coefficient of utilization chart, a luminous flux distribution table, BUG rating report, and complete calculations based on specified requirements and test results.

Electrical testing shall conform to NEMA and ANSI standards and, as a minimum shall include a complete check of wiring connections and a table of characteristics showing input amperes, watts, power factor, total harmonic distortion and LED drive current.

The summary report and the test results including IES photometric files shall be sent directly to the Resident Engineer, the Electrical Engineer, and the Contractor via email or other mutually agreeable means.

Photometric performance shall meet or exceed that of the specified values. If the luminaire does not meet the specified photometric values, the luminaire has failed regardless of whether the test results meet the submitted factory data.

Should any of the tested luminaires of a given type, and distribution fail to satisfy the specifications and perform according to approved submittal information, the luminaire type of that distribution type and wattage shall be unacceptable and be replaced by alternate equipment meeting the specifications with the submittal and testing process repeated in their entirety; or corrections made to achieve required performance.

In the case of corrections, the Contractor shall advise the Engineer of the proposed corrections and shall request a repeat of the specified testing and, if the corrections are deemed reasonable by the Engineer, the testing process shall be repeated in its entirety.

The number of luminaires to be tested shall be the same quantity as originally tested as required in the above table.

Contract: 61L99 County:Will

Retesting, should it become necessary, shall not be grounds for additional compensation or extension of time.

Submittal information shall include a statement of intent to provide the testing as well as a request for approval of the chosen laboratory.

Installation.

Each luminaire shall be installed according to the luminaire manufacturer's recommendations.

Luminaires which are pole mounted shall be mounted on site such that poles and arms are not left unloaded. Pole mounted luminaires shall be leveled/adjusted after poles are set and vertically aligned before being energized. When mounted on a tenon, care shall be exercised to assure maximum insertion of the mounting tenon. Each luminaire shall be checked to assure compatibility with the project power system. When the night-time check of the lighting system by the Engineer indicates that any luminaires are mis-aligned, the mis-aligned luminaires shall be corrected at no additional cost.

No luminaire shall be installed prior to approval. Where independent testing is required, full approval will not be given until complete test results, demonstrating compliance with the specifications, have been reviewed and accepted by the Engineer.

Pole wiring shall be provided with the luminaire. Pole wire shall run from handhole to luminaire. Pole wire shall be sized No. 10, rated 600 V, RHW/USE-2, and have copper conductors, stranded in conformance with ASTM B 8. Pole wire shall be insulated with cross-linked polyethylene (XLP) insulation. Pole wire shall include a phase, neutral, and green ground wire. Wire shall be trained within the pole or sign structure so as to avoid abrasion or damage to the insulation.

Pole wire shall be extended through the pole, pole grommet, luminaire ring, and any associated arm and tenon. The pole wire shall be terminated in a manner that avoids sharp kinks, pinching, pressure on the insulation, or any other arrangement prone to damaging insulation value and producing poor megger test results. Wires shall be trained away from heat sources within the luminaire. Wires shall be terminated so all strands are extended to the full depth of the terminal lug with the insulation removed far enough so it abuts against the shoulder of the lug, but is not compressed as the lug is tightened.

Included with the pole wiring shall be fusing located in the handhole. Fusing shall be according to Article 1065.01 with the exception that fuses shall be 6 amperes.

Each luminaire and optical assembly shall be free of all dirt, smudges, etc. Should the optical assembly require cleaning, a luminaire manufacturer approved cleaning procedure shall be used.

Contract: 61L99 County:Will

Horizontal mount luminaires shall be installed in a level, horizontal plane, with adjustments as needed to insure the optics are set perpendicular to the traveled roadway.

When the pole is bridge mounted, a minimum size stainless steel 1/4-20NC set screw shall be provided to secure the luminaire to the mast arm tenon. A hole shall be drilled and tapped through the tenon and luminaire mounting bracket and then fitted with the screw.

Warranty.

The entire luminaire and all of its component parts shall be covered by a 10-year warranty. Failure is when one or more of the following occur:

- 1) Negligible light output from more than 10 percent of the discrete LEDs.
- 2) Significant moisture that deteriorates performance of the luminaire.
- 3) Driver that continues to operate at a reduced output due to overheating.

The warranty period shall begin on the date of luminaire delivery. The Contractor shall verify that the Resident Engineer has noted the delivery date in the daily diary. Copy of the shipment and delivery documentation shall be submitted with the final documentation.

The replacement luminaire shall be of the same manufacturer, model, and photometric distribution as the original.

Method of Measurement.

The rated initial minimum luminous flux (lumen output) of the light source, as installed in the luminaire, shall be according to the following table for each specified output designation.

Designation Type	Minimum Initial Luminous Flux	Designation Type	Minimum Initial Luminous Flux
Α	2,200	F	12,500
В	3,150	G	15,500
С	4,400	Н	25,200
D	6,300	I	33,000
E	9,450		

Where delivered lumens is defined as the minimum initial delivered lumens at the specified color temperature. Luminaires with an initial luminous flux less than the values listed in the above table

Contract: 61L99 County:Will

will not be acceptable even if they meet the requirements given in the Luminaire Performance table shown in the contract.

Basis of Payment.

This work will be paid for at the contract unit price per each for **LUMINAIRE**, **LED**, **ROADWAY**, of the output designation specified.

TRAFFIC SIGNAL GENERAL REQUIREMENTS

Effective: May 22, 2002 Revised: March 1, 2024

800.01TS

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations.

All material furnished shall be new unless otherwise noted herein. Traffic signal construction and maintenance work shall be performed by personnel holding current International Municipal Signal Association (IMSA)/Illinois Public Service Institute (IPSI) Traffic Signal Technician Level II certification. A copy of the certification shall be immediately available upon request of the Engineer. The work to be done under the Contract consists of furnishing, installing, and maintaining all traffic signal work and items as specified in the plans and as specified herein in a manner acceptable and approved by the Engineer.

Definitions of Terms.

Add the following to Section 101 of the Standard Specifications:

- **101.56 Manufacturer.** Company that sells a particular type of product directly to the Contractor or the Vendor.
- **101.57 Vendor.** Company that supplies, represents, and provides technical support for IDOT District One approved traffic signal controllers and other related equipment. The Vendor shall be located within IDOT District One and shall:
 - (1) Be full service with on-site facilities to assemble, test and troubleshoot traffic signal controllers and cabinet assemblies.
 - (2) Maintain an inventory of IDOT District One approved controllers and cabinets.

Contract: 61L99 County:Will

- (3) Be staffed with permanent sales and technical personnel able to provide traffic signal controller and cabinet expertise and support.
- (4) Have technical staff that hold current IMSA/IPSI Traffic Signal Technician Level III certification and shall attend traffic signal turn-ons as well as cabinet and/or controller modifications.

Submittals.

Revise Article 801.05 of the Standard Specifications to read:

"All material approval requests shall be submitted electronically following District guidelines unless directed otherwise by the Engineer. Submittal requirements shall include, but not limited to the following:

- (1) All material approval requests shall be made prior to or no later than the date of the preconstruction meeting. A list of major traffic signal items can be found in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
- (2) Product data and shop drawings shall be assembled by pay item. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.
- (3) Original manufacturer published product data and shop drawing sheets with legible dimensions and details shall be submitted for review.
- (4) When hard copy submittals are necessary, four (4) complete copies of the manufacturer's descriptive literatures and technical data for the traffic signal materials shall be submitted. For hard copy or electronic submittals, the descriptive literature and technical data shall be adequate for determining whether the materials meet the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
- (5) When hard copy submittals are necessary for structural elements, four (4) complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials shall be submitted.
- (6) Partial or incomplete submittals will be returned without review.

Contract: 61L99 County:Will

- (7) Certain non-standard mast arm poles and special structural elements will require additional review from IDOT's Central Office. Examples include ornamental/decorative, non-standard length mast arm pole assemblies and monotube structures.
- (8) The Contract number or Permit number, project location/limits, and corresponding pay code number must be on each sheet of correspondence, material approval, and mast arm poles and assemblies drawings.
- (9) Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections and/or tests of material shall be complete with all test data, dates, and times.
- (10) After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with Contract and specification requirements.
- (11) The Contractor shall secure approved materials in a timely manner to assure construction schedules are not delayed.
- (12) All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify Contract compliance at no additional cost to the Contract.
- (13) Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

Contract: 61L99 County:Will

- (14) The Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure proper placement of Contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.
- (15) Revised cabinet wiring diagrams shall be submitted whenever any wiring modifications are made to the traffic signal cabinet."

Marking Proposed Locations.

Revise "Marking Proposed Locations for Highway Lighting System" of Article 801.09 to read "Marking Proposed Locations for Highway Lighting System and Traffic Signals."

Add the following to Article 801.09 of the Standard Specifications:

"It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to ordering materials and beginning construction. This shall include locating the mast arm foundations and verifying the mast arms lengths."

Inspection of Electrical Systems.

Add the following to Article 801.10 of the Standard Specifications:

(c) All cabinets, including temporary traffic signal cabinets, shall be assembled by an approved Vendor in District One. The Department reserves the right to request any controller and cabinet to be tested at the Vendor's facility prior to field installation at no extra cost to the Contract.

Maintenance and Responsibility of Traffic Signal and Flashing Beacon Installations. Replace Article 801.11(b) of the Standard Specifications to read:

- (b) Traffic Signals and Flashing Beacons. The Contractor shall be responsible for maintaining the traffic signal/flashing beacon installation in proper operating condition.
 - (1) General.
 - a. The Contractor must notify the Area Traffic Signal Maintenance and Operations Engineer of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. The Department will attempt to

ntract: 61L99 County:Will

fulfill the Contractor's inspection date request(s); however, workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested inspection date(s) cannot be scheduled by the Department.

- b. Full maintenance responsibility shall start upon the successful completion of a maintenance transfer inspection, or as directed by the Engineer. If the Contractor begins any physical work on the Contract or any portion thereof prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at the time of transfer at no cost to the owner of the traffic signal equipment. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection, otherwise the traffic signal installation will not be accepted.
- c. All traffic signals within the limits of the Contract or those which have the item "MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION," "TEMPORARY TRAFFIC SIGNAL INSTALLATION", "TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION", "TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION", and/or "MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION" shall become the full responsibility of the Contractor. Maintenance responsibility shall end upon issuance of final acceptance by the Engineer.
- d. The Contractor shall have electricians with IMSA/IPSI Traffic Signal Technician Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request by the Engineer.
- e. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle preemption (EVP) equipment, master controllers, network switches, uninterruptable power supply (UPS) and batteries, pan-tilt-zoom (PTZ) cameras, vehicle detection, handholes, lighted signs, telephone service installations, cellular modems, radios, communication cables, and other traffic signal equipment. All conduit and related equipment to adjacent intersections shall be maintained to the far back handhole, or as directed by the Engineer. If adjacent intersections are part of Contract

> Contract: 61L99 County:Will

work, then maintenance of all conduit and related equipment shall be included in this item.

- f. Regional transit, County, and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as network switches and transit signal priority (TSP, SCP, and BRT) servers, radios, and other devices, where maintenance shall be coordinated with the owner.
- g. Maintenance shall not include automatic traffic enforcement equipment such as red light enforcement cameras, detectors, or peripheral equipment. This equipment is operated and maintained by others and shall be deactivated while on Contractor maintenance.
- h. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

(2) Maintenance.

- a. The Contractor shall inspect all traffic signal equipment and appurtenances every two (2) weeks to ensure they are functioning properly. Signal heads shall be properly adjusted, including plumb, and tightly mounted. All controller cabinets, signal posts, and controller pedestals shall be tight on their foundations and in alignment. Deficient equipment shall be repaired or replaced as necessary. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as routine maintenance, all portions of EVP equipment. The Contractor shall always maintain enough materials and equipment in stock to provide effective temporary and permanent repairs. The Contractor shall supply a detailed maintenance log monthly that includes dates, locations, names of electricians performing the required checks and inspections, and any other information requested by the Engineer. The Contractor shall attend any additional inspections as requested by the Engineer. The Contractor shall check the controllers, relays, and detectors after receiving complaints or calls to ascertain that they are functioning properly and make all necessary repairs and replacement.
- b. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation which exceeds fifteen (15) minutes must have prior approval

County:Will

from the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 9:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

- c. The Contractor shall provide immediate corrective action when any part(s) of the signal fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation in flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall install cones on all lane lines at the stop bar on each approach, R1-1 (36 in. minimum) "STOP" signs at the stop bar on each approach on the right side and on raised medians (where applicable), and black on fluorescent orange "SIGNALS OUT AHEAD" warning signs followed by fluorescent orange W3-1 symbolic stop ahead warning signs on all approaches to the intersection.
- d. Temporary replacement of a damaged or knocked down mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals is not permitted.
- e. The Contractor shall provide the Engineer with two (2) 24-hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.
- f. Traffic signal equipment which is lost, damaged, or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.
- g. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals and other equipment noted herein. The Contractor shall respond to all emergency calls from the Department or others within

Contract: 61L99 County:Will

one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new equipment meeting current District One traffic signal specifications. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional cost to the Contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition, or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the Department's Electrical Maintenance Contractor perform the maintenance work. The Contractor shall be responsible for all of the Department's Electrical Maintenance Contractor's costs and liquidated damages of \$1,000 per day per occurrence. The Department's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to inspect the traffic signal installation that has been transferred to the Contractor for maintenance. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection, otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed. The Department may inspect any signalizing device on the Department's highway system at any time without notification. The Contractor shall not install padlocks on traffic signal cabinets or otherwise restrict the Department's access to the cabinet or controller.

h. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

Contract: 61L99 County:Will

- i. The Contractor shall be responsible to clear snow, ice, dirt, debris, vegetation, temporary fence, or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.
- j. The Contractor shall maintain the traffic signal in normal operation during any loss of utility or battery backup power. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power shall not be paid for separately but shall be included in the Contract.
- (3) Basis of Payment. This work will be paid for at the Contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION. Each location will be paid for separately. Maintenance of a flashing beacon shall be paid for at the Contract unit price for MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION. Each flashing beacon will be paid for separately.

Damage to Traffic Signal System.

Add the following to Article 801.12(b) of the Standard Specifications:

"Any traffic signal control equipment that is damaged and non-repairable or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection. Repair or replace any equipment damaged within the time shown in the table below:

ITEM	RESPONSE TIME	SERVICE RESTORATION	PERMANENT REPAIR (calendar days)
Cabinet	1 hour	24 hours	21 days
Controllers and Peripheral Equipment	1 hour	4 hours	21 days
System Detector Loop	1 hour	N/A	7 days
All Other Detectors	1 hour	N/A	21 days
Signal Head and Lenses	1 hour	4 hours	7 days
Aviation Red Beacon	1 hour	4 hours	7 days
Mast Arm Assembly and Pole	1 hour	4 hours	7 days

> Contract: 61L99 County:Will

ITEM	RESPONSE TIME	SERVICE RESTORATION	PERMANENT REPAIR (calendar days)
Traffic Signal Post	1 hour	4 hours	7 days
Cable and Conduit	1 hour	4 hours	7 days
Interconnect and Telemetry	1 hour	4 hours	7 days
Graffiti Removal	N/A	N/A	7 days
Misalignment of Signal Heads	1 hour	4 hours	4 hours
Closed Loop Monitoring System	1 hour	24 hours	14 days
Post and Poles Plumb Vertically	N/A	N/A	21 days
Controller, Post & Pole Foundations	N/A	N/A	21 days
Complaints, Calls, Controller or System Alarms, Timing, Phasing, Programming	1 hour	4 hours	N/A
Patrol Truck Deficiencies	N/A	24 hours	24 hours
Signal Heads Visibility	1 day	2 days	14 days

Temporary replacement of a damaged or knocked down mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Replacement of any equipment for any reason shall be reported to the Area Traffic Signal Maintenance and Operations Engineer in writing within 24 hours. Permanent and temporary replacement of the controller and/or cabinet shall require inspection and testing by the Vendor.

Automatic Traffic Enforcement equipment, such as red light enforcement cameras, detectors, and peripheral equipment, that is damaged or not operating properly from any cause, shall be the responsibility of the municipality or the automatic traffic enforcement company per Permit agreement."

Traffic Signal Inspection (TURN-ON).

Revise Article 801.15(b) of the Standard Specifications to read:

"Turn-on. It is the intent to have all electric work completed and equipment field tested by the Contractor and/or Vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled, and the Contractor will be required to reschedule at another date. The maintenance of the traffic

County:Will

signals will not be accepted until all punch list work is corrected and re-inspected.

When the Contractor requests a turn-on and inspection of the completed traffic signal installation(s), the request must be made to the Area Traffic Signal Maintenance and Operations Engineer a minimum of seven (7) working days prior to the time of the requested inspection. The Department will attempt to fulfill the Contractor's turn-on and inspection date request(s); however, workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested turn-on and inspection date(s) cannot be scheduled by the Department. The Department will not grant a field inspection until written or electronic notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Contractor must invite local fire department personnel to the turn-on when emergency vehicle preemption (EVP) is included in the project. When the Contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, and/or TEMPORARY TRAFFIC SIGNAL TIMING, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a police officer to assist with traffic control at the time of testing.

The Contractor shall provide a representative from the Vendor who is knowledgeable of the cabinet design and controller functions to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons.

Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The signals shall continue to be maintained by the Contractor until final acceptance.

The Department requires the following Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. An electronic media device shall be submitted with separate folders corresponding to each numbered title below. The electronic media device shall be labeled with date, project location, company, and Contract or Permit number. Electronic record drawings and material approvals shall be submitted prior to traffic signal turn-on for review by the Department as described in the Record Drawings section herein.

Final Project Documentation:

Contract: 61L99 County:Will

- (1) Record Drawings. Electronically produced signal plans of record with field revisions marked in red. Two (2) hard copies of 11 in. x 17 in. record drawings shall also be provided.
- (2) Field Testing. Written notification from the Contractor and the Vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13).
- (3) Material Approvals. Material approval documentation.
- (4) Manuals. Operation and service manuals of the signal controller and associated control equipment.
- (5) Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies of 11 in. x 17 in. cabinet wiring diagrams shall be provided along with electronic PDF and DGN files of the cabinet wiring diagram. Five (5) hard copies of the cable logs and electronic Excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.
- (6) Warrantees and Guarantees. All manufacturer and Contractor warrantees and guarantees required by Article 801.14.
- (7) GPS Coordinates. GPS coordinates of traffic signal equipment as described in the Record Drawings section herein.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn-on", completeness of the required documentation, and successful operation during a minimum 72 hour "burn-in" period following activation of traffic signal equipment. If approved, traffic signal acceptance shall be verbal at the final inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the turn-on. The Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer to

Contract: 61L99 County:Will

schedule an inspection of all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.

All cost of work and materials required to comply with the requirements herein shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the requirements herein shall be subject to removal and disposal at the Contractor's expense."

Record Drawings.

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the second and third paragraphs of Article 801.16 of the Standard Specifications to read:

"When the work is complete, and seven (7) days before the request for a final inspection, electronic Contract drawings, stamped "RECORD DRAWINGS", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format. If the Contract consists of multiple intersections, each intersection shall be saved as an individual PDF file with TS# and location name in its file name.

In addition to the record drawings, copies of the final material approvals which have been Approved or Approved as Noted shall be submitted in PDF format. The PDF files shall clearly indicate the pay item either by filename or PDF Table of Contents referencing the respective pay item number for multi-item PDF files. Specific part or model numbers of items which have been selected shall be clearly visible.

The Contractor shall provide two (2) 11 in. x 17 in. hard copies of electronically produced final record drawings to be kept inside each traffic signal cabinet within project limits."

Add the following to Article 801.16 of the Standard Specifications:

"In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following traffic signal components being installed, modified or being affected in other ways by the Contract:

- All Mast Arm Poles and Posts
- Traffic Signal Wood Poles
- Railroad Bungalow
- UPS

Contract: 61L99 County:Will

- Handholes
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV/PTZ Camera installations

Datum to be used shall be North American 1983.

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

- File shall be named: TSXXX_YY-MM-DD.csv (i.e. TS22157_24-01-01.csv)
- Each intersection shall have its own file
- Row 1 should have the location name (i.e. IL 31 @ Klausen)
- Row 2 is blank
- Row 3 is the headers for the columns
- Row 4 starts the data
- Column A (Date) should be in the following format: MM/DD/YYYY
- Column B (Item) as shown in the table below
- Column C (Description) as shown in the table below
- Column D and E (GPS Data) should be in decimal form

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2024	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	-87.793378
01/01/2024	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	-87.792571
01/01/2024	ES (Electrical Service)	Ground mount, Pole mount	41.765532	-87.543571
01/01/2024	CC (Controller Cabinet)		41.602248	-87.794053
01/01/2024	PTZ (PTZ)	NEQ extension pole	41.593434	-87.769876
01/01/2024	POST (Post)		41.651848	-87.762053
01/01/2024	MCC (Master Controller Cabinet)		41.584593	-87.793378
01/01/2024	COMC (Communication Cabinet)		41.584600	-87.793432
01/01/2024	BBS (Battery Backup System)		41.558532	-87.792571

County:Will

Data collection can be made as construction progresses or can be collected after all items are installed. If the data is unacceptable, the Contractor shall make corrections to the data collection equipment and/or process and resubmit the data for review and approval as specified.

Data shall have a minimum 1 ft accuracy after post processing."

Restoration of Work Area.

Add the following article to Section 801 of the Standard Specifications:

"801.17 Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, underground raceways, detector loop installation or replacement, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer.

Exposed holes created from removal or relocation of traffic signal equipment shall be sealed using a zinc-plated fender washer with toggle bolt.

Restoration of the work area shall be included in the Contract without any extra compensation allowed to the Contractor.

Removal, Disposal, and Salvage of Existing Traffic Signal Equipment.

The removal, disposal, and/or salvage of existing traffic signal equipment shall become the property of the Contractor and disposed of by the Contractor outside the State's right-of-way, unless otherwise noted. No additional compensation shall be provided to the Contractor for removal, disposal or salvage expense for the work in the Contract."

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/unenergized signal sections, visors, and retroreflective backplates. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two (2) straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service. Pedestrian pushbuttons that are not in service shall be covered with a durable material such as described above or burlap that is secured in a weather-resistant manner. The entire housing, including the pedestrian sign, shall also be covered on the front side.

Contract: 61L99 County:Will

Turn-on of New Traffic Signal Installations.

The following only applies to new traffic signals at previously unsignalized locations.

The signal responsibility shall begin at the start of signal construction and shall end upon issuance of final acceptance by the Engineer. New traffic signal heads and indications may not be installed more than two (2) weeks (14 calendar days) prior to the scheduled turn-on of the traffic signal to avoid motorist confusion caused by the presence of new signal heads, even if properly covered. Unenergized signal indications shall be bagged until one (1) hour prior to the scheduled turn-on per the Bagging Signal Heads section above.

New stop bars and crosswalks on approaches that did not previously have stop control shall NOT be installed until the day of the traffic signal turn-on.

A Portable Changeable Message Sign (PCMS) must be placed two (2) weeks prior to the scheduled new traffic signal turn-on for all approaches to the intersection with the following messages:

NEW TRAFFIC SIGNAL STARTING MMM ##

where "MMM" and "##" are the 3-character month abbreviation and day of the scheduled turnon, respectively.

On the day of the turn-on, change messages to read:

NEW SIGNAL AHEAD BE PREPARED TO STOP

The PCMS must remain in place for two (2) weeks following the day of the turn-on.

Conflicting Stop signs shall be removed immediately at the time of the traffic signal turn-on.

Locating Underground Facilities.

Revise Section 803 to the Standard Specifications to read:

"IDOT traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger. If the Contract requires the maintenance services of an Electrical Contractor, the Contractor shall be responsible at their own expense for locating all

County:Will

existing IDOT electrical facilities, including but not limited to interconnect conduit and handholes, prior to performing any work. A maintenance transfer is required prior to any locating work. If this Contract does not require the maintenance services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests will be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities, locally owned equipment, and leased enforcement camera system facilities, the local Counties or Municipalities may need to be contacted: in the City of Chicago contact Digger at (312) 744-7000, and for all other locations contact J.U.L.I.E. at 1-800-892-0123 or 811.

The Contractor shall take whatever precautions to protect the electric cable or electric conductors in conduit from damage during location and construction operations. If the wiring is damaged, the Contractor shall replace the entire length of cable or conductors in conduit, in a manner satisfactory to the Engineer. Splicing below grade will not be permitted.

In the event the repairs are not made by the Contractor, the Contractor shall reimburse the Department for such repairs within sixty (60) days of receiving written notification of said damage. Otherwise, the cost of such repairs will be deducted from monies due or which will become due the Contractor under the terms of the Contract."

Grounding of Traffic Signal Systems

Revise Section 806 of the Standard Specifications to read:

"All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. This work shall be in accordance with IDOT's District One Traffic Signal Design Details.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations were measured resistance exceeds 25 ohms. Ground rods are included in the applicable concrete foundation or service installation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

Contract: 61L99 County:Will

- (a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- (b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications:
 - (1) Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 - (2) Equipment grounding conductors shall be bonded, using a UL Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations, including spare or empty conduits and conduit protruding from handhole walls.
 - (3) All metallic and non-metallic raceways, including spare or empty raceways, shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 V and/or fiber optic cable will not be required to include an equipment grounding conductor.
 - (4) Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.
- (c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, and UL listed clamps."

ELECTRIC CABLE

Effective: May 22, 2002 Revised: July 1, 2015

County:Will

873.01TS

Delete "or stranded, and No. 12 or" from the last sentence of Article 1076.04 (a) of the Standard Specifications.

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

<u>LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED</u> SIGNAL HEAD

Effective: May 22, 2002 Revised: March 1, 2025

880.01TS

Materials.

Add the following to Section 1078 of the Standard Specifications:

"LED modules proposed for use and not previously approved by IDOT District One will require independent testing for compliance to current VTCSH-ITE standards for the product and be Intertek ETL Verified. This would include modules from new Vendors and new models from IDOT District One approved Vendors.

The proposed independent testing facility shall be approved by IDOT District One. Independent testing must include a minimum of two (2) randomly selected modules of each type of module (i.e. ball, arrow, pedestrian, etc.) used in the District and include as a minimum Luminous Intensity and Chromaticity tests. However, complete module performance verification testing may be required by the Engineer to assure the accuracy of the Vendor's published data and previous test results. An IDOT representative will select sample modules from the local warehouse and mark the modules for testing. Independent test results shall meet current ITE standards and vendor's published data. Any module failures shall require retesting of the module type. All costs associated with the selection of sample modules, testing, reporting, and retesting, if applicable, shall be the responsibility of the LED module Vendor and not be a cost to this Contract.

All signal heads shall provide 12 in. (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signals heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall

County:Will

be applied to all metallic mounting bracket joints and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts and shall be constructed of the same material as the brackets.

The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTCSH], or applicable successor ITE specifications, or show signs of entrance of moisture or contaminants, shall be replaced or repaired. The Vendor's written warranty for the LED signal modules shall be dated, signed by a Vendor's representative, and included in the product submittal to the State. See Article 801.14 of the Standard Specifications for warranty information.

- (a) Physical and Mechanical Requirements
 - (1) Modules can be manufactured under this specification for the following faces:
 - a. 12 in. (300 mm) circular, multi-section
 - b. 12 in. (300 mm) arrow, multi-section
 - (2) The maximum weight of a module shall be 4 lb (1.8 kg).
 - (3) Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.
 - (4) The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.
 - (5) The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.
 - (6) Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 in. (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 in. (12.7mm) letters next to the symbol.

> Contract: 61L99 County:Will

(b) Photometric Requirements

(1) The LEDs utilized in the modules shall be AllnGaP technology for red and InGaN for green and amber indications and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40 °C to 74 °C.

(c) Electrical

- (1) Maximum power consumption for LED modules as per the tables in Article 1078.01.
- (2) Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
- (3) The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
- (4) When a current of 20 mA AC or less is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
- (5) The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
- (6) LED arrows shall be wired such that a loss or the failure of one or more LEDs will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

- (1) Retrofit modules can be manufactured under this specification for the following faces:
 - a. 12 in. (300 mm) circular, multi-section
 - b. 12 in. (300 mm) arrow, multi-section
- (2) Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.

Contract: 61L99 County:Will

- (3) The maximum weight of a Retrofit module shall be 4 lb (1.8 kg).
- (4) Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.
- (5) Electrical conductors for modules, including Retrofit modules, shall be 39-2/5 in. (1 m) in length, with quick disconnect terminals attached.
- (6) The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.
- (e) The following specification requirements apply to the 12 in. (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
 - (1) The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.
 - (2) The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.
- (f) The following specification requirement applies to the 12 in. (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.
 - (1) The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

Delete the fourth paragraph of Article 880.03 of the Standard Specifications. Refer to the "Bagging Signal Heads" section of the District 1 Traffic Signal Special Provision 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS."

Basis of Payment.

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

"The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition."

Revise the second paragraph of Article 880.04 of the Standard Specifications to read:

County:Will

If the work consists of retrofitting an existing polycarbonate traffic signal head with light emitting diodes (LEDs), it will be paid for as a SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. Price shall be payment in full for removal of the existing module, furnishing the equipment described above including LED modules, all mounting hardware, and installing them in satisfactory operating condition. The type specified will indicate the number of signal faces, the number of signal sections in each signal face and the method of mounting.

LED SIGNAL FACE, LENS COVER

Effective: July 1, 2021 Revised: March 1, 2025

880.03TS

Description.

This work shall consist of furnishing and installing a signal lens cover with the purpose or preventing snow buildup on and around a signal lens allowing for clear indication during inclement weather.

This item shall fit over a 12 in. signal head lens and shall include the clear lens cover, attachment collar, and any clips or fasteners necessary to fit it flush. The cover must be installed in accordance with the Manufacturer's instructions and in a manner that prevents dust, debris, or moisture buildup on the inside of the lens cover that could affect the signal indication visibility. All mounting hardware including screws used for lens cover installation must be stainless steel. Lens covers shall be installed on all red signal head indications.

The snow resistant signal head lens cover must be warrantied for a period of three (3) years from final inspection and must be free from material and workmanship defects.

Basis of Payment.

This work shall be paid for at the Contract unit price each for LED SIGNAL FACE, LENS COVER, the price of which shall include the cost for all work and material described herein and includes furnishing, installing, and all mounting hardware necessary for a fully operational snow resistant signal head lens cover.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Effective: May 22, 2002 Revised: March 1, 2024

895.02TS

Add the following to Article 895.05 of the Standard Specifications:

Contract: 61L99 County:Will

"The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor's expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within thirty (30) days of removing it from the traffic signal installation. The Contractor shall provide one hard copy and one electronic file of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned according to these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until approval by the Department. A delivery receipt will be signed by the State's Electrical Maintenance Contractor indicating the items have been returned.

The Contractor shall safely store and arrange for pick up or delivery of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost, damaged, or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications at no cost to the contract."

REBUILD EXISTING HANDHOLE

Effective: January 1, 2002 Revised: March 1, 2025

895.04TS

This item shall consist of rebuilding and bringing to grade a handhole, double handhole, or heavy duty handhole at a location shown on the plans or as directed by the Engineer. The work shall consist of removing the handhole frame and cover and the walls of the handhole to a depth of eight (8) inches below the finished grade.

Handhole and Heavy Duty Handhole

Four (4) holes, four (4) inches in depth and one half (1/2) inch in diameter, shall be drilled into the remaining concrete; one hole centered on each of the four handhole walls. Four (4) #3 epoxy coated steel rebar, eight (8) inches in length, shall be furnished and shall be installed in

County:Will

the drilled holes with a masonry epoxy.

Double Handhole

Six (6) holes, four (4) inches in depth and one half (1/2) inch in diameter, shall be drilled into the remaining concrete; one hole centered on both short walls and two spaced equally on both long walls. Six (6) #3 epoxy coated steel rebar, eight (8) inches in length, shall be furnished and shall be installed in the drilled holes with a masonry epoxy.

All concrete debris shall be disposed of outside the right-of-way. All rebar must meet the specifications set forth in 1006.10.

The area adjacent to each side of the handhole shall be excavated to allow forming. All steel hooks, handhole frame, cover, and concrete shall be provided to construct a rebuilt handhole according to applicable portions of Section 814 of the Standard Specification and as modified in 814.01TS HANDHOLES Special Provision. The existing frame and cover shall be replaced if it was damaged during removal or as determined by the Engineer.

Basis of Payment.

This work shall be paid for at the contract unit price each for REBUILD EXISTING HANDHOLE, which price shall be payment in full for all labor, materials, and equipment necessary to complete the work described above and as indicated on the drawings.

PLANTING WOODY PLANTS

This work shall consist of planting woody plants as specified in Section 253 of the Standard Specifications with the following revisions:

Delete Article 253.03 Planting Time and substitute the following:

Spring Planting. This work shall be performed between March 15th and May 31st except that evergreen planting shall be performed between March 15th and April 30th in the northern zone.

Add the following to Article 253.03 (a) (2) and (b):

All plants shall be obtained from Illinois Nurserymen's Association or appropriate state chapter nurseries. All trees and shrubs shall be dug prior to leafing out (bud break) in the spring or when plants have gone dormant in the fall, except for the following species which are only to be dug prior to leafing out in the spring:

- Red Maple (Acer rubra)
- Alder (alnus spp.)
- Buckeye (Aesculus spp.)
- Birch (Betulus spp.)

Contract: 61L99 County:Will

- American Hornbeam (Carpinus caroliana)
- Hickory (Carya spp.)
- Eastern Redbud (Cercis spp.)
- American Yellowwood (Cladrastis kentuckea spp.)
- Corylus (Filbert spp.)
- Hawthorn (Crataegus spp.)
- Walnut (Juglans spp.)
- Sweetgum (Liquidambar spp.)
- Tuliptree (Liriodendron spp.)
- Dawn Redwood (Metasequoia spp.)
- Black Tupelo (Nyssa sylvatica)
- American Hophornbeam (Ostrya virginiana)
- Planetree (Platanus spp.)
- Poplar (Populus spp.)
- Cherry (Prunus spp.)
- Oak (Quercus spp.)
- Willow (Salix spp.)
- Sassafras (Sassafras albidum)
- Baldcypress (Taxodium distichum)
- Broadleaf Evergreens (all)
- Vines (all)

Fall Planting. This work shall be performed between October 1 and November 30 except that evergreen planting shall be performed between August 15 and October 15.

Planting dates are dependent on species of plant material and weather. Planting might begin or end prior or after above dates as approved by the Engineer. Do not plant when soil is muddy or during frost.

Add the following to Article 253.05 Transportation:

Cover plants during transport to prevent desiccation. Plant material transported without cover shall be automatically rejected. During loading and unloading, plants shall be handled such that stems are not stressed, scraped, or broken and that root balls are kept intact.

Delete the third sentence of Article 253.07 and substitute the following:

Trees must be installed first to establish proper layout and to avoid damage to other plantings such as shrubs and perennials.

The Contractor shall be responsible for all tree, shrub, and vine layout. The layout must be

Contract: 61L99 County:Will

performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine dimensions.

Tree and shrub locations within each planting area shall be marked with different color stakes/flags and labeled to denote the different tree and shrub species.

Shrub and vine beds will first be marked out with flags to delineate the perimeter of the planting bed. Once the planting bed has been approved by the Roadside Development Unit, the perimeter shall be painted prior to the removal of the flags and turf. The removal of the existing turf will be by a method approved by the Engineer.

Prior to shrub, vine installation, all plants shall be placed above ground or planting locations clearly marked out.

All utilities shall have been marked prior to contacting the Roadside Development Unit. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of seven (7) working days prior to installation for approval.

Delete the first paragraph to Article 253.08 Excavation of Plant Holes and substitute with the following:

Protect structures, utilities, sidewalks, bicycle paths, knee walls, fences, pavements, utility boxes, other facilities, lawns, and existing plants from damage caused by planting operations. Excavation of the planting hole may be performed by either hand, machine excavator, or auger.

The excavated material shall not be stockpiled on turf, in ditches, or used to create enormous water saucer berms around newly installed trees or shrubs. Remove all excess excavated subsoil from the site and dispose as specified in Article 202.03.

Delete the second sentence of Article 253.08 Excavation of Plant Holes (a) and the third paragraph of Article 253.08(b) and substitute with the following:

<u>Excavation of planting hole width</u>. Planting holes for trees, shrubs, and vines shall be three times the diameter of the root mass and with 45-degree sides sloping down to the base of the root mass to encourage rapid root growth. Roots can become deformed by the edge of the hole if the hole is too small and will hinder root growth.

Planting holes dug with an auger shall have the sides cut down with a shovel to eliminate the glazed, smooth sides and create sloping sides.

<u>Excavation of planting hole depth</u>. The root flare shall be visible at the top of the root mass. If the trunk flare is not visible, carefully remove soil from around the trunk until the root flare is

Contract: 61L99 County:Will

visible without damaging the roots. Remove excess soil until the top of the root mass exposes the root collar.

The root flare shall always be slightly above the surface of the surrounding soil. The depth of the hole shall be equal to the depth of the root mass minus one (1) inch allowing the tree or shrub to sit one (1) inch higher than the surrounding soil surface for trees that have a 1-inch caliper or smaller. The depth of the hole shall be equal to the depth of the root mass minus two (2) inches allowing the tree or shrub to sit two (2) inches higher than the surrounding soil surface for trees that have a 2-inch caliper or larger.

For stability, the root mass shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

<u>Excavation of planting hole on slopes</u>. Excavate away the slope above the planting hole to create a flattened area uphill of the planting hole to prevent the uphill roots from being buried too deep. Place the excess soil on the downslope of the planting hole to extend the planting shelf to ensure roots on the downhill side of the tree remain buried. The planting hole shall be three times the diameter of the root mass and saucer shaped. The hole may be a bit elongated to fit the contour of the slope as opposed to the typical round hole on flat ground.

Add backfill to create a small berm on the downhill portion of the planting shelf to trap water and encourage movement into the soil to increase water filtration around the tree. Smooth out the slope above the plant where you have cut into the soil so the old slope and the new slope transition together smoothly.

Add the following to Article 253.08 Excavation of Plant Holes (b):

When planting shrubs in shrub beds or vines in vine beds as shown on the plans or as directed by the Engineer, the Contractor will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to removing the existing turf. The removal of the existing turf will be by a method approved by the Engineer. Areas damaged outside the delineated planting beds shall be restored at the Contractor's expense.

Spade a planting bed edge at approximately a 45-degree angle and to a depth of approximately 3-inches around the perimeter of the shrub bed prior to placement of the mulch. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.

Delete Article 253.09 (b) Pruning and substitute with the following:

Deciduous Shrubs. Shrubs shall be pruned to remove dead, conflicting, or broken branches and shall preserve the natural form of the shrub.

Delete the third and fourth paragraphs of Article 253.10 Planting Procedures and Article

Contract: 61L99 County:Will

253.10 (a) and substitute the following:

Approved watering equipment shall be at the immediate work site area and in operational condition PRIOR TO STARTING the planting operation and DURING all planting operations OR PLANTING WILL NOT BE ALLOWED.

All plants shall be placed in a plumb position and avoid the appearance of leaning. Confirm the tree is straight from two directions prior to backfilling.

Before the plant is placed in the hole, any paper or cardboard trunk wrap shall be removed. Check that the trunk is not damaged. Any soil covering the tree's root flare shall be removed to expose the crown prior to planting.

Check the depth of the root ball in the planting hole. With the root flare exposed, one-inch caliper trees shall be set one inch higher than the surrounding soil and two-inch and larger caliper trees shall be set two inches higher than the surrounding soil. The root flare shall always be slightly above the surface of the surrounding soil. For stability, the root ball shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

After the plant is place in the hole, all cords and burlap shall be removed from the trunk. Remove the wire basket from the top three quarters (3/4) of the root ball. The remaining burlap shall be loosened and scored to provide the root system quick contact with the soil. All ropes or twine shall be removed from the root ball and tree trunk. All materials shall be disposed of properly.

The plant hole shall be backfilled with the same soil that was removed from the hole. Clay soil clumps shall be broken up as much as possible. Where rocks, gravel, heavy clay, or other debris are encountered, clean topsoil shall be used. Do not backfill excavation with subsoil.

The hole shall be 1/3 filled with soil and firmly packed to assure the plant remains in plumb, then saturated with water. After the water has soaked in, complete the remaining backfill in 8" lifts, tamping the topsoil to eliminate voids, and then the hole shall be saturated again. Maintain plumb during backfilling. Backfill to the edge of the root mass and do not place any soil on top of the root mass. Visible root flair shall be left exposed, uncovered by the addition of soil.

Add the following to Article 253.10 (b):

After removal of the container, inspect the root system for circling, matted or crowded roots at the container sides and bottom. Using a sharp knife or hand pruners, prune, cut, and loosen any parts of the root system requiring corrective action.

Delete the first sentence of Article 253.10(e) and substitute with the following:

Contract: 61L99 County:Will

<u>Water Saucer</u>. All plants placed individually and not specified to be bedded with other plants, shall have a water saucer constructed of soil by mounding up the soil 4-inches high x 8-inches wide outside the edge of the planting hole.

Delete Article 253.11 and substitute the following:

Individual trees, shrubs, shrub beds, and vines shall be mulched within 48 hours after being planted. No weed barrier fabric will be required for tree and shrub plantings.

The mulch shall consist of wood chips or shredded tree bark free not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. Mulch shall be aged in stockpiles for a minimum of four (4) months where interior temperatures reach a minimum of 140-degrees. The mulch shall be free from inorganic materials, contaminants, fuels, invasive weed seeds, disease, harmful insects such as emerald ash borer or any other type of material detrimental to plant growth. A sample must be supplied to the Roadside Development Unit for approval prior to performing any work. Allow a minimum of seven (7) working days prior to installation for approval.

Mulch shall be applied at a depth of 4-inches around all plants within the entire mulched bed area or around each individual tree forming a minimum 5-foot diameter mulch ring around each tree. An excess of 4-inches of mulch is unacceptable, and excess shall be removed. Mulch shall not be tapered so that no mulch shall be placed within 6-inches of the shrub base or trunk to allow the root flare to be exposed and shall be free of mulch contact.

Care shall be taken not to bury leaves, stems, or vines under mulch material. All finished mulch areas shall be left smooth and level to maintain uniform surface and appearance. After the mulch placement, any debris or piles of material shall be immediately removed from the right of way, including raking excess mulch out of turf areas in accordance with Article 202.03.

Pre-emergent Herbicide shall be used in the around the plant beds and tree rings after the placement of mulch. See specification for Weed Control, Pre-emergent Herbicide.

Delete Article 253.12 Wrapping and substitute the following:

Within 48 hours after planting, screen mesh shall be wrapped around the trunk of all deciduous trees with a caliper of 1-inch or greater. Multi-stem or clump form trees, with individual stems having a caliper of 1-inch or greater, shall have each stem wrapped separately. The screen mesh shall be secured to itself with staples or single wire strands tied to the mesh. Trees shall be wrapped at time of planting, before the installation of mulch. The lower edge of the screen wire shall be in continuous contact with the ground and shall extend up to a minimum of 36-inches or to the lowest major branch, whichever is less. Replacement plantings shall not be

Contract: 61L99 County:Will

wrapped.

Delete Article 253.13 Bracing and substitute with the following:

Unless otherwise specified by the Engineer, within 48 hours after planting all deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8-feet in height shall require three 6-foot long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball. The posts shall be driven vertically to a depth of 18-inches below the bottom of the hole. The anchor plate shall be aligned perpendicular to a line between the tree and the post. The tree shall be firmly attached to each post with a double guy of 14-gauge steel wire. The portion of the wire in contact with the tree shall be encased in a hose of a type and length approved by the Engineer.

During the life of the contract, within 72 hours the Contractor shall straighten any tree that deviates from a plumb position. The Contractor shall adjust backfill compaction and install or adjust bracing on the tree as necessary to maintain a plumb position. Replacement trees shall not be braced.

Delete the second sentence of the first paragraph of Article 253.14 Period of Establishment and substitute the following:

This period shall begin in April and end in November of the same year.

Delete the first paragraph of Article 253.15 Plant Care and substitute the following:

During the period of establishment, the Contractor shall properly care for all plants including weeding, watering, adjusting of braces, repair of water saucers, pruning, cultivating, tightening, and repairing supports, repair of wrapping, and furnishing and applying sprays as necessary to keep the plants free of insects and disease, or other work which is necessary to maintain the health and satisfactory appearance of the plantings. The Contractor shall provide plant care a minimum of every two weeks, or within 36 hours following notification by the Engineer. All requirements for plant care shall be considered as included in the cost of the contract.

Delete the first paragraph of Article 253.15 Plant Care (a) and substitute with the following:

During the period of establishment, watering (initial) shall be performed at least every 30 days following installation during the months of May through November and is included in the cost of the contract unit price per each for TREES, SHRUBS, or VINES, of the species, root type, and plant size specified. The Contractor shall apply per week a minimum of 15 gallons of water per tree, 10 gallons per large shrub, 5 gallons per small shrub, and 2 gallons per vine.

Contract: 61L99 County:Will

Additional watering will be done once a week (3 times a month) following installation during the months of May through November. Any required additional watering in between the regularly scheduled (initial) watering(s) will be paid for as Supplemental Watering.

Special consideration in determining water needs must be given during extreme weather conditions or if plants exhibit any signs of stress in between the regularly scheduled every thirty-day watering during the period of establishment. Water immediately if plants show signs of wilting or if top (1) inch to two (2) inches of soil is dry. Water to ensure that moisture penetrates throughout the root zone, including the surrounding soil, and only as frequently as necessary to maintain healthy growth. **Do not overwater.**

The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions. Should excess moisture prevail, the Engineer may delete any or all the additional watering cycles.

Add the following to Article 253.15 Plant Care (c):

The contractor shall correct any vine growing across the ground plane that should be growing up desired vertical element (noise wall, retaining wall, fence, knee wall, etc.). Work may include but is not limited to carefully weaving vines through fence and/or taping vines to vertical elements.

Add the following to Article 253.15 Plant Care (d):

The Contractor shall inspect all trees, shrubs, and vines for pests and diseases at least every two weeks during the months of initial planting through final acceptance. Contractor must identify and monitor pest and diseases and determine action required to maintain the good appearance, health, and top performance of all plant material. Contractor shall notify the Engineer with their inspection findings and recommendations within twenty-four (24) hours of findings. The recommendations for action by the Contractor must be reviewed and by the Engineer for approval/rejection. All approved corrective activities will be considered as included in the cost of the contract and shall be performed within thirty-six (36) hours following notification by the Engineer.

Add the following to Article 253.16 Method of Measurement:

Pre-emergent Herbicide will be measured for payment as specified in Weed Control, Pre-emergent Granular Herbicide.

Additional Watering will be measured for payment as specified in Supplemental Watering.

Delete Article 253.17 Basis of Payment and substitute the following:

Contract: 61L99 County:Will

This work will be paid for at the contract unit price per each for TREES, SHRUBS, or VINES, of the species, root type, and plant size specified, and per unit for SEEDLINGS. The unit price shall include the cost of all materials, equipment, labor, plant care, removal, disposal, and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer. Payment will be made according to the following schedule:

- (a) Initial Payment. Upon completion of planting, mulching, wrapping, and bracing, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third-party bond, the remaining 25 percent of the pay item(s) will be paid."
- (c) The placement of Pre-emergent Herbicide shall be paid for at the contract unit price for WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.
- (d) Additional Watering will be paid for as specified in SUPPLEMENTAL WATERING.

PLANTING PERENNIAL PLANTS

Delete Article 254.03(a) Planting Time and substitute the following:

Bulbs shall be planted between October 15 and November 30. Bulbs shall not be installed prior to trees, shrubs, perennials, and ornamental grasses are planted.

Delete Article 254.05 Layout of Planting and substitute the following:

When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine some dimensions. Bed limits shall be painted or flagged. Individual plants layout shall be marked prior to installation. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of three (3) days prior to installation for approval.

Add the following to Article 254.06 Planting Procedures:

Contract: 61L99 County:Will

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- Spade a planting bed edge at approximately a 45 degree angle and to a
 depth of approximately three (3) inches around the perimeter of the
 perennial bed. Remove any debris created in the spade edging process
 and dispose of as specified in Article 202.03.
- Do not plant when soil is muddy.
- Trees and shrubs must be installed first to establish proper layout and to avoid damage to other plantings.
- Perennial plants shall be planted by a hand method approved by the Engineer. Open holes sized to accommodate roots, place plants so it is level with the surrounding soil and backfill with soil, working carefully to avoid damage to roots and to leave no voids. Build up a small water basin of soil around each plant.
- Thoroughly water plant beds within 2 hours of installation. Do not wash soil onto crowns of plants.

Delete the first sentence of Article 254.07 Mulching and substitute the following:

A mulch sample shall be submitted to the Engineer for approval seven (7) days prior to placing.

Within 24 hours, the entire perennial plant bed shall be mulched with two (2) inches of fine grade Shredded Hardwood Bark Mulch. Hardwood bark mulch shall be clean, finely shredded mixed-hardwood bark not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. All hardwood mulch shall be processed through a hammer mill. Hardwood bark not processed through a hammer mill shall not be accepted.

Care shall be taken to place the mulch to form a saucer around each perennial so as not to smother the plants or bury leaves, stems, or vines under mulch material.

Delete Article 254.08 (b) Period of Establishment and substitute the following:

Perennial plants must undergo a 30-day period of establishment. Additional watering shall be performed not less than once a week for four weeks following installation. Any signs of stress exhibited by plant material must be given special consideration in determining water needs. Water immediately if plants begin to wilt, or if top (1) inch to two (2) inches of soil is dry.

Contract: 61L99 County:Will

Water shall be applied at the rate of a minimum of 2 gallons per square foot. Water to ensure that moisture penetrates throughout the root zone, including the surrounding soil, and only as frequently as necessary to maintain healthy growth. **Do not over water.**

Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional watering.

Water must be applied in such a manner so as not to damage plant material. Water must trickle slowly into soil and completely soak the root zone. An open end hose is unacceptable. Water early in the day and apply water as close to the soil as possible without washing out soil or mulch. Water at the base of the plant to keep as much water as possible off plant leaves in order to minimize fungus problems. Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing water to flow beyond the periphery of the bed. Thoroughly saturate all areas of the perennial bed, not just individual plants. The plants to be watered and the method of application will be approved by the Engineer.

The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the amount of watering. Any loss of newly installed plant material determined by the Engineer to be due to lack of water, is the responsibility of the contractor to replace at no additional cost. Any damage to plant material due to incorrect watering must be corrected or replace at the Contractors expense, to the satisfaction of the Engineer.

Add the following Article 254.08 Period of Establishment:

During the period of establishment, weeds and grass growth shall be removed from within the mulched perennial beds. This weeding shall be performed a minimum of once per week or within 48 hours following notification by the Engineer during the 30-day period of establishment. The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the extent of weeding.

The weeding may be performed in any manner approved by the Engineer provided the weed and grass growth, including their roots and stems, are removed from the area specified. Mulch disturbed by the weeding operation shall be replaced to its original condition. All debris that results from this operation must be removed from the right-of-way and disposed of at the end of day in accordance with Article 202.03.

Add the following to Article 254.09 Method of Measurement:

a) Disposal of weeds, sod, and debris (rock, stones, concrete, bottles, plastic

Contract: 61L99 County:Will

bags, etc.) removed from the perennial planting bed as specified in Article 202.03.

Add the following to Article 254.10 Basis of Payment:

- a) Payment for Shredded Mulch shall be included in contract unit price of the perennial plant pay item.
- b) The unit price shall include the cost of all materials, equipment, labor, plant care, removal, disposal, and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

PERENNIAL PLANT CARE

<u>Description</u>: This work shall consist of weeding, replenishing mulch, trimming and other perennial plant care work items for each work cycle as described herein and as directed by the Engineer. The work required for each work cycle shall be scheduled to be complete and acceptable at the time of inspection.

<u>Inspection Date</u>: Perennial plant care will be inspected on the date specified in the plans. The work required for each work cycle must be 100 percent complete on the inspection date. Partial inspections will not be made.

Work Cycle Requirements:

- Perennial plant beds must be 100 percent weed-free and clear of litter and debris to be acceptable. Control weeds in landscaped areas by pulling the entire plant and roots. (The Contractor may apply a pre-emergent herbicide, approved by the Engineer, during Spring perennial plant care cycles). Disturbed areas shall be raked level and mulch adjusted.
- Dead flowers, stems, and leaves must be trimmed and removed.
- Monitor mulch depths to maintain a two-inch (50 mm) depth around perennial plants (no more, no less). Rake mulch any away from perennial crowns.
- Finely shredded hardwood bark mulch must be replenished to maintain a two-inch (50 mm) depth around perennial plants, if necessary. Hardwood mulch shall not exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. (Mulch must be approved by the Engineer prior to placement).
- Plants must be free of insect infestations and sprayed if necessary.
- Beds must have a neatly spaded edge between the mulched bed and the turf.
- Mulch must be raked out of turf surrounding the mulched bed.
- Trim dead tips of vines and ground covers.

Contract: 61L99 County:Will

- In the spring (March/April), cut back ornamental grasses to six (6) inches in height. Cut down any perennial left up over the winter to a height of six (6) inches or less and remove any dead leaves around the crowns of the plants. Rake beds free of accumulated debris, dead leaves, and other material, leaving mulch in place and being careful not to damage emerging bulb foliage and flowers. Rake back any mulch that covers plant crowns.
- Fall clean-up (October 15 November 15; depending upon weather conditions and condition of plant material), cut back perennials leaving 3 to 4 inches height foliage as soon as foliage has died back or at discretion of the Engineer. Do not cut into plant crowns. Do not cut back any perennial with winter interest (ornamental grasses, Echinacea/Rudbeckia seed heads).
- Remove litter and other debris. All drain inlets must be kept clean and draining freely. All walls, pavement, curb and gutters, and concrete pads are to be left clean and swept free of all debris
- All debris that results from this operation must be removed from the right-of-way and disposed of in accordance with Article 202.03 at the end of each day.

<u>Method of Measurement</u>: The work will be measured for payment of surface area cared for to the satisfaction of the Engineer on the inspection date specified in the plans. The area will be computed in square yards. Measurement for payment of this work will be performed on the inspection date specified in the plans.

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work on the inspection date. Work that is not acceptable on the inspection date will not be measured for payment. Individual perennial plant areas within a perennial plant bed will not be measured for payment if any portion of the perennial plant bed has not been cared for to the satisfaction of the Engineer. Each perennial plant care work cycle specified in the plans will be measure separately for payment.

<u>Basis of Payment</u>: This work will be paid for at the contract unit price per square yards for PERENNIAL PLANT CARE, which price shall include all materials, equipment, labor, removal, disposal and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

GENERAL REQUIREMENTS FOR WEED CONTROL SPRAYING

Experience

The Contractor shall have previous experience with the use of weed control chemicals. He/she shall have had at least three (3) season's experience in ecological restoration and the ability to

Contract: 61L99 County:Will

identify and differentiate between targeted weeds and vegetation to remain. The Contractor shall observe and comply with all sections of the Illinois Custom Spray Law, including licensing. Contractor personnel applying herbicides shall have a valid pesticide applicator license issued by the Illinois Department of Agriculture.

The licensed pesticide applicator shall attend the preconstruction meeting and submit their current license to the Engineer. The licensed pesticide applicator shall be qualified at a minimum in Right-of-Way and Aquatics. The licensed applicator shall work on-site.

Equipment

The equipment used shall consist of a vehicle-mounted tank, pump, spray bar and handgun, plus any other accessories needed to complete the specified work. Spraying shall be done through multiple low-pressure flooding or broad jet nozzles mounted on spray bars operated not more than 36" above the ground. If different sizes or types of nozzles are used to make up the spray pattern, the pressure, sizes, and capacities shall be adjusted to provide a uniform rate of application for each segment of the spray pattern. Hand spray guns may be used for spraying areas around traffic control devices, lighting standard and similar inaccessible areas. Maximum speed of the spray vehicle during application of chemical shall be ten (10) miles per hour.

Pumps used shall have a volume and pressure capacity range sufficient to deliver the mixture at a pressure to provide the required coverage and to keep the spray pattern full and steady without pulsation or excessive pressure as to cause fogging. Maximum pressure for application shall be 15 PSI. Quick acting shut-off valves and spring-loaded ball check valves shall be provided to stop the spray pattern with a minimum of nozzle drip. In areas where the spray vehicle must traverse the right-of-way, a four-wheel drive vehicle with flotation tires will be required to minimize damage to the ground surface.

Additional equipment used shall consist of swiping gloves, wicks, wands, hand spray guns and/or backpack sprayers, plus any other accessories needed to complete the specified work as directed by the Engineer. Wick applicators, swiping gloves, or other such devices may be required to ensure herbicides are applied only to target species. If hand spray guns used are attached to spray vehicle, maximum speed of the spray vehicle during application of chemical shall be five (5) miles per hour. In areas where a vehicle is needed to traverse the right-of-way, a four-wheel drive vehicle with flotation tires will be required to minimize damage to the ground surface.

Prior to beginning work, the Contractor shall obtain approval from the Engineer of the spraying equipment proposed for completing this work. The proposed equipment shall be in an operational condition and available for inspection by the Engineer at least two (2) weeks prior to the proposed starting time. If requested by the Engineer, the Contractor shall demonstrate the calibration of the equipment.

Contract: 61L99 County:Will

The equipment must provide consistently uniform coverage and keep the spray mixture sufficiently agitated or the work will be suspended until the equipment is repaired or replaced.

Spraying Areas

This work includes roadsides and other types of right-of-way of various widths and gradients. Spray areas often extend more than thirty (30) feet from the edge of the roadway, requiring both spray bar and handgun applications.

When the description of work requires weed control of a stated species, such as teasel, the chemical shall be applied only to locations where the stated species is present. When the description of work requires general weed control within a bed or area, such as broadleaf weed control in turf, then the chemical shall be applied to the entire bed or area.

Exclusion of Spraying Areas

Areas where weed control spraying is inappropriate or detrimental to the environment, desirable planting, or private property shall be excluded from the spray area.

Spraying will not be permitted over any drainage swales or waterways, or other areas where the chemical label prohibits application. Spraying within 150 feet of a natural area or site where endangered or threatened species occur.

Responsibility for Prevention of Damage to Private Property

The Contractor shall, at all times, exercise extreme caution to prevent damage to residential plantings, flower or vegetable gardens, vegetable crops, farm crops, orchard or desirable plants adjacent to the roadside.

The Contractor or Department receives a complaint; the Contractor shall contact a complaint within ten (10) days after receiving a claim for damages, either in person or by letter. The Contractor, or his authorized representative, shall make a personal contact with the complainant within twenty (20) days. The Engineer shall also be notified by the Contractor of all claims for damage he received and shall keep the Engineer informed as to the progress in arriving at a settlement for such claims.

Communication with the Engineer

The Contractor is required to communicate with the Engineer to receive all required approvals in a timely way and to assure that the Engineer can accurately document the work performed.

> Contract: 61L99 County:Will

All herbicide application shall be directly supervised by the Engineer for quality assurance and for payment purposes. If the Contractor performs work without the Engineer's supervision, work will not be paid for.

It shall be the Contractor's responsibility to assure that all chemical containers are opened and added to the spray mixture in the presence of the Engineer.

The Contractor shall obtain approval from the Engineer to proceed with spraying at each location 24 hours prior to the proposed spray operations.

The Contractor's superintendent shall closely coordinate work with the Engineer at all times in accordance with Article 105.06. The superintendent shall attend weekly progress meetings with the Engineer at the Engineer's office or other mutually agreed upon location. The superintendent shall communicate with the Engineer in the field during weed control activities to facilitate accurate completion of work while it is occurring. At the request of the Engineer, the Contractor shall provide a cell phone number where the superintendent can be reached during working hours. The Contractor shall notify the Engineer at least twenty-four (24) hours in advance of either discontinuing or resuming operations.

Pesticide Application Daily Spray Record

The Contractor will be required to properly track pesticide applications as required by the ILG87 Permit. Reported data from this form will be collected and complied annually and reported to the IEPA as required.

Within 48 hours of the application of pesticides, including but not limited to herbicides, insecticides, algaecides, and fungicides, the Contractor shall complete and return to the Engineer, Operations form "OPER 2720". OPER 2720 may be found at the following link:

http://www.idot.illinois.gov/Assets/uploads/files/IDOT-Forms/OPER/OPER%202720.docx

WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE

<u>Description</u>: This work shall consist of spreading a pre-emergent granular herbicide in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

<u>Materials</u>: The pre-emergent granular herbicide shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Contract: 61L99 County:Will

<u>Method</u>: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

<u>Method of Measurement</u>: Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.

<u>Basis of Payment</u>: This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

Effective: May 22, 2002 Revised: November 1, 2023

800.03TS

Description.

This work shall consist of re-optimizing a traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the Traffic Responsive Program (TRP).

Contract: 61L99 County:Will

For the purposes of re-optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing traffic signal systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4734 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, timing patterns, and SCAT Report may be obtained from the Department, if available and as appropriate. The Consultant shall confer with the Area Traffic Signal Maintenance and Operations Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

- 1. The following tasks are associated with LEVEL I Re-Optimization.
 - a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
 - b. Proposed signal timing plan for the modified intersection(s) shall be forwarded to IDOT for review prior to implementation.
 - c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations. The consultant shall respond to IDOT comments and public complaints for a minimum period of six (6) months from date of timing plan implementation.
- 2. The following deliverable shall be provided for LEVEL I Re-Optimization.
 - a. Consultant shall furnish to IDOT a cover letter describing the extent of the reoptimization work performed.

Contract: 61L99 County:Will

(b) LEVEL II Re-Optimization

- 1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.
 - a. Traffic counts shall be taken at the subject intersection(s) after the traffic signals are approved for operation by the Area Traffic Signal Maintenance and Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday and on a Saturday and/or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes and special event facilities. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
 - b. The intersections shall be re-addressed and all system detectors reassigned as necessary according to the current standard practice of District One. System detector quantities and locations shall be assessed for optimal performance. The Department shall be notified of any proposed changes.
 - c. TRP operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.
- 2. The following deliverables shall be provided for LEVEL II Re-Optimization.
 - a. Consultant shall provide to IDOT one (1) USB flash drive for the optimized system containing the following:
 - (1) Electronic copy of the technical memorandum in PDF format
 - (2) Revised Synchro (or other appropriate, approved optimization software) files including the new signal and the rest of the signals in the system
 - (3) Traffic counts conducted at the subject intersection(s)

The flash drive shall be labeled with the IDOT system number and master location (if applicable), as well as the submittal date and the consultant logo.

- b. The technical memorandum shall include the following elements:
 - (1) Brief description of the project

County:Will

- (2) Analysis output from Synchro (or other appropriate, approved optimization software file)
- (3) Traffic counts conducted at the subject intersection(s)

Basis of Payment.

This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of the specified deliverables, 100 percent of the bid price will be paid. Each intersection will be paid for separately.

PEDESTRIAN SIGNAL POST

Effective: January 1, 2020

Revised: 875.02TS

Description.

This work shall consist of furnishing and installing a metal pedestrian signal post. All installations shall meet the requirements of the "District One Standard Traffic Signal Design Details".

Materials.

- a. General. The pedestrian signal post shall be designed to support the traffic signal loading shown on the plans. The design and fabrication shall be according to the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO.
- b. Post. The post shall be made of steel or aluminum and have an outside diameter of 4 1/2 in. The post shall be threaded for assembly to the base. Aluminum posts shall be according to the specifications for Schedule 80 aluminum pipe. Steel posts shall be according to the specifications for Schedule 40 steel pipe.
- c. Base. The base of a steel post shall be cast iron. The base of an aluminum post shall be aluminum. The base shall be threaded for the attachment to the threaded post. The base shall be approximately 10 in. high and 6 3/4 in. square at the bottom. The bottom of the base shall be designed to accept four 5/8 in. diameter anchor rods evenly spaced in a 6 in. diameter circle. The base shall be true to pattern, with sharp clean cutting ornamentation, and equipped with access doors for cable handling. The door shall be fastened to the base with stainless steel screws. A grounding lug shall be provided inside the base.

Contract: 61L99 County:Will

d. Anchor Rods. The anchor rods shall be 5/8 in. in diameter and 16 in. long and shall be according to Article 1006.09. The anchor rods shall be threaded approximately 6 in. at one end and have a bend at the other end. The first 12 in. at the threaded end shall be galvanized. One each galvanized nut and trapezoidal washer shall be furnished with each anchor rod. The washer shall be properly sized to fully engage and sit flush on all sides of the slot of the base plate.

The aluminum post and base shall be drilled at the third points around the diameter and 1/4 in. by 2 in. stainless steel bolts shall be inserted to prevent the post from turning and wobbling.

e. Finish. The steel post, steel post cap and the cast iron base shall be hot-dipped galvanized according to AASHTO M 111. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions. If the post and the base are threaded after the galvanization, the bare exposed metal shall be immediately cleaned to remove all cutting solvents and oils, and then spray painted with two coats of an approved galvanized paint.

The aluminum post shall have a natural finish, 100 grit or finer.

Installation.

The pedestrian signal post shall be erected plumb, securely bolted to a concrete foundation, and grounded to a ground rod according to the details shown on the plans. No more than 3/4 in. of the post threads shall protrude above the base.

A post cap shall be furnished and installed on the top of the post. The post cap shall match the material of the post. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly.

Prior to the assembly, the Contractor shall apply two additional coats of galvanized paint on the threads of the post and the base. The Contractor shall use a fabric post tightener to screw the post to the base.

Basis of Payment.

This work will be paid for at the contract unit price per each for PEDESTRIAN SIGNAL POST, of the length specified.

Contract: 61L99 County:Will

WEED CONTROL, NATIVE LANDSCAPE REMEDIATION

<u>Description</u>: This work shall consist of controlling and/or removing weeds growing within native landscapes (prairies, savannahs, woodlands, wetlands, etc.). Various methods of weed control (hand weeding, hand trimming, spot spraying, wicking, etc.) may be required depending on the location, type of weeds, and size of weed infestation. These selective weed control areas may not be able to be treated with typical large roadside herbicide spraying equipment. Locations for selective weed control remediation shall be designated by the Engineer.

The undesirable weeds (tree saplings, teasel, thistle, phragmites, cattails, etc.) shall be removed and/ or treated with the appropriate weed control method approved by the Engineer prior to the start of work per location. Multiple weed species may be treated during each site visit. All herbicides shall be approved by the Engineer prior to the start of work.

All selective weed control remediation areas shall be completed to the satisfaction of the Engineer with equipment, method, and/or herbicide approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

<u>Schedule</u>: See CALENDAR OF CONSTRUCTION AND ESTABLISHMENT WORK in the plans for selective weed control, native landscape remediation dates and as directed by the Engineer. Individual weed species may be targeted and shall be spot sprayed during the appropriate growth stage. Weed control must be completed in a timely manner. When the Engineer directs the Contractor to control the weeds, the Contractor must begin the weed control operation within 7 days of notice.

<u>Equipment and Herbicides</u>: Special equipment such as backpack sprayers, hand sprayers, and hand pruners may be required to conduct spot herbicide treatments and manual removal of weeds in small areas. All equipment shall be approved by the Engineer. The Contractor shall submit for approval labels for all herbicides, including the following, prior to starting work:

- 1. The chemical names of the compound and the percentage by weight of the ingredients.
- 2. A statement that the material will form a satisfactory emulsion for use when diluted with water for normal spraying conditions.
- 3. A statement that the herbicide, when mixed with water, will be completely soluble and dispersible and remain in suspension with continuous agitation.
- 4. A statement describing the products proposed for use when the manufacturer requires that surfactants, drift control agents, or other additives be used with the product. These tank mix additives shall be used as specified by the manufacturer. Required additives will not be paid for separately.

All material shall be brought to the spray area in the original, unopened containers supplied by the manufacturer.

> Contract: 61L99 County:Will

Application Rate: Follow manufacturer's recommendation for the various herbicides.

Method: All weed control operations are to proceed in the direction of traffic flow.

If weeds or other undesirable vegetation threatens to smother planted species, or in case of weeds exceeding growth of planted species, at the direction of the Engineer, the weeds shall be: spot sprayed, wicked, hand trimmed or uprooted, raked and removed from the area. Weeds shall be removed in a manner that does not damage the underlying native grasses and forbs.

The cut material from common reed (*Phragmites australis*), teasel species (Dipsacus spp.), and thistle species (Cirsium spp.) shall be removed and disposed of according to Article 202.03.

Remove litter, including plastic bags, paper, bottles, etc. prior to weed control. All weeds, litter, and debris removal must be complete to the satisfaction of the Engineer and disposed of according to Article 202.03. Damage to the native vegetation, such as ruts or wheel tracks more than 2 inches in depth, other plantings, or highway appurtenances caused by the weed control remediation operation shall be repaired at the Contractor's expense and to the satisfaction of the Engineer.

<u>Method of Measurement</u>: The work will be measured in units of 1,000 square feet of surface area cared for to the satisfaction of the Engineer 15 calendar days after the work order authorization date.

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work within 4 working days. Removal and disposal of debris will not be measured separately but shall be considered included.

Areas not meeting the satisfaction of the Engineer shall not be measured for payment. Plan quantities are estimates only. Actual quantities will be measured in place. Agreement to plan quantities will not be allowed.

<u>Basis of Payment:</u> This work will be paid for at the contract unit price per unit for WEED CONTROL, NATIVE LANDSCAPE REMEDIATION. Payment for Selective Weed Control, Native Landscape Remediation shall include all materials, equipment, labor, removal, disposal and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

Contract: 61L99 County:Will

SELECTIVE CLEARING

Effective: February 8, 2007 Revised: September 1, 2022

<u>Description.</u> This work shall consist of extensive removal and disposal of shrubs, brush, fallen trees and limbs, debris (including rocks, bottles, etc.) and selected trees up to six (6) inches in diameter. Selective clearing shall include removal of typical amounts of litter and debris encountered during tree removal operations. All trees and shrubs to be saved shall be carefully protected as provided by Article 201.05 of the Standard Specifications. Locations for selective clearing shall be designated by the Engineer. Locations for vegetation to be saved shall be designated by the Roadside Development Unit. Contractor shall contact a representative of the Roadside Development Unit at (847) 705-4171 at least 10 days prior to work.

Damages to existing vegetation to remain, such as broken limbs, or other plantings or roadside appurtenances caused by the Contractor's tree removal or trimming operations shall be repaired at the Contractor's expense to the satisfaction of the Engineer.

The undesirable trees and brush (i.e. Tree of Heaven, Siberian Elm, European Buckthorn, Mulberry, Russian Olive, Eurasian Honeysuckle, etc.) shall be cut flush with the ground. All stumps shall be cut flat with no sharp points, and less than two (2) inches of surrounding grade.

All stumps shall be treated with an approved resprout herbicide mixed with a marking dye within twenty-four (24) hours of the tree being cut to prevent regrowth from those stumps. Resprout herbicide shall be included in the cost of SELECTIVE CLEARING.

All herbicides shall be applied according to the manufacturer's label specifications. Contractor's personnel applying the resprout herbicide shall have a valid pesticide applicator license issued by the Illinois Department of Agriculture.

Branches on remaining trees shall be pruned off up to six (6) feet from the ground.

All cleared areas shall be graded, trimmed, smoothed, finished uniformly, and left ready to be seeded and blanketed to the satisfaction of the Engineer with equipment approved by the Engineer. The ground shall be relatively free of rocks over 1 ½ inch diameter and sticks or other foreign material which will prevent the close contact of the mulch or blanket. Disposal of material shall be done in accordance with Article 202.03.

<u>Method of Measurement</u>. Selective clearing will be measured in units of 1,000 square feet. The unit price shall include the cost of all material, equipment, labor, disposal and incidental items required to complete the work as specified herein and to the satisfaction of the Engineer.

Contract: 61L99 County:Will

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work. Areas not meeting the satisfaction of the Engineer shall not be measured for payment. Plan quantities are estimates only. Actual quantities will be measured in place. Agreement to plan quantities will not be allowed.

<u>Basis of Payment.</u> This work will be paid for at the contract unit price per unit for SELECTIVE CLEARING. Payment for selective clearing shall include the cost of all minor grading, debris removal and disposal, trimming, pruning, smoothing, finishing, labor, materials, tools and equipment required to complete the work as specified herein and to the satisfaction of the Engineer.

CURB OR COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT (D1)

Effective: November 1, 2020 Revised: September 1, 2022

<u>Description</u>. This work shall consist of the complete removal and replacement of curb or combination curb and gutter. Work shall be according to Sections 440 and 606 of the Standard Specifications, State Standard 606001, District Detail BD-24 and as directed by the Engineer except as modified herein.

Curb or combination curb and gutter removal and replacement shall match the type of the existing curb or combination curb and gutter. Types may be variable and are to meet existing dimensions and field conditions. Locations of removal and replacement shall be determined by the Resident Engineer at the time of construction.

Unsuitable material to be removed, as directed by the Engineer, shall be replaced with subbase granular material, type B or additional thickness of concrete. Suitable backfill material, when required, shall be replaced as directed by the Engineer.

Epoxy coated tie bars, #6 (20) - 24" (610) long at 24" (610) centers, shall be used except when adjacent to flexible pavement. Longitudinal bars, if encountered, are not to be replaced.

Hot-mix asphalt surface removal on the existing gutter flag, if encountered, shall be included in the removal of the curb and gutter.

Saw cuts shall be according to Article 440.03 of the Standard Specifications.

1/2" (13) preformed expansion joints shall be used at concrete sidewalks, driveways and medians.

Contract: 61L99 County:Will

<u>Method of Measurement.</u> Concrete curb removal and replacement, or combination concrete curb and gutter removal and replacement will be measured for payment in feet (meters) along the face of concrete curb. A minimum replacement length of 4 feet is required.

<u>Basis of Payment</u>. This item will be paid for at the contract unit price per foot (meter) for CURB REMOVAL AND REPLACEMENT GREATER THAN 10 FEET or COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT GREATER THAN 10 FEET for lengths greater than 10 feet.

This item will be paid at the contract unit price per foot (meter) for CURB REMOVAL AND REPLACMENT LESS THAN OR EQUAL TO 10 FEET or COMBINATION CURB AND GUTTER REMOVAL AND REPLACMENT LESS THAN OR EQUAL TO 10 FEET for lengths less than or equal to 10 feet.

Where unsuitable material is encountered in the subgrade or subbase and its removal and replacement is required by the Engineer, such removal and replacement will be paid for according to Article 109.04.

Sidewalk removal, driveway pavement removal and median surface removal will be paid for according to Article 440.08 of the Standard Specifications.

Portland cement concrete sidewalk will be paid for according to Article 424.13 of the Standard Specifications.

Portland cement concrete driveway pavement will be paid for according to Article 423.11 of the Standard Specifications.

Hot-mix asphalt driveway will be paid for according to Article 355.11 and 406.14 of the Standard Specifications.

Concrete median surface will be paid for according to Article 606.15 of the Standard Specifications.

Topsoil will be paid for according to Article 211.08 of the Standard Specifications.

Sodding will be paid for according to Article 252.13 of the Standard Specifications. Fertilizer for the placement of sod is not required.

> Contract: 61L99 County:Will

MEDIAN SURFACE REMOVAL

Description: This work shall consist of the complete removal of existing median surfaces to allow for landscaping as shown in the plans. All work shall be in accordance with the applicable portions of Section 440 of the "Standards Specifications for Road and Bridge Construction".

Method of Measurement: This work will be measured for at the contract square foot price for MEDIAN SURFACE REMOVAL.

Basis of Payment: This work will be paid for at the contract square foot price for MEDIAN SURFACE REMOVAL.

CLEANOUTS

Description. This work shall consist of furnishing and installing cleanouts at locations as shown on the plans.

General. This work shall be completed in accordance with Section 601 of the Standard Specifications and the details shown in the plans. All work and materials, as shown in the detail, shall be included in this pay item.

Basis of Payment. This work shall be paid for at the contract unit price per each for CLEANOUTS.

MEDIAN INLET (604101), SPECIAL

Description: This work shall consist of the installation of median inlets at locations designated in the plans and as directed by the Engineer. This work shall be completed according to applicable portions of Section 604 of the Standard Specifications for Road and Bridge Construction and shall include all labor, equipment and materials to reconstruct median inlets.

General: The constructed median inlet shall be set to the proposed grade and shall be constructed according to the details provided by Highway Standard 604101 and plan details.

Basis of Payment: This work will be paid for at the contract unit price per each for MEDIAN INLET (604101), SPECIAL.

County:Will

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996 Revised: January 29, 2020

Description.

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

Materials.

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

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

- Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
- Note 2. The sign face material shall be in accordance with the Department's Fabrication of Highway Signs Policy.
- Note 3. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

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

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

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

Method of Measurement.

County:Will

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

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

Basis Of Payment.

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

ACCESSIBLE PEDESTRIAN SIGNALS

Effective: April 1, 2003 Revised: March 1, 2025

888.02TS

<u>Description</u>. This work consists of furnishing and installing accessible pedestrian signals (APS). Each APS consists of an interactive vibrotactile pedestrian push-button with a speaker, informational sign, light emitting diode (LED) indicator light, solid-state electronic control board, power supply, wiring, and mounting hardware. The APS must meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Add the following to Article 888.03 of the Standard Specifications:

"A mounting bracket and/or extension must be used to assure proper orientation and accessibility where needed. The bracket and/or extension is included in the cost of the pedestrian push-button. The Contractor is not allowed to install a push-button assembly with the sign below the push-button to meet mounting requirements."

Add the following to Article 1074.02 of the Standard Specifications:

"Stations must be designed to be mounted to a post, mast arm pole or wood pole. The station must be aluminum and must accept a 3 in. round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD sign series R10-3e 9 in. x 15 in. sign with arrow(s) for a countdown pedestrian signal. Stations must be powder coated yellow with a black push-button and a stainless steel tactile arrow on the push-button."

<u>Electrical Requirements</u>. The APS must 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 must contain a power protection circuit consisting of both fuse and transient protection.

Contract: 61L99 County:Will

<u>Audible Indications</u>. A push-button locator tone must sound at each push-button and must be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Push-button locator tones must have a duration of 0.15 seconds or less and must repeat at 1 second intervals. Each actuation of the push-button must be accompanied by the speech message "Wait". Locator tones must be audible 6 to 12 ft from the push-buttons.

If two accessible pedestrian push-buttons are placed less than 10 ft apart or placed on the same pole, the audible walk and don't walk indication must be a speech message. This speech message must sound throughout the Walk interval only. The common street name must be used and not the route number of the street unless there is no common street name. Locations without a street name (ex: private benefit driveways, shopping plaza entrances, etc.) must use the general term "Commercial Driveway" as a street name for that leg. The speech message must be modeled after: "[Street Name]. Walk Sign is on to cross [Street Name]." For signalized intersections utilizing exclusive pedestrian phasing, the verbal message must be "Walk sign is on for all crossings". Speech walk messages should not contain any additional information, except they should include designations such as "Street" or "Avenue" where this information is necessary to avoid ambiguity at a particular location.

In addition, a speech push-button information message must be provided by actuating the APS push-button during the Don't Walk interval. This verbal message must be modeled after: "Wait". The extended press option verbal message must be: "Wait to cross [Street Name] at [Street Name]".

Where two accessible pedestrian push-buttons are separated by 10 ft or more, the Walk indication must be an audible percussive tone. The percussive tone must repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz. Percussive tones must be uniform at all stations at the intersection and must not change for different directions.

Automatic volume adjustments in response to ambient traffic sound level must be provided up to a maximum volume of 100 dB. Locator tones and speech messages must be no more than 5 dB louder than ambient sound. Locator tones and speech messages must be programmed at the same volume; one must not be significantly louder than the other and must be adjusted as directed by the Engineer.

Railroad Preemption.

At locations interconnected to a railroad crossing, APS push-buttons must be capable of receiving a railroad preemption similar to a traffic signal controller and must be hard wired to the railroad preemption relay inside the traffic signal cabinet. A shelf mount control unit must be provided and installed inside the cabinet capable of receiving and transmitting the railroad preemption to all the push-buttons.

Contract: 61L99 County:Will

At railroad intersections, all APS push-buttons must use speech messages only and must follow the below speech models.

<u>During Don't Walk:</u> "Wait to cross [Street Name] at [Street Name]. Caution, Walk time shortened when train approaches." – this does not repeat, plays only once with every push-button press. <u>During Walk:</u> "[Street Name.] Walk sign is on to cross [Street Name]" – this repeats as many times as possible during Walk interval only.

<u>During Railroad preemption:</u> All push-buttons simultaneously state "Train Approaching" – this message must be stated two (2) times.

At locations with emergency vehicle preemption (EVP), no additional speech message will be provided during preemption.

At locations with an equestrian push-button style installation, the APS push-buttons must use speech messages only and must emit the audible message from the bottom mounted push-button only.

<u>Locations with Corner Islands or Center Medians</u>

At locations with corner islands, push-buttons must follow the requirements as specified herein regarding the use of a percussive tone vs. a speech message. When push-buttons are closer than 10 ft apart, the speech message must follow the format specified herein for the main street crossing. The speech message must follow the below speech models for the unusual configurations.

<u>Crossing of the right turn lane to or from corner island:</u> "Wait to cross right turn lane for [Street Name] at [Street Name]" and "Walk sign is on to cross right turn lane for [Street Name] at [Street Name]".

<u>Crossing to refuge island where second push-button actuation is required:</u> "Wait to cross [Street Name] at [Street Name] to median with second push-button" and "Walk sign is on to cross [Street Name] to median with second push-button".

Center medians on divided highways with a single push-button must have a dual tactile arrow on the push-button.

<u>Pedestrian Push-button</u>. Pedestrian push-buttons must be at least 2 in. (50 mm) in diameter or width. The force required to activate the push-button must be no greater than 3.5 lb (15.5 N).

A red LED must be located on or near the push-button which, when activated, acknowledges the pedestrian's request to cross the street.

APS push-button systems that utilize any wireless technology to place calls or communicate with the traffic signal controller, including Bluetooth technology, will not be allowed. A central control

County:Will

unit must be provided and installed in the traffic signal cabinet with the latest available firmware. Push-buttons must be connected directly to the central control unit in the traffic signal cabinet using only 2 wires. All push-buttons must be capable of placing a pedestrian call request into the controller and must be hard wired. APS push-buttons must be a direct replacement of existing standard push-buttons and must be weather resistant with a minimum warranty of five (5) years.

APS push-buttons must be compatible with one another and easily replaceable on future replacements or maintenance repairs. Multiple model variations will not be allowed.

All APS push-buttons must come with speech messages pre-programmed for each particular intersection regardless of their location or distance of separation. Final field adjustments, including the use of percussive tones or speech messages, must be completed once push-buttons are installed in the final location. All push-buttons must be programmed with the appropriate parameters and settings as directed by the Engineer. These settings must be standard for all push-buttons and will vary based on the manufacturer. Access to push-button settings must be provided via an application either through wired, wireless or Bluetooth connection. Push-button information, settings and access instructions must all be provided in a weatherproof pouch and safely stored inside each traffic signal cabinet.

The Contractor must remove any existing pedestrian isolation boards, field wire terminals and any wires to the board when easily accessible. If the pedestrian isolation board has been installed from the factory on the back panel of the cabinet, the Contractor is to disconnect the power to the isolation board and any wires while leaving the board mounted. This work is included in the cost of APS and will not be paid for separately.

<u>Signage</u>. A sign must be located immediately above the pedestrian push-button and parallel to the crosswalk controlled by the push-button. The sign must conform to the following standard MUTCD design: R10-3e.



R10-3e

<u>Tactile Arrow</u>. A tactile arrow, pointing in the direction of travel controlled by a push-button, must be provided on the push-button.

> Contract: 61L99 County:Will

<u>Vibrotactile Feature</u>. The push-button must pulse when depressed and must vibrate continuously throughout the Walk interval.

<u>Basis of Payment</u>. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS and includes furnishing, installation, mounting hardware, extension brackets, and programming of the push-button.

CONCRETE FOUNDATIONS

Effective: May 22, 2002 Revised: March 1, 2024

878.01TS

Add the following to Article 878.03 of the Standard Specifications:

"All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. at the threaded end.

Depending on the foundation type, the top of foundation shall be between 1 in. and 6 in. above finished grade or as directed by the Engineer.

No foundation is to be poured until the Resident Engineer gives their approval as to the depth of the foundation."

Add the following to the first paragraph of Article 878.05 of the Standard Specifications:

"The concrete apron in front of the cabinet and UPS shall be included in this pay item."

Revise the first paragraph of Article 878.05 of the Standard Specifications to read:

"Basis of Payment. This work will be paid for at the Contract unit price per foot (meter) of depth of CONCRETE FOUNDATION of the type specified, or CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER for pedestrian post concrete foundations."

DECORATIVE LIGHTING UNIT, TYPE "D1"

LUMINAIRE, ROADWAY, LED

This work shall be performed in accordance with Section 821 of the Standard Specifications insofar as applicable and as detailed on the plans, except as modified herein.

Contract: 61L99 County:Will

This work shall consist of furnishing and installing a pole mounted, LED luminaire manufactured by GE/Current, Evolve Series, Catalog No. EALS-03-0-F2-AN-7-40-N-D-C1-DKBZ-LR:

The luminaire shall have a Gray powder coat finish.

The fuse holder shall be Busmann HEY-AW for 240 volt circuits.

This work shall include all labor, material, and equipment to furnish and install the luminaire complete with lamp, pole wire, ballast, fuse holders, fusing and incidental expenses as necessary to complete the work as specified and as indicated on the Plans.

LIGHT POLE, ALUMINUM, 39 FT., WITH UPSWEEP ARM, SPECIAL

This work shall be performed in accordance with Section 830 of the Standard Specifications insofar as applicable and as detailed on the Plans, except as modified herein.

This work shall consist of furnishing and installing an aluminum light pole assembly with frangible base on a foundation as detailed on the Plans. Light pole shall comply with AASHTO structural requirements and be UL or ETL classified. The pole shall be of the type listed herein:

As manufactured by HAPCO Pole Products, Inc., as detailed in plans. The complete pole assembly shall have a satin brush finish.

This work shall include all labor, material, and equipment to furnish and install the pole assembly complete with anchor bolts, nuts, washers, base and incidental expenses as necessary to complete the work as specified and as indicated on the Plans.

Basis Of Payment. This work will be paid for at the unit price for each DECORATIVE LIGHTING UNIT, TYPE "D1" which shall be reimbursement in full for electric utility service charges.

DECORATIVE LIGHTING UNIT, TYPE "D2"

LUMINAIRE, ROADWAY, LED

This work shall be performed in accordance with Section 821 of the Standard Specifications insofar as applicable and as detailed on the plans, except as modified herein.

This work shall consist of furnishing and installing a pole mounted, LED luminaire

Contract: 61L99 County:Will

manufactured by GE/Current, Evolve Series, Catalog No. EALS-03-0-F2-AN-7-40-N-D-C1-DKBZ-LR:

The luminaire shall have a Gray powder coat finish.

The fuse holder shall be Busmann HEY-AW for 240 volt circuits.

This work shall include all labor, material, and equipment to furnish and install the luminaires complete with lamps, pole wire, ballast, fuse holders, fusing and incidental expenses as necessary to complete the work as specified and as indicated on the Plans.

LUMINAIRE, LED

This work shall be performed in accordance with Section 821 of the Standard Specifications insofar as applicable and as detailed on the plans, except as modified herein.

This work shall consist of furnishing and installing twin pole mounted, 20 Watt, 120vac, LED luminaires manufactured by Kirlin Lighting, Catalog No. LSR-06173-2000L-40K-35-89-WB:

The luminaires shall have a Silver acrylic enamel finish.

The fuse holders shall be Busmann HEY-AW for 240 volt circuits.

This work shall include all labor, material, and equipment to furnish and install the luminaires complete with lamps, pole wire, LED driver, fuse holders, fusing and incidental expenses as necessary to complete the work as specified and as indicated on the Plans.

LIGHT POLE, ALUMINUM, 39 FT., WITH DOUBLE UPSWEEP ARM, SPECIAL

This work shall be performed in accordance with Section 830 of the Standard Specifications insofar as applicable and as detailed on the Plans, except as modified herein.

This work shall consist of furnishing and installing an aluminum light pole assembly with double upsweep arms, double banner arms, duplex GFCI receptacle with in-use cover, accommodations for double carriage lights, and frangible base on a foundation as detailed on the Plans. Light pole shall comply with AASHTO structural requirements and be UL or ETL classified. The pole shall be of the type listed herein:

As manufactured by HAPCO Pole Products, Inc., as detailed in plans. The complete pole assembly shall have a satin brush finish.

This work shall include all labor, material, and equipment to furnish and install the pole

County:Will

assembly complete with anchor bolts, nuts, washers, base and incidental expenses as necessary to complete the work as specified and as indicated on the Plans.

Basis Of Payment. This work will be paid for at the unit price for each DECORATIVE LIGHTING UNIT, TYPE "D2" which shall be reimbursement in full for electric utility service charges.

> Contract: 61L99 County:Will

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D1)

Effective: November 1, 2019 Revised: January 1, 2025

Revise Article 1004.03(c) to read:

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

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

- 1/ CA 16 or CA 13 may be blended with the CA 11.
- 2/ The coarse aggregates used shall be capable of being combined with the fine aggregates and mineral filler to meet the approved mix design and the mix requirements noted herein.
- 3/ The specified coarse aggregate gradations may be blended.
- 4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve."

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

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

> Contract: 61L99 County:Will

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

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

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

"Item Article/Section

(g)Performance Graded Asphalt Binder (Note 6) (h)Fibers (Note 2)

1032

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

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

County:Will

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

	"MIXTURE COMPOSITION (% PASSING) 1/											
Sieve	IL-19	.0 mm	SMA	12.5	SMA	9.5	IL-9.	5mm	IL-9.	.5FG	IL-4.7	5 mm
Size	min	max	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5 mm)												
1 in. (25 mm)		100										
3/4 in. (19 mm)	90	100		100								
1/2 in. (12.5 mm)	75	89	80	100		100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	60	75 ^{6/}	90	100
#8 (2.36 mm)	20	42	16	24 4/	16	324/	34 5/	52 ^{2/}	45	606/	70	90
#16 (1.18 mm)	15	30					10	32	25	40	50	65
#30 (600 μm)			12	16	12	18			15	30		
#50 (300 μm)	6	15					4	15	8	15	15	30
#100 (150 μm)	4	9					3	10	6	10	10	18
#200 (75 μm)	3.0	6.0	7.0	9.0 3/	7.5	9.5 3/	4.0	6.0	4.0	6.5	7.0	9.0 3/
#635 (20 μm)			≤ 1	3.0	≤ 3	3.0						
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0		1.0

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.

Contract: 61L99 County:Will

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

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

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

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

- 1/ Maximum draindown shall be 0.3 percent according to Illinois Modified AASHTO T 305.
- 2/ The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30°F.
- 3/ Applies when specific gravity of coarse aggregate is ≥ 2.760 .
- 4/ Applies when specific gravity of coarse aggregate is < 2.760.

Contract: 61L99 County:Will

5/ For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone"

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

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

Revise the first and second paragraphs of Articles 1030.06(c)(2) of the Standard Specifications to read:

"(2) Personnel. The Contractor shall provide a QC Manager who shall have overall responsibility and authority for quality control. This individual shall maintain active certification as a Hot-Mix Asphalt Level II technician.

In addition to the QC Manager, the Contractor shall provide sufficient personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. Mix designs shall be developed by personnel with an active certification as a Hot-Mix Asphalt Level III technician. Technicians performing mix design testing and plant sampling/testing shall maintain active certification as a Hot-Mix Asphalt Level I technician. The Contractor may provide a technician trainee who has successfully completed the Department's "Hot-Mix Asphalt Trainee Course" to assist in the activities completed by a Hot-Mix Asphalt Level I technician for a period of one year after the course completion date. The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Hot-Mix Asphalt Level II Technician. The Contractor shall provide a Hot-Mix Asphalt Density Tester who has successfully completed the Department's "Nuclear Density Testing" course to run all nuclear density tests on the job site."

Add Article 1030.06(d)(3) to the Standard Specifications to read:

"(3) The Contractor shall take possession of any Department unused backup or dispute resolution HMA mixture samples or density specimens upon notification by the Engineer. The Contractor shall collect the HMA mixture samples or density specimens from the location designated by the Engineer. The HMA

Contract: 61L99 County:Will

mixture samples or density specimens may be added to RAP stockpiles according to Section 1031."

Revise the second paragraph of Articles 1030.07(a)(11) and 1030.08(a)(9) of the Standard Specifications to read:

"When establishing the target density, the HMA maximum theoretical specific gravity (Gmm) will be based on the running average of four available Department test results for that project. If less than four Gmm test results are available, an average of all available Department test results for that project will be used. The initial Gmm will be the last available Department test result from a QMP project. If there is no available Department test result from a QMP project, the Department mix design verification test result will be used as the initial Gmm."

Revise the following table and notes in Article 1030.09 (c) of the Standard Specifications to read:

	CONTROL LIMITS					
Parameter	IL-19.0, IL-9.5, IL-9.5FG, IL-19.0L, IL-9.5L		SMA-12.5, SMA-9.5		IL-4.75	
	Individual Test	Moving Avg. of 4	Individual Test	Moving Avg. of 4	Individual Test	Moving Avg. of 4
% Passing: 1/						
1/2 in. (12.5 mm)	±6%	±4%	±6%	±4%		
3/8 in. (9.5mm)			± 4 %	± 3 %		
# 4 (4.75 mm)	± 5 %	±4%	± 5 %	± 4 %		
# 8 (2.36 mm)	±5%	± 3 %	± 4 %	± 2 %		
# 16 (1.18 mm)			±4%	± 2 %	± 4 %	± 3 %
# 30 (600 µm)	± 4 %	± 2.5 %	± 4 %	± 2.5 %		
Total Dust Content # 200 (75 µm)	± 1.5 %	± 1.0 %			± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.2 %	± 0.1 %	± 0.3 %	± 0.2 %
Air Voids 2/	± 1.2 %	± 1.0 %	± 1.2 %	± 1.0 %	± 1.2 %	± 1.0 %
Field VMA 3/	-0.7 %	-0.5 %	-0.7 %	-0.5 %	-0.7 %	-0.5 %

^{1/} Based on washed ignition oven or solvent extraction gradation.

Contract: 61L99 County:Will

- 2/ The air voids target shall be a value equal to or between 3.2 % and 4.8 %.
- 3/ Allowable limit below minimum design VMA requirement.

Revise Article 1030.09(g)(2) of the Standard Specifications to read:

"(2)The Contractor shall complete split verification sample tests listed in the Limits of Precision table in Article 1030.09(h)(1)."

In the Supplemental Specifications, replace the revision for the end of the third paragraph of Article 1030.09(h)(2) with the following:

"When establishing the target density, the HMA maximum theoretical specific gravity (Gmm) will be the Department mix design verification test result."

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

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

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

caa.			
	Breakdown/Intermediate Roller (one of the following)	Final Roller (one or more of the following)	Density Requirement
IL-9.5, IL-9.5FG, IL-19.0 ^{1/}	V_D,P , $T_B,3W,O_T,O_B$	V_S , T_B , T_F , O_T	As specified in Section 1030
IL-4.75 and SMA	Т _{в,} 3W, От	T _F , 3W	As specified in Section 1030
Mixtures on Bridge Decks ^{2/}	Тв	T _F	As specified in Articles 582.05 and 582.06.

[&]quot;4/ The Contractor shall provide a minimum of two steel-wheeled tandem rollers (T_B), and/or three-wheel (3W) rollers for breakdown, except one of the (T_B) or (3W) rollers shall be 84 inches (2.14 m) wide and a weight of 315 pound per linear inch (PLI) (5.63 kg/mm) and one of the (T_B) or (3W) rollers can be substituted for an oscillatory roller (O_T). T_F rollers shall be a

County:Will

minimum of 280 lb/in. (50 N/mm). The 3W and T_B rollers shall be operated at a uniform speed not to exceed 3 mph (5 km/h), with the drive roll for T_B rollers nearest the paver and maintain an effective rolling distance of not more than 150 ft (45 m) behind the paver."

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

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

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

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

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

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

County:Will

FRICTION AGGREGATE (D1)

Effective: January 1, 2011 Revised: December 1, 2021

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

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

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

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

County:Will

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

> Contract: 61L99 County:Will

Use	Mixture	Aggregates Allow	/ed	
		Other Combination	ons Allowed:	
		Up to	With	
			Any Mixture E aggregate	
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone	
		75% Crushed Gravel ^{2/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag	
HMA	F Surface	Allowed Alone or in Combination 5/6/:		
High ESAL IL-9.5 SMA Ndesign 80 Surface		Crystalline Crush Crushed Sandsto Crushed Slag (At Crushed Steel Sla No Limestone.	one CBF)	
		Other Combinations Allowed:		
		Up to	With	
		50% Crushed Gravel ^{2/} or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone	

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as binder.

Contract: 61L99 County:Will

- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume."
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80."

> Contract: 61L99 County:Will

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)

Effective: April 1, 2011 Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- (j) Temporary Rubber Ramps (Note 2)
 - Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)"

Revise Article 603.07 of the Standard Specifications to read:

"603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Contract: 61L99 County:Will

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting \pm 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

> Contract: 61L99 County:Will

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

Effective: January 1, 2019 Revised: December 1, 2021

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

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

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

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

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

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

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

County:Will

"High ESAL - Required Samples for Verification Testing" table in Article 1030.05(d)(3) above." Add the following to the end of Article 1030.10 of the Standard Specifications to read:

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

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:

University Park			
Richton park			

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 & Streets SPECIAL PROVISION

FOR

LOCAL QUALITY ASSURANCE/ QUALITY MANAGEMENT QC/QA Effective: January 1, 2022

Replace the first five paragraphs of Article 1030.06 of the Standard Specifications with the following:

"1030.06 Quality Management Program. The Quality Management Program (QMP) will be Quality Control / Quality Assurance (QC/QA) according to the following."

Delete Article 1030.06(d)(1) of the Standard Specifications.

Revise Article 1030.09(g)(3) of the Standard Specifications to read:

"(3) If core testing is the density verification method, the Contractor shall provide personnel and equipment to collect density verification cores for the Engineer. Core locations will be determined by the Engineer following the document "Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations" at density verification intervals defined in Article 1030.09(b). After the Engineer identifies a density verification location and prior to opening to traffic, the Contractor shall cut a 4 in. (100 mm) diameter core. With the approval of the Engineer, the cores may be cut at a later time."

Revise Article 1030.09(h)(2) of the Standard Specifications to read:

"(2) After final rolling and prior to paving subsequent lifts, the Engineer will identify the random density verification test locations. Cores or nuclear density gauge testing will be used for density verification. The method used for density verification will be as selected below

Density Verification Method			
	Cores		
X	Nuclear Density Gauge (Correlated when		
	paving ≥ 3,000 tons per mixture)		

Density verification test locations will be determined according to the document "Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations". The density testing interval for paving wider than or equal to 3 ft (1 m) will be 0.5 miles (800 m) for lift thicknesses of 3 in. (75 mm) or less and 0.2 miles (320 m) for lift thicknesses greater than 3 in. (75 mm). The density testing interval for paving less than 3 ft (1 m) wide will be 1 mile (1,600 m). If a day's paving will be less than the prescribed density testing interval, the length of the day's paving will be the interval for that day. The density testing interval for mixtures used for patching will be 50 patches with a minimum of one test per mixture per project.

If core testing is the density verification method, the Engineer will witness the Contractor coring, and secure and take possession of all density samples at the

density verification locations. The Engineer will test the cores collected by the Contractor for density according to Illinois Modified AASHTO T 166 or AASHTO T 275.

If nuclear density gauge testing is the density verification method, the Engineer will conduct nuclear density gauge tests. The Engineer will follow the density testing procedure detailed in the document "Illinois Modified ASTM D 2950, Standard Test Method for Density of Bituminous Concrete In-Place by Nuclear Method".

A density verification test will be the result of a single core or the average of the nuclear density tests at one location. The results of each density test must be within acceptable limits. The Engineer will promptly notify the Contractor of observed deficiencies."

Revise the seventh paragraph and all subsequent paragraphs in Section D. of the document "Hot-Mix Asphalt QC/QA Initial Daily Plant and Random Samples" to read:

"Mixtures shall be sampled from the truck at the plant by the Contractor following the same procedure used to collect QC mixture samples (Section A). This process will be witnessed by the Engineer who will take custody of the verification sample. Each sample bag with a verification mixture sample will be secured by the Engineer using a locking ID tag. Sample boxes containing the verification mixture sample will be sealed/taped by the Engineer using a security ID label."



Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Lo	cation Information		
(Describe the lo	cation of the source of the uncontaminated soil)		
Physical Site Lo	L 50 - Cicero Avenue Streetscape ecation (address, inclduding number and street): way between Applied Parkway and Home Avenu		one Number, if available: intersection with IL 50 (Cicero Avenue)
City: University	Park State: IL	Zip Code: 60449	
County: Will		ownship: Mone	e
Lat/Long of app	roximate center of site in decimal degrees (DD.c	ldddd) to five dec	imal places (e.g., 40.67890, -90.12345)
(De	Longitude: -87.73214 ecimal Degrees) (-Decimal Degree he lat/long data were determined: Map Interpolation Photo Interpolation	Survey [Other
IEPA Site Numb	per(s), if assigned:	BOW:	BOA
II. Owner/Op	perator Information for Source Site Site Owner		Site Operator
Name	Village of University Park	Name:	Village of University Park
Street Address: 44 Towncenter Drive		Street Address:	44 Towncenter Drive
PO Box:		PO Box:	
City:	University Park State: IL	City:	University Park State: IL
Zip Code:	60484 Phone: 708-235-4813	Zip Code:	60484 Phone: 708-235-4813
Contact:	Ernestine Beck-Fulgham	Contact:	Ernestine Beck-Fulgham
Fmail if availab	le: ebeck-fulgham@university-park-il.com	Email if availah	le ebeck-fulgham@university-park-il.com

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms

LPC 663 Rev. 8/2012 Management Center.

II 532-2922

Project Name: <u>IL 50 - Cicero Avenue Streetscape</u>

Latitude <u>41,45629</u> Longitude -87,73214

Uncontaminated Site Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

Soil borings SB-01 through SB-08 were advanced at appropriate intervals within the University Parkway ROW. See attached Map of Advanced Soil Boring Plan.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached Map of Advanced Soil Boring and Sample Plan and Laboratory Analytical Report for this project.

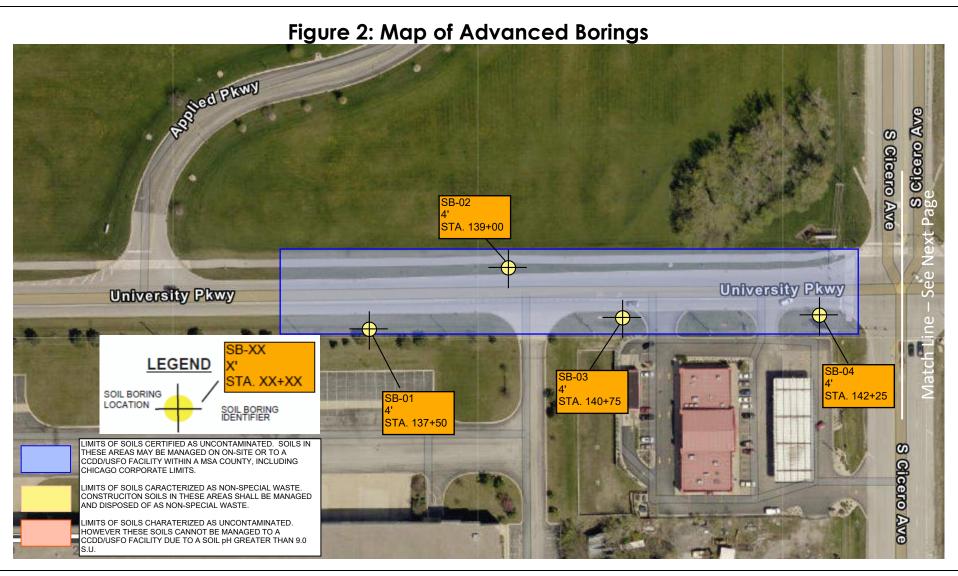
IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In Jacob Rogers

(name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

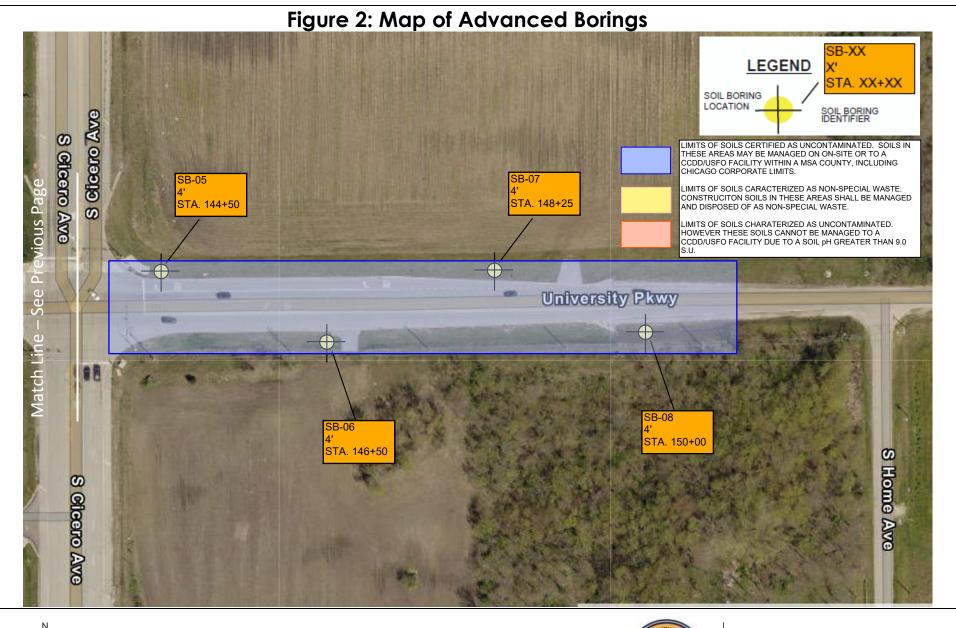
Company Name:	Baxter & Woodman, Inc.				
Street Address:	8678 Ridgefield Road				
City:	Crystal Lake	State IL Zip Code: 60014	_		
Phone:	(815) 459-1260				
Jacob Rogers			190	OFESSIONAL	
Printed N	lame:		13/	100	
Jun D	n	8/20/25	ENSED	JACOB ROGERS 196.001562	
Licensed Profession	onal Engineer or onal Geologist Signature	Date:	Ton	196.001562 G	



















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Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		11)		
•	ion of the source of the u		•	Number, if available:	
Project Name: FAP 350 - IL 50 (Cicero Avenue) Physical Site Location (address, including number and street):				Nulliber, il avallable.	
-	gs (ISGS SITE NO. 4034				
City: Univer	sity Park	State: IL	Zip Code: <u>60449</u>		
County: Cook		Township:			
Lat/Long of approxi	imate center of site in de	cimal degrees (DD	oddddd) to five decimal	l places (e.g., 40.67890,	-90.12345):
Latitude: 41.4727	6 Longitude:	-87.73216			
(Decimal	Degrees)	(-Decimal Degree	s)		
Identify how the late	long data were determin	ed:			
	p Interpolation () Photo	o Interpolation (Survey () Other		
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): TB	D	Approximate End D	Date (mm/dd/yyyy): <u>TBI</u>)
Estimated Volume	of debris (cu. Yd.): 82				
•	ator Information fo	r Source Site			
Site Owner			Site Operator		
Name:	Illino	is DOT District 1	Name:	Illinoi	s DOT District 1
Street Address:	201 W	est Center Court	Street Address:	201 We	est Center Court
PO Box:			PO Box:		
City:	Schaumburg	State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrey.Willia	ms@illinois.gov	Email, if available:	Jeffrey.Willia	ms@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-3-1, 4034V-3-2 AND 4034V-4-2 WERE SAMPLED AT THE RESIDENTIAL PROPERTY (ISGS SITE NO.4034V-3). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations

established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Tim Scully-Granzei	er			(name of licensed profes	sional engineer or geologist)
certify under penalty of	law that the information s	ubmitted, inclu	ding bu	it not limited to, all attach	ments and other information, is to
					ronmental Protection Act [415
					s uncontaminated soil. I also
					t been removed from the site as
part of a cleanup or rer	moval of contaminants. Al	I necessary do	cumen	tation is attached.	
					ally or in writing, to the Illinois ass 3 felony. (415 ILCS 5/44(h))
Company Name:	Arcadis				
Street Address:	225 West Wacker Dr	rive, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:			=8		
To Selly.	t			10.16.25	551 B. GO
Licensed Professional	Engineer or			Date:	All connection of
Licensed Professional	Geologist Signature:			8	19:062:051484: TO

IL 532-2922 LPC 663 Rev. 2/2025 P.E or L.P.G. Sea



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Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information				
`	on of the source of the 350 - IL 50 (Cicero Ave		•	Number, if available:	
Physical Site Locati	on (address, including SGS SITE NO. 4034V-	number and street):		_	
City: Univers	sity Park	State: IL	Zip Code: 60449		
County: Cook		Township:			
Lat/Long of approxi	mate center of site in d	ecimal degrees (DD	oddddd) to five decimal	l places (e.g., 40.6789	0, -90.12345):
Latitude: 41.47096	S Longitude:	-87.73207			
(Decimal	Degrees)	(-Decimal Degree	s)		
Identify how the lat/	long data were determi	ned:			
	Interpolation O Pho	oto Interpolation	Survey Other		
IEPA Site Number(s	s), if assigned: BOL:		BOW:	BOA:	
Approximate Start I	Date (mm/dd/yyyy): \underline{T}	BD	Approximate End D	Pate (mm/dd/yyyy):	TBD
Estimated Volume	of debris (cu. Yd.): 2	39			
•	ator Information fo	or Source Site	0:4- 0		
Site Owner			Site Operator		: DOT D: (: (4
Name:		ois DOT District 1	Name:		nois DOT District 1
Street Address:	201 V	Vest Center Court	Street Address:	201	West Center Court
PO Box:			PO Box:		
City:	Schaumbur	g State: IL	City:	Schaumbu	irg State: IL
Zip Code:	60196-1096 Phone	: 847-705-4633	Zip Code:	60196-1096 Phon	e: 847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrey.Will	iams@illinois.gov	Email, if available:	Jeffrey.W	lliams@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-4-1 AND 4034V-4-2 WERE SAMPLED AT THE AGRICULTURAL PROPERTY (ISGS SITE NO.4034V-4). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In a cully-Granzeier (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis			
Street Address:	225 West Wacker Dr	ive, Suite 2015		
City:	Chicago	State: IL	Zip Code: 60606	
Phone:	312-575-3717			
Tim Scully-Granzeier				
Printed Name:				
To Self.	H		10-16-25	B. GRAN
Licensed Professional		in the second	Date:	S: 062-051484 M
Licensed Professional	Geologist Signature:			REGISTERED PROFESSIONAL ENGINEER OF
				P.E or L.P.G. Seal:



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Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

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This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion information on of the source of the ur	contaminated soil)				
•	350 - IL 50 (Cicero Aven	Office Phone Number, if available:					
Physical Site Location (address, including number and street): RIGHT OF WAY (ISGS SITE NO. 4034V-6), 23000 block of Cic			cero Avenue.				
City: Univers	sity Park	State: IL	Zip Code: 60449				
County: Cook		Township:					
Lat/Long of approxi Latitude: 41.4696	mate center of site in dec		ddddd) to five decimal	places (e.g., 40	0.67890, -	90.12345):	
•	Degrees) long data were determine	(-Decimal Degrees ed:	3)				
	Interpolation Photo	Interpolation	Survey Other				
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:			
Approximate Start I	Date (mm/dd/yyyy): TBI)	_ Approximate End D	ate (mm/dd/yyy	/y): <u>TB</u> [)	
Estimated Volume	of debris (cu. Yd.): 21		_				
II. Owner/Oper Site Owner	ator Information for	Source Site	Site Operator				
Name:	Illinois	DOT District 1	Name:		Illinois	DOT Distr	rict 1
Street Address:	201 We	st Center Court	Street Address:		201 We	st Center C	Court
PO Box:			PO Box:		_		
City:	Schaumburg	State: IL	City:	Sch	aumburg	State:	IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096	Phone:	847-705-4	1633
Contact:		Jeffrey Williams	Contact:			Jeffrey Willi	ams
Fmail_if available: .leffrey Williams@illinois.gov			Email. if available:	Jeff	rev.Willia	ms@illinois	.aov

Project Name: FAP 350 - IL 50 (Cicero Avenue) Latitude: 41.46965 Longitude: -87.73223

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-4-1, 4034V-8-3, AND 4034V-10-2 WERE SAMPLED AT THE RIGHT OF WAY (ISGS SITE NO. 4034V-6). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations

established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

(name of licensed professional engineer or geologist)

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1 AND 500-272493. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415]

certify that the soil pH	4	o 9.0. În addit	ion, I c	ertify that the soil has r	e is uncontaminated soil. I also not been removed from the site as
					orally or in writing, to the Illinois Class 3 felony. (415 ILCS 5/44(h))
Company Name:	Arcadis				
Street Address:	225 West Wacker Dri	ve, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:	•		_	10.16.25 Date:	
Licensed Professional	() [062-051484 REGISTERED PROFESSIONAL ENGINEER

IL 532-2922 LPC 663 Rev. 2/2025

I, Tim Scully-Granzeier



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information				
•	on of the source of the un 350 - IL 50 (Cicero Aver		•	Number, if available:	
Physical Site Locat	ion (address, including nu S SITE NO. 4034V-7), 230	ımber and street):		<u> </u>	
City: Univers	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mon	ee Township		
Lat/Long of approxi	mate center of site in dec	imal degrees (DD	oddddd) to five decimal	l places (e.g., 40.67890,	-90.12345):
Latitude: 41.46910	D Longitude:	-87.73240			
(Decimal	Degrees)	(-Decimal Degree	s)		
Identify how the lat/	long data were determine	ed:			
	o Interpolation () Photo	Interpolation (Survey Other		
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): TBI)	Approximate End D	oate (mm/dd/yyyy): <u>TBI</u>	D
Estimated Volume	of debris (cu. Yd.): 10		_		
•	ator Information for	Source Site			
Site Owner			Site Operator		
Name:	Illinoi	s DOT District 1	Name:	Illinoi	s DOT District 1
Street Address:	201 We	est Center Court	Street Address:	201 We	est Center Court
PO Box:			PO Box:		
City:	Schaumburg	State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrey.Willia	ms@illinois.gov	Email, if available:	Jeffrey.Willia	ms@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATION 4034V-10-2 WAS SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-10). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Tim Scully-Granzeier	(name of licensed professional engineer or geologist)
certify under penalty of law that the information submitted, incl	uding but not limited to, all attachments and other information, is to
the best of my knowledge and belief, true, accurate and comp	lete. In accordance with the Environmental Protection Act [415
ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I	certify that the soil from this site is uncontaminated soil. I also
certify that the soil pH is within the range of 6.25 to 9.0. In add	dition, I certify that the soil has not been removed from the site as
part of a cleanup or removal of contaminants. All necessary d	ocumentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis				
Street Address:	225 West Wacker Dr	ive, Suite 2015	i		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:					
7w Celly.	4			10.16-25	B. GRAN
Licensed Professional Licensed Professional			_	Date:	062-051484
					REGISTERED PROFESSIONAL ENGINEER OF
				P.E.C	or L.P.G. Seal:



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		:1)				
•	on of the source of the u 350 - IL 50 (Cicero Aver		,	Number, if avail	able:		
•	ion (address, including no S SITE NO. 4034V-8), 23						
City: Univers	sity Park	State: IL	Zip Code: 60449				
County: Will		Township: Mor	nee Township				
Lat/Long of approxi	mate center of site in dec	imal degrees (DD	o.ddddd) to five decima	l places (e.g., 4	0.67890, -	90.12345):	
Latitude: 41.4681	1 Longitude:	-87.73206					
(Decimal	Degrees)	(-Decimal Degree	es)				
Identify how the lat/	long data were determin	ed:					
	o Interpolation () Photo	Interpolation (Survey Other				
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:			
Approximate Start	Date (mm/dd/yyyy): TB)	Approximate End D	Date (mm/dd/yy	yy): <u>TB</u> [)	
Estimated Volume	of debris (cu. Yd.): 213	}					
II. Owner/Oper	ator Information fo	Source Site					
Site Owner			Site Operator				
Name:	Illinoi	s DOT District 1	Name:		Illinois	s DOT Distr	ict 1
Street Address:	201 We	est Center Court	Street Address:	201 West Center Court		ourt	
PO Box:			PO Box:		_		
City:	Schaumburg	State: IL	City:	Sch	aumburg	State:	IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096	Phone:_	847-705-4	633
Contact:		Jeffrey Williams	Contact:			Jeffrey Willi	ams
Email if available:	Jeffrey Willia	ms@illinois gov	Email. if available:	Jef	frev.Willia	ms@illinois	.aov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-8-1 AND 4034V-8-3 WERE SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-8). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Tim Scully-Granzeier	(name of licensed professional engineer or geologist)
certify under penalty of law that the information submitted, includir	ng but not limited to, all attachments and other information, is to
the best of my knowledge and belief, true, accurate and complete.	. In accordance with the Environmental Protection Act [415
ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I cert	ify that the soil from this site is uncontaminated soil. I also
certify that the soil pH is within the range of 6.25 to 9.0. In additio	
part of a cleanup or removal of contaminants. All necessary docu	mentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis				
Street Address:	225 West Wacker Dr	ive, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:			_		
70 Selly.	1			10.16.25	B. GRAN
Licensed Professional Licensed Professional				Date:	062-051484
					REGISTERED DIPOPESSIONAL ENGINEER OF
				P	For LP.G. Seal:



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		n.		
•	ion of the source of the u ? 350 - IL 50 (Cicero Ave		,	Number, if available:	
Physical Site Locat	ion (address, including n	umber and street):			
City: Univer	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mon	ee Township		
Lat/Long of approx	imate center of site in de	cimal degrees (DD	.ddddd) to five decimal	l places (e.g., 40.67890, -	90.12345):
Latitude: 41.4690	8 Longitude:	-87.73243			
(Decimal	Degrees)	(-Decimal Degree	s)		
Identify how the lat	long data were determin	ed:			
	p Interpolation () Phot	o Interpolation (Survey Other		
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): TE	D	Approximate End D	oate (mm/dd/yyyy): TBD)
Estimated Volume	of debris (cu. Yd.): 7				
•	ator Information fo	r Source Site			
Site Owner			Site Operator		
Name:	Illino	is DOT District 1	Name:	Illinois	DOT District 1
Street Address:	201 W	est Center Court	Street Address:	201 We	st Center Court
PO Box:			PO Box:		
City:	Schaumburg	State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrev.Willia	ams@illinois.gov	Email, if available:	Jeffrey.Williar	ms@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATION 4034V-10-2 WAS SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-10) ADJACENT TO THE AGRICULTURAL PROPERTY (ISGS SITE NO 4034V-9). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

			but not limited to, all attachments and other information, is t
뭐 한 집에 그 아마 가지 않는데 없어요. 맛이 가지 않는데 살아 없다니다. 이 이 이 이 사람들이 되었다.			In accordance with the Environmental Protection Act [415
			that the soil from this site is uncontaminated soil. I also
		and the second and th	I certify that the soil has not been removed from the site as
part of a cleanup or re	moval of contaminants. All	necessary docum	entation is attached.
Anv person who kno	wingly makes a false, fict	itious. or fraudule	ent material statement, orally or in writing, to the Illinois
			se after conviction is a Class 3 felony. (415 ILCS 5/44(h))
Company Name:	Arcadis		
Company Name: Street Address:	Arcadis 225 West Wacker Dri	ive, Suite 2015	
25 150	-	ive, Suite 2015 State: IL	Zip Code: 60606
Street Address:	225 West Wacker Dri		Zip Code: 60606

Tim Scully-Granzeier
Printed Name:

Tim Scully-Granzeier

Licensed Professional Engineer or

Licensed Professional Geologist Signature:

Date:

Date:

062-051484

REGISTERED PROFESSIONAL ENGINEER
OF

P.E or L.P.G. Seal:

(name of licensed professional engineer or geologist)



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		***		
•	ion of the source of the 2350 - IL 50 (Cicero Ave		•	Number, if available:	
Physical Site Locat	tion (address, including as SITE NO. 4034V-10),	number and street)	:		
City: Univer	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mor	nee Township		
Lat/Long of approx	imate center of site in de	ecimal degrees (DD	D.ddddd) to five decimal	l places (e.g., 40.67890, -	90.12345):
Latitude: 41.4687	2 Longitude:	-87.73233			
(Decimal	Degrees)	(-Decimal Degree	es)		
Identify how the lat	/long data were determi	ned:			
	p Interpolation ()Pho	to Interpolation (Survey Other		
IEPA Site Number((s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): TI	BD .	Approximate End D	oate (mm/dd/yyyy): TBD)
Estimated Volume	of debris (cu. Yd.): 15	57	<u> </u>		
II. Owner/Oper Site Owner	rator Information fo	or Source Site	Site Operator		
	III:	-i- DOT District 4	Name:	Illinois	DOT District 1
Name:		ois DOT District 1	Street Address:		st Center Court
Street Address:	201 V	/est Center Court		201 vve	st Center Court
PO Box:			PO Box:		.
City:	Schaumbur	g State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone	847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrey.Will	ams@illinois.gov	Email, if available:	Jeffrey.Williar	ms@illinois.gov

Project Name: FAP 350 - IL 50 (Cicero Avenue) Latitude: 41.46872 Longitude: -87.73233

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-10-1 AND 4034V-10-2 WERE SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-10). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to

(name of licensed professional engineer or geologist)

ILCS 5/22.51 or 22.51 certify that the soil pH	a] and 35 III. Adm. Code 11	00.205(a), İ ce o 9.0. In addit	ertify th	nat the soil from this site is certify that the soil has not l	uncontaminated soil. I also been removed from the site as
					lly or in writing, to the Illinois s 3 felony. (415 ILCS 5/44(h))
Company Name:	Arcadis				
Street Address:	225 West Wacker Dr	ve, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier Printed Name:					
To Sella	7			10-16-25	
Licensed Professional			_	Date:	- Ball San
Licensed Professional	Geologist Signature:				REGISTERED TO PROFESSIONAL ENGINEER OF

I, Tim Scully-Granzeier

P.E or L.P.G. Seal.



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information				
`	ion of the source of the		•	lumber if quallable	
<u> </u>	2 350 - IL 50 (Cicero Av	•		Number, if available:	
•	tion (address, including ISGS SITE NO. 4034V-	,			
City: Univer	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mor	nee Township		
Lat/Long of approx	imate center of site in o	lecimal degrees (DE	O.ddddd) to five decimal	places (e.g., 40.67890,	-90.12345):
Latitude: 41.4665	2 Longitude	: -87.73221			
(Decimal	Degrees)	(-Decimal Degree	es)		
Identify how the lat	/long data were determ	ined:			
GPS Ma	p Interpolation Ph		Survey () Other BOW:	BOA:	
· ·	3 - 7,	 BD	Approximate End D		
		75		110 (11111/144/9999). <u>110</u>	
•	rator Information f	or Source Site			
Site Owner			Site Operator		
Name:	Illir	nois DOT District 1	Name:	Illinoi	s DOT District 1
Street Address:	201 \	West Center Court	Street Address:	201 We	est Center Court
PO Box:			PO Box:		
City:	Schaumbu	rg State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone	e: 847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrev.Wil	liams@illinois.gov	Email, if available:	Jeffrey.Willia	ms@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-11-2, 4034V-11-3, AND 4034V-11-4 WERE SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-11). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1 AND 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In accordance with the Environmental Protection Act [415] ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis				
Street Address:	225 West Wacker Dri	ve, Suite 201	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:					
7 Selly	1. T			10-16-25	B. GR
Licensed Professional Licensed Professional				Date:	062-051484
				P.	REGISTERED PROFESSIONAL ENGINEER OF LINO 15



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information				
•	ion of the source of the u P 350 - IL 50 (Cicero Aver		,	Number, if available:	
Physical Site Locat	tion (address, including n	umber and street):	 :		
City: Univer	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mon	nee Township		
Lat/Long of approx	imate center of site in de	cimal degrees (DD	o.ddddd) to five decimal	l places (e.g., 40.67890,	-90.12345):
Latitude: 41.4643	2 Longitude:	-87.73237			
(Decimal	Degrees)	(-Decimal Degree	es)		
Identify how the lat	long data were determin	ed:			
	p Interpolation () Photo	o Interpolation (Survey Other		
IEPA Site Number((s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): TB	D	Approximate End D	oate (mm/dd/yyyy): <u>TBI</u>	D
Estimated Volume	of debris (cu. Yd.): 82		<u></u>		
II. Owner/Oper Site Owner	rator Information fo	r Source Site	Site Operator		
	me	· DOT D: 1: 14	•	Illinoi	o DOT District 1
Name:		is DOT District 1	Name:		s DOT District 1
Street Address:	201 W	est Center Court	Street Address:	201 VVE	est Center Court
PO Box:			PO Box:		
City:	Schaumburg	State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096 Phone:_	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available:	Jeffrey.Willia	ams@illinois.gov	Email, if available:	Jeffrey.Willia	ms@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-15-10 AND 4034V-11-2 WERE SAMPLED AT THE VACANT PROPERTY (ISGS SITE NO.4034V-13). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In a Coully-Granzeier (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis				
Street Address:	225 West Wacker Dri	ve, Suite 2015			
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:			•		
To Selly.	1			10-16-25	B. GRAN
Licensed Professional Licensed Professional			5.	Date:	062-051484
				F	REGISTERED PROFESSIONAL ENGINEER OF



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	ation Information	,						
•	tion of the source of the P 350 - IL 50 (Cicero A		ed soil	•	Number, if availa	able:		
Physical Site Local	tion (address, including S SITE NO. 4034V-14)	number and s	,					
City: Univer	rsity Park	State: IL		Zip Code: 60449				
County: Will		Township	Mone	ee Township				
Lat/Long of approx	imate center of site in	decimal degree	s (DD	.ddddd) to five decimal	places (e.g., 4	0.67890, -	90.12345):	
Latitude: 41.4642	23 Longitude	e:87.73207						
(Decima	l Degrees)	(-Decimal D	egrees	s)				
Identify how the lat	l/long data were determ	nined:						
	p Interpolation O Ph	noto Interpolation	on (Survey Other				
IEPA Site Number	(s), if assigned: BOI	L:		BOW:	BOA:			
Approximate Start	Date (mm/dd/yyyy):	TBD		Approximate End D	ate (mm/dd/yyy	yy): <u>TB</u> [)	
Estimated Volume	of debris (cu. Yd.):	349		_				
II. Owner/Oper Site Owner	rator Information	for Source S	Site	Site Operator				
	me.	' DOT D' (•		Illinois	DOT Diete	iot 1
Name:		nois DOT Distr		Name:			s DOT Distr	
Street Address:	201	West Center C	ourt	Street Address:		201 We	st Center C	ourt
PO Box:				PO Box:		_		
City:	Schaumbu	urg State:	<u>IL</u>	City:		aumburg	State:	<u> L</u>
Zip Code:	60196-1096 Phon	e: 847-705-4	633	Zip Code:	60196-1096	Phone:_	847-705-4	633
Contact:		Jeffrey Willi	ams	Contact:			Jeffrey Willi	ams
Email, if available:	: Jeffrey.Wi	illiams@illinois	.gov	Email, if available:	Jef	frey.Willia	ms@illinois	.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-14-1 AND 4034V-14-2 WERE SAMPLED AT THE RIGHT OF WAY PROPERTY (ISGS SITE NO. 4034V-14). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272413-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

 Tim Scully-Granze 	ier			(name of licensed professi	ional engineer or geologist)
					nents and other information, is to
마리스 (B. 1985)	그래에 그 그렇게 되는 것이 없었다면 하게 되었다.				onmental Protection Act [415
					uncontaminated soil. I also been removed from the site as
	moval of contaminants. All				been removed from the site as
Any person who kno	wingly makes a false firt	itious or frau	dulen	t material statement oral	lly or in writing, to the Illinois
					s 3 felony. (415 ILCS 5/44(h))
Company Name:	Arcadis				
Street Address:	225 West Wacker Dr	ive, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:	i i				
011	M				
To Selly	. / \			10-16-25	B. GRAN
Licensed Professional	Engineer or		_	Date:	-
Licensed Professional	•			Date.	AS: 062-051484 (D)
LICONOCA I TOTOSSIONAI	Ocologist Olgitature.				REGISTERED D
					PROFESSIONAL
					ENGINEER . 4
					11:00
					ALCINO15

IL 532-2922 LPC 663 Rev. 2/2025 P.E or L.P.G. Seal:



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		11)				
	on of the source of the u 350 - IL 50 (Cicero Ave			Number, if availa	able:		
•	ion (address, including n	,					
City: Univers	sity Park	State: IL	Zip Code: 60449				
County: Will		Township: Mon	ee Township				
Lat/Long of approxi	mate center of site in de	cimal degrees (DD	ddddd) to five decimal	places (e.g., 40	0.67890, -	90.12345):	
Latitude: 41.46033	Longitude:	-87.73224					
(Decimal	Degrees)	(-Decimal Degree	s)				
Identify how the lat/	long data were determir	ed:					
	Interpolation () Phot	o Interpolation	Survey Other				
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:			
Approximate Start I	Date (mm/dd/yyyy): TE	D	Approximate End D	ate (mm/dd/yyy	/y): <u>TB</u> [)	
Estimated Volume	of debris (cu. Yd.): 48	7					
-	ator Information fo	r Source Site					
Site Owner			Site Operator				
Name:	Illino	is DOT District 1	Name:		Illinois	s DOT Distr	ict 1
Street Address:	201 W	est Center Court	Street Address:		201 We	st Center C	ourt
PO Box:			PO Box:		_		
City:	Schaumburg	State: IL	City:	Sch	aumburg	State:	<u>IL</u>
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096	Phone:	847-705-4	633
Contact:		Jeffrey Williams	Contact:			Jeffrey Willi	ams
Email if available:	.leffrey Willi	ams@illinois gov	Email. if available:	Jefl	frev.Willia	ms@illinois	.aov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-15-1, 4034V-15-3, 4034V-15-4, 4034V-15-6, 4034V-15-7, 4034V-15-9, 4034V-15-10 WERE SAMPLED AT THE APPLIED SYSTEMS, INC. PROPERTY (ISGS SITE NO. 4034V-15). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Tim Scully-Granzeier (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis			
Street Address:	225 West Wacker Dri	ive, Suite 2015		
City:	Chicago	State: IL	Zip Code: 60606	
Phone:	312-575-3717			
Tim Scully-Granzeier				
Printed Name:				
To Self	,: M		10.16.25	B. GRAN
Licensed Professional E			Date:	S: 062-051484
Licensed Professional G	seologist Signature:			REGISTERED PROFESSIONAL ENGINEER OF
			P	For LPG Seal:



2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information		*15				
•	on of the source of the ur		,	Number, if avail	able:		
Physical Site Locat	ion (address, including nu Park Inspection Center (ımber and street)	: :				
City: Univers	sity Park	State: IL	Zip Code: 60449				
County: Will		Township: Mor	nee Township				
Lat/Long of approxi	mate center of site in dec	imal degrees (DI	D.ddddd) to five decima	l places (e.g., 4	0.67890, -	90.12345):	
Latitude: 41.4601	1 Longitude:	-87.73203					
(Decimal	Degrees)	(-Decimal Degree	es)				
Identify how the lat/	long data were determine	ed:					
	Interpolation () Photo	Interpolation (Survey Other				
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:			
Approximate Start	Date (mm/dd/yyyy): TBI)	Approximate End D	oate (mm/dd/yy	yy): <u>TB</u> [)	
Estimated Volume	of debris (cu. Yd.): 287	•					
II. Owner/Oper	ator Information for	Source Site					
Site Owner			Site Operator				
Name:	Illinoi	s DOT District 1	Name:		Illinois	s DOT Distr	ict 1
Street Address:	201 We	est Center Court	Street Address:		201 We	st Center C	ourt
PO Box:			PO Box:		_		
City:	Schaumburg	State: IL	City:	Sch	aumburg	State:	IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096	Phone:_	847-705-4	1633
Contact:		Jeffrey Williams	Contact:		•	Jeffrey Willi	ams
Fmail if available:	Jeffrey Willia	ms@illinois gov	Email. if available:	Jef	frev.Willia	ms@illinois	.aov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATIONS 4034V-14-1, 4034V-16-2, 4034V-16-5, 4034V-16-8 WERE SAMPLED AT THE CARVANA UNIVERSITY PARK INSPECTION CENTER PROPERTY (ISGS SITE NO. 4034V-16). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272346-1 AND 500-272413-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In accordance with the Environmental Protection Act [415] ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis					
Street Address:	225 West Wacker Drive, Suite 2015					
City:	Chicago	State:	IL	Zip Code: 60606		
Phone:	312-575-3717				ű.	
Tim Scully-Granzeier						
Printed Name:	11		_			
To Self	1			10-16-25	B. GRAN	
Licensed Professional Licensed Professional			_	Date:	0.062-051484	
					REGISTERED PROFESSIONAL ENGINEER OF	



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Uncontaminated Soil Certification

by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 III. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 III. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

	tion Information				
`	on of the source of the u 350 - IL 50 (Cicero Aver		•	lumber, if available:	
Physical Site Locat	ion (address, including names (ISGS SITE NO. 403-	umber and street):		tambol, il avallable.	
City: Univer	sity Park	State: IL	Zip Code: 60449		
County: Will		Township: Mone	ee Township		
Lat/Long of approxi	mate center of site in de	cimal degrees (DD	.ddddd) to five decimal	places (e.g., 40.67890,	-90.12345):
Latitude: 41.4559	Longitude:	-87.73233			
(Decimal	Degrees)	(-Decimal Degrees	s)		
Identify how the lat	long data were determin	ed:			
	o Interpolation O Photo	o Interpolation	Survey () Other		
IEPA Site Number(s), if assigned: BOL:		BOW:	BOA:	
Approximate Start	Date (mm/dd/yyyy): <u>TB</u>	D	Approximate End D	ate (mm/dd/yyyy): TB	D
Estimated Volume	of debris (cu. Yd.): 6		_		
II. Owner/Oper	ator Information fo	Source Site			
Site Owner			Site Operator		
Name:	Illino	s DOT District 1	Name:	Illino	is DOT District 1
Street Address:	201 W	est Center Court	Street Address:	201 W	est Center Court
PO Box:			PO Box:		
City:	Schaumburg	State: IL	City:	Schaumburg	State: IL
Zip Code:	60196-1096 Phone:	847-705-4633	Zip Code:	60196-1096 Phone:	847-705-4633
Contact:		Jeffrey Williams	Contact:		Jeffrey Williams
Email, if available: Jeffrey.Williams@illinois.gov			Email, if available:	Jeffrey.Willia	ams@illinois.gov

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 III. Adm. Code 1100.610(a)]:

LOCATION 4034V-17-1 WAS SAMPLED AT THE COMMERICIAL BUILDINGS PROPERTY (ISGS SITE NO. 4034V-17). SEE FIGURE 3-1 AND TABLES 4-1 AND 4-2 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 III. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 III. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-272493-1. ALSO SEE FIGURE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

In Scully-Granzeier (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 III. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name:	Arcadis				
Street Address:	225 West Wacker Dri	ve, Suite 2015	5		
City:	Chicago	State:	IL	Zip Code: 60606	
Phone:	312-575-3717				
Tim Scully-Granzeier					
Printed Name:					
Tw Sell.				10.16.25	Y B. GRA
Licensed Professional Eng				Date:	Poince never the
Licensed Professional Geo	ologist Signature:				REGISTERED PROFESSIONAL ENGINEER OF
				P.	E or L.P.G. Seal:

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)	

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:

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

"(i) Ground Granulated Blast Furnace (GGBF) Slag1010"

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

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

Revise Article 352.02 of the Standard Specifications to read:

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

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

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	
(c) Fine Aggregate	
(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:

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

(1) Organic (ITP T 26)	0.02% max.
(2) Inorganic (ITP T 26)	
(3) Sulfate (SO4) (ASTM D 516-82)	
(4) Chloride (ASTM D 512)	

- (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 (Na₂O + 0.658K₂O) 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 (Na₂O + 0.658K₂O) 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 (Na₂O + 0.658K₂O) 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 $(3.6 \text{ m} \times 3.6 \text{ m})$ 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 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

Mi	ix 2
Cement	125 lb (74 kg)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Revise Article 1021.01 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

Revise Article 1021.03 of the Standard Specifications to read:

- "1021.03 Retarding and Water-Reducing Admixtures. The admixture shall be according to the following.
 - (a) Retarding admixtures shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
 - (b) Water-reducing admixtures shall be according to AASHTO M 194, Type A.
 - (c) High range water-reducing admixtures shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding)."

Revise Article 1021.05 of the Standard Specifications to read:

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

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

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

Revise Article 1021.06 of the Standard Specifications to read:

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

Revise Article 1021.07 of the Standard Specifications to read:

- "1021.07 Corrosion Inhibitor. The corrosion inhibitor shall be according to one of the following.
 - (a) Calcium Nitrite. Corrosion inhibitors shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution and shall comply with either the requirements of AASHTO

M 194, Type C (accelerating) or the requirements of ASTM C 1582. The corrosion inhibiting performance requirements of ASTM C 1582 shall not apply.

(b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.

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

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

Add Article 1021.08 of the Standard Specifications as follows:

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

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

Add Article 1021.09 of the Standard Specifications as follows:

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

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

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

Revise Article 1024.01 of the Standard Specifications to read:

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

Materials for the grout shall be according to the following.

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

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	
(e) Fine Aggregate	
(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:

"<u>Description</u>. This work shall consist of filling voids beneath rigid and composite pavements with cement grout.

<u>Materials</u>. 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	
(d) Ground Granulated Blast Furnace (GGBF) Slag	1010
(e) Admixtures	
(f) Packaged Rapid Hardening Mortar or Concrete	

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

"<u>Materials</u>. 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	

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

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017 Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

- "(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.
 - (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
 - (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
 - (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days."

Revise Article 107.40(c) of the Standard Specifications to read:

- "(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.
 - (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.
 - Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).
 - (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

(3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

- "(b) No working day will be charged under the following conditions.
 - (1) When adverse weather prevents work on the controlling item.
 - (2) When job conditions due to recent weather prevent work on the controlling item.
 - (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
 - (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
 - (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
 - (6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited."

Add the following to Section 109 of the Standard Specifications.

"109.13 Payment for Contract Delay. Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
 - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager,
	Two Project Superintendents,
	One Engineer, and
	One Clerk

- (2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.
- (c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

CONSTRUCTION AIR QUALITY - DIESEL RETROFIT (BDE)

Effective: June 1, 2010 Revised: January 1, 2025

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term "equipment" refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted according to the table below.

Horsepower Range	Model Year and Older
50-99	2003
100-299	2002
300-599	2000
600-749	2001
750 and up	2005

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (https://www.epa.gov/verified-diesel-tech/verified-technologies-list-clean-diesel),
 - or verified by the California Air Resources Board (CARB) (http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

EROSION CONTROL BLANKET (BDE)

Effective: August 1, 2025

Revise Article 251.02 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

Revise Article 251.07 of the Standard Specifications to read:

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

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

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

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

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

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

Revise Article 1081.10 of the Standard Specifications to read:

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

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

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

- (b) Wildlife Friendly Erosion Control Blanket. Wildlife friendly erosion control blanket shall be according to Article 1081.10(a) except the netting shall be loose weave, also known as leno weave or gauze weave, with a moveable joint.
- (c) Wire Staples. Staples shall be made from No. 11 gauge or heavier uncoated black carbon steel wire, a minimum of 1 in. (25 mm) wide at the top and a minimum overall length of 8 in. (200 mm).
- (d) Wood Stakes. Hardwood blanket anchors shall be nominally 7 in. (180 mm) long from neck of hook to tip of anchor. The anchor shall have a minimum 1/2 in. (13 mm) curving hook to hold the blanket in place.
- (e) Turf Reinforcement Mat (TRM). The TRM shall be comprised of non-degradable, ultraviolet stabilized synthetic fibers, filaments, netting, and/or wire mesh processed into

a three-dimensional reinforced mat. The mats may include degradable material to assist with vegetation establishment. Soil filled mats will not be allowed.

The TRM shall meet the following physical and performance properties:

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

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

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

PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

"1032.05 Performance Graded Asphalt Binder. These materials will be accepted according to the Bureau of Materials Policy Memorandum, "Performance Graded Asphalt Binder Qualification Procedure." The Department will maintain a qualified producer list. These materials shall be free from water and shall not foam when heated to any temperature below the actual flash point. Air blown asphalt, recycle engine oil bottoms (ReOB), and polyphosphoric acid (PPA) modification shall not be used.

When requested, producers shall provide the Engineer with viscosity/temperature relationships for the performance graded asphalt binders delivered and incorporated in the work.

(a) Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 "Standard Specification for Performance Graded Asphalt Binder" for the grade shown on the plans and the following.

Test	Parameter
Small Strain Parameter (AASHTO PP 113) BBR, ΔTc, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5 °C min.

(b) Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 "Standard Specification for Performance Graded Asphalt Binder" for the grade shown on the plans.

Asphalt binder modification shall be performed at the source, as defined in the Bureau of Materials Policy Memorandum, "Performance Graded Asphalt Binder Qualification Procedure."

Modified asphalt binder shall be safe to handle at asphalt binder production and storage temperatures or HMA construction temperatures. Safety Data Sheets (SDS) shall be provided for all asphalt modifiers.

(1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrenebutadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders			
Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 64-28 SB/SBS PG 70-22 SB/SBS PG 70-58/SBS PG 76-58/SBS P			
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions 4 (2) max. 4 (2) max.			
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)			
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.	

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer		
ITP, "Separation of Polymer from Asphalt		
Binder"		
Difference in °F (°C) of the softening		
point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness		
ASTM D 5801, 77 °F (25 °C),	440 (40 =)	440 (40 =)
20 in./min. (500 mm/min.), inlbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity		
ASTM D 5801, 77 °F (25 °C),	()	()
20 in./min. (500 mm/min.), inlbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery		
ASTM D 6084, Procedure A,		
77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

(2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient

grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois Modified AASHTO T 27 "Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates" or AASHTO PP 74 "Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method", a 50 g sample of the GTR shall conform to the following gradation requirements.

Sieve Size	Percent Passing	
No. 16 (1.18 mm)	100	
No. 30 (600 µm)	95 ± 5	
No. 50 (300 µm)	> 20	

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders			
Test Asphalt Grade GTR PG 64-28 GTR PG 70-22 GTR PG 70-22 GTR PG 70-28 GTR PG 70-28			
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)			
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, % 60 min. 70 min.			

(3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified

asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: *.SPA, *.SPG, *.IRD, *.IFG, *.CSV, *.SP, *.IRS, *.GAML, *.[0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Table 4 - Requirements for Softener Modified Asphalt Binders		
	Asphalt Grade	
	SM PG 46-28 SM P	G 46-34
Test	SM PG 52-28 SM P	G 52-34
	SM PG 58-22 SM P	G 58-28
	SM PG 64-22	
Small Strain Parameter (AASHTO PP 113)		
BBR, ΔTc, 40 hrs PAV (40 hrs	-5°C min.	
continuous or 2 PAV at 20 hrs)		
Large Strain Parameter (Illinois Modified		
AASHTO T 391) DSR/LAS Fatigue	≥ 54 %	
Property, Δ G* peak τ, 40 hrs PAV	2 54 %	
(40 hrs continuous or 2 PAV at 20 hrs)		

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat"

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

"(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % 1/2/			
Ndesign Binder Surface Polymer Modified Binder or Surface ³			
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

- 2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.
- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % 1/ 2/			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface ^{3/}
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA			25
IL-4.75			35

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for GTR modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes."

Add the following to the end of Note 2 of Article 1030.03 of the Standard Specifications.

"A dedicated storage tank for the ground tire rubber (GTR) modified asphalt binder shall be provided. This tank shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent."

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 III. 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 Methods 8270C, or RCRA METALS GROUNDWATER ANALYSIS using EPA Methods 6010B and 7471A. This price shall include transporting the sample from the job site to the laboratory."

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

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

SEEDING (BDE)

Effective: November 1, 2022

Revise Article 250.07 of the Standard Specifications to read:

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

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

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

Class	– Туре	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	Annual Ryegrass	25 (25)
	Sedge Mixture 2/6/	Oats, Spring	25 (25)
		Wetland Grasses (species below) 5/	6 (6)
	Species:		% By Weight
		densis (Blue Joint Grass)	12
	Carex lacustris (Lak		6
	Carex slipata (Awl-F		6 6
	Carex stricta (Tussock Sedge) Carex vulpinoidea (Fox Sedge)		6
Eleocharis acicularis (Needle Spike Rush)		s (Needle Snike Bush)	3
	Eleocharis obtusa (E		3
	Glyceria striata (Fov		14
	Juncus effusus (Cor		6
	Juncus tenuis (Slene	der Rush)	6
	Juncus torreyi (Torre		6
	Leersia oryzoides (F		10
		d-Stemmed Bulrush)	3
	Scirpus atrovirens (I		3
		iatilis (River Bulrush)	3
	Scribenopiecius iab Spartina pectinata (ernaemontani (Softstem Bulrush)	3 4
L	Spariiria peciiriala (Julu Glassj	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)
	A I - NAS et NAS	to the second se	

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)

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 -	- Туре	Seeds	lb/acre (kg/hectare)
5A	Large Flower Na Forb Mixture 2/ !		5 (5)
	Species:		% By Weight
	Aster novae-	angliae (New England Aster)	5
	Echinacea p	10	
	Helianthus m Heliopsis hei	10 10	
		10	
		stachya (Prairie Blazing Star) nata (Yellow Coneflower)	5
	Rudbeckia h	10	
		niatum (Compass Plant)	10
		ebinthinaceum (Prairie Dock)	20
5B	Wetland Forb 2/	rigidum (Rigid Goldenrod) 5/ 6/ Forb Mixture (see below)	10 2 (2)
35		5/ 6/ Total Wilklute (See Below)	
	Species:	nua (Curant Flag)	% By Weight
		nus (Sweet Flag) opurpurea (Angelica)	3 6
		carnata (Swamp Milkweed)	2
		us (Purple Stemmed Aster)	10
		ua (Beggarticks)	7
		maculatum (Spotted Joe Pye Weed)	7
		perfoliatum (Boneset) tumnale (Autumn Sneeze Weed)	7
		shrevei (Blue Flag Iris)	2 2
		inalis (Cardinal Flower)	5
	Lobelia siphi	litica (Great Blue Lobelia)	5
		um (Winged Loosestrife)	2
	Physostegia virginiana (False Dragonhead) Persicaria pensylvanica (Pennsylvania Smartweed)		5 10
		pathifolia (Curlytop Knotweed)	10
		um virginianum (Mountain Mint)	5
		aciniata (Cut-leaf Coneflower)	5
		riddellii (Riddell Goldenrod)	2
_		eurycarpum (Giant Burreed)	5
6	Conservation Mixture 2/6/	Schizachyrium scoparium (Little Blue Stem) 5/	5 (5)
		Elymus canadensis	2 (2)
		(Canada Wild Rye) 5/	F (F)
		Buffalo Grass 5/ 7/ Vernal Alfalfa 4/	5 (5)
		Oats, Spring	15 (15) 48 (55)
6A	Salt Tolerant	Schizachyrium scoparium	5 (5)
	Conservation	(Little Blue Stem) 5/	0.70\
	Mixture 2/6/	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	Perennial Ryegrass	50 (55)
	Cover Mixture	Oats, Spring	64 (70)

Notes:

- 1/ Seeding shall be performed when the ambient temperature has been between 45 °F (7 °C) and 80 °F (27 °C) for a minimum of seven (7) consecutive days and is forecasted to be the same for the next five (5) days according to the National Weather Service.
- 2/ Seeding shall be performed in late fall through spring beginning when the ambient temperature has been below 45 °F (7 °C) for a minimum of seven (7) consecutive days and ending when the ambient temperature exceeds 80 °F (27 °C) according to the National Weather Service.
- 3/ Specific variety as shown in the plans or approved by the Engineer.
- 4/ Inoculation required.
- 5/ Pure Live Seed (PLS) shall be used.
- 6/ Fertilizer shall not be used.
- 7/ Seed shall be primed with KNO₃ to break dormancy and dyed to indicate such.

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

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023 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)) Luml	oer:
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- (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."

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

"109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting. The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment."

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

"This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%"

SUBMISSION OF BIDDERS LIST INFORMATION (BDE)

Effective: January 2, 2025 Revised: March 2, 2025

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

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

SUBMISSION OF PAYROLL RECORDS (BDE)

Effective: April 1, 2021 Revised: November 2, 2023

<u>FEDERAL AID CONTRACTS</u>. 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."

<u>STATE CONTRACTS</u>. 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."

SURVEYING SERVICES (BDE)

Effective: April 1, 2025

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

Delete Section 668 of the Standard Specifications.

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021 Revised: November 1, 2022

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

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

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020 Revised: January 1, 2026

Add the following to Article 701.03 of the Standard Specifications:

"(q) Temporary Sign Supports1106.02"

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

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.
- (I) 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."

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within $\underline{\bf 35}$ working days.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- Implementation of Clean Air Act and Federal Water Pollution Control Act
- Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid designbuild 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 designbuilder 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, preapprenticeship, 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 nonresponsible.
- 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 nonminority 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 <code>DBAconformance@dol.gov</code>, 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 $\underline{40}$ $\underline{\text{U.S.C. }3144(b)}$ or \S 5.12(a).
- c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, $\underline{18}$ $\underline{\text{U.S.C. }1001}$.
- **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
- 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, <u>31</u> 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 lowertier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

- **5. Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:
- a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

- 1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
- a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)
- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.
- 2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
- 3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).
- 5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

- 1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.
- 2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal- aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more — as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

- e. The terms "covered transaction," "debarred,"
 "suspended," "ineligible," "participant," "person," "principal,"
 and "voluntarily excluded," as used in this clause, are defined
 in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200.
 "First Tier Covered Transactions" refers to any covered
 transaction between a recipient or subrecipient of Federal
 funds and a participant (such as the prime or general contract).
 "Lower Tier Covered Transactions" refers to any covered
 transaction under a First Tier Covered Transaction (such as
 subcontracts). "First Tier Participant" refers to the participant
 who has entered into a covered transaction with a recipient or
 subrecipient of Federal funds (such as the prime or general
 contractor). "Lower Tier Participant" refers any participant who
 has entered into a covered transaction with a First Tier
 Participant or other Lower Tier Participants (such as
 subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.
- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;
- (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800: and
- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).
- (5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and
- (6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2

 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

- a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 - 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general 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.

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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.

- 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.
- 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
- 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.