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Letting March 5, 2021

Notice to Bidders, Specifications and Proposal



**Contract No. 61G22
COOK County
Section 15-00129-00-BR (Brookfield)
Route FAU 1408 (Brookfield Avenue)
Project 96L7-433 ()
District 1 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. March 5, 2021 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. 61G22
COOK County
Section 15-00129-00-BR (Brookfield)
Project 96L7-433 ()
Route FAU 1408 (Brookfield Avenue)
District 1 Construction Funds**

Replace the bridge carrying Brookfield Avenue over Salt Creek in Brookfield.

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

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

By Order of the
Illinois Department of Transportation

Omer Osman,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2021

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 4-1-16) (Revised 1-1-21)

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BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	April 1, 2020
80274			Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80246			Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	
80241			Bridge Demolition Debris	July 1, 2009	
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
* 80425			Cape Seal	Jan. 1, 2020	Jan. 1, 2021
80384	163	X	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	
80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80261	167	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387			Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
* 80434			Corrugated Plastic Pipe (Culvert and Storm Sewer)	Jan. 1, 2021	
80029	170	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Mar. 2, 2019
80402	180	X	Disposal Fees	Nov. 1, 2018	
80378			Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80421			Electric Service Installation	Jan. 1, 2020	
80415	182	X	Emulsified Asphalts	Aug. 1, 2019	
80423	185	X	Engineer's Field Office Laboratory	Jan. 1, 2020	
80229			Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80417	188	X	Geotechnical Fabric for Pipe Underdrains and French Drains	Nov. 1, 2019	
80420			Geotextile Retaining Walls	Nov. 1, 2019	
* 80433			Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2020
80422			High Tension Cable Median Barrier	Jan. 1, 2020	Nov. 1, 2020
80416			Hot-Mix Asphalt – Binder and Surface Course	July 2, 2019	Nov. 1, 2019
80398			Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Nov. 1, 2019
* 80406			Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Data Collection)	Jan. 1, 2019	Jan. 2, 2021
80347			Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	July 2, 2019
80383			Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	July 2, 2019
80411			Luminaires, LED	April 1, 2019	
80393	190	X	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	Mar. 1, 2019
80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
80418			Mechanically Stabilized Earth Retaining Walls	Nov. 1, 2019	Nov. 1, 2020
* 80424			Micro-Surfacing and Slurry Sealing	Jan. 1, 2020	Jan. 1, 2021
80428	192	X	Mobilization	April 1, 2020	
80412			Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80430	193	X	Portland Cement Concrete – Haul Time	July 1, 2020	
80359	194	X	Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2019
80431			Portland Cement Concrete Pavement Patching	July 1, 2020	
80432			Portland Cement Concrete Pavement Placement	July 1, 2020	
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
34261		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	196	X Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	198	X Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 2, 2021
80407	208	X Removal and Disposal of Regulated Substances	Jan. 1, 2019	Jan. 1, 2020
80419	219	X Silt Fence, Inlet Filters, Ground Stabilization and Riprap Filter Fabric	Nov. 1, 2019	April 1, 2020
80395		Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340		Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127	225	X Steel Cost Adjustment	April 2, 2014	Aug. 1, 2017
80408		Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
80413		Structural Timber	Aug. 1, 2019	
80397	228	X Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	229	X Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
* 80435		Surface Testing of Pavements – IRI	Jan. 1, 2021	
80298		Temporary Pavement Marking	April 1, 2012	April 1, 2017
80409	230	X Traffic Control Devices – Cones	Jan. 1, 2019	
80410		Traffic Spotters	Jan. 1, 2019	
20338	231	X Training Special Provisions	Oct. 15, 1975	
80318		Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
80429		Ultra-Thin Bonded Wearing Course	April 1, 2020	
80288	234	X Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	236	X Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80414		Wood Fence Sight Screen	Aug. 1, 2019	April 1, 2020
80427	237	X Work Zone Traffic Control Devices	Mar. 2, 2020	
80071		Working Days	Jan. 1, 2002	

The following special provisions are in the 2021 Supplemental Specifications and Recurring Special Provisions.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location(s)</u>	<u>Effective</u>	<u>Revised</u>
80277	Concrete Mix Design – Department Provided	Check Sheet #37	Jan. 1, 2012	April 1, 2016
80405	Elastomeric Bearings	Article 1083.01	Jan. 1, 2019	
80388	Equipment Parking and Storage	Article 701.11	Nov. 1, 2017	
80165	Moisture Cured Urethane Paint System	Article 1008.06	Nov. 1, 2006	Jan. 1, 2010
80349	Pavement Marking Blackout Tape	Articles 701.04, 701.19(f), 701.20(j) and 1095.06	Nov. 1, 2014	April 1, 2016
80371	Pavement Marking Removal	Articles 783.02-783.04, 783.06 and 1101.13	July 1, 2016	
80389	Portland Cement Concrete	Article 1020.04 Table 1 and Note 4	Nov. 1, 2017	
80403	Traffic Barrier Terminal, Type 1 Special	Articles 631.04 and 631.12	Nov. 1, 2018	

The following special provisions have been deleted from use.

<u>File Name</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80317	Surface Testing of Hot-Mix Asphalt Overlays	Jan 1, 2013	Aug. 1, 2019

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: January 15, 2021 Letting

Pg #	√	File Name	Title	Effective	Revised
		GBSP 12	Drainage System	June 10, 1994	Jun 24, 2015
		GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Oct 23, 2020
		GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	April 13, 2018
		GBSP 15	Three Sided Precast Concrete Structure	July 12, 1994	Dec 21, 2016
		GBSP 16	Jacking Existing Superstructure	Jan 11, 1993	April 13, 2018
		GBSP 18	Modular Expansion Joint	May 19, 1994	Oct 23, 2020
		GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Oct 23, 2020
		GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Oct 23, 2020
		GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Apr 22, 2016
		GBSP 28	Deck Slab Repair	May 15, 1995	April 13, 2018
		GBSP 29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	March 1, 2019
		GBSP 30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Oct 20, 2017
		GBSP 31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	March 1, 2019
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	Oct 23, 2020
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Oct 4, 2016
		GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
239	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Oct 23, 2020
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	Aug 9, 2019
		GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP 56	Setting Piles in Rock	Nov 14, 1996	Oct 23, 2020
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Mar 29, 2017
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Apr 22, 2016
		GBSP 61	Slipform Parapet	June 1, 2007	March 1, 2019
		GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	Oct 5, 2015
		GBSP 71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011
		GBSP 72	Bridge Deck Fly Ash or GGBF Slag Concrete Overlay	Jan 18, 2011	March 1, 2019
241	X	GBSP 75	Bond Breaker for Prestressed Concrete Bulb-T Beams	April 19, 2012	Oct 23, 2020
242	X	GBSP 78	Bridge Deck Construction	Oct 22, 2013	Dec 21, 2016
		GBSP 79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Mar 29, 2017
		GBSP 81	Membrane Waterproofing for Buried Structures	Oct 4, 2016	March 1, 2019
		GBSP 82	Metallizing of Structural Steel	Oct 4, 2016	Oct 20, 2017
		GBSP 83	Hot Dip Galvanizing for Structural Steel	Oct 4, 2016	Oct 20, 2017
		GBSP 85	Micropiles	Apr 19, 1996	Oct 23, 2020
244	X	GBSP 86	Drilled Shafts	Oct 5, 2015	Oct 4, 2016
		GBSP 87	Lightweight Cellular Concrete Fill	Nov 11, 2011	Apr 1, 2016
		GBSP 88	Corrugated Structural Plate Structures	Apr 22, 2016	April 13, 2018
		GBSP 89	Prefomed Pavement Joint Seal	Oct 4, 2016	Oct 23, 2020
		GBSP 90	Three Sided Precast Concrete Structure (Special)	Dec 21, 2016	April 13, 2018
256	X	GBSP 91	Crosshole Sonic Logging Testing of Drilled Shafts	Apr 20, 2016	Aug 9, 2019
		GBSP 92	Thermal Integrity Profile Testing of Drilled Shafts	Apr 20, 2016	
		GBSP 93	Prefomed Bridge Joint Seal	Dec 21, 2016	Oct 23, 2020
		GBSP 94	Warranty for Cleaning and Painting Steel Structures	Mar 3, 2000	Nov 24, 2004
		GBSP 96	Erection of Bridge Girders Over or Adjacent to Railroads	Aug 9, 2019	

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW

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Brookfield Avenue over Salt Creek
Section: 15-00129-00-BR
County: Cook
Contract No.: 61G22
Village of Brookfield

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted April 1, 2016, 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 Section: 15-00129-00-BR; Project Number: 96L7(433); County: Cook; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

Brookfield Avenue over Salt Creek
Section: 15-00129-00-BR
County: Cook
Village of Brookfield
Contract No.: 61G22

LOCATION OF PROJECT

The project is located in the Village of Brookfield in Cook County. The construction limits along Brookfield Avenue (FAU 1408) are from 50' east of Forest Avenue to 280' west of Arden Avenue. The gross and net length of the project is 601 feet (0.11 miles)

DESCRIPTION OF PROJECT

The work consists of furnishing all labor, materials, equipment, and other incidentals necessary for the construction of a precast prestressed concrete I beam superstructure, reconstruction of a hot-mix asphalt pavement, earth excavation, furnished excavation, combination curb and gutter removal, sidewalk removal, porous granular embankment, subbase granular material, hot mix asphalt binder and surface courses, Portland cement concrete sidewalk, combination concrete curb and gutter, lighting, storm sewer, and other incidental and miscellaneous items of work in accordance with the Plans, Standard Specifications, and these Special Provisions.

COMPLETION DATE PLUS WORKING DAYS

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

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, October 29, 2021 except as specified herein.

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

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

MAINTENANCE OF ROADWAYS (D-1)

Effective: September 30, 1985

Revised: November 1, 1996

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

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

STATUS OF UTILITIES

Effective: June 1, 2016
 Revised: January 1, 2020

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

UTILITIES TO BE ADJUSTED

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

Pre-Stage

LOCATION	TYPE	DESCRIPTION	OWNER	DURATION
505+95	Electric, Telecom Sharing Pole	Utility Pole conflicts with the proposed construction and change in elevation at this location. Pole to be raised.	ComEd, MCI, and Comcast	Relocate 112 Days
506+51	Electric, Telecom Sharing Pole	Utility Pole conflicts with the proposed sidewalk and change in elevation at this location.	ComEd, MCI, and Comcast	Relocate 112 Days

LOCATION	TYPE	DESCRIPTION	OWNER	DURATION
506+29 to 507+84	Telephone	Underground Telephone Duct conflicts with the proposed storm sewer and Temporary Soil Retention System at this location. Fiber Optic will be relocated north of the bridge, across Salt Creek. Manhole in proposed east approach slab to relocate 12' downstation.	AT&T	Relocate 112 Days
506+46/ to 507+43/	Fiber Optic Communication	Conduit Package Across Bridge conflicts with the proposed bridge replacement. Package cannot be reattached to the proposed bridge, and cannot be placed underneath. Conduit will be relocated north of the bridge, across Salt Creek.	Century Link, MCI, Crown Castle, BNSF	Relocate 120 Days.
507+81	Fiber Optic, Aerial Electric	Utility Pole conflicts with the proposed construction and change in elevation at this location.	ComEd, MCI, and Comcast	Relocate 112 Days

Total Number of Days – 120 DAYS

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 owners part can be secured.

PRE-STAGE AND DURING CONSTRUCTION

LOCATION	TYPE	DESCRIPTION	OWNER
506+44	Tunnel	MWRD Tunnel, No access hatches and manhole covers on District structures and manholes within the project area shall be buried or covered. No debris shall enter District structures, sewers, or facilities. District personnel shall have 24 hour-a-day unrestricted access to all District facilities.	MWRD
507+67	Telephone Structure	Controller Box	AT&T
507+81	Cable Television	Underground Duct	Comcast
507+84 31L to 509+52 24L	High Pressure Gas Main	Underground 2" Main	Nicor
509+37 to 510+00	Communications	Fiber Optic	Crown Castle

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

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
AT&T	Chris Cass	1000 Commerce Drive Flr 1 Oak Brook, IL 60523	(630) 573-5715	cc4361@att.com
BNSF	Dan Peltier	80 44 th Ave NE, Minneapolis, MN 55421	(312) 850-5680	michael.brody@bnsf.com daniel.peltier@bnsf.com
Brookfield Public Works	Andy Zontos	4545 Eberly Avenue Brookfield, IL 60513	(708) 485-2540	AZontos@brookfieldil.gov

Brookfield Avenue over Salt Creek
 Section: 15-00129-00-BR
 County: Cook
 Contract No.: 61G22
 Village of Brookfield

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
Brookfield Water	Andy Zontos	4545 Eberly Avenue Brookfield, IL 60513	(708) 485-2540	AZontos@brookfieldil.gov
Century Link	Brian Shepherd	2100 W Carroll Ave Chicago, IL 60612	(312) 253-1800x1878	bshepherd@hbkengineering.com
Comcast	Emily Craven	1 Lincoln Centre, Suite 600 Oakbrook Terrace, IL 60181	(773) 509-3678	Emily.Craven@exeloncorp.com
ComEd	Michelle Ho	1 Lincoln Centre, 6 th Floor Oakbrook Terrace, IL 60181	(331) 481-9108	michelle.ho@comed.com
Crown Castle	David Antol	2000 Corporate Dr. Canonsburg, PA 15317	(724) 416-2180	David.Antol@crowncastle.com
MCI/Verizon	Joe Chaney	400 International Pkw Richardson, TX 75081	(312) 617-2131	Investigations@verizon.com
MWRD	Chester Kos	100 East Erie Street Chicago, IL 60611	(312) 751-3236	KosC@mwr.org
Nicor	Charles M. Parrot	1844 Ferry Rd. Naperville, IL 60563	(630) 388-3319	gasmaps@agresources.com cparrot@southernco.com

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be taken into account 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 in the action column 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 dates 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. The Department's contractor is responsible for contacting J.U.L.I.E. prior to any and all excavation work

ELECTRICAL SHUTDOWN

All electrical shutdown costs required to meet OSHA or utility requirements necessary for the day-to-day activities the Contractor employs to complete construction is the responsibility of the Contractor and will not be reimbursed.

TRAFFIC CONTROL PLAN (D-1)

Effective: September 30, 1985

Revised: January 1, 2007

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

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

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

STANDARDS:

701006-05 701301-04 701311-03 701801-06 701901-08

DETAILS:

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)

DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS (TC-21)

SPECIAL PROVISIONS:

MAINTENANCE OF ROADWAYS

PUBLIC CONVENIENCE AND SAFETY

TRAFFIC CONTROL AND PROTECTION (ARTERIALS)

TRAFFIC CONTROL DEVICES – CONES (BDE)

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

CHANGEABLE MESSAGE SIGN

AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012

Revised: April 1, 2016

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

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

303.02 Materials. Materials shall be according to the following.

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

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

Note 2. RAP having 100 percent passing the 1 1/2 in (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradation CS 01 is used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders. The final product shall not contain more than 40 percent by weight of RAP.

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

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer. The calibration for the mechanical feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered.

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

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradation CS 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the

1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

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

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

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

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

Add the following to Section 1004 of the Standard Specifications:

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

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. The top 12 inches of the aggregate subgrade improvement shall be 3 inches of capping material and 9 inches of crushed gravel, crushed stone or crushed concrete. In applications where greater than 36 inches of subgrade material is required, rounded gravel, meeting the CS01 gradation, may be used beginning at a depth of 12 inches below the bottom of pavement.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials. Non-mechanically blended RAP may be allowed up to a maximum of 5.0 percent.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01.

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

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

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

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

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

Site: Brookfield Avenue (FAU 1408)

- Station 504+80 to Station 505+40 contains non-special waste, locations are shown on cross sections. Soils within the areas are considered to be (a)(5) soils per Article 669.05 of IDOT Standard Specifications for Road and Bridge Construction, which must be managed and disposed of off-site as non-special waste or special waste.

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:

- Brookfield Cleaners, 8903 Burlington Ave- RCRA
- Magic Touch Cleaners, 3737 Prairie Ave-SRP, RCRA
- J. Mikl & Sons Machine Works, Hladik Robert 8822 -8824 Brookfield Ave LUST, RCRA

Additional information on the above sites is available from Village of Brookfield
8820 Brookfield Ave
Brookfield, IL 60513

PUBLIC CONVENIENCE AND SAFETY

Effective: May 1, 2012
 Revised: July 15, 2012

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

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

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

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

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

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

FRICITION AGGREGATE (D-1)

Effective: January 1, 2011
 Revised: November 1, 2019

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

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

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

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete

Use	Mixture	Aggregates Allowed
HMA Low ESAL	Stabilized Subbase Shoulders	or
		<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}
HMA High ESAL Low ESAL	C Surface and Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}
HMA High ESAL	D Surface and Binder IL-9.5 SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}
		<u>Other Combinations Allowed:</u>

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

Use	Mixture	Aggregates Allowed	
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} :	
		Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel ^{2/} , Crushed Concrete ^{3/} , 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. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

HAMBURG WHEEL AND TENSILE STRENGTH RATIO TESTING (D-1)

Effective: October 15, 2020

Revise Article 1030.04(d) of the Standard Specifications to read:

“(d) Verification Testing. During mixture design, prepared samples shall be submitted to the District laboratory 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 Testing ^{1/2/}	Tensile Strength Testing
Binder	total of 3 - 160 mm tall bricks	6 - 95 mm tall bricks
Surface	total of 4 - 160 mm tall bricks	6 - 95 mm tall bricks

Low ESAL – Required Samples for Verification Testing	
Mixture	Tensile Strength Testing
Binder	6 - 95 mm tall bricks
Surface	6 - 95 mm tall bricks

- 1/ The compacted gyratory bricks for Hamburg wheel 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.

New and renewal mix designs shall meet the following requirements for verification testing.

- (1) Hamburg Wheel Test. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

Illinois Modified AASHTO T 324 Requirements ^{1/}	
PG Grade	Minimum Number of Wheel Passes
PG 58-xx (or lower)	5,000
PG 64-xx	7,500
PG 70-xx	15,000
PG 76-xx (or higher)	20,000

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or below, loose warm mix asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg wheel specimens.

(2) Tensile Strength. Tensile strength testing shall be according to the Illinois Modified AASHTO T 283 procedure. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 80 psi (550 kPa) for polymer modified PG asphalt binder, except polymer modified PG XX-28 or lower asphalt binders which shall have a minimum tensile strength of 70 psi (483 kPa). The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa).

If a mix fails the Department's verification testing, the Contractor shall make necessary changes to the mix and provide passing Hamburg wheel and tensile strength test results from a private lab. The Department will verify the passing results."

Start of HMA Production and Job Mix Formula (JMF) Adjustments. Revise Article 1030.06(a) paragraphs six, seven and eight of the Standard Specifications to read:

"Mixture sampled to represent the test strip shall include approximately 60 lb (27 kg) of additional material for the Department to conduct Hamburg wheel 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 testing shall be according to the "High ESAL - Required Samples for Verification Testing" table in Article 1030.04(d) above.

Mixture sampled during production for Hamburg wheel will be tested by the Department. The Hamburg wheel results shall meet the requirements specified in Article 1030.04(d) above.

Upon notification by the Engineer of a failing Hamburg wheel test and prior to restarting production, the Contractor shall make necessary adjustments approved by the Engineer to the mixture production and submit another mixture sample for the Department to conduct Hamburg wheel testing. Prior produced material may be paved out provided all other mixture criteria is being met. Upon consecutive failing Hamburg wheel tests, no additional mixture shall be produced until the Engineer receives passing Hamburg wheel test results.

The Department may conduct additional Hamburg wheel testing on production material as determined by the Engineer."

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006

Revised: April 1, 2016

Add the following to the end of article 1032.05 of the Standard Specifications:

“(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other 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, 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

Add the following to the end of Note 1. 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 must be capable of providing continuous mechanical mixing throughout by continuous agitation and 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.”

Revise 1030.02(c) of the Standard Specifications to read:

“(c) RAP Materials (Note 5)1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 5. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D-1)

Effective: November 1, 2019
Revised: October 15, 2020

Description. This work shall consist of constructing a hot-mix asphalt (HMA) binder and/or surface course on a prepared base. Work shall be according to Sections 406 and 1030 of the Standard Specifications, except as modified herein.

Materials. Revise Article 1004.03(c) to read:

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

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

- 1/ CA 16 or CA 13 may be blended with the CA 11.
- 2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.
- 3/ The specified coarse aggregate gradations may be blended.
- 4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

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

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

HMA Nomenclature. 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 Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

“**1030.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.03
(b) Fine Aggregate	1003.03
(c) RAP Material	1031
(d) Mineral Filler	1011
(e) Hydrated Lime	1012.01
(f) Slaked Quicklime (Note 1)	
(g) Performance Graded Asphalt Binder (Note 2)	1032
(h) Fibers (Note 3)	
(i) Warm Mix Asphalt (WMA) Technologies (Note 4)	

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. 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. The elastic recovery shall be a minimum of 80.

Note 3. 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 4. Warm mix additives or foaming processes shall be selected from the Department’s Qualified Producer List, “Technologies for the Production of Warm Mix Asphalt (WMA)”.

Mixture Design. Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}										
Sieve Size	IL-19.0 mm		SMA 12.5		SMA 9.5		IL-9.5mm		IL-4.75 mm	
	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
3/8 in. (9.5 mm)				65	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	90	100
#8 (2.36 mm)	20	42	16	24 ^{4/}	16	32 ^{4/}	34 ^{5/}	52 ^{2/}	70	90
#16 (1.18 mm)	15	30					10	32	50	65
#30 (600 μm)			12	16	12	18				
#50 (300 μm)	6	15					4	15	15	30
#100 (150 μm)	4	9					3	10	10	18
#200 (75 μm)	3	6	7.0	9.0 ^{3/}	7.5	9.5 ^{3/}	4	6	7	9 ^{3/}
#635 (20 μm)			≤ 3.0		≤ 3.0					
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		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.
- 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.

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

“(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent, for IL-4.75 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.

VOLUMETRIC REQUIREMENTS High ESAL				
	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
Ndesign	IL-19.0; Stabilized Subbase IL- 19.0	IL-9.5	IL-4.75 ^{1/}	
50	13.5	15.0	18.5	65 – 78 ^{2/}
70			65 - 75	
90				

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

2/ VFA for IL-4.75 shall be 72-85 percent.”

Revise the table in Article 1030.04(b)(3) to read:

“VOLUMETRIC REQUIREMENTS, SMA 12.5 ^{1/} and SMA 9.5 ^{1/}			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 ^{4/}	3.5	17.0 ^{2/}	75 - 83
		16.0 ^{3/}	

1/ Maximum draindown shall be 0.3 percent. The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30 °F.

2/ Applies when specific gravity of coarse aggregate is ≥ 2.760.

- 3/ Applies when specific gravity of coarse aggregate is < 2.760.
- 4/ Blending of different types of aggregate will not be permitted.
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.

Add to the end of Article 1030.05 (d) (2) a. of the Standard Specifications:

“During production, the Contractor shall test SMA mixtures for draindown according to AASHTO T305 at a frequency of 1 per day of production.”

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 steel slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours.”

Quality Control/Quality Assurance (QC/QA). Revise the third paragraph of Article 1030.05(d)(3) 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.”

Add the following paragraphs to the end of Article 1030.05(d)(3):

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement). Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The

three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed.”

Revise the second table in Article 1030.05(d)(4) and its notes to read:

“DENSITY CONTROL LIMITS			
Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density, minimum
IL-4.75	Ndesign = 50	93.0 – 97.4 % ^{1/}	91.0%
IL-9.5FG	Ndesign = 50 - 90	93.0 – 97.4 %	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0 %	90.0%
IL-9.5, IL-9.5L,	Ndesign < 90	92.5 – 97.4 %	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0 %	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 ^{2/} – 97.4 %	90.0%
SMA	Ndesign = 80	93.5 – 97.4 %	91.0%

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

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

Equipment. Add the following to Article 1101.01 of the Standard Specifications:

“(h) Oscillatory Roller. The oscillatory roller shall be self-propelled and provide a smooth operation when starting, stopping, or reversing directions. The oscillatory roller shall be able to operate in a mode that will provide tangential impact force with or without vertical impact force by using at least one drum. The oscillatory roller shall be equipped with water tanks and sprinkling devices, or other approved methods, which shall be used to wet the drums to prevent material pickup. The drum(s) amplitude and frequency of the tangential and vertical impact force shall be approximately the same in each direction and meet the following requirements:

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN).”

Construction Requirements.

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller 1101.01”

Revise the third paragraph of Article 406.05(a) to read:

“All depressions of 1 in. (25 mm) or more in the surface of the existing pavement shall be filled with binder. At locations where heavy disintegration and deep spalling exists, the area shall be cleaned of all loose and unsound material, tacked, and filled with binder (hand method).”

Revise Article 406.05(c) to read.

“(c) Binder (Hand Method). Binder placed other than with a finishing machine will be designated as binder (hand method) and shall be compacted with a roller to the satisfaction of the Engineer. Hand tamping will be permitted when approved by the Engineer.”

Revise the special conditions for mixture IL-4.75 in Article 406.06(b)(2) e. to read:

“e. The mixture shall be overlaid within 5 days of being placed.”

Revise Article 406.06(d) to read:

“(d) Lift Thickness. The minimum compacted lift thickness for HMA binder and surface courses shall be as follows.

MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19) - over HMA surfaces ^{1/} 1 (25) - over PCC surfaces ^{1/}
IL-9.5FG	1 1/4 (32)
IL-9.5, IL-9.5L	1 1/2 (38)
SMA 9.5	1 3/4 (45)
SMA 12.5	2 (51)
IL-19.0, IL-19.0L	2 1/4 (57)

1/ The maximum compacted lift thickness for mixture IL-4.75 shall be 1 1/4 in. (32 mm).”

Revise Table 1 and Note 3/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

"TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Binder and Surface ^{1/}	V _D , P ^{3/} , T _B , 3W, O _T , O _B	P ^{3/} , O _T , O _B	V _S , T _B , T _F , O _T	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
IL-4.75 and SMA ^{4/ 5/}	T _B , 3W, O _T	- -	T _F , 3W, O _T	
Bridge Decks ^{2/}	T _B	- -	T _F	As specified in Articles 582.05 and 582.06.

3/ A vibratory roller (V_D) or oscillatory roller (O_T or O_B) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder."

Add the following to EQUIPMENT DEFINITION in Article 406.07(a) contained in the Errata of the Supplemental Specifications:

"O_T - Oscillatory roller, tangential impact mode. Maximum speed is 3.0 mph (4.8 km/h) or 264 ft/min (80 m/min).

O_B - Oscillatory roller, tangential and vertical impact mode, operated at a speed to produce not less than 10 vertical impacts/ft (30 impacts/m)."

Delete last sentence of the second paragraph of Article 1102.01(a) (4) b. 2.

Add to the end of Article 1102.01 (a) (4) b. 2.:

"As an option, collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following:

(a.) Sufficient collected dust (baghouse) is available for production of the SMA mix for the entire project.

(b.) A mix design was prepared based on collected dust (baghouse).

Production Testing. Revise first paragraph of Article 1030.06(a) of the Standard Specifications to read:

“(a) High ESAL Mixtures. 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.”

Method of Measurement:

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} .”

Basis of Payment. Replace the second through the fifth paragraphs of Article 406.14 with the following:

“HMA binder and surface courses will be paid for at the contract unit price per ton (metric ton) for MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS; HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the N_{design} specified; HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and N_{design} specified; HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and N_{design} specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the N_{design} specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and N_{design} specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and N_{design} specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and N_{design} specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition, friction aggregate, and N_{design} specified.”

TRAFFIC CONTROL AND PROTECTION (ARTERIALS)

Effective: February 1, 1996

Revised: March 1, 2011

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

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

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

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

Temporary pavement markings will be paid for separately unless shown on a Standard.

DUCTILE IRON WATER MAIN 16"

Description. This work includes furnishing and installing ductile iron water main, AWWA C151, thickness Class 52, bends, tees, and plugs with polyethylene wrap. The work shall be done in accordance with Sections 20, 22, 40 and 41 of the Standard Specifications for Water and Sewer Construction in Illinois (Current Edition) and the details shown on the Plans, and shall include fittings, pipe restraint, thrust blocks, connections to existing water main, disinfection, testing, bacteriological analysis, and other appurtenances required to do the Work. The minimum depth of cover over the water main shall be 5'-6". The pipe and the fittings shall be protected by loosely wrapping with polyethylene sheets installed per AWWA C105/ANSI A21.5-93.

Materials. The ductile iron water main shall be in conformance with Section 40-2.05 of the Standard Specifications for Water and Sewer Construction in Illinois and shall be Class 52 DIP with a minimum pressure rating of 350 psi with push-on and restrained joints where shown. The polyethylene sheet shall comply with A.S.T.M. D1248, with a thickness of not less than eight mils. The fittings shall be in conformance with Section 40-2.05A of the Water and Sewer Specifications and shall be Class 52 DIP with a minimum pressure rating of 350 psi with mechanical joints. The ductile iron pipe and fittings shall have a cement-mortar lining in accordance with AWWA C104/ANSI A21.4.

Bronze wedges shall be installed at all joints.

Excavation, Bedding and Backfilling: This work shall be performed in accordance with Sections 20 and 22 of the Standard Specifications for Water and Sewer Construction in Illinois and the detail shown on the Plans. Granular bedding, 4 inches thick, shall be installed under all water main. Additional granular material to 6 inches above the pipe shall be installed. Granular material from 4 inches below the bottom of the pipe to 6 inches above the top of the pipe shall not be paid for separately but shall be considered included in the pay item. CA-7 trench backfill shall be required where the trench is located within 5-feet of existing or proposed pavements and shall not be paid for separately but included in this pay item. Trench width shall include the outside diameter width of the pipe plus 18" on each side of the pipe. Trench height shall be from 6" above the pipe to the subgrade elevation of the final pavements or proposed topsoil. Any sheeting or shoring required for open-cut trenches shall be provided and installed and shall be included in the cost of the pay item. Sheeting or shoring shall comply with any governing Federal or State agencies, laws and local ordinances.

Where the trench crosses sidewalks, roads, and driveways, the trench shall be backfilled to the existing grade at the end of each working day or protected by other means as approved by the engineer (plates, temporary pavement, etc.). This temporary backfill (or other methods) shall not be paid for separately, but shall be considered included in the cost of the water main installation.

Restrained Joints: To prevent movement of water main under pressure, all fitting joints (bends, tees, reducers and plugs) shall be restrained with EBAA Iron MEGALUG series 1100 Pipe Mechanical Joint Restraint. All water main pipe joints between the vertical fittings at adjustment locations shall be restrained with MEGALUG series 1700 Pipe Harness. Ductile iron restrained joint pipe type U.S. Pipe TR Flex is an acceptable alternative. Gasket restraints are NOT an acceptable alternative. Fittings shall be further restrained with concrete thrust blocks in accordance with the details. Restrained joints and thrust blocking shall not be paid for separately but shall be included in the unit price per foot for water main. Limits of pipe joint restraint shall comply with the following table:

THRUST RESTRAINT TABLE	
TYPE	16"
Horizontal Bend, 11.25°	2.4
Horizontal Bend, 22.5°	4.8
Horizontal Bend, 45°	10.0
Horizontal Bend, 90°	24.1
Vertical Up Bend, 11.25°	2.4
Vertical Up Bend, 22.5°	4.8
Vertical Up Bend, 45°	10.0
Vertical Up Bend, 90°	24.1
Vertical Down Bend, 11.25°	5.5
Vertical Down Bend, 22.5°	11.1
Vertical Down Bend, 45°	23.2
Vertical Down Bend, 90°	55.9
Tee 16" Equal	24.7
Dead End and Valves	28.0
NOTES: 1. Lengths in feet per DIPRA thrust restraint design (Soil = Clay 1, Lay Condition = 4, Pressure = 60 psi, SF = 1.5, polywrapped pipe). 2. Bend lengths required on both sides of fitting. 3. Tee lengths required on tee branch. 4. Reducer lengths required on larger pipe.	

Pressure and Leakage Testing

After the water main has been laid and partially backfilled, all pipe, fittings, joints and valves shall be subjected to a hydrostatic pressure of 150 psig in accordance with Section 41-2.14 of the Standard Specifications for Water and Sewer Construction in Illinois. The above pressure shall hold without loss and without further application of pressure for at least 60 minutes. Upon satisfactorily maintaining 150 psig the water main, fittings, joints and valves will be subjected to a pressure test. Mains shall be pressure tested at a maximum pressure of 150 psi for 2 hours and shall not exceed the allowable leakage as specified in AWWA C600. If the measured leakage exceeds that which is allowable, the Contractor shall remedy all leaks and the pressure and leakage tests will be repeated. The water main will not be accepted until the leakage is less than the allowable stated above.

It shall be the Contractor's responsibility to furnish all material and labor to complete the testing. This shall include restrained joint plugs, corporations, whips, and other temporary materials as needed. The Contractor shall satisfy himself that the tests can be successfully completed prior to requesting the Engineer's presence for the official tests.

The Contractor shall notify the Engineer at least 48 hours in advance of the time that official tests will be made. Depending on traffic conditions, public hazard, or other reasons, the Engineer may direct when tests of completed sections of mains shall be made, and may order such tests to be made in relatively short sections. Testing shall not be paid for separately but shall be considered included in the Contract.

Disinfection: After the new work has been completed, pressure tested and found to be satisfactory, the Contractor shall furnish the equipment and the materials necessary to properly disinfect the system in accordance with Section 41-2.15 of the Standard Specifications for Water and Sewer Construction in Illinois. All taps required for disinfection shall be provided by the Contractor.

After the system has been disinfected and then flushed so as to be free of chlorine, the Contractor using proper sampling bottles, shall collect water samples from the new system. These samples shall be shipped to a state approved laboratory for bacteriological analysis. Satisfactory samples must be obtained on two consecutive days.

The Village will not accept the new work until notification has been received from the laboratory that the samples examined showed that the water from the new work is at least equal in bacteriological quality to that of the water served to the public from the existing water supply system if the new work is in connection with an existing system, or in the case of a new system, that the new work was free of contamination at the time the samples were collected.

The existing water main shall continue to provide service through the construction of the proposed water main and will not be shut off until the new work has been accepted by the Village.

Fittings: Sizes and angles of bends and fittings have been provided on the plan set and are the best estimates provided. The Contractor shall ascertain in the field the proper angle bend required at no additional cost to the Engineer. All bends required for the installation of the water main shall not be paid for separately, but shall be considered included in the per foot cost of this pay item.

Method of Measurement. This work will be measured for payment per foot.

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

ADJUSTING WATER MAIN

Description. This work shall consist of adjusting existing water mains when directed by the Engineer where they are in conflict with new improvements or where the proposed construction will reduce the cover over the water main. All materials used in adjusting water mains shall meet the requirements of DUCTILE IRON WATER MAIN and shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition. All adjustment in the line or grade of the existing water main shall be approved by the Engineer.

Materials. All materials, labor, and equipment necessary to adjust the water main shall be on hand before shutdown and cutting of the existing main. The Contractor shall take every precaution to hold the interruption of service to a minimum.

Construction Methods. A minimum clearance of eighteen inches (18") shall be maintained between the adjusted main and improvement for which the adjustment was made. A downward adjustment will be required unless 5.5' of cover can be maintained for an upward adjustment or as approved by the Engineer.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surface of all new materials used in the adjustment shall be cleaned of all foreign materials and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed with potable water.

The Contractor shall provide protection from movement of water main piping, plugs, caps, tees, valves, hydrants, and bends of 11 ¼ degrees or greater. Concrete thrust blocks shall be provided at all locations unless restrained joint type fittings are utilized. The Village of Brookfield requires the use of Mega-Lug retainer glands at all connection of ductile iron water main with bends, tees, crosses, reducers and all other fittings. Cast-in-place concrete thrust block shall not be allowed for the water main. The blocking shall be located between solid, undisturbed ground and the fitting to be anchored. The blocking shall be placed so that the fitting joints will be accessible for repair. The minimum width of thrust blocks shall be DUCTILE IRON WATER MAIN. All wooden shims and wedges used to tighten precast thrust blocking shall be fully encased with poured concrete and the concrete shall have set before the trench is backfilled. When conditions prevent the use of concrete thrust block, restrained joints shall be used. Excluding the joints of any valve, bend, cross or tee, the first two joints beyond any valve, bend, cross or tee shall be restrained.

Forty-eight (48) hours prior to shutting down the existing main for the adjustments, the facility owner and all users that will be affected shall be notified in writing. The Contractor shall distribute notices of the shut down to the residents affected. The Contractor shall cooperate with the local agency personnel to locate valves necessary to isolate the work area. All valves will be operated by personnel from the owning agency.

Method of Measurement. This work will be measured for payment per foot, of actual water main pipe installed.

Basis of Payment. This work will be paid for at the contract unit price per foot for ADJUSTING WATERMAIN of the size specified.

FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX

Description: This item shall consist of furnishing fire hydrants with auxiliary valves and valve boxes and installing them at the locations shown on the plans and in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois, and the Special Provisions below.

Materials:

1. Fire Hydrants

Fire hydrants shall be the break flange type Mueller Super Centurion A-423 and conform to AWWA Standard C-502. They shall have a valve opening of five and one-fourth inches (5 1/4") and shall be equipped with two (2) 2 1/2-inch hose connections and one 5 1/2-inch male pumper connection, all of which shall have "national standard" outside diameter male threads. Hose caps shall not be fastened to barrel, the steel chain shall be removed.

Inlet opening shall be flanged with a Mechanical Joint type auxiliary attachment.

The installation of the hydrant on this project shall be accomplished without a shutoff of the existing watermain and shall be made with a pressure connection. The tapping sleeve shall be a Smith Blair – Model 665 with stainless steel bolts. The auxiliary valve shall be 6" type U.S. Pipe or Mueller, and suitable for buried service, stainless steel valve box stabilizer, and valve box. The pipe connecting the hydrant to the main shall be six inch (6") ductile iron water pipe (class 52) meeting the requirements contained in the special provision for DUCTILE IRON WATER MAIN.

All hydrant bolts installed underground shall be 304 stainless steel t-bolts and nuts. Each hydrant shall have a stainless steel lower operating stem.

Each hydrant shall be provided with a drain that will leave no water standing in the barrel of the hydrant when the hydrant is closed. This drain shall close tightly before the hydrant begins to open. The hose and steamer connections shall be securely threaded and locked into the hydrant and each shall be provided with a suitable cast iron threaded cover fastened securely.

All hydrants and any required fittings shall receive one (1) coat of factory applied yellow paint as recommended by the manufacturer prior to final acceptance. Hydrant shall have a buried depth of 6'-0".

All cap chains shall be removed prior to hydrant installation.

2. Auxiliary Valves and Valve Box

Auxiliary valves shall be "resilient seat wedge valves" in accordance with the following: The valves shall come complete with a cast iron valve box and cover produced by the same manufacturer producing the valve. The auxiliary valves shall be six (6) inches in diameter. The word "Water" shall be imprinted on the valve box cover (Mueller 1H-10360 or Tyler 6850 Series). All valves shall be rated for 300 psi test pressure and 150 working pressure.

The auxiliary valve shall be attached directly to the hydrant with push joints or mechanical joints.

All valves shall be right hand turning.

Wedges shall be constructed of ductile iron, fully encapsulated in nitrite rubber except for guide and wedge nut areas.

Wedge rubber shall be molded in place and bonded to the ductile iron portion, and shall not be mechanically attached with screws, rivets, or similar fasteners.

Wedge shall seat against seating surfaces arranged symmetrically about the centerline of the operating stem, so that seating is equally effective regardless of direction of pressure unbalance across the wedge.

All seating surfaces in body shall be inclined to the vertical at a minimum angle of 32 degrees (when stem is in a vertical position) to eliminate abrasive wear of rubber sealing surfaces. The stem shall be sealed by at least two O-rings; all stem seals shall be replaceable with valve fully open and while subjected to full pressure. Waterway shall be smooth and shall have no depressions or cavities in seat area where foreign material can lodge and prevent closure or sealing.

Construction Methods: Each hydrant shall be set on a concrete thrust block not less than 24 inches by 24 inches by 4 inches in thickness. Within the disturbed area, CA-7 gravel shall be placed 3 foot above the weep hole with a geofabric placed on top of the gravel to prevent fines from the soil backfill from clogging the drain field.

All hydrants shall be set plumb and shall have their nozzles parallel with edge of pavement, the steamer connection shall be facing the edge of pavement. The height of the nut on a four and one-half inch (4 ½") steamer connection shall be no less than twenty four inches (24") or more than thirty six inches (36") above finished grade at the hydrant. All hydrant leads between the tee and the hydrant shall be a positively restrained connection.

The bowl of each hydrant shall be well braced against undisturbed earth at the end of trench with stone slabs or concrete backing.

Fire hydrant extensions shall only be used with the approval of the Engineer. Should fire hydrant extensions be required due to improper construction methods by the Contractor, the extensions will be installed but will not be measured for payment.

Auxiliary valves shall be installed in the vertical position, supported on a concrete pedestal. It shall be the Contractor's responsibility to assure that the finished elevation of the box is flush with the adjacent proposed ground line. Valve box installation shall meet the requirements of Section 44 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

All excavation around the fire hydrant and auxiliary valve shall be backfilled to the natural line or finished grade as rapidly as possible. The backfill material shall consist of CA-7 or trench backfill as herein specified. All backfill material shall be deposited in the excavation in a manner that will not cause damage to the fire hydrant or auxiliary valve. Any depressions which may develop

within the area involved in a construction operation due to settlement of backfill material shall be filled in a manner consistent with standard practice.

If the new fire hydrant is added to an existing water main, the hydrant shall be installed within five to seven feet of the auxiliary valve.

Method of Measurement: This work will be measured for payment in units of each and shall include the work described above including the pressure tap, auxiliary valve and appurtenances, 6" hydrant lead, hydrant and all items for a complete installation.

Basis of Payment: This work will be paid for at the contract unit price per each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX which payment will include and furnishing all materials, labor, equipment, tools, thrust block, fittings, all appurtenances, and backfilling necessary to complete the Work as specified.

VALVE BOX FRAMES TO BE ADJUSTED

Description: This work shall consist of adjusting the existing valve box frame to match finished grade as directed by the Engineer, in accordance with Section 603 of the standard specifications.

Method of Measurement: This work will be measured for payment in units of each for VALVE BOX FRAMES TO BE ADJUSTED.

Basis of Payment: This work will be paid for at the contract unit price per each for VALVE BOX FRAMES TO BE ADJUSTED.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

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

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

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

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

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

Add the following to Article 402.12 of the Standard Specifications:

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

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

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

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

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.

Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

CHANGEABLE MESSAGE SIGN

Revise the second paragraph of Article 701.20(h) of the Standard Specifications to read:

“For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN.”

Revise this second sentence of the first paragraph of Article 1106.02(i) of the Standard Specifications to read:

The Message panel shall be a minimum of 7 ft (2.1 m) above the edge of pavement in urban areas and a minimum of 5 ft (1.5 m) above the edge of pavement in rural areas, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time.”

GENERAL ELECTRICAL REQUIREMENTS

Effective: September 1, 2019

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Major items shall include, but not limited to the following:

Type of Work (discipline)	Item
All Electrical Work	Electric Service Metering Emergency Standby System Transformers Cable Unit Duct Splices Conduit Surge Suppression System
Lighting	Tower Pole Luminaire Foundation Breakaway Device Controllers Control Cabinet and Peripherals
ITS	Controller Cabinet and Peripherals CCTV Cameras Camera Structures Ethernet Switches Detectors Detector Loop Fiber Optic Cable

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

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

The Contractor shall have reviewed the submittal material and affixed his/her stamp of approval, with date and signature, for each individual item. In case of subcontractor submittal, both the subcontractor and the Contractor shall review, sign, and stamp their approval on 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 Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as "Approved", "Approved as Noted", "Disapproved", or "Information Only". Since the Engineer's review is for conformance with the design concept only, it shall be the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, or layout drawings by the Engineer's approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

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

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

Unless otherwise approved by the Engineer, all of the above items shall be submitted to the Engineer at the same time. Each item shall be properly identified by route, section, and contract number.

Electronic Submittals. Unless otherwise directed, the Contractor shall utilize the **Traffic Operations Construction Submittal (TOCS)** system.

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

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

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

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

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

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

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

Maintenance and Responsibility During Construction.

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

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

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

energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

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

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

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

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

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

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

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

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

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

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

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.
- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet, with all loads connected, shall be measured and recorded.

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

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

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

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

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

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

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

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

- (a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 60 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 neatly and plainly marked in red by the Contractor on the full-size set of record drawings kept at the Engineer's field office for the project. These drawings shall be updated on a daily basis and shall be available for inspection by the Engineer during the course of the work. The record drawings shall include the following:

- Cover Sheet
- Summary of Quantities, electrical items only
- Legends, Schedules and Notes
- Plan Sheet
- Pertinent Details
- Single Line Diagram
- Other useful information useful to locate and maintain the systems.

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

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

The inventory shall include:

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

The following electronic inventory forms are available from the Engineer:

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

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

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

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

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

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review. A total of five hardcopies and CDROMs of the final documentation shall be submitted.

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

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

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. 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.

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 20 feet. Upon verification, data collection can begin. 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

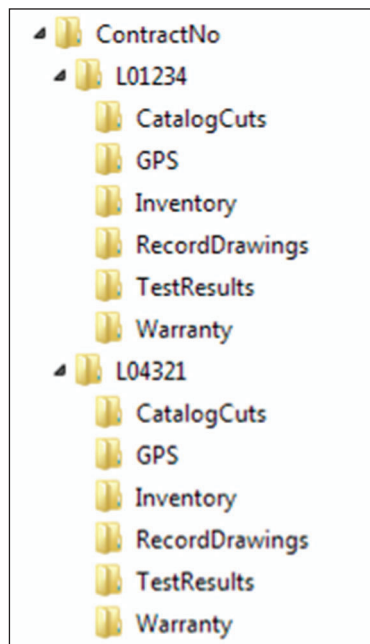
process and submit the data for review and approval as specified. **Data collection prior to the submittal and review of the sample data of existing data points will be unacceptable and rejected.**

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

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

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

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



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

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

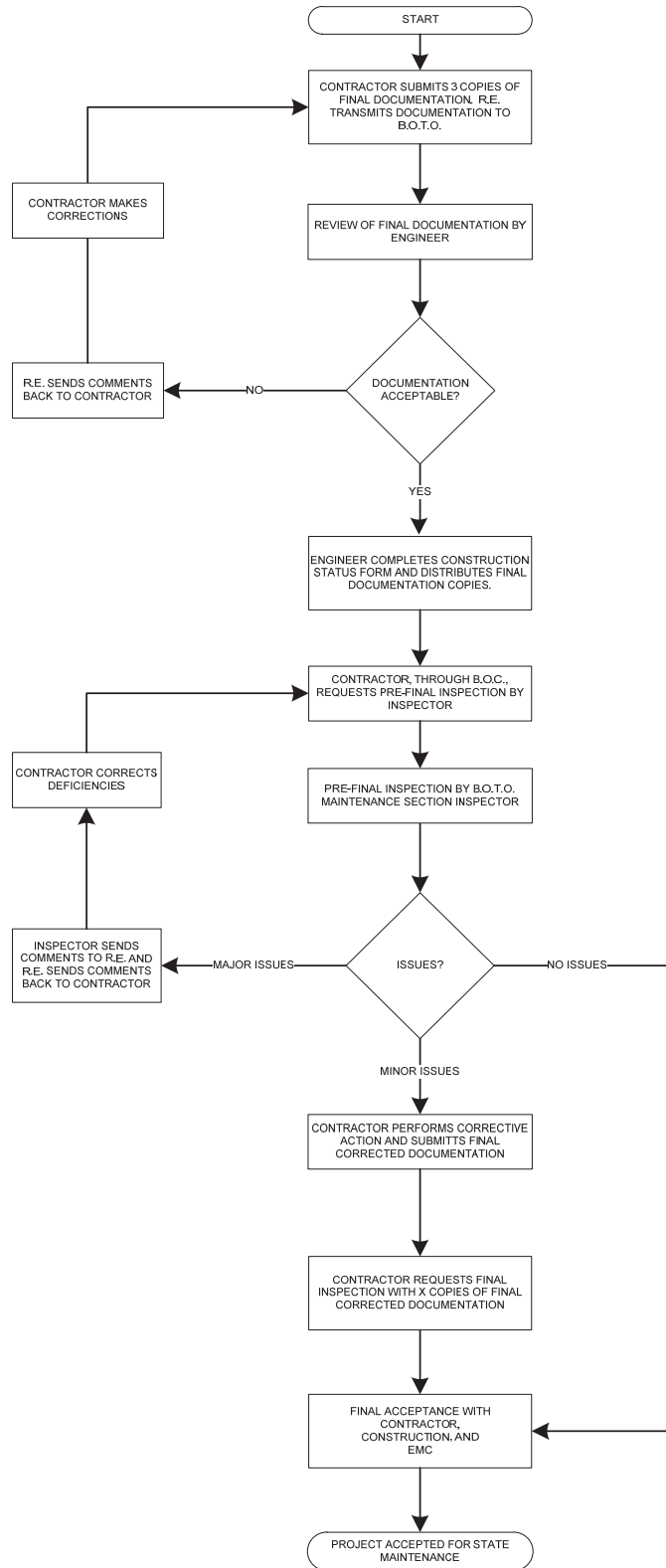
The Final Acceptance Documentation Checklist shall be completed and is contained elsewhere herein.

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

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

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

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



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Final Acceptance Documentation Checklist

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

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

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

General Notes:

Record Drawings – The record drawings should contain contract cover sheet, summary of quantities showing all lighting pay item sheets, proposed lighting plans and lighting detail sheets. Submit hardcopies 11 x 17 size. Include the original “red-ink” copy. The red-ink markup should be neatly drawn. Record drawings copies should be legible. Blurred copies will not be acceptable. Temporary lighting plans and removal lighting plans should not be part of the set.

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

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

Job Warranty Letter – See standard specifications.

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

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

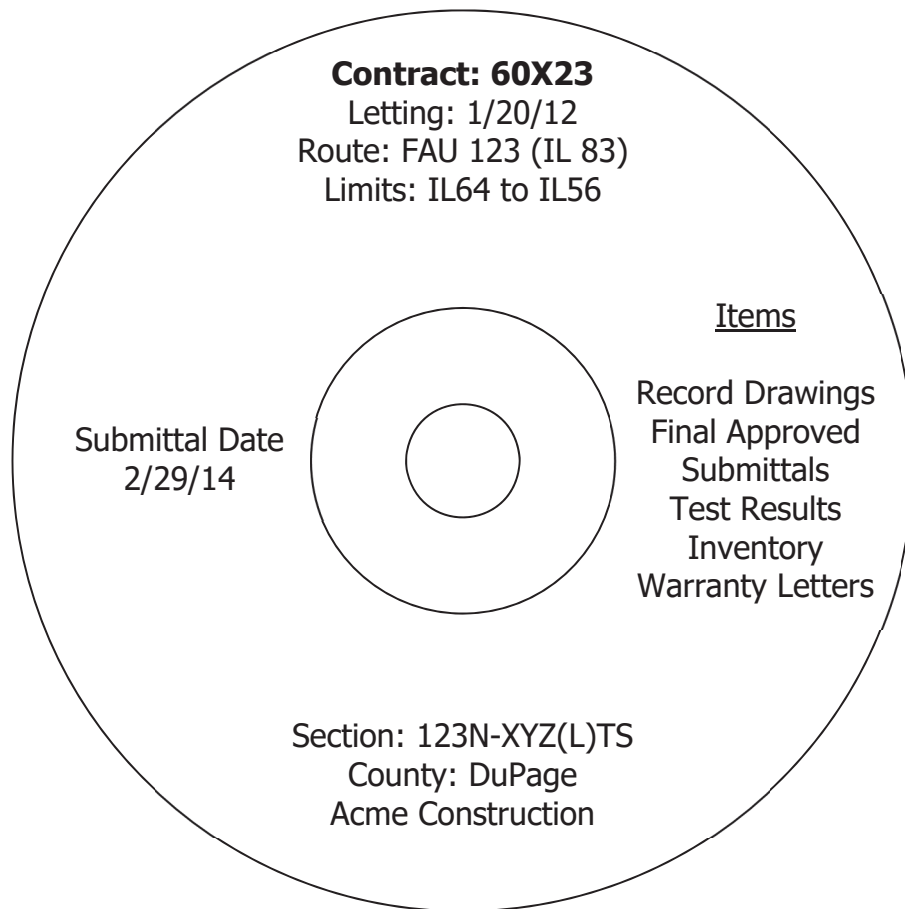
Lighting Controller Inventory Form – Form should be filled out for only proposed lighting controllers.

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

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CD LABEL FORMAT TEMPLATE.

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



UNDERGROUND RACEWAYS

Effective: March 1, 2015

Revise Article 810.04 of the Standard Specifications to read:

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

Add the following to Article 810.04 of the Standard Specifications:

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

Add the following to Article 810.04 of the Standard Specifications:

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

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

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

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.”

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

Phase Conductor		Messenger wire			
Size AWG	Stranding	Average Insulation Thickness		Minimum Size AWG	Stranding
		mm	mils		
6	7	1.1	(45)	6	6/1
4	7	1.1	(45)	4	6/1
2	7	1.1	(45)	2	6/1
1/0	19	1.5	(60)	1/0	6/1
2/0	19	1.5	(60)	2/0	6/1
3/0	19	1.5	(60)	3/0	6/1
4/0	19	1.5	(60)	4/0	6/1

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 Article 1066.04 to read:

“Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to Section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is “Palomino”. The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474.”

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.”

SIGN LIGHTING UNIT COMPLETE

Description: This item shall consist of furnishing and installing a linear sign luminaire complete with foundation, mounting hardware, galvanized anchor bolts, fuses, fuse holders, and all required hardware as specified herein, shown on the plans and per Articles 821 and 830 of the Standard Specifications.

Materials: The sign lighting unit shall be a linear style luminaire suitable for outdoor environments with IP67 water resistance rating and 3G vibration rating. The luminaire shall be model number 4750L 4FT 500LMF 50K MVOLT WWD BL, as manufactured by Hydrel/Acuity Brands Lighting, Inc. The luminaire shall meet or exceed the following requirements:

Illuminated Length: The luminaire shall be 4' in length.

LED Output: 500 nominal lumens per foot.

Lumen Maintenance Factor: The luminaire shall have a lumen maintenance factor of 0.85 at 50,000 hours and 0.7 at 100,000 hours.

Color Temperature: LED color temperature shall be 5,000 degrees Kelvin with at CRI of 80 or greater.

Voltage: The luminaire shall be multi-voltage (120-277) capable.

Lens: High clarity acrylic, superior UV resistant.

Light Distribution: Wall-wash asymmetric

Material: Copper free die cast aluminum and corrosion resistant extruded aluminum. All stainless steel fasteners.

Finish: Exterior parts are protected by a zinc-infused super durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climates without cracking or peeling. The luminaire finish shall be black.

Environment: Suitable for outdoor wet location applications. Suitable for indoor, non-IC rated applications, maximum 40° C and minimum -20° C ambient operating temperatures.

Mounting: Mounting hardware shall be per the luminaire manufacturer's recommendations. Mounting hardware shall allow for the luminaire to be mounted low to minimize visibility of the luminaire and shall allow for electrical connections to be located above finished grade.

Listing: The luminaire shall be listed to UL1598a.

Installation: The Contractor shall install the lighting unit according to the plans and as recommended by the manufacturer.

Any damage to the paint finish of the lighting unit after installation shall be touched up in the field by the Contractor per the manufacturer's recommendations.

Warranty: All electrical components shall be warranted by the manufacturer for a minimum of 5 years

Basis of Payment: This work will be paid for at the contract unit price per each for SIGN LIGHTING UNIT COMPLETE.

FILL EXISTING SANITARY SEWERS

Description: This work shall consist of abandoning and filling existing sanitary or combined sewers. Work shall be performed as per ABANDON AND FILL EXISTING STORM SEWER.

Method of Measurement: This work will be measured for payment in units of cubic yards.

Basis of Payment: The work shall be paid for at the contract unit price per cubic yard for FILL EXISTING SANITARY SEWERS.

PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER

Description: Work shall include the proper proposed storm sewer connection to existing storm sewer where indicated on the plans. Pipe connections shall follow IDOT District 1 standard BD-7 and include sand bedding, mastic joint sealant, concrete collars, metal binding, or approved method. This pay item shall include all time, materials, and labor to facilitate a watertight connection.

For purposes of this contract, all connections will be paid for at the same unit cost regardless of size of sewer pipe to be connected.

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

Basis of Payment: The work shall be paid for at the contract unit price per each for PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER.

PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE

Description. This work shall consist of making a storm sewer connection to an existing manhole at locations as shown in the plans.

The Contractor shall carefully core a hole into the existing manhole the same size as the external diameter of the proposed storm sewer at the line and grade as shown in the plans. The protrusion of the proposed storm sewer into the manhole must not exceed one inch. After the storm sewer is installed, the manhole shall be mortared with a non-shrink concrete grout.

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

Basis of Payment. The work shall be paid for at the contract unit price per each for PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE. Void spaces between the carrier and casing pipes will be filled with CLSM that meets requirements of Sections 593 and 1019 of the Standard Specifications.

BOLLARD, LED

Description: This item shall consist of furnishing and installing a three-legged, open cage, cylindrical LED bollard intended for pedestrian path/sidewalk lighting. All necessary hardware for installation shall be included herein.

Materials: All items for the lighting unit shall be model number RT4-36-26L30T5-MDL03-CA-FHD/BK (Rialta RT4), as manufactured by Sternberg Lighting.

General: The bollard shall be a three legged, open cage, cylindrical column with a height of 36". The 8" bollard shall have a 12" high open body section that adds visual interest by illuminating from the top casting and giving the effect of moon light from within its cage form. The luminaire shall utilize a LED array with a Clear Acrylic lens to deliver IES type 5 distribution with high efficiency and low wattage consumption. The luminaire shall be UL listed in the United States.

LEDs: The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating of 1 to 3 mils. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IES LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 3000K color temperature with a minimum CRI of 70. The luminaire shall have a minimum 2390 delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics: The luminaire shall be provided with individual, refractor type optics applied to each LED. The luminaire shall provide Type 5 light distribution per the IES classifications. Testing shall be done in accordance with IES LM-79.

Electronic Driver: The LED driver shall be U.L. listed. It shall be securely mounted inside the bollard, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than 0.9.

Shipment: The bollards shall be carefully inspected at the factory prior to shipment to assure that the units are complete and free of defects. When bollards are stacked together, they shall be supported with suitable spacers or shall otherwise be protected from damage.

Installation: The Contractor shall install the lighting unit according to the plans and as recommended by the manufacturer. Four 5/8" diameter, hot-dipped galvanized "L" type anchor bolts shall be provided with the post for anchorage, they shall be mounted in a 4-1/2" bolt circle. A door shall be provided for wiring and anchor bolt access. It shall be secured with tamper-proof stainless-steel hardware. Post will be provided with a grounding stud mounted behind the access door. Any damage to the paint finish of the lighting unit after installation shall be touched up in the field by the Contractor per the manufacturer's recommendations.

Warranty: All electrical components shall be warranted by the manufacturer for a minimum of 7 years.

Basis of Payment: This work will be paid for at the contract unit price per each for BOLLARD, LED.

COMBINED SEWER REMOVAL

Description: This work shall consist of the removal of existing combined sewers at the locations shown on the plans, in accordance with applicable portions of Section 551 of the Standard Specifications.

Excavated pipe material shall not be salvaged but disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications.

When a segment of combined sewer is to be removed and replaced, the limits of the removal shall be sawcut by the contractor so that a clean edge exists for connection to the proposed sewer. Any pipe outside of the removal limits damaged during removal operations shall be replaced.

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

Basis of Payment: This work shall be paid for at the contract unit price per foot for COMBINED SEWER REMOVAL, of the diameter specified.

PLUG EXISTING PIPE

Description: This work shall consist of plugging and filling existing sewer stubs to be abandoned at existing structures, at the locations shown on the plans or as directed by the Engineer.

Construction Requirements: Based on a review of available information it is believed that there are no existing active connections draining into the pipe to be abandoned. However, before the pipe is abandoned, the Contractor must field verify that there are no existing active connections draining into the pipe to be abandoned. In the event there are existing active connections, the Contractor must either re-route the existing active connection or maintain the existing pipe so as not to block flow from the existing active connections at no additional cost.

After field verification that there are no existing active connections draining into the pipe to be abandoned, the Contractor must plug the pipe with Class SI Concrete or brick and suitable mortar to the satisfaction of the Engineer, and fill the remaining empty length of pipe with Controlled Low-Strength Material. The Controlled Low-Strength Material (CLSM) must meet material requirements of Article 593.02.

Method of Measurement: The volume of void to be filled for the plugged pipe will be measured in unites of cubic yards.

Basis of Payment: This work shall be paid for at the contract unit price per cubic yard for PLUG EXISTING PIPE.

BRICK PAVEMENT REMOVAL AND REPLACEMENT

This work shall be in accordance with applicable portions of IDOT Bureau of Local Roads and Streets Special Provision for Paving Brick and Concrete Paver Pavements and Sidewalks revised 1-1-2009 (Checksheet #LRS14). The brick pavers that interfere with the proposed combination curb and gutter and sidewalk shown on the plan shall be removed up to the limits established by the Engineer and reinstalled after the proposed curb and gutter and sidewalk has been installed. Any leftover bricks shall be salvaged and shall be delivered to the Village.

A sub-base granular material base course shall be prepared to compacted depth of 2" and compacted, and in accordance with Section 311 of the Standard Specifications.

Sand shall be spread over granular base as a setting bed for pavers. Sand shall be spread 2" thick, and leveled to required slope and grade. Minimum thickness of sand shall be 1" after leveling. Bed shall not be compacted until pavers are installed. Surface tolerance shall be within 1/4" of required grade as measured with a 10' straightedge in both transverse and longitudinal directions.

The setting bed shall be protected from damage prior to setting pavers. Unit pavers shall be set on sand setting bed. Setting shall be done by competent workmen under adequate supervision, and in accordance with manufacturer's recommendations. Pavers shall be set true to the required

lines and grades in a pattern that was the same as the existing condition. Pavers shall be tightly butted. Joints between pavers shall be uniform and shall not exceed 1/8". There shall be no raised edges, either pavers or materials adjacent to pavers, that could allow someone to trip. The tolerance for such edges shall be 0" – 1/8" maximum in range. After a sufficient area of pavers has been installed, the pavers shall be compacted by running a mechanical vibratory compactor over the paved surface until the pavers are uniformly leveled, true to grade, and totally immobilized. Where required, pavers shall be accurately cut with a masonry or concrete saw. Cut edges shall be plumb and straight. Scoring and breaking shall not be acceptable. Joints between pavers shall be filled by sweeping sharp sand into the joints. When joints are filled, paver surfaces shall be swept clean of sand.

Excess pavers should be cleaned put on a pallet and delivered to the Village of Brookfield, the Engineer shall coordinate delivery time and location with the Village.

The removal of the existing paver bricks, resetting of the paver bricks, sub-base and sand materials and installation, excavation, cleaning, placing on pallets, delivery, and related work will be paid for at the contract unit price bid per SQUARE FOOT for BRICK PAVEMENT REMOVAL AND REPLACEMENT. The quantity shall be calculated as the square footage of the removed bricks to the limits as directed by the Engineer.

REMOVAL OF EXISTING SIGN LIGHTING UNIT AND SALVAGE

This work shall consist of the removal of an existing sign lighting luminaire, concrete foundation and all appurtenances at the location(s) indicated in the plans.

Luminaires shall be returned to the Village of Brookfield Department of Public Works, 8820 Brookfield Avenue, Brookfield, Illinois 60513. Conduit, cable, concrete foundation, and other debris shall be disposed of by the contractor offsite.

Basis of Payment: This work shall be paid for at the contract unit price per each for REMOVAL OF EXISTING SIGN LIGHTING UNIT AND SALVAGE which price included all labor and equipment necessary to complete this work.

SANITARY SEWER CONNECTION

Description: This work shall consist of connecting a proposed sanitary or combined sewer to an existing sanitary sewer or combined sewer, at the locations shown in the plans. The work shall be performed in accordance with the Standard Specifications of Water and Sewer in Illinois and details shown in the plans.

The existing pipe shall be sawcut and removed, or removed to the nearest joint, a new pipe placed, size to match existing, a concrete collar or coupling constructed as detailed, and grout placed at connection to the proposed structure. Non-shear couplings with stainless steel bands shall be used to connect existing and new pipe.

Where a connection is to be made to an existing sewer that has a Cured-In-Place Pipe (CIPP) liner, any damage to the liner shall be repaired with a high modulus, high strength, structural,

epoxy paste adhesive. This adhesive shall also be applied in and around the joint of the new pipe to the existing lined pipe and the two pipes shall be connected with a non-shear coupling with a minimum pressure rating of 4.3 psi.

The epoxy paste adhesive shall be a 2-component, 100 % solids, solvent-free, moisture-tolerant, high-modulus, high strength, structural epoxy paste adhesive. It conforms to the current ASTM C-881, Types I and IV, Grade-3, Class-B/C and AASHTO M-235 specifications.

For connections made with pipe diameters larger than 36", work shall be in accordance with PROPOSED STORM SEWER CONNECTION TO EXISTING STORM SEWER.

For purposes of this contract, all connections will be paid for at the same unit cost regardless of size of sewer pipe to be connected.

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

Basis of Payment: The work shall be paid for at the contract unit price per each for SANITARY SEWER CONNECTION.

WASHOUT BASIN

Description: This work consists of installation, maintenance and subsequent removal and disposal of a concrete washout basin and shall be done in accordance with Sections 280 of the Standard Specifications and as shown on the plans. The washout basin shall be removed after concrete items have been installed. A concrete washout basin shall be supplied as necessary to accommodate concrete delivery operations. No more than one (1) washout basin will be permitted without approval from the Engineer. The washout basin location(s) must be approved by the Engineer prior to installation.

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

Basis of Payment: This work will be paid for at the contract lump sum price for WASHOUT BASIN.

REMOVE FIRE HYDRANT AND VALVE ASSEMBLY

Description: This work shall conform to the applicable sections of the Standard Specifications for Water and Sewer Main Construction in Illinois. This work shall consist of the removal of existing fire hydrants, auxiliary valve box, capping the downstream end of the auxiliary valve, and backfilling the excavated site at the location shown on the Plans.

The Contractor shall coordinate delivery of the existing hydrant to the location specified by the Village of Brookfield Public Works Department or dispose of them at the direction of the Engineer.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation, unless a new fire hydrant is shown to be installed at this

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location. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

Method of Measurement: This work will be measured for payment in units of each and shall include all appurtenances and removal of auxiliary valve.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVE FIRE HYDRANT AND VALVE ASSEMBLY.

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

Effective: January 1, 2019

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

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

Construction Methods: Construction shall be in accordance with Article 502.06(a) of the Supplemental Specifications and Recurring Special Provisions and in accordance with the authorized USACE Section 404 Permit. For Cofferdam - Type 1, it is anticipated the design will be based on the flow requirement as shown in the plans and per the General Conditions of the current Regional Permit Program. The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer and in accordance with the authorized USACE Section 404 Permit and General Conditions of the current Regional Permit Program. This project requires a USACE Section 404 Permit prior to the start of work. All conditions of the Section 404 Permit must be followed. As a condition of the Section 404 Permit, the Contractor will be required to submit an In-Stream/Wetland Work Plan to the Department for approval. The USACE defines and determines in-stream/wetland work within the WOUS. Guidelines on acceptable In-Stream/Wetland work techniques can be found on the USACE website: <https://www.lrc.usace.army.mil/Missions/Regulatory/Regional-Permit-Program>

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

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

VALVE VAULTS TO BE ABANDONED

Description: This work shall consist of abandoning the existing water valves not being used in the new water system. When directed by the Engineer and the new watermain has been placed into service, this work is to be accomplished.

Construction Methods: When the new watermain has been installed, tested and placed into service, the contractor shall excavate around existing valves in vaults to remove the top barrel section(s) leaving only the section with the existing valve. The existing valve is to be closed and this barrel section shall be filled with sand while the remaining depth of the hole is to be filled with approved backfill material, as approved by the Engineer, to the existing grade elevation. Valve boxes shall likewise be excavated, have their valves closed, boxes removed and be backfilled with an approved backfill material, as approved by the Engineer, to the existing grade elevation.

All backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

The barrel section(s) and boxes that have been removed shall be hauled offsite and disposed of in an appropriate and approved location.

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

Basis of Payment: This work will be paid for at the contract unit price per each for VALVE VAULTS TO BE ABANDONED complete in place, including disposal of frame and lid or portion of the existing vault to be abandoned.

ABANDON EXISTING WATER MAIN, FILL WITH CLSM, 16"

Description: This work shall consist of the abandonment of the existing water main. When directed by the Engineer and the new water main has been placed into service, this work is to be accomplished.

Construction Methods: When the new watermain has been installed, tested and placed into service, the contractor shall excavate down to the existing watermain, work with the Village of Brookfield Public Works (708.485.2540) to permanently shut down the existing water main crossing, cut into the existing watermain on the river side of the valve, and cap both ends of the existing watermain. The caps shall be a fitting that is connected to sections of water main pipe by means of a positive restrained joint consisting of mechanical joints with retainer gland, or MEGALUG Fittings shall be ductile iron meeting requirements of ANSI/AWWA C153/A21.10 and

ANSI/AWWA C111/A21.11. Concrete thrust blocks shall be placed against the cap on the existing watermain to remain in service.

The abandoned water main crossing the river shall be filled with controlled low strength material (CLSM). All controlled low strength materials shall conform to section 1019 Standard Specifications. This work shall also include necessary venting of the water main to be abandoned to ensure the main is completely filled. This work shall also include any associated saw cuts, pavement removal, pavement patching, trench backfill, and restoration with topsoil and seed required to facilitate the abandoning of the mains with CLSM.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

Method of Measurement: This work will be measured for payment per units of feet.

Basis of Payment: This work will be paid for at the contract unit price per foot for ABANDON EXISTING WATER MAIN, FILL WITH CLSM, 16”.

LUMINAIRE, LED, SPECIAL

Description: This work shall consist of furnishing and installing a luminaire in accordance with Section 821 of the Standard Specifications, the details in the plans, and the following additions or exceptions. The concrete stabilization pad shall be constructed in accordance with Section 424 of the Standard Specifications.

Materials: The luminaire shall be an in-grade style model M9420C SS LED P3 40K MVOLT MFL FLC 34S luminaire, as manufactured by Hydrel/Acuity Lighting Brands, Inc. The luminaire shall meet the following requirements:

General: The luminaire shall incorporate a modular design with a water-tight module and junction box intended for applications with flow-through capability. The design of the housing starts at the rough-in sections with a molded junction box and holes at the bottom, allowing a pathway for the water to flow through the housing and drain out the bottom. The product shall be intended for outdoor upright applications, such as wall washing and feature accentuation.

Door Material: Brushed stainless steel.

Rough-in Section: Injection molded polymer with integral junction box for thru-branch wiring. The housing shall be UV stabilized, impact and corrosion resistant for use in all types of environments. The rough-in houses the LED and power module components and top door finishing section.

Conduit Entries: Two (2) bottom or side entries shall be provided. Wiring box shall be suitable for through-branch wiring.

Finishing Section: Double lens design includes door assembly with 360° Aim-Lock™ module support and tilt ring that allows 15° of aiming. Active optical lenses are also available. Module indexing provides easy maintenance without re-aiming. Door trim locks into position with two stainless steel captive, tamper-resistant fasteners.

LED Module: Over molded brass housing, factory-sealed and purged of all moisture for longer component life. The LED module shall be suspended below the top door lens in a surface adjustable, 15° tilt mechanism. Lens is sealed with silicone gasket and stainless-steel clamp band assembly with single fastener. Electrical connection to LED module is done through a submersible quick disconnect plug connector with gold-plated contacts.

Light Engine: Light engine shall be directly coupled to the housing to maximize heat dissipation and have an expected life of 100,000 hours (L75).

Power Module: LED driver shall be encapsulated in heat-dissipating epoxy resin to eliminate all moisture intrusion. Module shall be provided with submersible rated cord leads for connection to integral junction box and LED module.

Electrical: The unit shall have an operating range of 120 to 277 volts AC, 60 Hz. The LED driver shall be a Class 2 electronic driver and have a power factor greater than 90%, a THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Surge protection shall meet or exceed Category C Low operation per ANSI/IEEE C62.41.2.

Listings: The luminaire shall have the following listings:

- UL Standard UL-1598
- Suitable for Wet Locations

Warranty: The manufacturer shall provide a 5-year warranty.

Basis of Payment: This work will be paid for at the contract unit price per each for LUMINAIRE, LED, SPECIAL.

SEEDING, CLASS 4A (MODIFIED)

This work shall consist of preparing the seed bed, placing the seed, and other materials required in the seeding operation in areas as shown in the plans.

All work, materials and equipment shall conform to Section 250 and 1081 of the Standard Specifications except as modified herein.

The Class 4A (Modified) seed mixture shall be supplied in pounds of Pure Live Seed. All native seed species will be local genotype and verified that original seed collection source must originate from a radius of 200 miles from the project site. Fertilizer is not required.

Article 250.07 Seeding Mixtures – Add the following to Table 1:

CLASS – TYPE	SEEDS	PURE LIVE SEED LB/ACRE
4A (Modified) Low Profile Native Grass		9.0
	Bouteloua curtipendula (Side Oats Grama)	4.0
	Andropogon scoparius (Little Bluestem)	5.0
Temporary Cover		30 (lb/acre)
	Spring: Avena sativa (Annual Oats)	25.0
	Elymus canadensis (Canada Wild Rye)	3.0
	Fall: Triticum aestivum (Winter Wheat)	9.0
	Elymus canadensis (Canada Wild Rye)	3.0

Variation in the Class 3, 4, 5, or 6 seed quantities or varieties may be allowed in the event of a crop failure or other unforeseen conditions. Quantities of proposed substitutions shall be determined by seed count. The Contractor shall provide for the approval of the Engineer a written description of the proposed changes to the Class 3, 4, 5, or 6 Mixture(s), the reasons for the change, and the name of the seed suppliers who were contacted in an effort to obtain the specified species. Adjustments will be made at no cost to the contract. Approval of substitutes shall in no way waive any requirements of the contract

Seeding Time:

Seeding shall be completed between October 15 to March 15 but not when raining or when the ground is covered with snow, unless prior written approval is received from Engineer. No seed shall be sown when the ground is not in proper condition for seeding. Seeding done outside of this time frame will not be measured for payment unless approved in writing by Engineer in advance.

The Contractor shall schedule work so that final grade is achieved during the specified seeding times. Any seeding installed on or after March 1 must be incorporated into the soil surface, but no deeper than ¼ inch, such as by rangeland type seed drill, harrow, hand rake, or other method approved by the Engineer.

Bagging, Transporting, and Storing Seed:

Seed mixtures of the specified classes shall be thoroughly mixed, labeled and bagged by the supplier. Purity and germination tests no older than twelve months old must be submitted for all seed supplied to verify quantities of bulk seed required to achieve LB PLS specified.

Seed shall be thoroughly mixed, labeled and bagged by the supplier. Seed shall be bagged, transported, and stored in such a manner to protect it from damage and to maintain the viability of the seed. All seed mixtures shall be brought to the site in clearly labeled and unopened bags.

Seed shall be adequately protected from rain, temperature extremes, rodents, insects, and other such factors that could adversely affect seed viability during transport or while being stored prior to planting. Bags of seed that are leaking, wet, moldy, or otherwise damaged shall be rejected and promptly removed from the site of work. Prior to application, the Engineer must approve the seed mix in the bags on site.

Layout of Seeding:

The Contractor shall be responsible for filed verifying the acreage of the area(s) to be seeded. The amount of seed ordered shall match the area(s) to be seeded during the pending planting season. A minimum of 30 days shall be allowed for seed acquisition, testing, and inspection.

The Contractor shall demarcate all areas to be seeded and estimate quantities of each area to determine the quantity of seed necessary to achieve the specified seed rate per acre. The Contractor shall delineate the perimeter of the seedbed with wooden lathe. The wooden lathe shall remain in place. The contractor shall provide a minimum of seven calendar days notice to the Engineer to allow for review and approval of seeding layout.

Inspection:

The Engineer must witness the delivery of seed with original labels attached in the field. A bag ticket must be affixed to each bag of seed upon delivery, and shall not be removed until the Engineer has reviewed and accepted each bag of seed. The label shall bear the dealer's guarantee of mixture and year grown, purity and germination, and date of test.

Seed Bed Preparation:

All area(s) to be seeded must be properly prepared prior to planting seed.

Bare earth seeding refers to sowing seed upon soils with no existing vegetative cover. In areas with existing vegetation, the vegetation shall be eradicated as specified or as directed by the Engineer. Seed bed preparation shall not be started until all requirements of Section 212 have been completed. The area to be seeded shall be worked to a minimum depth of 3 in. (75 mm) with a disk, tiller, box rake, or other equipment approved by the Engineer. In areas with heavy soils, tilling or power raking will be required to achieve the proper depth. All soil clods shall be reduced to a size not larger than ½ in. (13 mm) in the largest dimension to create a friable, pulverized topsoil surface suitable for seeding. Dragging the soil surface with the blade of a loader or dozer will not be an acceptable method of seed bed preparation. The prepared surface shall be relatively free of weeds, stones, roots, sticks, debris, rills, gullies, crusting, caking, and compaction. No seed shall be sown until the seed bed has been approved by the Engineer.

Seeding Methods:

No seed shall be sown when wind gusts exceed 25 miles per hour or when the ground is not in a proper condition for seeding, nor shall any seed be sown until the purity test has been completed for the seeds to be used, and said tests show that the seed meets the noxious weed seed requirements. All equipment shall be approved by the Engineer prior to being used. Prior to

starting work, seeders shall be calibrated and adjusted to sow seeds at the required seeding rate. Equipment shall be operated in a manner to ensure complete coverage of the entire area to be seeded. The Engineer shall be notified 48 hours prior to beginning the seeding operations so that the Engineer may determine by trial runs that a calibration of the seeder will provide uniform distribution at the specified rate per acre.

Seeding Classes 3, 4, 5, and 6 shall be sown with a broadcast seeder or a rangeland type seed drill.

Hand broadcasting and other methods of sowing seed will be allowed in special circumstances as approved by the Engineer. Special circumstances include but are not necessarily limited to steep slopes (over 1:3 (V:H)), inaccessible areas, wet areas, or other unique situations where the use of the specified equipment is not possible.

Method of Measurement: SEEDING, CLASS 4A (MODIFIED) will be measured for payment in acres of surface area of seeding for the seed mix type specified.

Basis of Payment: SEEDING, CLASS 4A (MODIFIED) shall be paid at the Contract unit price per acre. Payment shall be in full for seed, planting, and furnishing all labor to complete the work as set forth above.

HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL

This work shall consist of furnishing, transporting, and placing 100 % biodegradable leno weave erosion control blanket over seeded areas with biodegradable anchors as detailed on the plans, according to Section 251 except as modified herein.

Delete Article 1081.10(c) (1) Excelsior Blanket.

Delete Article 1081.10 (c) (2) Knitted Straw Mat and substitute the following:

Knitted Straw Mat. The minimum weight (mass) of the blanket shall be 8.32 oz/sq yd (282.9 g/sm). The blanket shall be machine-produced 100% biodegradable blanket which contains 70% certified weed free straw and 30% coconut fiber with a functional longevity of up to 18 months. The blanket shall be of a minimum consistent thickness of .25 inch with the straw and coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with 100% biodegradable woven natural organic jute fiber netting. No plastic netting will be allowed.

The top and bottom netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (leno weave) to form an approximate 0.50 x 1.0 (1.27 x 2.54 cm) mesh. Joints shall be movable joints, not fixed or welded.

The blanket shall be sewn together on 1.50-inch (3.81 cm) to 2-inch centers with 100% biodegradable thread. The blanket shall be manufactured with a colored thread stitched

along both outer edges (approximately 2-5 inches (5-12.5cm) from the edge) as an overlap guide for adjacent mats.

The manufacturer shall furnish a certification with each shipment, stating the number of rolls furnished and that the material complies with these requirements.

Delete Article 1081.10(d) Wire Staples.

Add the following to Article 1081.10 (e) Wood Stakes:

The 100% biodegradable hardwood stake shall exhibit ample rigidity to enable being driven into hard ground, with sufficient flexibility to resist breakage. The wooden stake shall be a minimum of 12 inches in length with a 1.25 inch head to hold the blanket in place. Biodegradable plastic stakes will be allowed.

Add the following to Article 251.06 Method of Measurement:

Heavy Duty Erosion Control Blanket, Special will be measured for payment in place in square yards of actual surface areas covered.

Add the following to Article 251.07 Basis of Payment:

This work will be paid for at the contract unit price per square yard for HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL.

TURF REINFORCEMENT MAT (SPECIAL)

Description. This work shall consist of installing Geo Cells for slope protection at the locations shown on the plan. The cell shall have minimum depth of 4 inch and provide adequate friction to hold the soil.

Construction Requirements. Prepare subgrade and install protection system in accordance with manufacturer's recommendations. Excavate or fill foundation soils to the level that top of installed section is flush with or slightly lower than adjacent terrain or final grade. Anchorage requirements for the sections shall be as recommended by the manufacture or directed by the engineer. Verify all sections are expanded uniformly to required dimensions and that outer cells of each section are correctly aligned. Interleaf or overlap edges of adjacent sections. Ensure upper surface of adjoining are flush at joint and adjoining cells are fully aligned at the cell wall slot. Connect the sections and place clean topsoil in expanded cells with suitable material handing equipment, such as backhoe, front-end loader, conveyor, or crane-mounted skip. Limit drop height to a maximum of 3 feet (1 m) to prevent panel distortion. Fill sections from the crest of the slope to toe or in accordance with Engineer's direction. Evenly spread topsoil and tamp into place.

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

Basis of Payment. The work shall be paid for at the contract unit price of square yards for TURF REINFORCEMENT MAT (SPECIAL).

EROSION CONTROL BLANKET, SPECIAL

This Special Provision revises Section 251 of the Standard Specifications for Road and Bridge Construction to eliminate the use of Excelsior Blanket for Erosion Control Blanket. This work shall consist of furnishing, transporting, and placing 100 % biodegradable leno weave erosion control blanket over seeded areas with biodegradable anchors as detailed on the plans, according to Section 251 except as modified herein.

Delete Article 1081.10(a) Excelsior Blanket.

Delete Article 1081.10 (b) Knitted Straw Mat and substitute the following:

Knitted Straw Mat. Knitted straw mat shall be a machine-produced mat of 100% clean, weed free agricultural straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the blanket with a functional longevity of up to 12 months. The blanket shall be covered on top and bottom sides with a 100% biodegradable woven natural organic fiber netting. No plastic netting will be allowed.

The top and bottom netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (leno weave) to form an approximate 0.50 x 1.0 (1.27 x 2.54 cm) mesh. Joints shall be movable joints, not fixed or welded.

The blanket shall be sewn together on 1.50-inch (3.81 cm) to 2-inch centers with 100% biodegradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches (5-12.5cm) from the edge) as an overlap guide for adjacent mats.

Delete Article 1081.10(d) Wire Staples.

Add the following to Article 1081.10 (e) Wood Stakes:

The 100% biodegradable hardwood stake shall exhibit ample rigidity to enable being driven into hard ground, with sufficient flexibility to resist breakage. The wooden stake shall be a minimum of 6 inches in length with a 1.25 inch head to hold the blanket in place. Biodegradable plastic stakes nor metal wire stakes will be allowed.

Add the following to Article 251.06 Method of Measurement:

Erosion Control Blanket, Special will be measured for payment in place in square yards of actual surface areas covered.

Add the following to Article 251.07 Basis of Payment:

This work will be paid for at the contract unit price per square yard for EROSION CONTROL BLANKET, SPECIAL.

INLET PROTECTION, SPECIAL

Description. This work shall consist of Inlet protection in pervious areas as shown in the Inlet Protection (Special) detail.

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

Basis of Payment. The work shall be paid for at the contract unit price per each for INLET PROTECTION, SPECIAL.

ABANDON AND FILL EXISTING STORM SEWER

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

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

Construction Requirements: The storm sewer pipe shall be plugged on both ends with Class SI concrete or brick and mortar. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during construction, the Contractor shall be responsible for the cost of repairing the pipe plugs and filling the remainder of the pipe culvert. Storm sewer end sections that are removed must be disposed of in accordance with article 605.05 of the Standard Specifications.

Method of Measurement: This work will be measured for payment per units of feet. Storm sewer end sections that are removed at the end of the sewer sections will not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per foot for ABANDON AND FILL EXISTING STORM SEWER.

WATER MAIN 16" (DIRECTIONAL BORE)

SUMMARY: Pipes installed by trenchless horizontal directional drilling (HDD) method as shown on the Drawings, as specified herein, and as needed for a complete installation. Provide labor, materials, tools, and equipment necessary to perform all work specified in this Section.

SUBMITTALS:

- A. Submit Manufacturer's data on installation procedures and pipe specifications. Obtain approval prior to beginning work.
- B. Submit certificates and guarantees installation inspection and verifications forms, and equipment guarantee forms.
- C. Submit detailed construction scheduling plan at preconstruction meeting.
- D. Provide detailed plan of means and methods to maintain clean and safe conditions in the event drilling material escapes to surface or adjacent storm sewers, including list of material and equipment that will be on-site during drilling and pipe insertion.
- E. Prepare a written, comprehensive contingency plan to address the response to, and cleanup of, hydrofracture (frac-outs) and surface spill events (release events). Provide and submit the contingency plan at the Preconstruction Meeting.
- F. Submit horizontal directional drilling contract qualifications.

QUALITY ASSURANCE: Use an adequate number of workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

- A. Contractor performing horizontal directional drilling shall have the following qualifications:
 - 1. Experience with at least 3 projects of similar pipe diameters and pipe/pullback lengths.
 - 2. Experience with and use of a pressure probe.
 - 3. Supervision and drillers, each with a minimum of 5 years of experience with similarly sized projects.

GENERAL CONSTRUCTION REQUIREMENTS:

- A. Comply with the requirements of the permit issued by the controlling agency.
- B. Provide the insurance and other information required for the above referenced permits.
- C. Notify the controlling agency of the construction schedule not less than 10 days prior to the start of the construction.
- D. Provide all excavation, pits, installation and removal of tight sheeting, leaving of sheeting in place if indicated on the Drawings, backfilling of pits, compaction of excavated materials, and providing and compacting granular backfill materials where indicated on the Drawings.

DIRECTIONAL DRILLING SYSTEM:

- A. Provide hydraulically or pneumatically operated, fluid-assisted, remote guided drilling system capable of installing pipe indicated on the Drawings by trenchless methods.
 - 1. Provide compressors, pumps, apparatus, tools, and all devices certified as suitable by the system manufacturer to install the new pipe without damaging or stressing the pipe.
 - 2. Provide recovery system that will recover bentonite slurries or other drilling fluids without releasing the slurry onto the surrounding ground or water surfaces.
 - 3. Provide, use and maintain downhole pressure monitoring equipment.

4. Provide and stock a complete variety of equipment, tools and materials to respond to release events. Equipment and tools include, but are not limited to: backhoe, dozer, tank or dump trucks, rowboat, barrels, vacuum truck, vacuum hoses, shovels, hand tools, lumber, sandbags, tarps, silt fence, compost filter logs, coir wattles, straw bales, spill containment socks and pads, spill berms and portable pumps.
- B. Provide certification from pipe manufacturer that the proposed pipe material and strength classification is appropriate for this project's application(s).

DUCTILE IRON PIPE (RESTRAINED JOINT):

- A. Material:
 1. Restrained joint pipe shall be Ductile Iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51.
 2. Pipe shall be Special Thickness Class 52.
 3. Restrained joint fittings and the restraining components shall be Ductile Iron in accordance with applicable requirements of ANSI/AWWA C110/A21.10 and / or C153/A21.53.
 4. Restrained joint pipe and fittings shall be U.S. Pipe's TR Flex Pipe and Fittings.
 5. Restraint of field cut pipe shall be provided with U.S. Pipe's TR Flex Gripper Ring, TR Flex Pipe field weldments.
 6. Cement mortar lining and seal coating for pipe and fittings, where applicable, shall be in accordance with ANSI/AWWA C104/A21.4. Asphaltic outside coating shall be in accordance with ANSI/AWWA C151/A21.51 for pipe and ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 for fittings.

POLYETHYLENE WRAP:

- A. Piping shall be double bagged. Layer 1 (against the pipe) shall be linear low-density polyethylene (LLDPE) V-Bio. Layer 2 shall be HDPE.
- B. Reference DIPRA Installation Guide Alternate Modified Method A, Wet Trench Conditions for polyethylene encasement, taping at 2-foot intervals to secure the polyethylene to the pipe. An acceptable alternative to taping at 2-foot intervals is to spiral or "candycane" wrap the tape to secure the polyethylene to the pipe.

PIPE TRACER WIRE: Provide 7x19SS (T304) PVC coated stainless steel Aircraft Cable; sized to withstand pull required, but minimum 3/16-inch diameter.

SURFACE CONDITIONS: Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

PROTECTION:

- A. Protect existing utilities indicated or made known. This shall include the potholing of all utilities shown on the plans, identified by JULIE, or other information, along the drilling alignment. Potholing and restoration of pothole areas to pre-construction conditions, shall not be paid for separately, but shall be considered included in the unit cost for WATER MAIN 16" (DIRECTIONAL BORE).

- B. Protect trees and shrubs by plank wrappers securely wired in place or by providing a fence around the tree or shrub of sufficient distance away and of sufficient height so trees and shrubs will not be damaged in any way as part of this Work.
 - 1. Do not permit any equipment to operate within 5 feet of any trees or shrubs that are to remain or in a manner as to harm overhanging branches.
- C. Protection of persons and property:
 - 1. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.
 - 2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
 - 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations under this Section.
- D. Remove the top six (6) inches of topsoil at entry and exit locations and stockpile the topsoil on-site. Cover the topsoil with tarps and sandbags or other weights to keep the tarps in place. Surround topsoil storage areas and the drilling and separation equipment and tanks with silt fence.
- E. Use means necessary to prevent dust from becoming a nuisance to the public, to neighbors, and to other work being performed on or near the work areas.
- F. Maintain access to the work areas at all times.
- G. Provide protection to environment, public and private property, and public or private utilities from drilling mud that is utilized as lubricant or hole support during drilling and pipe insertion.
 - 1. Provide vac-trucks and apparatus of sufficient size and quantity to reclaim all mud that may be discharged during operations.
 - 2. Provide trucks, end loaders, and any other equipment and manpower necessary to maintain a clean and safe work site during operation.
- H. HDD activities shall be constantly monitored by the Contractor and may be monitored by the representatives of the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. Monitoring shall include:
 - 1. Inspection along the drill path.
 - 2. Pothole all utilities shown on the plans, identified by JULIE, or other information, along the drilling alignment. Restore pothole locations to pre-construction conditions.
 - 3. Continuous examination of drilling mud pressure gauges and return flows to the surface pits by the Contractor.
 - 4. Monitoring of drill status information regarding drilling conditions and alignment of the drilling profile during the course of drilling activities, by the Contractor.
 - 5. If a release event occurs, contain the drilling fluids and continue inspection to determine any potential for movement of released drilling mud into or within a wetland or water body. Collect drilling mud returns at the release location for future analysis,

- as required. Notify the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. The Owner, or their representative, will keep documentation and photographs of release events.
6. If a monitoring indicates a release is occurring or has occurred, the Contractor shall immediately begin containment.
 - a. The Contractor shall determine and implement any modifications to the drilling technique or composition of drilling fluid (e.g., thickening of mud by increasing bentonite content, temporary lowering of the downhole pressures, etc.) to minimize or prevent further releases of drilling mud.
 - b. If a release occurs within a wetland or water body, reasonable actions within the limitation of directional drilling technology and the Contractor's ability, shall be taken to re-establish drilling mud circulation.
 - c. The Owner may evaluate the release to determine if containments structures are warranted and can effectively contain the release. When making this determination, the Owner may consider if placement of containments structures will cause additional adverse environmental impact.
 - d. Upon completion of the drilling operations, the Owner may consult with applicable regulatory agencies to determine any final clean-up requirements for the release.
 - e. If public health and safety are threatened by the release, drilling operations might be shut down until the threat is eliminated. This measure would be taken as a last resort because of the potential for drill hole collapse resulting from loss of downhole pressure.
 - I. Dispose of all bentonite slurry, drilling mud, cuttings, pit spoils, etc. at a legal off-site disposal area.

INSTALLATION AND RECEIVING PITS:

- A. Provide pits as required to install and receive pipes.
 1. Provide tight sheeting where required to provide protection to public, permitting agency and public property, and adjacent utilities.
 2. Comply with OSHA requirements for type, installation, and removal of sheeting.
 3. Leave sheeting in place where indicated on the Drawings.
 4. Provide fencing around pits to secure the area and to provide protection to the public.
- B. Provide pits of length and width as necessary to install pipes and sized to fit area available for Work.
- C. Provide dewatering as required to allow excavation of pits and installation of pipes.
 1. Provide protection to environment from erosion or sedimentation resulting from all pumping operations.
- D. Backfilling of pits:
 1. Backfill with compacted granular backfill materials at all locations within 5-feet of curb, sidewalks, roadways, or driveways.

2. Backfill with compacted excavated materials where granular backfill material is not indicated.
 3. Comply with compaction requirements outlined in Special Provision for DUCTILE IRON WATER MAIN under the section "Excavation, Bedding, and Backfilling" except that trench backfill for pits shall not be paid for separately but shall be considered included in the cost of WATER MAIN 16" (DIRECTIONAL BORE).
 4. Re-grade slopes and ditches to match preconstruction condition and adjacent area.
 5. Remove all construction debris, materials, excess excavated material, and sheeting from construction area upon completion of the Work.
- E. Restoration: Pavement removed for launching and receiving pits shall be saw-cut for clean edges and restored with an 8" Class D patch. The cost of this pavement restoration shall not be paid for separately but shall be considered included in the cost of WATER MAIN 16" (DIRECTIONAL BORE).

PIPE INSTALLATION:

- A. Install pipe by HDD methods unless conditions require installation by open-cut methods.
- B. Complete open-cut installation in strict accordance with pertinent provisions of the Special Provision for "DUCTILE IRON WATER MAIN."
- C. Provide pipe insertion pits necessary for complete installation of pipe.
 1. Position pits at locations indicated on the Drawings whenever possible.
 2. Provide additional pits as required to install new pipe.
 3. Provide all traffic control, barricades, flagmen, and other items at insertion pit areas as necessary to complete the work.
 4. Provide tight sheeting at insertion pits to keep pit to the minimum size necessary to do the work.
 - a. Remove sheeting when work is completed.
- D. Connect to manholes or valve vaults where indicated on the Drawings and as outlined in these Specifications.
- E. Install Ductile Iron pipe by pulling the pipe into place.
 1. Provide winch systems designed to protect structures, provide directional stability, and pull pipe from insertion point to exit point without causing damage to the pipe being inserted.
 2. Insert pipe in a continuous operation from point to point.
 3. Provide lubricants as specified by pipe manufacturer to avoid stressing of pipe beyond its elastic limit during insertion.
 4. Provide silencers, mufflers, or other devices required to reduce noise from compressors and other equipment to meet limits as outlined by Owner's local ordinances.
- F. Provide transition fittings and temporary plugs and/or caps on pipes where pipes are left for others to connect to.

- G. Provide neoprene or rubber seals between drilled pipe and carrier pipe at termination of drilled pipe, if dual pipes are indicated.
- H. Mark location of drilled pipe termination points on "Job Set" of plans, measured from adjacent permanent structures or iron pins.
- I. Install pipe tracer wire (and conduit) pulled into place alongside the main pipe, at each drilling location for the total length of pipe.
 - 1. Connect tracer wire to ductile or steel pipe or to tracer wire on pipe installed by other methods with a "hard" connection at each end of directional drilled pipe.

TESTING: Repair any defects or leaks in the pipe discovered during testing. Retest all repaired sections until they meet all testing and inspection requirements.

PRESSURE, LEAKAGE TESTING, AND DISINFECTION: Installed water main by directional drilling shall comply with leakage testing, pressure testing, and disinfection in accordance with the Special Provision for DUCTILE IRON WATER MAIN.

Basis of Payment. The work shall be paid for at the contract unit price per foot for WATER MAIN 16" (DIRECTIONAL BORE) and shall include potholing for utilities and trench backfill of the drilling and receiving pits.

SANITARY MANHOLE, SPECIAL

Description: This work shall consist of constructing cast-in-place MWRDGC manholes of the size indicated on the plans, together with the necessary cast iron frames and lids, in accordance with Section 602 of the Standard Specifications, the detail "Sanitary Manhole, Special", and will include all excavation, backfilling, flat slab tops (when required), and existing sewer connections required to complete the work.

Manholes constructed over proposed or existing sanitary sewers and which are indicated on the plans as sanitary manholes shall be provided with rubber gasketed couplings to ensure a watertight seal between pipe and manhole. The rubber gasketed couplings shall conform to ASTM Specification C-923. Sanitary manholes shall be provided with ladder rungs per the plans. The rubber gasketed couplings and steps shall be included in the cost of sanitary manholes and will not be paid for separately. The manholes shall conform to the structure details shown in the plans.

The contractor is responsible for tying in all existing sanitary and combined sewers to the proposed structure as required. Up to 10 feet of new sewer (if required) for each existing sewer tying into the proposed structure shall be considered included to this pay item. The contractor shall be responsible for verifying the size, inverts and locations of the existing sewers to be connected to the proposed structure. Any existing sanitary sewers that are damaged during construction shall be replaced in kind by the contractor at no additional cost to the Village or owner.

Where the proposed sanitary manhole will be connected an existing sewer that has a Cured-In-Place Pipe (CIPP) liner, any damage to the liner shall be repaired with a high modulus, high

strength, structural, epoxy paste adhesive. This adhesive shall also applied to the pipe and manhole to bridge the connection. The epoxy paste adhesive shall be a 2-component, 100 % solids, solvent-free, moisture-tolerant, high-modulus, high strength, structural epoxy paste adhesive. It conforms to the current ASTM C-881, Types I and IV, Grade-3, Class-B/C and AASHTO M-235 specifications.

Sanitary and combined sewer manholes shall be tested for water tightness in accordance with Section 32-12 of the Standard Specifications for Sewer and Water Construction in Illinois.

MWRDGC frame and lids shall be in accordance with the details shown in the plans.

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

Basis of Payment: This work shall be paid for at the contract unit price per each for SANITARY MANHOLE, SPECIAL.

MANHOLES, SANITARY, TYPE 1 FRAME, CLOSED LID

Description: This work shall consist of constructing manholes of the size indicated on the plans, together with the necessary cast iron frames and lids, in accordance with Section 602 of the Standard Specification, the detail "Typical Sanitary Manhole 'A' and 'B' Detail", and will include all excavation, backfilling, sand cushion, flat slab tops (when required), and existing sewer connections required to complete the work. These manholes shall not be connected to MWRDGC owned infrastructure.

Manholes constructed over proposed or existing sanitary sewers and which are indicated on the plans as sanitary manholes shall be provided with rubber gasketed couplings to ensure a watertight seal between pipe and manhole. The rubber gasketed couplings shall conform to ASTM Specification C-923. Sanitary manholes shall be provided with ladder rungs per the plans. The rubber gasketed couplings and steps shall be included in the cost of sanitary manholes and will not be paid for separately. The manholes shall conform to the structure details shown in the plans.

The contractor is responsible for tying in all existing sanitary and combined sewers to the proposed structure as required. Up to 10 feet of new sewer (if required) for each existing sewer tying into the proposed structure shall be considered included to this pay item. The contractor shall be responsible for verifying the size, inverts and locations of the existing sewers to be connected to the proposed structure. Any existing sanitary sewers that are damaged during construction shall be replaced in kind by the contractor at no additional cost to the Village or owner. In addition, the contractor will be responsible for determining which structures require precast concrete flat slab tops in accordance with the Standard Specifications. Flat slab tops will only be allowed where a conical section cannot be installed due to a lack of clearance.

Sanitary and combined sewer manholes shall be tested for water tightness in accordance with Section 32-12 of the Standard Specifications for Sewer and Water Construction in Illinois.

Frame and lids shall be in accordance with the details shown in the plans.

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Method of Measurement: This work will be measured per units of each.

Basis of Payment: This work shall be paid for at the contract unit price per each for MANHOLES, SANITARY, TYPE 1 FRAME, CLOSED LID, of the diameter specified in the plans.

MANHOLES TO BE ADJUSTED (SPECIAL)

Description: This item shall consist of adjusting MWRDGC manholes as specified in the plans.

Construction Requirements: This work shall be completed in accordance with applicable portions of Section 602 of the Standard Specifications and the standard MWRDGC details and notes shown in the plans, where elevation difference between final and existing structure rims is greater than 12”.

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

Basis of Payment: This work will be paid for at the contract unit price per each for MANHOLES TO BE ADJUSTED (SPECIAL).

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

Description: This item shall consist of adjusting MWRDGC structure frame and lids as specified in the plans.

Construction Requirements: This work shall be completed in accordance with applicable portions of Section 602 of the Standard Specifications and the standard MWRDGC details and notes shown in the plans, where elevation difference between final and existing structure rims is no more than 12”.

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

Basis of Payment: This work will be paid for at the contract unit price per each for FRAMES AND LIDS TO BE ADJUSTED (SPECIAL).

LIGHTING UNIT COMPLETE, SPECIAL

Description: This item shall consist of furnishing and installing a fluted aluminum pole complete with a decorative base, decorative arm, luminaire, galvanized anchor bolts, fuses, fuse holders, and all required hardware as specified herein, shown on the plans and per Article 830 of the Standard Specifications.

Materials: The lighting unit shall be model number 1A-1521LED-F-12L30T2-MDL008-SV1-EZ/480HPM/6110FP4-.125/BCC3/BK, as manufactured by Sternberg Lighting. No substitute

products will be allowed. This equipment matches the style of other lighting units currently installed within the Village.

Pole and Decorative Base: The pole shall be fabricated from a one piece, 15" aluminum straight diameter fluted shaft with a decorative base as specified in the plans. A maintenance opening and access door shall be provided with stainless steel alien head screws and one copper ground lug. The base plate shall accept four (4) galvanized anchor bolts, sized per manufacturer requirements, with two (2) galvanized nuts and two (2) galvanized washers per bolt. The pole and decorative base shall be prime painted and then finish painted Black. The pole shall be welded for single unit construction.

Decorative Arm: A single decorative aluminum arm shall be provided as specified in the plans.

Pole Cap: The aluminum pole cap shall be a 3" ball.

Luminaire: The luminaire shall be a small scale, decorative downlight fixture with a spun aluminum bell styled dome with a flared edge shade. The luminaire shall measure 21" in outside diameter and 17" overall height. The luminaire shall be U.L. listed in United States.

LEDs: The luminaire shall use high output, high brightness LED's. They shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface. The arrays shall be roof mounted to minimize up-light. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating of 1 to 3 mils. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IES LM-80. The High Performance white LED's will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C. The High Brightness, High Output LED's shall be 3000K color temperature with a minimum CRI of 70. The luminaire shall have a minimum 2390 delivered initial lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Optics: The luminaire shall be provided with individual, refractor type optics applied to each LED. The luminaire shall provide Type 2 light distribution per the IES classifications. Testing shall be done in accordance with IES LM-79.

Electronic Driver: The LED driver shall be U.L. listed. It shall be securely mounted inside the bollard, for optimized performance and longevity. It shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation. It shall have overload, overheat and short circuit protection, and have a DC voltage output, constant current design, 50/60HZ. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be a high efficiency driver with a THD less than 20% and a high power factor greater than 0.9.

Shipment: The poles shall be carefully inspected at the factory prior to shipment to assure that the poles are complete and free of defects. When poles are stacked together, they shall be supported with suitable spacers or shall otherwise be protected from damage.

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Installation: The Contractor shall install the lighting unit according to the plans and as recommended by the manufacturer. The light pole shall be set plumb on the foundation without the use of shims, grout, or any other leveling devices under the pole bases. The base cover of the pole shall be flush with the concrete foundation. Poles shall not be installed until luminaires are available for installation at the same time the poles are installed.

Any damage to the paint finish of the lighting unit after installation shall be touched up in the field by the Contractor per the manufacturer's recommendations.

Warranty: All electrical components shall be warranted by the manufacturer for a minimum of 5 years

Basis of Payment: This work will be paid for at the contract unit price per each for LIGHTING UNIT COMPLETE, SPECIAL.

RELOCATE EXISTING LIGHT POLE WITH LUMINAIRE

Description: This work shall consist of removing an existing light pole and luminaire from an existing foundation and reinstalling the pole and luminaire on a new foundation at the location shown in the plan.

Prior to the removal of any lighting equipment, the Contractor shall schedule an inspection with the Engineer to review the condition of the equipment. Any deficiencies shall be corrected prior to removal. A minimum of 7 days advanced notice shall be provided prior to the inspection.

Basis of Payment: This work will be paid for at the contract unit price per each for RELOCATE EXISTING LIGHT POLE WITH LUMINAIRE.

SEWER CONNECTIONS TO STRUCTURES

Description: This work shall consist of connecting a proposed sanitary or combined sewer to an existing sanitary or combined sewer structure, at the locations shown in the plans. The work shall be performed in accordance with the Standard Specifications of Water and Sewer in Illinois and the details shown in the plans.

The connection to an existing structure shall be done by saw cutting the wall of the existing manhole to form a square opening large enough to accommodate the proposed pipe. The pipe shall be inserted within the manhole for a distance of four inches from the inside wall of the manhole, or flush to a non-curved structure. Non-shrink grout shall be applied for the entire thickness of the wall to create a watertight barrier at the connection. A reinforced square formed concrete collar shall be poured on the outside of the manhole where the connection is made. The collar shall extend out 12" along the new sewer. All poured place concrete must be 4000 PSI non-shrink mix. A curved internal arch form must be used during collar concrete fill. No brick, mortar, or debris is to be used in place of consolidated concrete.

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

Basis of Payment: The work shall be paid for at the contract unit price per each for SEWER CONNECTIONS TO STRUCTURES.

SANITARY SEWER REMOVAL (SPECIAL)

Description: This work shall consist of the removal of existing 48" combined or sanitary sewers at the locations shown on the plans, in accordance with applicable portions of Section 551 of the Standard Specifications.

Excavated pipe material shall not be salvaged but disposed of by the Contractor in accordance with Article 202.03 of the Standard Specifications.

When a segment of sanitary sewer is to be removed and replaced, the limits of the removal shall be sawcut by the contractor so that a clean edge exists for connection to the proposed sewer. Any pipe outside of the removal limits damaged during removal operations shall be replaced.

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

Basis of Payment: This work shall be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL (SPECIAL).

FORM LINER COLORATION (SPECIAL)

Description: This work shall consist of furnishing and applying concrete form liner and penetrating stain to concrete surfaces at the bottom portion of lighting pilaster indicated on the plans. Different stain colors to match the adjacent brick short wall East of the project will be required. A separate color shall be applied to all grout lines within the form lined surfaces.

Coloration: All patterning of brick surfaces shall appear natural. Seam lines and/or match lines caused from two form liners coming together shall not be apparent when viewing final wall. Final coloration of brick surfaces shall accurately simulate the appearance of real brick, including the multiple colors, gradients, shades, and flecking that is apparent in real brick. It shall also demonstrate the colors that may be apparent from aging, such as staining from oxidation or rusting. Joints shall be colored to simulate real mortar.

Concrete surface shall be cleaned prior to applying color stain materials to assure that surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's instructions for surface preparation. Do no sandblast. Preferred method to *remove* latency is pressure washing with water, minimum 3,000 psi (rate of three to four gallons per minute), using a fan nozzle perpendicular to and at one or two feet from surface. Completed surface shall be free of blemishes, discoloration, surface voids, and unnatural form marks.

Water based concrete color stain shall be utilized and selected to match the existing brick short wall just East of the bridge.

Verification Sample: Test sample of the stain on concrete shall be submitted for acceptance to the Village of Brookfield and the Resident Engineer before any concrete form liner or staining is to start on the structure. Submit a 1' x 1' sample of the simulated brick finish which demonstrates the finishes, colors, and textures specified. Contractor will coordinate delivery and access to the panel with the Resident Engineer. Remove any sample rejected by the Resident Engineer from the project and submit a new sample at no additional expense to the Department.

Quality Assurance: Manufacturer of simulated brick wall shall have a minimum of five years of experience making brick wall color stains to create formed concrete surfaces to match natural brick shapes, surface texture, and colors.

Contractor shall schedule a pre-installation meeting with manufacture representative to assure understanding of simulated brick wall, molds use, color application, requirements for construction and mock-up, and to coordinate work.

Formed concrete construction shall require five years experience pouring vertically formed architectural concrete. Manufacturer of manufacturer's authorized representative shall perform the color stain system application.

Method of Measurement: FORM LINER COLORATION (SPECIAL) will be measured for payment in place per SQUARE FOOT. Measurement will include all costs associated with providing the aesthetic treatment including furnishing, installing, stripping and reusing the form liner as well as all costs for furnishing and applying the color stain.

Basis of Payment: This work will be paid for at the contract unit price per SQUARE FOOT for FORMLINE COLORATION (SPECIAL).

STABILIZED CONSTRUCTION ENTRANCE

Description. This work shall consist of the furnishing, installation, maintenance and removal of all stabilized construction entrances which are used to reduce or eliminate the tracking of sediment onto public right-of-ways or streets. Construction entrances shall be used in conjunction with the stabilization of construction roads and other exposed areas.

Materials. All materials shall conform to the applicable requirements of Materials, Division 1000 and specific references as follows:

Coarse Aggregate	Article 1004
Filter Fabric	Article 1080

Construction Requirements. Stabilized construction entrances shall consist of 12 inches of CA-1 Aggregate placed over filter fabric. The filter fabric shall be included with this pay item. The aggregate shall be crushed stone or crushed gravel.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Pipe used for this will not be paid for, but shall be included in the work. The stabilized construction entrance will have positive drainage away from the roadway.

Maintenance shall consist of placing additional aggregate of the same type and gradation as the base aggregate. Additional aggregate will not be paid for, but shall be included in the work.

After the stabilized construction entrances have served their purpose, the suitable aggregate shall be removed, and, at the direction and approval of the Engineer, utilized for embankment construction or otherwise disposed of as specified in Article 202.03 of the Standard Specifications.

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

Basis of Payment. Payment for STABILIZED CONSTRUCTION ENTRANCE will be made at the Contract unit price per square yard, measured as specified.

MAINTENANCE OF LIGHTING SYSTEMS

Effective: March 1, 2017

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

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

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

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

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

Maintenance of Existing Lighting Systems

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

Extent of Maintenance.

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

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

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

Maintenance of Proposed Lighting Systems

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

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

Lighting System Maintenance Operations

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

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

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

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

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

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

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

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

Operation of Lighting

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

Method of Measurement

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

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

FENCE REMOVAL

Description: Work under this item consists of the removal and disposal of existing fence at the locations shown in the plans in accordance with the applicable articles of Section 664 of the IDOT Standard Specifications for Road and Bridge Construction, except as herein modified. Fence removal shall include the removal of posts and foundations in their entirety. All removed materials shall be disposed of by the Contractor, at their expense, outside the limits of the improvement. Holes or excavations resulting from the removal operation shall be backfilled with suitable material and compacted.

At locations where fence fabric or rails shall remain, the Contractor shall cut the fabric or rails and connect it to new posts or existing posts to remain. In cutting the fence and reconnecting the fabric or rails to a new post, Contractor shall ensure that no cut ends of the fence will be exposed. Wire ties shall be used, if necessary to tie the fence to remain to the post that remains or the new post. No fence material shall extend beyond the posts which create a hazard to pedestrians. Connections between the existing fence, existing posts and new fence shall be made with the appropriate connections as approved by the Engineer.

Method of Measurement: This work will be measured in place and the area computed in feet.

Basis of Payment: This work will be paid for at the contract unit price per foot for FENCE REMOVAL which payment shall constitute full compensation for removing and disposing of all existing fence materials, including foundations; backfilling and compacting the resulting holes or excavations; connecting existing fence and posts that remain; and furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work as specified.

SEDIMENT CONTROL, SILT CURTAIN

Description: This work shall consist of installing and removing a floating turbidity curtain to deter silt suspension and the movement of silt particles during construction.

Materials: The curtain shall be as follows:

1. The barriers shall be a bright color – yellow or “international” orange is recommended.
2. The curtain fabric shall meet the following minimum requirements:

PHYSICAL PROPERTIES OF TURBIDITY CURTAIN FABRIC	
Physical Property	Minimum Requirement
Thickness (mils)	45
Weight (oz / sq yd)	
Type I	18
Type II	18 or 22
Type III	22
Grab Tensile Strength (lbs)	300

UV Inhibitor	Must Be Included
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3. Seams in the fabric shall be vulcanized, welded, or sewn, and shall develop the full strength of the fabric.
4. Flotation devices shall be flexible, buoyant units, contained in an individual flotation sleeve or collar attached to the curtain. Buoyancy provided by the flotation units shall be sufficient to support the weight of the curtain and maintain a freeboard of at least 3 inches above the water surface.
5. Load lines shall be fabricated into the bottom of all floating turbidity curtains. The Type II curtain shall have load lines fabricated into the top of the fabric. The top load line shall consist of woven webbing or vinyl-sheathed steel cable, and shall have break strength in excess of 10,000 pounds. The supplemental (bottom) load line shall consist of a chain incorporated into the bottom hem of the curtain, with sufficient weight to serve as ballast to hold the curtain in a vertical position. Additional anchorage shall be provided as necessary. The load lines shall have suitable connecting devices which develop the full breaking strength for connecting to load lines in Type I adjacent sections.
6. External bottom anchors shall be used.
7. The bottom anchors shall be sufficient to hold the curtain in the same position relative to the bottom of the watercourse, without interfering with the action of the curtain. The anchor may dig into the bottom (grappling hook, plow or fluke-type), or may be weighted (mushroom type), and should be attached to a floating anchor buoy via an anchor line. The anchor line would then run from the buoy to the top load line of the curtain. As previously noted, anchor spacing will vary with current velocity and potential wind and wave action; the manufacturer's recommendations shall be followed.

Installation: The structure shall be installed according to the manufacturer's recommendations.

1. In rivers or in other moving water (Type II and Type III installations), it is important to set all the curtain anchor points. Care must be taken, prior to putting the furled curtain into the water, to ensure that the anchor points have sufficient holding power to retain the curtain under the existing current conditions. Again, anchor buoys shall be employed on all anchors to prevent the current from submerging the flotation at the anchor points.
2. Anchor lines shall be attached to the flotation device, not to the bottom of the curtain. The anchoring line attached to the downstream side of the flotation device will provide support for the curtain. Attaching the anchors to the bottom of the curtain could cause premature failure of the curtain due to stresses imparted on its middle section.
3. There is an exception to the rule that turbidity curtains should not be installed across channel flows; it occurs when there is a danger of creating a silt build-up in the middle of a watercourse, thereby blocking access or creating a sand bar. Curtains have been used effectively in large areas of moving water by forming a very long sided, sharp "V" to deflect clean water around a work site, confine a large part of the silt-laden water to the work area inside the "V" and direct much of the silt toward the shoreline. Care must be taken, however, not to install the curtain perpendicular to the water current.

Removal:

1. Care should be taken to protect the turbidity curtain skirt from damage by furling the curtain before it is removed from the water.

2. The site selected to bring the curtain ashore should be free of sharp rocks, broken cement, debris, etc., to minimize damage when hauling the curtain over the area.
3. If the curtain has a deep skirt and no furling system, it can further be protected by running a small boat with a crew installing furling lines along its length before attempting to remove the curtain from the water.

Maintenance:

1. The Contractor shall be responsible for maintenance of the filter curtain for the duration of the project to ensure the continuous protection of the watercourse.
2. Should repairs to the geotextile fabric become necessary, there are repair kits available from Parker Systems, and their instructions must be followed to ensure the adequacy of the repair.
3. When the in-stream work is complete and the inspector determines that the curtain is no longer required, the curtain and related components shall be removed in such a manner as to minimize turbidity. Remaining sediment shall be sufficiently settled before removing the curtain. Sediment may be removed and the original depth (or plan elevation) restored. Any spoils must be taken to an upland area and be stabilized.

Method of Measurement: This work will be measured for payment per each turbidity curtain installed.

Basis of Payment: This work will be paid for at the contract unit price per each for SEDIMENT CONTROL, SILT CURTAIN.

PRESSURE CONNECTION 16" WITH VAULT, 5' DIAMETER

Description: This work shall consist of furnishing and installing a pressure connection and water valve in vault, with the valve on a 16" water main that tees from the 16" main line water main as shown on the plan detail for "Pressurized Connection Valve Vault Detail". The tapping sleeve shall be a Smith Blair – Model 665 style tapping sleeve with stainless steel bolts. The valve shall be type Mueller or U.S. Pipe and shall have replaceable resilient seats or wedges. They shall be installed in concrete vaults in conformance with the details shown on the detail. Valves shall be installed using stainless steel bolts. A 1" corp shall be installed on each side of each new valve in the vault to allow for insertion of a small meter and facilitate chlorination, flushing, pressure testing, determine leakage and obtaining water samples. Corporation stops shall be Mueller H-15000. The vault structure shall have an eccentric cone with the lid opening centered over the valve operating nut.

Pressure connections to existing water main shall be in accordance with Section 46 of "Standard Specifications for Water and Sewer Main Construction in Illinois", Village of Brookfield requirements and as directed by the Engineer. All new pipe and fittings must be cleaned and swabbed with a chlorine solution of at least fifty (50) mg/L. The Engineer must approve of this solution as coordinated with the Village of Brookfield Public Works.

The pressure connection shall be coordinated with the Village of Brookfield Public Works Department and shall be approved by the Engineer. Any necessary valve shut down, for the

purpose of work on existing water system, shall be done by the Village of Brookfield Public Works Department only.

Basis of Payment: This work shall be paid for at the contract unit price each for PRESSURE CONNECTION 16" WITH VAULT, 5' DIAMETER and shall include all work described above and as shown in the detail "Pressurized Connection Valve Vault Detail" which price shall be payment in full for performing all work as specified and as shown on the plans including all excavations, required field adjustments, temporary blind flange, corps, whips or other fitting installation for pipe flushing and pressure testing, backfilling including coarse aggregate trench backfill, thrust blocks placement, cleaning and swabbing, disposal of excavated materials and removed pipes, and restoration of areas outside the limits of those identified on the plans.

STORM SEWERS, WATER MAIN QUALITY PIPE

Description: This work consists of constructing storm sewer of the specified diameter adjacent to or crossing water main, as indicated by "Water Main Quality" in the plans, meeting the material and installation requirements of the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications. This work shall include the costs for bedding material, removal and disposal of any miscellaneous abandoned structures, all excavation and disposal, bypass pumping, and televised inspection. Any dewatering and/or sheeting or shoring required to do the work as specified shall not be paid for separately but will be included in the contract unit price of this item.

Materials. For the locations when proposed storm sewer crossing WM, the pipe shall be CLASS IV (ASTM C 76) RCP. When a storm sewer crosses water main, the joints shall be rubber gasketed joints (ASTM C443). This shall extend to the upstream and downstream minimum 10 feet from the outside of the crossing pipe.

For the locations when proposed storm sewer is adjacent to the WM, the material shall be:

- a) Concrete Pressure Pipe: Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303
- b) Ductile iron water main Class 52 Joints for Ductile Iron pipe shall be:
 1. Mechanical Joints – AWWA C111 and C600
 2. Push-On-Joints – AWWA C111 and C600
- c) Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes. (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Method of Measurement. This work will be measured for payment in place in units of feet. Measurements will be made along the centerline of pipe.

Basis of Payment. This work shall be paid for at the contract unit price per foot for STORM SEWER (WATER MAIN QUALITY), of the diameter and type specified.

SANITARY SEWER 18”

Description: This work shall consist of open cut construction of 18” MWRDGC sanitary or combined sewer as shown in the plans, and in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition and SANITARY SEWER, TYPE 2.

Sewer shall be encased in concrete per the detail "Pipe Encasement". Concrete shall extend up to the point of connection where a connection to an existing sewer is made, and up to the outside wall of a structure when a connection is made to an existing or proposed structure.

Method of Measurement. This work will be measured for payment in place in units of feet. Measurements will be made along the centerline of pipe.

Basis of Payment. This work will be paid for at the contract unit price per foot for SANITARY SEWER 18”.

SANITARY SEWER, SPECIAL

Description: This work shall consist of open cut construction of water main quality 48” combined and sanitary sewer for locations where proposed sewer crosses existing or proposed water main. Work shall conform to the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition.

Pipe materials shall be CLASS IV (ASTM C 76) RCP. When a storm sewer crosses water main, the joints shall be rubber gasketed joints (ASTM C443). This shall extend to the upstream and downstream minimum 10 feet from the outside of the crossing pipe or as shown in the plans.

Method of Measurement. This work will be measured for payment in place in units of feet. Measurements will be made along the centerline of pipe.

Basis of Payment. This work will be paid for at the contract unit price per foot for SANITARY SEWER, SPECIAL, of the type specified.

SANITARY SEWER, TYPE 2

Description: This work shall consist of open cut construction of sanitary or combined sewer as shown in the plans, and in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition.

All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 31 and 40 of the Water and Sewer Specifications.

Materials. All sanitary or combined sewers shall be PVC (Polyvinyl Chloride) SDR 26 (ASTM D-2241) plastic pipe with flexible elastomeric seal pipe joints. Sanitary sewers shall be constructed on a bedding comprised of ¼" to 1" size aggregate with a minimum thickness of 4 inches. PVC pipe shall be backfilled with aggregate to a minimum of 12 inches over the top of pipe. Selected granular backfill shall then be compacted in place up to pavement subgrade. The pipe and joints shall conform to ANSI / AWWA C905. Installation of PVC pipe shall conform to ANSI / AWWA C905. All pipe joints shall be flexible elastomeric seals per ASTM D 3212 and F 477.

Construction Requirements. The Contractor shall maintain flow through the existing sanitary sewers within the project limits during the construction of the proposed sanitary sewer. Flow must be maintained at all times, unless otherwise approved by the engineer. This includes all bypass pumping required for the installation of the proposed manholes and sanitary sewer on the existing sanitary sewer line. The Contractor shall monitor upstream manholes and prevent excessive surcharge conditions. The Contractor shall be responsible for continuity of sanitary sewer service to each facility connected to the section of sewer during the execution of the work. If sewage backup occurs and enters buildings, the Contractor shall be solely responsible for clean -up, repair, property damage costs, and claims.

At the preconstruction meeting, the Contractor shall submit his plan for the construction of the proposed sewer, the connections to the existing sewers, and how he/she will maintain the existing flow. Forty-eight hours advance notice is required prior to beginning any sanitary sewer work.

The Contractor shall be responsible for maintaining a safe work environment during the construction of the sanitary sewer and maintaining the existing sewer flow. Any sewage spills shall be reported to the appropriate agencies and all clean-up shall meet the requirements of the Village and the IEPA.

Final Acceptance and Testing of Sanitary Sewer. Before final acceptance, the sanitary sewers shall be tested in accordance with Section 31-1.12 of the "Standard Specifications for Water and Sewer Main Construction in Illinois." Specifically, all pipelines constructed of flexible materials shall be subject to air exfiltration tests, televising test, and deflection test. The deflection test shall be performed no sooner than thirty (30) days of the backfilling operation and shall consist of measuring the pipe for vertical ring deflection. Maximum ring deflection of the pipeline under load shall be limited to five (5) percent of the internal pipe diameter. All pipe exceeding this deflection shall be considered to have reached the limit of its serviceability and shall be re-laid or replaced by the developer. Deflection testing shall be accomplished by pulling a mandrel, sphere, or pin-type "go / no-go" device, with a diameter equal to ninety-five (95) percent of the undeflected inside diameter of the flexible pipe, through the pipeline. In addition, all sanitary sewer having a diameter of eight (8) inches or greater shall be televised. Copies of all video tapes must be submitted to the Village of Brookfield for their records within thirty (30) days after the sewer is televised.

Method of Measurement. This work will be measured for payment in place in units of feet. Measurements will be made along the centerline of pipe.

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

UNDERDRAIN CONNECTION TO STRUCTURE

Description: This item shall consist of furnishing all material, equipment and labor to support sewer trenches as shown on the plans, as herein specified and as directed by This work shall consist of making a pipe underdrain connection to an existing drainage structure or culvert as shown in the plans and in accordance with Section 601 of the Standard Specifications.

Construction Requirements: The Contractor shall carefully core a hole into the existing drainage structure or culvert the same size as the external diameter as the proposed pipe underdrain at the line and grade as shown in the plans. The protrusion of the proposed pipe underdrain into the drainage structure or culvert must not exceed one inch. After the pipe underdrain is installed, the drainage structure or culvert shall be mortared with a non-shrink concrete grout.

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

Basis of Payment: This work will be paid for at the contract unit price per each for UNDERDRAIN CONNECTION TO STRUCTURE.

AVAILABLE REPORTS

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: _____

Those seeking these reports should request access from:

Brett Sauter, PE, SE
Ciorba Group
773.775.4009
bsauter@ciorba.com

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION

Effective: August 1, 2012 Revised: February 2, 2017

In addition to the Contractor's equal employment opportunity (EEO) affirmative action efforts undertaken as required by this Contract, the Contractor is encouraged to participate in the incentive program described below to provide additional on-the-job training to certified graduates of the IDOT pre-apprenticeship training program, as outlined in this Special Provision.

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at \$15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

METHOD OF MEASUREMENT: The unit of measurement is in hours.

BASIS OF PAYMENT: This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is 2.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of \$15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

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:

Village of Brookfield

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

Date Prepared: 07/08/2020

Storm Water Pollution
Prevention Plan
Village of Brookfield



BROOKFIELD

Please find the following documents include in this application:

- BDE 2342 - Storm Water Pollution Prevention Plan Form and Contractor Certification Statement
- Project Location Map
- Soil Map
- Wetland Impact Exhibit
- Wetland Delineation Report
- Engineering Plans



Storm Water Pollution Prevention Plan



Route FAU 1408	Marked Route Brookfield Avenue	Section 15-00129-00-BR
Project Number P-91-402-15	County Cook	Contract Number 61G22

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name Carl Muell	Title Director of Public Works	Agency Village of Brookfield
Signature Carl Muell		Date 9/21/20

I. Site Description

A. Provide a description of the project location (include latitude and longitude):

Project located at Brookfield Avenue Bridge over Salt Creek, on Brookfield Avenue STA 504+00 to STA 510+00.75 with Latitude = 41.822834 and Longitude = -87.841632. General Location Map attached.

B. Provide a description of the construction activity which is subject of this plan:

The Brookfield Avenue Bridge over Salt Creek will be removed and replaced. Improvements will be made to increase the width of the bridge from 30' to 44.5. The proposed bridge elevation will be raised. The abutments on the south side will be widened. Pavement reconstruction will be performed within the Brookfield Avenue construction limits. The horizontal alignment west of the bridge will also be adjusted. The curve west of the bridge will be shifted to the west. There will be a small amount of storm sewer improvements east of the bridge along the north side of Brookfield Avenue. Storm sewers along the south side of the bridge will be replaced. Combined sewer will be replaced.

C. Provide the estimated duration of this project:

8 Months

D. The total area of the construction site is estimated to be 1.5 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 1.2 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.76

F. List all soils found within project boundaries. Include map unit name, slope information and erosivity:

189A - Martinton silt loam with 0-2 percent slopes
298A - Beecher silt loam with 0-2 percent slopes and soil unit
533 - Urban land
2822A - Ific Udarents, clayey-Urban land-Elliott complex with 0-2 percent slope
W - water
Soil map attached.

G. Provide an aerial extent of wetland acreage at the site:

There is one wetland totaling 1.04 acres and one Waters of the U.S. (WOUS) (Salt Creek) totaling 0.28 acres located within the project limits. (Wetland Delineation Report)

This project will impact 0.090 acres of permanent WOUS and Wetland area. (Wetland Impact Exhibit)

H. Provide a description of potentially erosive areas associated with this project:

Area near banks being regraded, and river banks near bridge abutments

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of scopes, etc.):

Soil disturbing activities include removal and replacement of bridge structure abutments, open cut trench and sewer installation outside of roadway, and partial grading of stream embankment at bridge structure, with side slopes ranging from 1H:1V to 4H:1V. Other regrading at the roadway level will be greater than 6H:1V.

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

The Village of Brookfield owns the storm sewers which discharge into Salt Creek and MWRD co-owns the combined sanitary storm sewers which discharge into the MWRD sanitary sewer system.

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

Village of Brookfield - Permit No: 0302

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

Project receiving waters is Salt Creek (Lower Reach). Ultimate receiving water is Des Plains River

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

Silt fence will be installed for undisturbed WOUS and wetland. Turf reinforcement mat will be placed on newly regraded channel side slopes between 1H:1V and 2H:1V.

O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- Floodplain
- Wetland Riparian
- Threatened and Endangered Species
- Historic Preservation
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity, or siltation
- Applicable Federal, Tribal, State or Local Programs
- Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

IL_GL-03, IL_GL-09

a. The name(s) of the listed water body, and identification of all pollutants causing impairment:

Salk Creek (Lower Reach) - Storm sewer outfall

b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

Inlet filters and pipe protection will be placed in all open lid drainage structures within the project. A perimeter erosion control barrier will also be placed upstream of runoff that flows into the project area. Rip rap will be placed in the outfall and at the bridge abutment.

c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

At storm sewer outfalls and overland flow discharging into stream.

d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:

Two discharge locations. Southwest and southeast corner of the proposed bridge on Brookfield Avenue over the Salt Creek.

2. TMDL (fill out this section if checked above)

a. The name(s) of the listed water body:

Salt Creek (Lower Reach)

b. Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

Temporary seeding will be placed during construction, as well as mulch and sodding, and erosion control blanket. Permanent seeding, erosion control blanket and turf reinforcement will be placed once construction is complete.

c. If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet the allocation:

P. The following pollutants of concern will be associated with this construction project:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Soil Sediment | <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input type="checkbox"/> Antifreeze / Coolants |
| <input type="checkbox"/> Concrete Truck waste | <input type="checkbox"/> Waste water from cleaning construction equipment |
| <input type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Solid waste Debris | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) _____ |

Fertilizers / Pesticides

Other (specify) _____

II. Controls

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

- A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed, and maintained to:
 1. Minimize the amount of soil exposed during construction activity;
 2. Minimize the disturbance of steep slopes;
 3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
 4. Minimize soil compaction and, unless infeasible, preserve topsoil.

- B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.
 1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
 2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input checked="" type="checkbox"/> Other (specify) Turf reinforcement mat |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) _____ |
| <input checked="" type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) _____ |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) _____ |

Describe how the stabilization practices listed above will be utilized during construction:

Tree protection will be placed prior to construction. Temporary seeding will be placed in any area that remains disturbed for longer than 7 days, mulch and erosion control blanket will be added within 7 days, along with mulch, sodding and erosion control blankets. Turf reinforcement mats will be palced over any newly regrade area.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Permanent seeding and much along with erosion control blankets will be added imediately after construction is complete.

- C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree

attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input checked="" type="checkbox"/> Rock Outlet Protection |
| <input type="checkbox"/> Temporary Ditch Check | <input checked="" type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input checked="" type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input checked="" type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input checked="" type="checkbox"/> Turf Reinforcement Mats | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Aggregate Ditch | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (specify) _____ |

Describe how the structural practices listed above will be utilized during construction:

Perimeter erosion control barriers, inlet and pipe protections, and stabilized construction exits will be installed before construction begins. Turf reinforcement mat will be placed in newly regraded areas.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Rip rap and outlet protection will be added after construction of proposed bridge substructures and abutments, and during construction of proposed outfall.

D. Treatment Chemicals

Will polymer flocculents or treatment chemicals be utilized on this project: Yes No

If yes above, identify where and how polymer flocculents or treatment chemicals will be utilized on this project.

E. Permanent Storm Water Management Controls: Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water act.

- Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

- Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

Rock rip rap will be installed at the proposed outfalls and bridge abutments.

- F. **Approved State or Local Laws:** The management practices, controls, and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control

- G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
 - Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization time frame
 - Mass clearing and grubbing/roadside clearing dates
 - Deployment of Erosion Control Practices
 - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
 - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
 - Paving, saw-cutting, and any other pavement related operations
 - Major planned stockpiling operations
 - Time frame for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
 - Permanent stabilization activities for each area of the project
2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
 - Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
 - Material delivery, Storage, and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
 - Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
 - Waste Disposal - Discuss methods of waste disposal that will be used for this project.
 - Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.).
 - Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
 - Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
 - Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.

- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The contractor will be responsible for the inspection, maintenance, and repair of all sedimentation and erosion control measures. If the engineer notices or is notified of an erosion or sedimentation control deficiency, the engineer will notify the contractor to correct the deficiency.

All ESC measures will be maintained in accordance with the IDOT Erosion Control Field Guide for Construction Inspection: (<http://www.dot.il.gov/desenv/environmental/idot%20field%20guide.pdf>) and IDOT's Best Management Practices - Maintenance Guide: (<http://www.dot.state.il.us/desenv/environmental/bestpractices.html>). All maintenance of ESC systems is the responsibility of the contractor.

IV. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by e-mail at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Attn: Compliance Assurance Section
 1021 North Grand East
 Post Office Box 19276
 Springfield, Illinois 62794-9276

Additional Inspections Required:

V. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractors/subcontractor completing this form.

Route FAU 1408	Marked Route Brookfield Avenue	Section 15-00129-00-BR
Project Number P-91-402-15	County Cook	Contract Number 61G22

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
 Sub-Contractor

Print Name Contractor TBD	Signature
Title	Date
Name of Firm	Telephone
Street Address	City/State/Zip

Items which the Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

STATE OF



ILLINOIS

Permit No.: DIL-20-006

Department of Transportation

Division of Highways
2300 South Dirksen Parkway
Springfield, IL 62764

REGULATED FLOODWAY CONSTRUCTION PERMIT
RIVERS, LAKES AND STREAMS ACT "615 ILCS 5"

PERMISSION IS HEREBY GRANTED TO: Village of Brookfield
4545 Eberly Avenue
Brookfield, IL 60513

FOR CONSTRUCTION OF: Replacing the two span reinforced concrete bridge on Brookfield Avenue
over Salt Creek. The proposed bridge replacement will be a single span structure with 36" PPC I-Beams
with reinforced cast in place concrete deck and have a Span Length of 103'- 0" end to end and Back to
Back Abutment Length of 105'-0". The project is located Section 34 and 35, Township 39 North, Range
12 East of the 3rd Prime Meridian, Cook County, as part of Section Number 15-00129-00-BR, SN 016-
6666.

IN ACCORDANCE WITH THE Application and Plan
DATED July 3, 2017 AND MADE A PART HEREOF, AND SUBJECT TO THE
TERMS SHOWN ON THE BACK HEREOF AND THE SPECIAL CONDITIONS ATTACHED
HERETO AS EXHIBIT.

EXAMINED AND APPROVED

[Handwritten signature]

REGIONAL ENGINEER/CENTRAL BUREAU CHIEF

7-22-2020

DATE



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET
CHICAGO, ILLINOIS 60604-1437

August 28, 2020

Operations Division
Regulatory Branch
LRC-2020-00634

SUBJECT: Discharge of 0.082 Acre of Riprap Scour Protection, Fill of 0.007 Acre for Bridge Piers, and Temporary Dewatering for Construction Access in 0.119 Acre of Salt Creek and its Abutting Wetland for the Brookfield Avenue Bridge Replacement Project in Sections 34 & 35, Township 39 North, Range 12 East, Village of Brookfield, Cook County, Illinois (Latitude 41.82276, Longitude -87.8415)

Carl Muell
Village of Brookfield
8820 Brookfield Avenue
Brookfield, Illinois 60513

Dear Mr. Muell:

This office has verified that your proposed activity complies with the terms and conditions of Regional Permit 3 and the General Conditions for all activities authorized under the Regional Permit Program.

This verification expires three (3) years from the date of this letter and covers only your activity as described in your notification and as shown on the plans entitled "Brookfield Ave Over Salt Creek Wetland Impact" dated 7/1/2020, and "Plans for Proposed Federal Aid Highway FAU Route 1408, (Brookfield Avenue) Over Salt Creek, Section 15-00129-00BR, Project 9617(433)", dated 7/8/2020, prepared by Ciorba Group. Caution must be taken to prevent construction materials and activities from impacting waters of the United States beyond the scope of this authorization. If you anticipate changing the design or location of the activity, you should contact this office to determine the need for further authorization.

Please be aware that the activity may not be completed until you submit the following information to our office:

1. Prior to the commencement of any work, you shall receive a determination by the Will-South Cook Soil and Water Conservation District (SWCD) that the Soil Erosion and Sediment Control (SESC) plans meet technical standards.

Upon receipt of the above information, the activity may be completed without further authorization from this office provided the activity is conducted in compliance with the terms and conditions of the RPP, including conditions of water quality certification issued under

Section 401 of the Clean Water Act by the Illinois Environmental Protection Agency (IEPA). If the design, location, or purpose of the project is changed, you should contact this office to determine the need for further authorization

The following special conditions are a requirement of your authorization:

2. You shall undertake and complete the project as described in the plans titled, “Brookfield Ave Over Salt Creek Wetland Impact” dated 7/1/2020, and “Plans for Proposed Federal Aid Highway FAU Route 1408, (Brookfield Avenue) Over Salt Creek, Section 15-00129-00BR, Project 9617(433)”, dated 7/8/2020, prepared by Ciorba Group, including all relevant documentation to the project plans as proposed.
3. When directional boring or horizontal directional drilling (HDD) beneath waters of U.S., including wetlands, is utilized, the contractor shall closely monitor the project. Monitoring activities during drilling operations will include: 1) visual inspection along the drill path, fluid return pit(s) and wetland/waterbody surfaces for evidence of a release; 2) observation and documentation of drilling fluid pressures using HDD instrumentation; 3) observation and documentation of drilling fluid recirculation volumes; and 4) documentation of all drilling fluid products. Any discharge of drilling material into waters of U.S. shall be reported to the Corps within 24 hours. You shall follow the approved contingency plan immediately upon discovery of the unauthorized discharge. Restoration and/or mitigation may be required as a result of any unintended discharge.
4. This authorization is contingent upon implementing and maintaining soil erosion and sediment controls in a serviceable condition throughout the duration of the project. You shall comply with the SWCD’s written and verbal recommendations regarding the SESC plan and the installation and maintenance requirements of the SESC practices on-site.
 - a. You shall schedule a preconstruction meeting with SWCD to discuss the SESC plan and the installation and maintenance requirements of the SESC practices on the site. You shall contact the SWCD at least 10 calendar days prior to the preconstruction meeting so that a representative may attend.
 - b. You shall notify the SWCD of any changes or modifications to the approved plan set. Field conditions during project construction may require the implementation of additional SESC measures. If you fail to implement corrective measures, this office may require more frequent site inspections to ensure the installed SESC measures are acceptable.
 - c. Prior to commencement of any in-stream work, you shall submit constructions plans and a detailed narrative to the SWCD that disclose the contractor's preferred method of cofferdam and dewatering method. Work in the waterway shall NOT commence until the SWCD notifies you, in writing, that the plans have been approved.

5. Under no circumstances shall the Contractor prolong final grading and shaping so that the entire project can be permanently seeded at one time. Permanent stabilization within the wetland and stream buffers identified in the plans shall be initiated immediately following the completion of work. Final stabilization of these areas should not be delayed due to utility work to be performed by others.
6. Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.
7. The plan must be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.
8. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.
9. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.
10. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.
11. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.
12. The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or pre-construction conditions and fully stabilized prior to accepting flows.
13. This site is within the aboriginal homelands of several American Indian Tribes. If any human remains, Native American cultural items or archaeological evidence are discovered during any phase of this project, interested Tribes request immediate

consultation with the entity of jurisdiction for the location of discovery. In such case, please contact Mr. Colin C. Smalley, PG, by telephone at 312-846-5538, or email at colin.c.smalley@usace.army.mil.

14. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization.
15. A copy of this authorization must be present at the project site during all phases of construction.
16. You shall notify this office of any proposed modifications to the project, including revisions to any of the plans or documents cited in this authorization. You must receive approval from this office before work affected by the proposed modification is performed.
17. You shall notify this office prior to the transfer of this authorization and liabilities associated with compliance with its terms and conditions.

This verification does not obviate the need to obtain all other required Federal, state, or local approvals before starting work. Please note that Section 401 Water Quality Certification has been issued by IEPA for this RP. If you have any questions regarding Section 401 certification, please contact Mr. Darin LeCrone at IEPA Division of Water Pollution Control, Permit Section #15, by telephone at (217) 782-0610.

Once you have completed the authorized activity, please sign and return the enclosed compliance certification. If you have any questions, please contact Mr. Colin C. Smalley, PG of my staff by telephone at (312) 846-5538, or email at Colin.C.Smalley@usace.army.mil.

Sincerely,
CHERNICH.
KATHLEEN.
G.12303656
16
Kathleen G. Chernich
Chief, East Section
Regulatory Branch

Digitally signed by
CHERNICH.KATHL
EEN.G.1230365616
Date: 2020.08.28
11:33:17 -05'00'

Enclosures

Copy Furnished:

Metropolitan Water Reclamation District of Greater Chicago (Dan Feltes)
Will-South Cook SWCD (Dan Jay)
Ciorba Group (Jose Garcia)



**PERMIT COMPLIANCE
CERTIFICATION**

Permit Number: LRC-2020-00634
Permittee: Carl Muell
Village of Brookfield
Date: August 28, 2020

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit and if applicable, compensatory wetland mitigation was completed in accordance with the approved mitigation plan.¹

PERMITTEE

DATE

Upon completion of the activity authorized by this permit and any mitigation required by the permit, this certification must be signed and returned to the following address:

U.S. Army Corps of Engineers
Chicago District, Regulatory Branch
231 South LaSalle Street, Suite 1500
Chicago, Illinois 60604-1437

Please note that your permitted activity is subject to compliance inspections by Corps of Engineers representatives. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.

¹ If compensatory mitigation was required as part of your authorization, you are certifying that the mitigation area has been graded and planted in accordance with the approved plan. You are acknowledging that the maintenance and monitoring period will begin after a site inspection by a Corps of Engineers representative or after thirty days of the Corps' receipt of this certification. You agree to comply with all permit terms and conditions, including additional reporting requirements, for the duration of the maintenance and monitoring period.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: BROOKFIELD (IL0310330)

Permit Issued to:
Village of Brookfield
8820 Brookfield Avenue
Brookfield, IL 60513

PERMIT NUMBER: 0031-FY2021

DATE ISSUED: October 7, 2020
PERMIT TYPE: Water Main Extension

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the Environmental Protection Act, Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Ciorba Group, Inc.
NUMBER OF PLAN SHEETS: 12
TITLE OF PLANS: "Brookfield Ave Over Salt Creek WMR"
APPLICATION RECEIVED DATE: July 10, 2020

PROPOSED IMPROVEMENTS:


Install approximately 513 feet of 16-inch water main.

ADDITIONAL CONDITIONS:

1. The permit approval is for the Application, Schedule "B" and 12 plan sheets received on July 10, 2020.

DCC:GAZ

cc: Ciorba Group, Inc.
Elgin Regional Office
Cook County Health Department



David C. Cook, P.E.
Manager Permit Section
Division of Public Water Supplies

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Agency Act (415 ILCS 5/39) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Division of Water Pollution Control, Air Pollution Control, Public Water Supplies and Land Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after this date of issuance unless construction or development on this project has started on or prior to that date.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.
 - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants.
 - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the permits upon which the permitted facilities are to be located;
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. does not release the permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability directly or indirectly for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. These standard conditions shall prevail unless modified by special conditions.
7. The Agency may file a complaint with Board of modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or
 - b. upon finding that any standard or special conditions have been violated; or
 - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.
8. Division of Public Water Supply Construction Permits expire one year from date of issuance or renewal, unless construction has started. If construction commences within one year from date of issuance or renewal, the permit expires five years from the date of permit issuance or renewal. A request for extension shall be filed prior to the permit expiration date.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829

217/782-0610

8/18/2020

VILLAGE OF BROOKFIELD
CARL MUELL
8820 BROOKFIELD AVE
BROOKFIELD, IL 60513

RE: FACILITY : BROOKFIELD AVENUE OVER SALT CREEK, BROOKFIELD, IL
COUNTY : COOK, NPDES Permit No : ILR10BP50
Notice of Coverage Under Construction Site Activity Storm Water General Permit

Dear NPDES Permittee:

We have reviewed your application and determined that storm water discharges associated with industrial activity from construction sites are appropriately covered by the attached General NPDES Permit issued by the Agency. Your discharge is covered by this permit effective as of the date of this letter or as identified by the conditions of the permit. The Permit as issued covers application requirements, a storm water pollution prevention plan and reporting requirements.

As a Permit Holder, it is your responsibility to:

1. Submit a modified Notice of Intent of any ownership or address change to the Permit Section within 30 days;
2. A Notice of Termination must be sent to the Agency, at the address indicated on the Notice of Termination, once your construction project has been completed and the site is properly stabilized. A Notice of Termination form has been enclosed for your convenience;

This letter shows your facility permit number below the construction site name. Please save this number and reference it in all future correspondence. Should you have any questions concerning the Permit, please contact Melissa Parrott at (217) 782-0610.

Very truly yours,

Amy L. Dragovich, P.E.
Manager, Permit Section
Division of Water Pollution Control

CC : Records Unit, Ciorba, North Cook County SWCD, Will - South Cook County SWCD, Region : DesPlaines

4302 N. Main St., Rockford, IL 61103 (815)957-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Main St., Collinsville, IL 62234 (618)346-3120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arber 113, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 11-300, Chicago, IL 60601 (312)614-6026

PLEASE PRINT ON RECYCLED PAPER

WATERSHED MANAGEMENT PERMIT
METROPOLITAN WATER RECLAMATION DISTRICT
OF GREATER CHICAGO
111 EAST ERIE, CHICAGO, ILLINOIS, 60611

Watershed Management Permit No.

20-163

www.mwrdd.org

INSTRUCTIONS FOR COMPLETING PERMIT FORM: Submit two original signed copies of this permit application (nine pages) and any required WMO schedules listed below; do not leave any blank spaces; use "X" for checking applicable information. Also submit two copies of location map and plans. Address all correspondence to the Local Sewer Systems Section; for any inquiries or assistance, telephone (312) 751-3255.

NAME AND LOCATION:

Name of Project (as shown on plans): Brookfield Avenue Over Salt Creek

Location of Project (street address or with respect to two major streets): Brookfield Avenue Bridge along Brookfield Avenue between Forest Avenue and Arden Avenue

Municipality (Township, if unincorporated) Village of Brookfield

Section 34 and 35, Township 39 N, Range 12 E

PIN (include all PINs for project, use additional sheets if more than two): 15_34_501_004 ; 15_34_427_001

Check type of sewer area for project: Combined Sewer Area Separate Sewer Area (See Appendix A)

- | | | |
|---|----------------------------------|---------------|
| <input checked="" type="checkbox"/> Project Information (Required in all cases) | WMO Schedule A | (Page 5 of 9) |
| <input checked="" type="checkbox"/> Sewer Summary (Required in all cases) | WMO Schedule B | (Page 6 of 9) |
| <input checked="" type="checkbox"/> Sewer Connections (Required in all cases) | WMO Schedule C | (Page 7 of 9) |
| <input type="checkbox"/> Detention & Stormwater Management Facilities (WMO) | WMO Schedule D | (3 Pages) |
| <input type="checkbox"/> Detention & Stormwater Management Facilities (Legacy) | WMO Schedule D _{Legacy} | (4 Pages) |
| <input type="checkbox"/> Lift Station and/or Force Main | WMO Schedule E | (2 Pages) |
| <input type="checkbox"/> Characteristics of Waste Discharge | WMO Schedule F | (2 Pages) |
| <input type="checkbox"/> Treatment or Pretreatment Facilities | WMO Schedule G | (2 Pages) |
| <input checked="" type="checkbox"/> Hazard Areas (Floodplain / Floodway /Riparian Areas) | WMO Schedule H | (2 Pages) |
| <input type="checkbox"/> Affidavit Relative to Compliance with Article 7 | WMO Schedule J | (1 Page) |
| <input type="checkbox"/> Affidavit of Disclosure of Property Interest | WMO Schedule K | (2 Pages) |
| <input type="checkbox"/> Notice of Requirements for Storm Water Detention | WMO Schedule L | (2 Pages) |
| <input type="checkbox"/> Current Survey of Property Interests (Attachment for Schedule K or L) | Exhibit A | |
| <input checked="" type="checkbox"/> Outfall, Direct Connection, District Owned or Leased Property | WMO Schedule O | (1 Page) |
| <input checked="" type="checkbox"/> Soil Erosion and Sediment Control | WMO Schedule P | (2 Pages) |
| <input type="checkbox"/> Recording and Maintenance | WMO Schedule R | (2 Pages) |
| <input type="checkbox"/> Recording Exhibit (Attachment for Schedule K or L) | Exhibit R | |
| <input checked="" type="checkbox"/> Wetlands and Wetland Buffer Areas | WMO Schedule W | (2 Pages) |

Refer to Table 1 of § 201 of Article 2 of Watershed Management Ordinance for applicable Permitting Authority.

OTHER DOCUMENTS: Indicate title, number of pages and originator (See attached letter)

NOTE: ATTACH FEE PAYMENT VOUCHER AND PAYMENT IF APPLICABLE

DISTRICT USE ONLY

Application received: 07/15/2020 WMO Permit issued: 11/05/2020 WRP: Stickney

Issued by: DISTRICT Authorized Municipality

GENERAL CONDITIONS OF THE PERMIT

Engineer after having inspected and approved the sewer installation. 20-163

1. **Definitions.** The definitions of Appendix A of the Watershed Management Ordinance are incorporated into this Watershed Management Permit by reference. Additionally, the following words and phrases shall be defined as follows:
 - a) **Building and Occupancy Permit.** Building and Occupancy Permit issued by the Municipality.
 - b) **Design Engineer.** A Professional Engineer who prepares plans and specifications for the project, and signs the Watershed Management Permit Application.
 - c) **Inspection Engineer.** A Professional Engineer who inspects the development to ensure compliance with the design plans, specifications, a Watershed Management Permit, and the Watershed Management Ordinance.
 - d) **Permit.** Watershed Management Permit.
 - e) **General Conditions.** General Conditions contained in a Watershed Management Permit.
 - f) **Special Conditions.** Special conditions of this Watershed Management Permit.
2. **Adequacy of Design.** The schedules, plans, specifications and all other data and documents submitted for this Permit are made a part hereof. The Permit shall not relieve the Design Engineer of the sole responsibility for the adequacy of the design. The issuance of this Permit shall not be construed as approval of the concept or construction details of the proposed facilities and shall not absolve the Permittee, Co-Permittee or Design Engineer of their respective responsibilities.
3. **Joint Construction and Operation Permits.** Unless otherwise stated by the Special Conditions, the issuance of this Permit shall be a joint construction and operation permit, provided that the Permittee or Co-Permittee has complied with all General and Special Conditions.
4. **Allowable Discharges.** Discharges into the Sanitary Sewer system constructed under this Permit shall consist of sanitary Sewage only. Unless otherwise stated by the Special Conditions, there shall be no discharge of industrial wastes under this Permit. Stormwater shall not be permitted to enter the Sanitary Sewer system. Without limiting the general prohibition of the previous sentence, roof and footing drains shall not be connected to the Sanitary Sewer system.
5. **Construction Inspection.** All erosion and sediment control facilities, Stormwater Facilities, Detention Facilities, and Qualified Sewer Construction shall be inspected and approved by an Inspection Engineer acting on behalf of the Permittee or the Owner of the project, or by a duly authorized and competent representative of the Inspection Engineer. No sewer trenches shall be backfilled except as authorized by the Inspection

6. **Maintenance.** Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, Sanitary Sewer lines, systems or facilities constructed hereunder or serving the facilities constructed hereunder shall be properly maintained and operated at all times in accordance with all applicable requirements. It is understood that the responsibility for maintenance shall run as a joint and several obligation against the Permittee, the Co-Permittee, the property served, the Owner and the operator of the facilities, and said responsibility shall not be discharged nor in any way affected by change of ownership of said property, unless the District has authorized assignment of the permit.
7. **Indemnification.** The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless the Metropolitan Water Reclamation District of Greater Chicago ("District", "MWRD", or "MWRDGC") and its Commissioners, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the District and its Commissioners, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the District and its Commissioners, officers, employees, servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless an Authorized Municipality and its elected officials, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the Authorized Municipality and its elected officials, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the Authorized Municipality and its elected officials, officers, employees, servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

right-of-ways of District easements, and to introduce additional Sewage flow through this connection into the intercepting sewer of said District.

8. **Sewer Construction by District.** Permittee understands and acknowledges that the District has the right and power to construct and extend sewer service facilities and render such services within the area to be served by the project for which this Permit is issued, and that by the District constructing and extending such sewer service facilities and rendering such services, the facilities constructed by the Permittee under this Permit may decrease in value, become useless or of no value whatsoever, the Permittee may also sustain a loss of business, income and profits.

Therefore, by accepting this Permit and acting thereon, the Permittee, for itself, its successors and assigns, does remise, release and forever discharge the District and its Commissioners, officers, employees, servants, and agents of any and all claims whatsoever which Permittee may now have or hereafter acquire and which Permittee's successors and assigns hereafter can, shall, or may have against the District and its Commissioners, officers, employees, servants, and agents for all losses and damages, either direct or indirect, claimed to have been incurred by reason of the construction or extension at any time hereafter by the District of sewer service facilities in the service area contemplated by this Permit, the rendering of such services, which District facilities and services decrease the value of the facilities constructed by the Permittee under this Permit, make same useless or of no value whatsoever, including but not limited to, any and all damages arising under 70 ILCS 2605/19; the taking of private property for public use without due compensation; the interference with the contracts of Permittee; the interference with Permittee's use and enjoyment of its land; and the decrease in value of Permittee's land.

9. **Third Parties.** Regarding Qualified Sewer Construction, this Permit does not grant the right or authority to the Permittee: (a) to construct or encroach upon any lands of the District or of any other parties, (b) to construct outside of the territorial boundaries of the District except as allowed under an extraterritorial service agreement, (c) to construct or encroach upon the territorial boundaries of any units of local government within the District, (d) to connect to or discharge into or be served by (directly or indirectly) any sewer or sewer system owned or operated by third parties.

10. **Costs.** It is expressly stipulated and clearly understood that the Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, or facilities for which the Permit is issued shall be constructed, operated and maintained at no cost to the District.

11. **Other Sewer Construction.** The District reserves the right, privilege and authority to permit others to reconstruct, change, alter and replace all sewers and appurtenances thereto at the point of connection of any sewerage system to a District interceptor and/or in public

12. **Change of Use.** This Permit shall be incorporated in the Building and Occupancy Permit for the Building or Buildings served under this Permit. The Owner or occupant of any Building served under this Permit shall not cause, or permit, a change of use of the Building to a use other than that indicated in this Permit without first having obtained a written permission from the Executive Director of the District.

13. **Interceptors Overloading.** The District hereby serves notice that its interceptors may flow full and may surcharge, and flooding of the proposed system may occur. The Permittee agrees that the proposed systems shall be constructed, operated and maintained at the sole risk of the Permittee.

14. **Transferability.** This Permit may not be assigned or transferred without the written consent of the Executive Director of the District or Enforcement Officer of an Authorized Municipality. However, a Sole Permittee may be required to assign or transfer the Permit when divesting itself of ownership to a third-party and should notify the District prior to such divestment so that the District may determine whether assignment to the new owner is necessary.

15. **Termination.** The District has the right to enforce or revoke a Permit issued by either the District or an Authorized Municipality as outlined in Article 12 of the Watershed Management Ordinance.

It is understood and agreed that in the event the Permittee shall default on or fail to perform and carryout any of the covenants, conditions or provisions of this Permit and such default or violation shall continue for sixty (60) days after receipt of notice thereof in writing given by the Executive Director of the District, then it shall be lawful for the District at or after the expiration of said sixty (60) days to declare said Permit terminated. The Permittee agrees that immediately upon receipt of written notice of such termination it will stop all operations, discontinue any discharges and disconnect the sewerage system or facilities constructed under this Permit. If the Permittee fails to do so, the District shall have the right to disconnect said system. The Permittee hereby agrees to pay for any costs incurred by the District for said disconnection.

16. **Rights and Remedies.** The various rights and remedies of the District contained in this Permit shall be construed as cumulative, and no one of them shall be construed as exclusive of any one or more of the others or exclusive of any other rights or remedies allowed by applicable rules, regulations, ordinances and laws. An election by the District to enforce any one or more of its rights or

or other facilities shall be put in service until all the conditions of the Permit have been satisfactorily met.

- remedies shall not be construed as a waiver of the rights of the District to pursue any other rights or remedies provided under the terms and provisions of this Permit or under any applicable rules, regulations, ordinances or laws.
17. **Expiration.** This Permit shall expire if construction has not started within one (1) year from the date of issue. Construction under an expired Permit is deemed construction without a Permit. All construction under this Permit shall be completed within two (2) years after start of construction. If conditions so warrant, an extension may be granted. For publicly financed projects (e.g. special assessments) the one (1) year period indicated will be considered from the date of final court action.
 18. **Revocation.** In issuing this Permit, the District or Authorized Municipality has relied upon the statements and representations made by the Permittee or his agent. Any incorrect statements or representations shall be cause for revocation of this Permit, and all the rights of the Permittee hereunder shall immediately become null and void.
 19. **Advance Notice.** The Permittee shall give the District or Authorized Municipality advance notice of at least two working days prior to the following: mobilization and installation of Erosion and Sediment Control Practices; commencement of construction; excavation for Qualified Sewer Construction; Major Stormwater Systems and Detention Facilities under this Permit; and completion of construction. When advance notice is given, the Permittee shall provide the Permit number, municipality and location.
 20. **Compliance with Plans and Specifications.** All construction shall be in accordance with the plans and specifications submitted for this Permit and made a part hereof. No changes in, or deviation from the plans and specifications which affect capacity, maintenance, design requirements, service area or Permit requirements shall be permitted unless revised plans have been submitted to, and approved by the District or Authorized Municipality. The Permit together with a set of the plans and specifications (revised plans and specifications, if any) shall be kept on the jobsite at all times during construction and until final inspection and approval by the District or Authorized Municipality.
 21. **Testing and Approval.** All construction under this Permit shall be subject to inspection, testing and approval by the District. All testing shall be made, or caused to be made, by the Permittee at no cost to the District and in the presence of the District representative. Upon satisfactory completion of construction, the Permittee and the owner shall submit, or cause to be submitted, a completion certificate and request for approval on the form prescribed by the District. No sewer
 22. **Record Drawings.** Before final inspection and approval by the District or an Authorized Municipality, the Permittee shall furnish, or cause to be furnished to the District or an Authorized Municipality, a set of Record drawings and Schedule R for the site stormwater plan, Detention Facilities, Stormwater Facilities, and Qualified Sewer Construction, or a statement that the project was constructed in accordance with the original plans and specifications.
 23. **Compliance with Rules and Regulations.** The Permittee hereby expressly assumes all responsibilities for meeting the requirements of all applicable rules, regulations, ordinances and laws of Local, State and Federal authorities. Issuance of this Permit shall not constitute a waiver of any applicable requirements.
 24. **Severability.** The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit, is held invalid, the remaining provisions of this Permit shall continue in full force and effect.
 25. **Property Rights.** This Permit does not convey any property rights of any sort, or any exclusive privilege.
 26. **Conflict with Other Conditions.** In the case of conflict between these General Conditions and any other condition(s) in this permit, the more stringent condition(s) shall govern.

WMO SCHEDULE A PROJECT INFORMATION

Watershed Management Permit No. _____

1. NAME OF PROJECT Brookfield Ave Over Salt Creek

(as shown on the plans)

2. APPURTENANCES (check all applicable items)

- Siphon
- Drop Manholes
- Public Lift Station (Submit Sch. E)
- Outfalls (Submit Sch. O)

Stream Crossing Direct Connections to District → Describe Connection to 48" combined sewer a. replace 24" combined outfall sewer, (Salt Creek 2, Salt Creek 4, outfalls) reroute existing 18" combined sewer - all are existing connections
 16" Water Main crossing under Salt Creek.

3. RECEIVING SANITARY/COMBINED SEWER SYSTEM

A. System that project will connect to is:

- Existing
- Proposed /Under Construction → District Permit # _____

List owners of all sewers from project to District interceptor IDOT and the Village of Brookfield.

4. RECEIVING STORM SEWER SYSTEM TRIBUTARY TO WATERWAY

Salt Creek is the receiving waterway.

A. System that project will connect to is:

- Existing
- Proposed /Under Construction → District Permit # _____

List owners of all sewers from project to waterway IDOT and the Village of Brookfield.

5. EXISTING LIFT STATION

- No
- Yes → Receiving system includes existing lift station

If yes, indicate location _____

6. FLOOD PROTECTION AREAS

Does any part of the project area involve the following? (check all applicable items)

Jurisdictional Only.

- Floodplain/Floodway/Riparian (Schedule H)
- Wetlands/Buffers/Riparian (Schedule W)

7. SIZE OF PROJECT

Right-of-Way, Bridge

Impervious area within project

- A. Total contiguous ownership interest 1.5 acres
- B. Development Area 1.2 acres
- C. Before development 0.8 acres
- D. After development 0.8 acres

8. STORMWATER MANAGEMENT

A. Is project in the service area of a District permitted detention facility?

- No
- Yes → District Permit No. _____

B. Is stormwater management provided under this permit?

- No
- Yes → Required by: District (Submit Sch. D)
- Other

C. Type of stormwater management

- Runoff Control
- Volume Control
- Detention Storage

WMO SCHEDULE B SEWER SUMMARY

Watershed Management Permit No. _____

20-163

PROJECT NAME: Brookfield Ave Over Salt Creek

(as shown on the plans)

1. **SEWER SUMMARY:** Include all qualified sewer construction sewers (Sanitary sewers in combined and separate sewer areas and Storm sewers in combined sewer area) and their tributary type: Sanitary (San), Combined (C), Storm to Combined (SC), Storm to Waterway (SW), or Storm part of Volume Control (SVC)

Tributary Type	Choose an C	Choose an C	Choose an SW	Choose an SW	Choose C	Choose an SW	Choose SC
Pipe Size (in.)	48	24	21	15	18	12	12
Total Length (ft.)	57	77	107	41/9	86	74	40
Min. slope used (%)	0.3	0.2	1.0	0.5	0.53	0.50	0.50
Pipe Material *	RCP	PVC SDR-26	RCP	RCP	PVC SDR-26	RCP	RCP
Total Manholes	1	0	0	1	1	0	0
Total Cleanouts	0	0	0	0	0	0	0
Catch Basin/Inlets	0	0	0	2	0	2	1

* Pipe material and joint specifications must be shown on plans. See Technical Guidance Manual for acceptable specifications.

Sewer construction in floodplain: No Yes → FPE 617.30 ft.

Sanitary Manholes in floodplain 0 (See Removal and Proposed Drainage Plan Sheet 36)

Note: All structures shall have lids located above the FPE or be constructed with watertight, bolt down covers/lids.

2. NATURE OF PROJECT (Check all that apply)

Brief description Bridge deck and roadway drainage to Salt Creek via reconstructed storm and combined sewer outfalls

- Publicly financed Sewer extension to serve future development
- Sewer system serving a subdivision Storm sewers in combined sewer area
- Off-site trunk sewer to serve subdivision Service connections to serve buildings (Sch. C)
- Other Storm sewer tributary to Salt Creek outfalls (no added tributary flow)

3. SEWER EXTENSIONS

Identify proposed project designed to service future connections (not included in Schedule C). Check the appropriate box and submit service area map and estimate of population equivalent (PE) to be served.

- NO YES → Service area map
- P.E. estimate submitted

WMO SCHEDULE C Watershed Management Permit No. _____

SEWER CONNECTIONS

(FILL OUT ALL SECTIONS THAT APPLY)

1. BUILDING CONNECTION DATA

A. RESIDENTIAL BUILDINGS

Single Family Total dwelling units * _____
 Number of sewer connections * _____ PE ** _____

Multi Family Total dwelling units * _____
 Number of sewer connections * _____ PE ** _____

B. COMMERCIAL & RECREATIONAL BUILDINGS

Number of sewer connections _____ PE ** _____

C. INDUSTRIAL BUILDINGS

Number of sewer connections _____ Combined Sewer PE ** _____

* Each sanitary line exiting a building is a connection
** Population Equivalent (Submit calculations for each connection and total from all connections)

2. BUILDING USE - (Check all that apply)

A. COMMERCIAL & RECREATIONAL

Describe use of buildings, including principal product(s) or activities _____

Food preparation or processing (install grease separator) Laundromat (install lint basin)

Swimming pool (provide pool plans) Auto service (install triple basin)

Manufacturing (describe) _____ Auto wash (install mud basin)

Other _____

B. INDUSTRIAL BUILDINGS

Describe use of buildings, including principal product(s) or activities _____

Sewer connections will receive domestic sewage only
 Industrial waste is produced

NOTE: If industrial waste is produced, submit [WMO Schedule F](#) & [WMO Schedule G](#) and plumbing plans along with flow diagram for pretreatment system.

**WMO SCHEDULE H
FLOODPLAIN/FLOODWAY & RIPARIAN ENVIRONMENTS**

Name of Project: Brookfield Avenue Over Salt Creek

Type of Development (check one below):

- Single-family home
 Residential Subdivision
 Multi-family residential
 Non-residential
 Right-of-way
 Open space

- 1) Provide the Cook County FIRM panel(s) for the site: Cook County = 250; NFIP = 17031C0479J
- 2) Is there regulatory floodplain located onsite? Yes No
 If yes, provide the name(s) of the flooding sources: Salt Creek (lower reach)
Salt Creek (lower reach)
- 3) Is there Zone A floodplain within 100 feet of the project site or does the site require a project-specific floodplain study? Yes No
- 4) If the answer to (2) or (3) is yes, provide the BFE on the project site to the nearest 0.1 ft. If more than one BFE, list each individually: 615.3 (See Appendix C-2) ft, NAVD 88
- 5) Provide the elevation source(s) of the BFE(s) from (4): Flood Insurance Map (See Appendix C-1)
- 6) Does the project include development of a residential building within 100-ft of the regulatory floodplain (excluding non-substantial single-family home improvements)? Yes No
- ~~7) If the development includes a new building, an addition to an existing building, or substantial improvement to a single-family home, provide the lowest floor elevation: Salt Creek (lower reach) ft, NAVD 88~~
- 8) Does the project result in fill in the floodplain? Yes No
 If yes, provide the floodplain fill and compensatory storage quantities below:

<u>Floodplain Fill (acre-feet)</u>	<u>Compensatory Storage Provided (acre-feet)</u>
<u>0.051</u> 0 -10 Year	<u>0.174</u> 0 -10 Year*
<u>0.024</u> 10 - 100-Year	<u>0.064</u> 10 - 100-Year*
<u>0.075</u> Total	<u>0.238</u> Total**

*Must be at least 1.0 times the floodplain fill
 ** Must be at least 1.1 times the floodplain fill

WMO SCHEDULE H
FLOODPLAIN/FLOODWAY & RIPARIAN ENVIRONMENTS

9) Is any part of the development in the regulatory floodway? [X] Yes [] No
If yes, describe appropriate use: Bridge removal and replacement, roadway improvements

10) Does the development involve a waterway with greater than one square mile of tributary area?
[X] Yes [] No

11) If answer to (9) or (10) is yes, provide a copy of the IDNR-OWR Floodway Construction Permit for the development. See Appendix C-3

12) Is there riparian environment located onsite? [X] Yes [] No
If yes, check the conditions that apply:
[X] Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
[] Isolated Waters (30-ft buffer from OHWM)
[] Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)

13) If answer to (12) is yes, does the proposed development result in adverse impacts to the riparian environment? [X] Yes [] No

14) If answer to (13) is yes, prepare riparian submittal and provide a brief description of the impacts and mitigation below: Impacts are due to bridge removal/replacement, resulting streambank grading and riprap for countermeasure. Any non riprap areas that function as a riparian zone will be seeded with IDOT Class 4A native, deep rooted seed within the buffer zone. See Erosion Control and Landscaping Sheets 31-32.

Name Tony Wolff Title Vice President Water Resources
Signature [Handwritten Signature] Date 7/8/2020
Engineering Firm Ciorba Group, Inc.



**WMO SCHEDULE O
OUTFALL, DIRECT CONNECTIONS TO DISTRICT FACILITIES, AND IMPACTS TO
DISTRICT OWNED OR LEASED PROPERTY**

INSTRUCTIONS: Use only for direct connections to District facilities outside the City of Chicago (City), direct discharge into waterways outside the City, or developments impacting District owned or leased property outside the City. Submit typed forms in **quadruplicate**, complete all information or indicate non-applicability, submit **two** copies of location map, plot plan, direct connection, and/or outfall details. (Additional material, such as plans and profiles, design report, specifications, calculations etc, which will describe the project more adequately, is desirable and may be required.)

Note: Written approval from the District shall be obtained prior to entering any District facilities including, but not limited to: TARP and interceptor manholes.

1. NAME AND LOCATION

Name of project (as shown on Plans): Brookfield Avenue Over Salt Creek
 Location: Forest Avenue and Brookfield Avenue Receiving District WRP/Lift Station None

2. TYPE OF CONNECTION

A. Authorization is requested for connection to:

- District interceptor facility District TARP facility
- Discharge into receiving water with new or reconstructed outfall. Indicate new or reconstructed: Reconstructed
- District owned reservoir or other facility (pump station, water reclamation facility, etc).

Describe: Relocating existing 21" storm outfall due to bridge replacement impacts

B. Nature of discharge to District facility:

- Sanitary sewage Stormwater Other (describe): _____

Location of facility: Brookfield

Structure Name and No. n/a Contract No. _____

3. OUTFALLS

A. Nature of discharge into receiving water

- Stormwater Cooling/process water or treatment system effluent (describe): _____
- Other (describe) _____

Name of receiving waterway: Salt Creek

Location of outfall: Proposed Bridge East Abutment (See East Abutment Structural Detail Sheet 90)

Indicate nearest street and bank (e.g. N,S,E,W) of waterway

Owner: Village of Brookfield Invert elevation: (NAVD 88) 606.00 (CCD) 26.81 Size 21" Material RCP

For discharge to Lake Michigan, indicate water quality measures provided: _____

Note: Submit outfall detail with all pertinent elevations. The detail should show the waterway section with normal/high water elevations.

B. Backflow prevention (submit details)

- Check valves Flap gates Energy dissipation (describe) _____
Refer to TGM for requirements

4. DEVELOPMENT IMPACTING DISTRICT OWNED OR LEASED PROPERTY

- No Yes \longrightarrow Location: _____

Describe development: _____

Notes: 1. Must obtain approval letter from District Law Department. 2. Submit copy of lease agreement.

Describe mitigation such as erosion control or District infrastructure relocation (if applicable): _____

5. ADDITIONAL INFORMATION (if applicable)

If project discharges directly or indirectly into a City/Village combined sewer, the receiving combined sewer does , does not , have an overflow. Overflow discharges to (name of waterway): _____ by means of _____

If connection to District facility is involved, indicate project distance to nearest City/Village sewer: _____ ft;

Location: _____

**WMO SCHEDULE O
OUTFALL, DIRECT CONNECTIONS TO DISTRICT FACILITIES, AND IMPACTS TO
DISTRICT OWNED OR LEASED PROPERTY**

INSTRUCTIONS: Use only for direct connections to District facilities outside the City of Chicago (City), direct discharge into waterways outside the City, or developments impacting District owned or leased property outside the City. Submit typed forms in **quadruplicate**, complete all information or indicate non-applicability, submit **two** copies of location map, plot plan, direct connection, and/or outfall details. (Additional material, such as plans and profiles, design report, specifications, calculations etc, which will describe the project more adequately, is desirable and may be required.)

Note: Written approval from the District shall be obtained prior to entering any District facilities including, but not limited to: TARP and interceptor manholes.

1. NAME AND LOCATION

Name of project (as shown on Plans): Brookfield Avenue Over Salt Creek
 Location: Forest Avenue and Brookfield Avenue Receiving District WRP/Lift Station Stickney WRP

2. TYPE OF CONNECTION

A. Authorization is requested for connection to:

- District interceptor facility District TARP facility
- Discharge into receiving water with new or reconstructed outfall. Indicate new or reconstructed: Reconstructed
- District owned reservoir or other facility (pump station, water reclamation facility, etc).

Describe: Relocating existing 24" CSO outfall due to bridge replacement impacts

B. Nature of discharge to District facility:

- Sanitary sewage Stormwater Other (describe): _____

Location of facility: Brookfield

Structure Name and No. MHOL14-00962 Contract No. Salt Creek 4.

3. OUTFALLS

A. Nature of discharge into receiving water

- Stormwater Cooling/process water or treatment system effluent (describe): _____
- Other (describe) Combined Sewer Overflow

Name of receiving waterway: Salt Creek

Location of outfall: Proposed Bridge East Abutment (See East Abutment Structural Detail Sheet 90)

Indicate nearest street and bank (e.g. N,S,E,W) of waterway

Owner: Village of Brookfield Invert elevation: (NAVD 88) 605.09 (CCD) 25.9 Size 24" Material PVC

For discharge to Lake Michigan, indicate water quality measures provided: _____

Note: Submit outfall detail with all pertinent elevations. The detail should show the waterway section with normal/high water elevations.

B. Backflow prevention (submit details)

See Appendix D1 for details

- Check valves Flap gates Energy dissipation (describe) _____
Refer to TGM for requirements

4. DEVELOPMENT IMPACTING DISTRICT OWNED OR LEASED PROPERTY

- No Yes \longrightarrow Location: _____

Describe development: _____

Notes: 1. Must obtain approval letter from District Law Department. 2. Submit copy of lease agreement.

Describe mitigation such as erosion control or District infrastructure relocation (if applicable): _____

5. ADDITIONAL INFORMATION (if applicable)

If project discharges directly or indirectly into a City/Village combined sewer, the receiving combined sewer does , does not , have an overflow. Overflow discharges to (name of waterway): _____ by means of _____

If connection to District facility is involved, indicate project distance to nearest City/Village sewer: _____ ft;

Location: _____

**WMO SCHEDULE O
OUTFALL, DIRECT CONNECTIONS TO DISTRICT FACILITIES, AND IMPACTS TO
DISTRICT OWNED OR LEASED PROPERTY**

INSTRUCTIONS: Use only for direct connections to District facilities outside the City of Chicago (City), direct discharge into waterways outside the City, or developments impacting District owned or leased property outside the City. Submit typed forms in **quadruplicate**, complete all information or indicate non-applicability, submit **two** copies of location map, plot plan, direct connection, and/or outfall details. (Additional material, such as plans and profiles, design report, specifications, calculations etc, which will describe the project more adequately, is desirable and may be required.)

Note: Written approval from the District shall be obtained prior to entering any District facilities including, but not limited to: TARP and interceptor manholes.

1. NAME AND LOCATION

Name of project (as shown on Plans): Brookfield Avenue Over Salt Creek
 Location: Forest Avenue and Brookfield Avenue Receiving District WRP/Lift Station Stickney WRP

2. TYPE OF CONNECTION

A. Authorization is requested for connection to:

- District interceptor facility District TARP facility
- Discharge into receiving water with new or reconstructed outfall. Indicate new or reconstructed: Reconstructed
- District owned reservoir or other facility (pump station, water reclamation facility, etc).

Describe: Relocating existing 48" CSO outfall due to bridge replacement impacts

B. Nature of discharge to District facility:

- Sanitary sewage Stormwater Other (describe): _____

Location of facility: Brookfield

Structure Name and No. MHOL14-00961 Contract No. Salt Creek 4.

3. OUTFALLS

A. Nature of discharge into receiving water

- Stormwater Cooling/process water or treatment system effluent (describe): _____
- Other (describe) Combined Sewer Overflow

Name of receiving waterway: Salt Creek

Location of outfall: Proposed Bridge West Abutment (See East Abutment Structural Detail Sheet 89)

Indicate nearest street and bank (e.g. N,S,E,W) of waterway

Owner: Village of Brookfield Invert elevation: (NAVD 88) 605.58 (CCD) 26.39 Size 48" Material RCP

For discharge to Lake Michigan, indicate water quality measures provided: _____

Note: Submit outfall detail with all pertinent elevations. The detail should show the waterway section with normal/high water elevations.

B. Backflow prevention (submit details)

See Appendix D-1 for Details

- Check valves Flap gates Energy dissipation (describe) _____
Refer to TGM for requirements

4. DEVELOPMENT IMPACTING DISTRICT OWNED OR LEASED PROPERTY

- No Yes \longrightarrow Location: _____

Describe development: _____

Notes: 1. Must obtain approval letter from District Law Department. 2. Submit copy of lease agreement.

Describe mitigation such as erosion control or District infrastructure relocation (if applicable): _____

5. ADDITIONAL INFORMATION (if applicable)

If project discharges directly or indirectly into a City/Village combined sewer, the receiving combined sewer does , does not , have an overflow. Overflow discharges to (name of waterway): _____ by means of _____

If connection to District facility is involved, indicate project distance to nearest City/Village sewer: _____ ft;

Location: _____

**WMO SCHEDULE P
SOIL EROSION AND SEDIMENT CONTROL**

Name of Project: Brookfield Avenue Over Salt Creek

Type of Development (check one below):

- Single-family home
 Residential Subdivision
 Multi-family residential
 Non-residential
 Right-of-way
 Open space

1) Total proposed disturbed area: 1.2 acres

2) Does the site’s stormwater discharge directly to:

- Waters of the State
 Storm Sewer
 Combined Sewer

If Waters of the State, provide name of receiving water body: Salt Creek

3) If answer to (1) is \geq one acre or part of a larger planned common development \geq one acre, provide IEPA NPDES ILR10 Permit Number*: ILR10BP50 See Appendix E-1 , E-2

If ILR10 permit coverage applies, provide a signed copy of ILR10 Notice of Intent (NOI)

*If all site stormwater discharges, including construction dewatering, drain to a combined sewer system, ILR10 permit coverage is not required

4) Summary of soil erosion and sediment control practices:

			Area Controlled (sq ft)	Permanent (P), Temporary (T), OR Both (B)
Silt fence	<u>744</u>	(ft)	<u> </u>	<u>T</u>
Entrance/exit control	<u>1</u>	(quantity)	<u> </u>	<u>T</u>
Vegetative control	<u>9792</u>	(sq ft)	<u>9792</u>	<u>B</u>
Interceptor ditches	<u>0</u>	(ft)	<u> </u>	<u> </u>
Berms	<u>0</u>	(ft)	<u> </u>	<u> </u>
Inlet control	<u>18</u>	(quantity)	<u> </u>	<u>T</u>
Sediment basins	<u>0</u>	(cu yd)	<u> </u>	<u> </u>
Volume Control Protection	<u> </u>	(indicate)	<u> </u>	<u> </u>
Volume Control Cleaning	<u>0</u>	(indicate)	<u> </u>	<u> </u>
Concrete Washout	<u>1</u>	(quantity)	<u> </u>	<u>T</u>
Debris basins	<u>0</u>	(cu ft)	<u> </u>	<u> </u>
Desilting basins	<u>0</u>	(cu ft)	<u> </u>	<u> </u>
Silt traps	<u>0</u>	(cu ft)	<u> </u>	<u> </u>
Mulching and matting	<u>333</u>	(cu ft/sq ft)	<u> </u>	<u>P</u>
Other	<u>0</u>	(indicate)	<u> </u>	<u> </u>

**WMO SCHEDULE P
SOIL EROSION AND SEDIMENT CONTROL**

5) Do any of the following special circumstances apply?

Yes No

If yes, check all conditions that apply:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Floodplain | <input checked="" type="checkbox"/> Wetland/Buffer | <input checked="" type="checkbox"/> Riparian Environment |
| <input type="checkbox"/> New Outfall | <input checked="" type="checkbox"/> MWRD Facility | <input type="checkbox"/> Tributary to Lake Michigan |
| <input type="checkbox"/> Volume Control Facility | | |

6) If the answer to (5) is yes, describe how the indicated area(s) will be protected from erosion and sedimentation: Rip rap installed under and adjacent to the replaced bridge stream banks. Sodding will be placed in disturbed areas behind roadway and native 4A seeding in stream banks above riprap. Turf reinforcement mat to be placed in slopes steeper than 3:1. Inlet protection in open lid structures and silt fence.

7) Provide topographical or plan maps of construction area and indicate erosion control practices, including a sequence of major construction activities.

8) Drainage area (above and including construction site): 0.70 acres


9) Slope categories of construction site:

		Area (acres)	Disposition of Collected Sediment
9.1	0 – 2 % Slope	<u>1</u>	<u>See Appendix E-3 for IDOT Specifications</u>
9.2	2 – 4 % Slope	<u>0.2</u>	<u>" "</u>
9.3	4 – 6 % Slope	<u> </u>	<u> </u>
9.4	≥ 6% Slope	<u> </u>	<u> </u>

10) Check the following conditions that apply:

- Erosion control practices identified above will be constructed in accordance with the Illinois Urban Manual, 2012
- Plans or specifications for the above referenced erosion control practices are attached

~~Co-Permittee~~ Derek Treischel Title President / Village Engineer

Signature  Date 07-06-2020

Company/Agency Edwin Hancock Engineering +

SCHEDULE W

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

WMO Permit Number: _____

20-163

NAME OF PROJECT: Brookfield Avenue Over Salt Creek

Complete all items, unless instructed to proceed to a later section.

1. **WETLAND IDENTIFICATION:** Forested floodplain wetland located north and south of bridge crossing.

2. **ONSITE WETLANDS** (*Wetlands located within the property holdings are considered onsite wetlands. If multiple wetlands are located within the property holdings, submit a separate Schedule W for each wetland.*)

A. Is a wetland or farmed wetland located on the property interest?

No → Proceed to Item 3 Yes → Delineate wetland per §603.3. Proceed to Item 2.B

B. Is the onsite wetland within the development area or within 100 feet of the development?

No → Proceed to Item 2.C Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

See Appendix F-1

C. Is an indirect wetland impact proposed?

No → Proceed to Item 3 Yes → Submit a copy of the US Army Corps of Engineers (Corps) Jurisdictional Determination letter. Proceed to Item 2.D

D. Does the Corps regulate the onsite wetland?

No → Proceed to Item 2.F Yes → Proceed to Item 2.E

NOTE: Jurisdictional Determination opinion is included in the Wetland Delineation Report, and will be verified by the USACE upon submittal of Section 404 permit.

E. Will the Corps regulated wetland be impacted by the development?

No → Proceed to Item 5 Yes → Submit a copy of the Corps permit application. (Approved Corps permit required prior to issuance.) Proceed to Item 4

See Appendix F-2, F-3

F. Will the isolated wetland or associated buffer be impacted by the development?

No → Proceed to Item 5 Yes → Proceed to Item 4

3. **OFFSITE WETLANDS** (*Wetlands located outside the property holdings are considered offsite wetlands. If multiple wetlands are located offsite within 100 feet of the property holdings, submit a separate Schedule W for each wetland.*)

A. Is there an offsite wetland located within 100 feet of the development site?

No → Proceed to Item 3.E Yes → Delineate wetland per §603.5 and follow §603.6. Proceed to Item 3.B

B. Can a Corps Jurisdictional Determination letter be obtained?

No → Consider high quality isolated wetland Proceed to Item 3.C Yes → Proceed to Item 3.C

C. Does the wetland buffer extend onto the development?

No → Proceed to Item 3.E Yes → Proceed to Item 3.D

D. Is the wetland or associated buffer impacted by the development?

No → Proceed to Item 3.E Yes → Proceed to Item 4

E. Is an indirect wetland impact proposed?

No → Proceed to Item 5 Yes → Proceed to Item 4

SCHEDULE W

WMO Permit Number: _____

20-163

WETLANDS, BUFFERS & RIPARIAN ENVIRONMENTS

4. MITIGATION FOR WETLAND IMPACTS

- Standard Isolated High Quality Isolated Corps Jurisdictional

Prepare the wetland/buffer submittal and briefly describe the impacts and proposed mitigation, below. (If the wetland is a Corps regulated wetland, briefly describe the wetland impacts and mitigation proposed under the Corps permit.)

0.09 acres will be permanent impacts related to existing bridge replacement, installation of riprap, and minor channel regrading.

0.122 acres will be temporarily impacted due to unavoidable construction activities. at Mill Creek Wetland Mitigation Bank which is in the same Des Plaines River watershed.

5. STORMWATER DETENTION WITHIN THE WETLAND

- A. Is stormwater detention proposed within the wetland?
 No → Proceed to Item 6 Yes → Proceed to Item 5.B
- B. Is the wetland regulated by the Corps and is a Corps permit required for the development?
 No → Proceed to Item 5.D Yes → Proceed to Item 5.C
- C. Did the Corps approve placing detention in the wetland?
 No → Detention not allowed Yes → Submit a copy of the approved Corps permit
Proceed to Item 6
- D. Is the wetland considered a high quality isolated wetland?
 No → Hydrologic study required Yes → Detention not allowed

6. RIPARIAN ENVIRONMENTS

- A. Is there a riparian environment located onsite?
 No → Proceed to Item 8 Yes → Proceed to Items 6.B and 6.C
- B. Indicate the conditions that apply:
 Jurisdictional Waters of the U.S. (50-ft buffer from OHWM)
 Jurisdictional or isolated waters with BSC of "A" or "B" or BSS Streams (100-ft buffer from OHWM)
 Isolated Waters (30-ft buffer from OHWM)
- C. Is the riparian environment adversely impacted by the development?
 No → Proceed to Item 8 Yes → Proceed to Item 7

7. MITIGATION FOR RIPARIAN IMPACTS

- A. Prepare a riparian submittal and briefly describe the impacts and proposed mitigation: _____
Impacted riparian zone functions are as a result of riprap placement for bridge scour countermeasure bridge removal and replacement, and will be restored with native IDOT Seeding Class 4A (Modified) which is a native, deep rooted plant species. See Erosion Control and Landscaping Plan sheets 31-32, and App. F-4 for the Seeding specification. Only areas within 50-ft buffer that have riparian zone functions will be restored as such.

8. WETLAND SPECIALIST CERTIFICATION

NOTE: If the answers to Items 2.D, 2.F, 3.E, 5.A or 6.C are yes, prepare the appropriate wetland, buffer and riparian environment submittals with supporting documentation along with the Watershed Management Permit application. (Electronic signatures are not accepted.)

Company/Agency: Huff & Huff, Inc.

Wetland Specialist: Alycia Klunenber

Title: Senior Project Manager

Signature: 

Date: 07/10/2020

SPECIAL CONDITIONS FOR WMO PERMIT NO. 20-163

1. This permit is issued electronically by the District due to the COVID-19 pandemic.
2. The Permittee will provide executed easement documents to the District for the relocated District owned interceptor within 90-days issuance of this permit. No construction shall take place on the District owned interceptor without District approved easement documents recorded against the property title.
3. Construction must conform to the soil erosion and sediment control requirements of this permit and any other local, state and/or federal agencies.
4. Construction must conform to the floodplain requirements of this permit and any other local and/or state requirements.
5. Construction must conform to the compensatory storage requirements of this permit and any other local and/or state requirements.
6. Construction must conform to the wetland and riparian requirements of this permit and the requirements of the U.S. Army Corps of Engineers.
7. Construction must conform to the floodway requirements of this permit and the requirements of the Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR).
8. The proposed storm sewer system shall discharge to a waterway or a storm sewer system directly tributary to a waterway, as shown on the plans, and shall not discharge directly or indirectly into MWRD facilities without written permission by the Director of Engineering of the MWRD.
9. The Permittee/Co-Permittee shall be responsible for obtaining applicable National Pollutant Discharge Elimination System (NPDES) and/or stormwater discharge permits from the Illinois Environmental Protection Agency (IEPA) as may be necessary for the construction and operation of all storm sewer outfalls to the Salt Creek.
10. The MWRD Local Sewer Systems Section Field Office shall be notified at least two (2) working days prior to making any connection to MWRD structures/sewers/facilities (call 708 588 4055).
11. The Maintenance & Operations (M&O) Department of the MWRD shall be notified at least two (2) working days prior to making any physical connection to the MWRD structure. Contact Mr. Paul Sobanski, Senior Civil Engineer, at 708-588-4080.
12. The MWRD shall have 24 hour-a-day unrestricted access to all MWRD structures/sewers/facilities.

SPECIAL CONDITIONS FOR WMO PERMIT NO. 20-163

13. All work done on MWRD structures/sewers/facilities shall be done at times agreed to by MWRD, and MWRD shall have 24 hour-a-day unrestricted access to conduct inspections.
14. No debris shall enter MWRD structures/sewers/facilities/waterways.
15. All access hatches/manhole covers on MWRD structures/manholes within the project area shall not be buried/covered.
16. The Permittee/Co-Permittee shall support/protect MWRD structures/sewers/facilities during excavations and at crossings.
17. A complete list of emergency contact personnel shall be furnished to the MWRD prior to the start of construction.
18. All connections/constructions to MWRD structures/sewers/facilities shall be completed according to approved MWRD standard specifications.
19. The Permittee/Co-Permittee shall restore the work site area, including access roads and MWRD structures/facilities, to the condition it was in prior to the completed work.
20. Any damage to MWRD structure/sewer/facilities revealed during the post construction inspection shall be repaired prior to the submittal of the RFI. All damage, including restoration work shall be repaired at the direction and to the satisfaction of, and at no cost to, MWRD.
21. The Contractor shall take precautions during excavation in critical locations (e.g. older interceptors susceptible to damage). The last two (2) feet of excavation in said critical areas shall either be hand excavated or vacuum excavated. The Permittee/Co-Permittee shall be held responsible for any damage to MWRD facilities.
22. This permit requires a connection to existing MWRD structures/sewers/facilities. A live sewer connection protocol that satisfies the requirements of the MWRD shall be followed. The live sewer connection protocol shall be submitted to and acknowledged by the MWRD Local Sewer Systems Section Field Office before the connection is made.

In the event MWRD structures/sewers/facilities have to be entered as a result of the work under this permit, the responsible party must submit a completed and notarized Release and Indemnity form for Confined Space Entry.
23. The Permittee/Co-Permittee shall document pre-construction and post-construction conditions of MWRD sewers/structures/facilities/equipment/instrumentation at the following location(s): MWRD Manholes 14-00961 and 14-00962. The documentation,

SPECIAL CONDITIONS FOR WMO PERMIT NO. 20-163

coordinated with MWRD, shall be produced by performing a closed circuit television inspection. The post-construction inspection shall be performed 30 days after completion of the construction. It shall be the responsibility of the Permittee/Co-Permittee to repair/replace all damaged sewers/structures/facilities/equipment/instrumentation at the direction and to the satisfaction of, and at no cost to, MWRD.

24. The MWRD interceptor is designed to convey dry weather flow plus a peaking factor. It is not an acceptable outlet for relief sewers and the MWRD cannot verify that during a storm event the proposed sewer connection will guarantee flood relief for the service area of the proposed sewer and/or upstream and downstream of the proposed connection. The MWRD will not be responsible for and shall be saved harmless of any capacity related problems due to changes to the local sewer system.

ENGINEERING CERTIFICATIONS

Watershed Management Permit No.

CERTIFICATE BY DESIGN ENGINEER: I hereby certify that the project described herein has been designed in accordance with the requirements set forth in this application and all applicable ordinances, rules, regulations, local, state and federal laws, and design criteria of the issuing authority; that the storm drainage and sanitary sewer system designed for this project are proper and adequate; that where the design involves one or more connections to an existing local sewer system, the capacity of said system has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

Comments, if any: _____

Engineering Firm: Ciorba Group, Inc. **Telephone:** (773) 355 - 2961

Address: 8725 W Higgins Rd Suite 600 **City:** Chicago **Zip:** 60631



Signature: *M. Anthony Wolff* **Vice President - Water Resources** **Date:** 7/8/2020
(Name and Title)

Email Address: twolff@ciorba.com

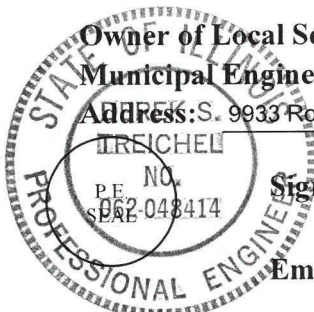
CERTIFICATE BY MUNICIPAL OR SYSTEM ENGINEER: The application and the drawings, together with other data being submitted with this application, have been examined by me and are found to be in compliance with all applicable requirements. The manner of drainage is satisfactory and proper in accordance with local requirements. The existing local sewer system to which the project discharges has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

I hereby certify that the project area is within the municipal corporate limits. YES NO

Owner of Local Sewer System: Village of Brookfield

Municipal Engineer: Derek Treichel, P.E., CFM - Edwin Hancock Engineering, Co. **Telephone:** 708.865.0300

Address: S. 9933 Roosevelt Road **City:** Westchester **Zip:** 60154



Signature: *Derek Treichel, President* **Date:** 07-06-2020
(Name and Title)

Email Address: dstreichel@ehancock.com

CERTIFICATE BY INSPECTION ENGINEER: I hereby certify that construction of the project will be in substantial compliance with the data and the plans submitted with this application; that approval will be obtained from the issuing authority prior to making any changes that would affect capacity, maintenance, design requirements, service area or the Permit requirements; that a set of RECORD drawings, signed and sealed by the undersigned Engineer will be furnished to the District or an Authorized Municipality before testing and approval by the District or Authorized Municipality of the completed work.

Engineering Firm: Ciorba Group, Inc. **Telephone:** 773.355.2961

Address: 8725 W Higgins Rd Suite 600 **City:** Chicago **Zip:** 60631



Signature: *M. Anthony Wolff* **Vice President - Water Resources** **Date:** 7/8/2020
(Name and Title)

Email Address: twolff@ciorba.com

SPECIAL CONDITIONS

Watershed Management Permit No.

[]

This Permit is issued subject to the General Conditions and the attached Special Conditions.

If Permit is granted:

- Please return two (2) copies of the Permit to the Permittee; or
- Please mail one (1) copy to Permittee and one (1) copy to the person designated below:

Name: Tony Wolff

Address : 8725 W. Higgins Road, Suite 600, Chicago IL 60631

Email : twolff@ciorba.com

CERTIFICATE BY APPLICANTS: We have read and thoroughly understand the conditions and requirements of this Permit application, and agree to conform to the Permit conditions and other applicable requirements of the District. It is understood that construction hereunder, after the Permit is granted, shall constitute acceptance by the applicants of any Special Conditions that may be placed hereon by the District or an Authorized Municipality. It is further understood that this application shall not constitute a Permit until it is approved, signed and returned by the Director of Engineering of the District or Enforcement Officer of an Authorized Municipality.

PERMITTEE	CO-PERMITTEE
<p>The project area is within municipal corporate limits.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable</p>	<p>(Co-Permittee is Property Owner)</p> <p>Title to property is held in a land trust: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, Co-Permittee shall be beneficiary with Power of Direction</p>
Municipality <u>Village of Brookfield</u>	Owner _____
Address <u>8820 Brookfield Avenue</u>	Address _____
City <u>Brookfield</u> Zip <u>60513</u>	City _____ Zip _____
Signature <u><i>Carl Muell</i></u>	Signature _____
Name <u>Carl Muell</u> (Print)	Name _____ (Print)
Title <u>Director of Public Works</u>	Title _____
Date <u>7/7/20</u> Phone <u>708-485-2540</u>	Date _____ Phone _____
Email <u>cmuell@brookfieldil.gov</u>	Email _____

REVIEW AND APPROVAL BY THE DISTRICT OR AUTHORIZED MUNICIPALITY	
Reviewed by: <u><i>Paul Johnson</i></u> (Local Sewer Systems) or (Professional Engineer)	Date <u>05 NOV 2020</u>
Approved for Issue	
Approved by: _____ (For the Director of Engineering) or (Enforcement Officer)	Date <u>11/5/2020</u>

Electronic approval due to COVID-19 pandemic remote work



Leadership in Resource Management Since 1946

1201 S. Gougar Rd • New Lenox, IL 60451
(815) 462-3106 • Fax (815) 462-3176
www.will-scookswcd.org

Carl Muell, Director of Public Works
Village of Brookfield
8820 Brookfield Ave.
Brookfield, IL 60513-1688

September 29, 2020

Erosion Control Plan Approval

ACOE# LRC-2020-634
WSCSWCD# 20-550
Brookfield Ave. Bridge over Salt Creek

Dear Mr. Muell:

We have reviewed the documents dated October 05, 2020 as they relate to erosion control measures pertaining to the above-mentioned project. The plan meets the technical standards of the Will-South Cook SWCD for SESC and is hereby approved.

Please keep a copy of the approved documents on site at all times for review, upon request, by the Will-South Cook SWCD or any other authorized agency. Please also notify our office of the preconstruction meeting or at the start of work.

If you have any questions, please contact Dan Jay at (815) 462-3106, ext. 3.

Sincerely,
Will / South Cook SWCD

Daniel Jay, P.E., CFM, CPESC
Resource Conservationist

cc: Kathleen Chernich, ACOE
Tony Wolff, Ciorba Group



Illinois Environmental Protection Agency

1021 North Grand Avenue East • 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 Ill. 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 Ill. 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 Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Brookfield Avenue over Salt Creek Project Office Phone Number, if available: 708-485-2540

Physical Site Location (address, including number and street):

Brookfield Avenue approximately 130 feet west of Prairie Ave to 130 feet east of Arden Ave

City: Brookfield State: IL Zip Code: 60513

County: Cook Township: Lyons

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.82276 Longitude: - 87.84146

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

ISGS Public Land Survey System. Lat/lon above refer to the approximate center of the Project Area

EPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Brookfield

Street Address: 8820 Brookfield Avenue

PO Box: _____

City: Brookfield State: IL

Zip Code: 60513 Phone: 708-485-2540

Contact: Timothy C. Wiberg - Village Manager

Email, if available: twiberg@brookfieldil.gov

Site Operator

Name: _____

Street Address: _____

PO Box: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Contact: _____

Email, if available: _____

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 Management Center.

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 Ill. Adm. Code 1100.610(a):

A database review was completed in the 2016 H&H PESA for the Project Area, which consists of residential and municipal properties. Ten (10) potentially impacted properties (PIPs) were identified in connection with the Project Area through the database review and site visit. Refer to the attachments for additional information.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. 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 Ill. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

8 soil borings were advanced in the Project Area on April 10, 2019. Samples were analyzed for one or more of: VOCs, BTEX, SVOCs, PNAs, RCRA Metals, PCBs, and pH. Samples at SB-2, SB-3, and SED-S had detections of arsenic, PNAs, or pH that exceeded the MACs. Remaining results achieve the CCDD requirements. Refer to the attachments for additional info.

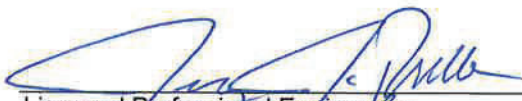
IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Jeremy J. Reynolds, P.G. (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 Ill. 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))

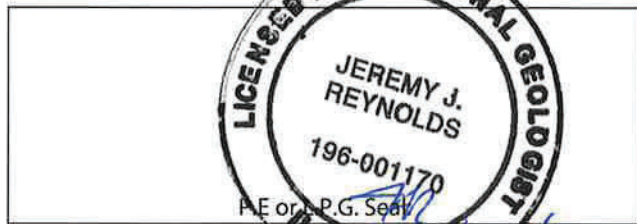
Company Name: Huff & Huff, Inc.
Street Address: 915 Harger Rd Suite 330
City: Oak Brook State: IL Zip Code: 60523
Phone: (630) 684-9100

Jeremy J. Reynolds, P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

6/10/19
Date:



Brookfield Avenue over Salt Creek
Section: 15-00129-00-BR
County: Cook
Contract No.: 61G22
Village of Brookfield

BNSF TEMPORARY OCCUPANCY PERMIT

Description: The contractor shall prepare and submit a Temporary Occupancy permit with the BNSF Railway as detailed in the Temporary Occupancy Process Instructions below to access and complete the work shown on the plans on the BNSF Railway property.

A draft permit has been initiated (Tracking # 20-66893) and is also included below, which is steps 1 and 2 of the process. The Contractor will refer to this tracking number during permit application and any references to the Village of Brookfield shall be replaced with the Contractor's name. All permit fees including application fee and contract fee will be paid by the Contractor.

Minimum insurance requirements are shown below in the permit. Insurance premiums above the requirements specified for RAILROAD PROTECTIVE LIABILITY INSURANCE and in Section 107 shall be included.

Basis of Payment: This work shall be included in the cost of RAILROAD RIGHT-OF-WAY ENTRY PERMIT.

TEMPORARY OCCUPANCY PROCESS INSTRUCTIONS

Licensing Process:

IMPORTANT: If you require a Temporary Occupancy permit, submit all paperwork to JLL.

If you require access to BNSF Railway Company's property for a Seismic Survey you must first enter into a Lease Agreement.

Please contact: Jennifer Kindred Phone: (918) 895-8037
Farmers National Company
5110 S. Yale
Suite 400
Tulsa, OK 74135
jkindred@farmersnational.com

After submitting a Lease Agreement with your application package Jones Lang LaSalle Brokerage, Inc. (JLL) will review the area to determine ownership of mineral rights and forward to the local BNSF Roadmaster for approval.

1. Once application package is received by (JLL), and all prior approvals have been obtained, if required, the application and drawing will be forwarded to the engineering firm to prepare the Exhibit "A" drawings for the contract. **This process takes approximately 10 to 15 working days.**
2. When the Exhibit "A" is completed, a contract will be prepared and two (2) copies will be forwarded to you for an original signature. **A letter will be sent to you that will provide directions regarding insurance and any additional fees.**
3. Return the signed contracts (2 contracts with original signatures), along with the appropriate **payment** to JLL's Permit Department.
4. The final contracts, with original signatures, are presented for execution provided payment has been received and insurance has been approved.
5. Once the contract is executed, one original will be returned to you for your files.
6. Prior to commencing any work on the Premises, Licensee shall complete and shall require its contractor (all parties who will be working on the site) to complete the safety orientation program at Internet Website <http://bnsfcontractor.com/>. This orientation must be completed no more than one year in advance of Licensee's entry on the Premises.
7. The cover letter and the executed contract will list the Roadmaster's name and phone number. **You will need to contact the Roadmaster or Wilson & Company ten (10) days prior to beginning work. The contact information will be provided to you when you receive your fully executed contract**

Process Time:

Please be advised that the average time period for completion of this process is 4 weeks from the time that the application is received. Every effort will be made to complete this process in a timely manner.

Insurance Requirements for the following Agreement:

	Temporary Occupancy
Commercial General Liability Insurance	Contractual Liability with a combined single limit of a minimum of \$2,000,000 each occurrence and an aggregate limit of at least \$4,000,000.
Business Automobile Insurance	Combined single limit of at least \$1,000,000 per occurrence.
Workers Compensation and Employers Liability Insurance	Employers' Liability with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.
Railroad Protective Liability Insurance	Coverage of at least \$2,000,000 per occurrence and \$6,000,000 in the aggregate, with the exception of New Mexico in which coverage is \$5,000,000 per occurrence and \$10,000,000 in the aggregate
Note: These limits are subject to change without notice. An Agreement will be provided to you, which contains details concerning insurance requirements.	

Please send the following so we may process your License request:

1. If License is for a Seismic Survey send a copy of your **Lease Agreement**.
2. **Completed Application**.
3. **\$800 non-refundable application fee**. This is not in lieu of a permit agreement fee. Check should be made payable to BNSF Railway Company.
4. **One set of drawings** (no larger than 11 x 17) for the area to be occupied. (Include: streets, distance from tracks and streets, mileposts if available and any distinguishing land marks.) Please ensure all information is accurate, as each change will add an additional \$800 to the application fee.

Forward application and payments to:
 Jones Lang LaSalle Brokerage, Inc.
 Attn: Permit Services
 4200 Buckingham, Ste.110
 Ft. Worth, TX 76155



December 15, 2020

VILLAGE OF BROOKFIELD
Attention: Mr. Tim Wiberg
8820 Brookfield Avenue
Brookfield, IL 60513

20-66893

Dear Mr. Wiberg:

Attached please find a copy of the requested contract for execution by an official authorized to execute contract agreements on behalf of your company. Please print two (2) copies execute and **return both copies with original signature** for completion on part of BNSF Railway Company ("BNSF") to this office, along with the following requirements:

- A check in the amount of \$1,350.00 payable to BNSF Railway Company which covers the contract fee.

Please note the agreements cannot be executed by BNSF without an approved insurance certificate. If there are any issues with your insurance, you will be contacted by a member of the Risk Management team of BNSF Railway. Please submit the following documents to BNSF@certfocus.com:

1. A Certificate of Insurance as required in the agreement.
2. A **separate policy** for Railroad Protective Liability Insurance as required in the agreement (**ORIGINAL POLICY MUST BE PROVIDED**). BNSF Railway Company will be the only insured party; OR;

In lieu of providing a separate policy for Railroad Protective Liability Insurance, you may participate in the BNSF's Railroad Protective Policy by checking the appropriate box in the contract and including an additional \$633.00 with your check and your signed agreements.

PLEASE ADVISE IF THIS PROJECT IS ARRA FUNDED.

Acceptance and deposit of any check by BNSF does not constitute an agreement between BNSF and Licensee for the requested license. BNSF shall not be obligated to hold the check in a separate fund, but may commingle the funds with other funds of BNSF, and in no event shall BNSF be responsible for interest on said funds.

The enclosed permit is not a binding agreement and shall become binding only when, and if, it is executed by you and fully approved and executed by BNSF Railway Company. Upon completion on behalf of BNSF, one fully executed counterpart will be returned for your records.

The specifications/plans you provided may differ from BNSF's minimum specification requirements. Therefore, prior to your installation, please review the Exhibit A to determine the specifications necessary for your installation.

Please be informed that if contracts, fees, and insurance are not returned within sixty (60) days, the processing fee will increase to \$1,600.00.

Sincerely,

Chris Shuffield
Permit Manager
Attachment

TEMPORARY OCCUPANCY PERMIT

THIS TEMPORARY OCCUPANCY PERMIT ("**License**"), is made to be effective _____, 2019, (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **VILLAGE OF BROOKFIELD**, ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

GENERAL

1. Grant of License. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to temporarily occupy, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), for the purposes specified in **Section 4** below, Licensor's rail corridor at or near Brookfield, County of Chicago, State of Illinois, Line Segment 0071, Mile Post 12.16 as shown on the attached Drawing No. 80280, dated November 11, 2020, attached hereto as **Exhibit "A"**, and incorporated herein by reference (the "**Premises**").
2. Term. This License shall commence on the Effective Date and shall continue for a period of twelve (12) months, subject to prior termination as hereinafter described.
3. Existing Improvements. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use of such improvements.
4. Use. Licensee shall use Premises exclusively as a site for adjacent vehicle bridge reconstruction which requires grading on railroad property. Licensee shall not use the Premises for any other purpose.
5. Alterations. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

COMPENSATION

6. License Fee. Licensee shall pay Licensor, prior to the Effective Date, the sum of One thousand three hundred fifty and No/100 Dollars (\$1,350.00) as compensation for the use of the Premises.
7. Costs and Expenses.
 - 7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.
 - 7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred. Licensee shall bear the cost of flagger services and other safety measures provided by Licensor, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging

rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7**.

8. **Payment Terms.** All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2½%), or (ii) the maximum rate permitted by law.

LICENSOR'S RESERVED RIGHTS

9. **Reserved Rights of Use.** Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:
- 9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;
 - 9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or
 - 9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.

LICENSEE'S OPERATIONS

10. **Use of the Premises.**
- 10.1 Licensee shall notify Licensor's Roadmaster, at nate.freeman@bnsf.com, telephone 773-217-2231, at least ten (10) business days prior to entering the Premises. In the event of emergency, Licensee shall notify Licensor of Licensee's entry onto the Premises at the telephone number above as soon as practicable and shall promptly thereafter follow up with written notice of such entry.
 - 10.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.
 - 10.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.
 - 10.4 Any contractors or subcontractors performing work on the Premises, or entering the Premises on behalf of Licensee shall be deemed servants and agents of Licensee for purposes of this License.
 - 10.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises in such a manner as not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right

of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.

LIABILITY AND INSURANCE

11. Liability and Indemnification.

- 11.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee or Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.
- 11.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE, KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**
- 11.2.1 **THIS LICENSE, INCLUDING, WITHOUT LIMITATION, ITS ENVIRONMENTAL PROVISIONS,**
- 11.2.2 **ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE,**
- 11.2.3 **LICENSEE'S OCCUPATION AND USE OF THE PREMISES,**
- 11.2.4 **THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR**
- 11.2.5 **ANY ACT OR OMISSION OF ANY LICENSEE PARTY.**
- 11.3 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). LICENSEE WILL INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM ANY AND ALL SUCH CLAIMS. NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE AGREES TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.**

- 11.4 **IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.**
- 11.5 **THE FOREGOING OBLIGATIONS OF LICENSEE SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.**
- 11.6 Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or other proceeding brought against any Indemnitee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any Indemnitee. Licensee shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.
12. Personal Property Risk of Loss. **ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.**
13. Insurance. Licensee shall, at its sole cost and expense, procure and maintain during the life of this License the following insurance coverage:
- 13.1 Commercial General Liability Insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$2,000,000 each occurrence and an aggregate limit of at least \$4,000,000 but in no event less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence or equivalent and include coverage for, but not limited to, the following:
- Bodily Injury and Property Damage
 - Personal Injury and Advertising Injury
 - Fire legal liability
 - Products and completed operations
- This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:
- The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
 - Waiver of subrogation in favor of and acceptable to Licensor.
 - Additional insured endorsement in favor of and acceptable to Licensor and Jones Lang LaSalle Brokerage, Inc.
 - Separation of insureds.
 - The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability Insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to Licensor's employees.

No other endorsements limiting coverage may be included on the policy.

- 13.2 Business Automobile Insurance. This insurance shall contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:
- Bodily injury and property damage.
 - Any and all vehicles owned, used or hired.

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.
- Additional insured endorsement in favor of and acceptable to Licensor.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

- 13.3 Workers' Compensation and Employers' Liability Insurance. This insurance shall include coverage for, but not limited to:
- Licensee's statutory liability under the workers' compensation laws of the state(s) in which the services are to be performed. If optional under state laws, the insurance must cover all employees anyway.
 - Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.

- 13.4 Railroad Protective Liability Insurance. This insurance shall name only Licensor as the Insured with coverage of at least \$2,000,000 per occurrence and \$6,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the adjacent vehicle bridge reconstruction which requires grading on railroad property. If further maintenance of the adjacent vehicle bridge reconstruction which requires grading on railroad property is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy shall be issued on a standard ISO form CG 00 35 12 03 and include the following:
- Endorsed to include the Pollution Exclusion Amendment.
 - Endorsed to include the Limited Seepage and Pollution Endorsement.
 - Endorsed to include Evacuation Expense Coverage Endorsement.
 - No other endorsements restricting coverage may be added.
 - The original policy must be provided to Licensor prior to performing any work or services under this License.
 - Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is \$633.00.

- I **elect** to participate in Licensor's Blanket Policy;
- I **elect not** to participate in Licensor's Blanket Policy.

13.6 Other Requirements:

- 13.6.1 Where allowable by law, all policies (applying to coverage listed above) shall contain no exclusion for punitive damages.
- 13.6.2 Licensee agrees to waive its right of recovery against Licensor for all claims and suits against Licensor. In addition, Licensee's insurers, through the terms of the policy or a policy endorsement, must waive their right of subrogation against Licensor for all claims and suits, and the certificate of insurance must reflect the waiver of subrogation endorsement. Licensee further waives its right of recovery, and its insurers must also waive their right of subrogation against Licensor for loss of Licensee's owned or leased property, or property under Licensee's care, custody, or control.
- 13.6.3 Licensee is not allowed to self-insure without the prior written consent of Licensor. If granted by Licensor, any self-insured retention or other financial responsibility for claims shall be covered directly by Licensee in lieu of insurance. Any and all Licensor liabilities that would otherwise, in accordance with the provisions of this License, be covered by Licensee's insurance will be covered as if Licensee elected not to include a self-insured retention or other financial responsibility for claims.
- 13.6.4 Prior to entering the Premises, Licensee shall furnish to Licensor an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments. Licensee shall notify Licensor in writing at least 30 days prior to any cancellation, non-renewal, substitution, or material alteration. In the event of a claim or lawsuit involving Licensor arising out of this License, Licensee will make available any required policy covering such claim or lawsuit.
- 13.6.5 Any insurance policy shall be written by a reputable insurance company acceptable to Licensor or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- 13.6.6 If coverage is purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years after expiration or termination of this License. Annually, Licensee agrees to provide evidence of such coverage as required hereunder.
- 13.6.7 Licensee represents that this License has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), who have been instructed by Licensee to procure the insurance coverage required by this License. Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.
- 13.6.8 Not more frequently than once every five years, Licensor may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

- 13.6.9 If any portion of the operation is to be subcontracted by Licensee, Licensee shall require that the subcontractor shall provide and maintain insurance coverages as set forth herein, naming Licensor as an additional insured, and shall require that the subcontractor shall release, defend and indemnify Licensor to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor herein.
- 13.6.10 Failure to provide evidence as required by this **Section 13** shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this Section shall not operate as a waiver of Licensee's obligations hereunder.
- 13.6.11 The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.
- 13.6.12 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable.
- 13.6.13 For purposes of this **Section 15**, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS

14. Compliance with Laws, Rules, and Regulations.

- 14.1 Licensee shall observe and comply with any and all laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to Licensee's use of the Premises.
- 14.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the website "www.BNSFcontractor.com" (the "**Safety Orientation**") within one (1) year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew the Safety Orientation annually.

15. Environmental.

- 15.1 Licensee shall strictly comply with all federal, state and local environmental Legal Requirements and regulations in its use of the Premises, including, but not limited to, the Resource Conservation and Recovery Act, as amended (RCRA), the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, and CERCLA (collectively referred to as the "**Environmental Laws**"). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or hazardous substances, as defined by Environmental Laws on or about the Premises.

- 15.2 Licensee covenants that it will not handle or transport "hazardous waste" or "hazardous substances", as "hazardous waste" and "hazardous substances" may now or in the future be defined by any federal, state, or local governmental agency or body through or on Licensor's property. Licensee agrees periodically to furnish Licensor with proof, satisfactory to Licensor that Licensee is in compliance with the provisions of this **Section 15.2**.
- 15.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of hazardous substances on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use the best efforts to promptly respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor immediate notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.
- 15.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the adjacent vehicle bridge reconstruction which requires grading on railroad property which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.
- 15.5 Licensee shall promptly report to Licensor in writing any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take whatever action is necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.

DISCLAIMER OF WARRANTIES

16. No Warranties.

16.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

16.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE VEHICLE BRIDGE RECONSTRUCTION WHICH REQUIRES GRADING ON RAILROAD PROPERTY WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.**

17. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

18. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damage Licensee sustains in connection with the eviction.

DEFAULT, TERMINATION, AND SURRENDER

19. Default and Termination. In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 13**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:

- 19.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 21** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 13**.
- 19.2 Should Licensee not comply fully with the obligations of **Section 15** regarding the handling or transporting of hazardous waste or hazardous material, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice of termination upon Licensee.
- 19.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedy set forth in this **Section 19** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.
- 19.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.

20. Surrender of the Premises.

- 20.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:
- 20.1.1 remove all of its equipment from the Premises;
- 20.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;
- 20.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and

- 20.1.4 leave the Premises in the condition which existed as of the Effective Date of this License.
- 20.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 20.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.
- 20.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore.

MISCELLANEOUS

21. Successors and Assigns. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.
21. Assignment.
- 21.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 21** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.
- 21.2 For purposes of this **Section 21**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least fifty percent (50%) of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.
- 21.3 Notwithstanding the provisions of **Section 21.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to

another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 13** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment.

- 21.4 The provisions of this **Section 21** shall survive the expiration or earlier termination of this License.
22. Notices. Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.
- If to Licensor: Jones Lang LaSalle Brokerage, Inc.
4200 Buckingham Rd., Suite 110
Fort Worth, TX 76155
Attn: Permits/Licenses
- with a copy to: BNSF Railway Company
2500 Lou Menk Dr.
Fort Worth, TX 76131
Attn: Senior Manager Real Estate
- If to Licensee: VILLAGE OF BROOKFIELD
8820 Brookfield Avenue
Brookfield, IL 60513
23. Survival. Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Premises are restored to its condition as of the Effective Date.
24. Recordation. It is understood and agreed that this License shall not be placed or allowed to be placed on public record.
25. Applicable Law. All questions concerning the interpretation or application of provisions of this License shall be decided according to the substantive laws of the State of Texas without regard to conflicts of law provisions.
26. Severability. To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.

27. Integration. This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.
28. Joint and Several Liability. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.
29. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.
30. Interpretation.
- 30.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.
- 30.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.
32. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged via email or electronic facsimile machines and any email or electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.
33. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

END OF PAGE – SIGNATURE PAGE FOLLOWS

This License has been duly executed by the parties hereto as of the date below each party's signature; to be effective, however, as of the Effective Date.

LICENSOR:

BNSF Railway Company, a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.,
4200 Buckingham Rd., Suite 110
Fort Worth, TX 76155

By: _____

Title: _____

Date: _____

LICENSEE:

VILLAGE OF BROOKFIELD

By: _____

Title: _____

Date: _____

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13.”

Revise Article 108.04(b) of the Standard Specifications to read:

“(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item.”

Revise Article 109.09(f) of the Standard Specifications to read:

“(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

“109.13 Payment for Contract Delay. Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
 - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

80384

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected.

Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

80261

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: March 2, 2019

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a

good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform 19.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:

<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.
 - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
 - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the

bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.

- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at DOT.DBE.UP@illinois.gov.
- (b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) SUBCONTRACT. The Contractor must provide copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
- (1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
 - (2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
 - (3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

- (e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

- (6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.
- (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be

made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

80029

DISPOSAL FEES (BDE)

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
 - b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - c. Quantities of materials, prices and extensions.
 - d. Transportation of materials.
 - e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.
- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

80402

EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

“1032.06 Emulsified Asphalts. Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

- (a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

Test	HFE-90	HFE-150	HFE-300
Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS ^{1/}	50 min.	50 min.	50 min.
Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), %	0.10 max.	0.10 max.	0.10 max.
Storage Stability Test, 1 day, (AASHTO T 59), %	1 max.	1 max.	1 max.
Coating Test (All Grades), (AASHTO T 59), 3 minutes	stone coated thoroughly		
Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, %	65 min. 7 max.	65 min. 7 max.	65 min. 7 max.

Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm	90-150	150-300	300 min.
Float Test at 140 °F (60 °C), (AASHTO T 50), sec.	1200 min.	1200 min.	1200 min.

1/ The emulsion shall be pumpable.

- (d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

Test	Result
Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS	75 max.
Sieve test, retained on No. 20 (850 µm) sieve, %	0.10 max.
Distillation to 500 °F (260 °C) residue, %	38 min.
Oil distillate by volume, %	4 max.

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

- (e) Delete this subparagraph.
- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
 - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
 - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be 374 ± 9 °F (190 ± 5 °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
 - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be 50.0 ± 1.0 °F (10.0 ± 0.5 °C).

(6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

Test	Requirement
Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS	20-100
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max.
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min.
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3 max.
Tests on Residue from Evaporation	
Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm	40 max.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Ash Content, (AASHTO T 111), % ^{1/}	1 max.

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

Grade	Use
SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh)	Tack Coat
PEP	Prime Coat
RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2	Bituminous Surface Treatment
CQS-1hP (formerly CSS-1h Latex Modified)	Micro-Surfacing Slurry Sealing Cape Seal"

80415

ENGINEER'S FIELD OFFICE AND LABORATORY (BDE)

Effective: January 1, 2020

Revise the last sentence of the first paragraph of Article 670.01 of the Standard Specifications to read:

“The building shall remain available for use until released by the Engineer.”

Revise the fifth and sixth paragraphs of Article 670.02 of the Standard Specifications to read:

“Sanitary facilities shall include hot and cold potable running water, lavatory and toilet as an integral part of the office where available. A portable toilet, if necessary, shall be serviced once per week. Solid waste disposal consisting of two waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.

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

Revise Article 670.02(b) through 670.02(r) of the Standard Specifications to read:

- “(b) One desk with minimum working surface of 48 x 72 in. (1.2 x 1.8 m).
- (c) Two free standing four drawer legal size file cabinets with lock and an underwriters' laboratories insulated file device 350 degrees one hour rating.
- (d) Table(s) and chairs capable of seating 10 people.
- (e) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office in a manner to prevent theft of the entire cabinet.
- (f) One refrigerator with a minimum size of 14 cu ft (0.40 cu m) with a freezer unit.
- (g) One electric desk type tape printing calculator.
- (h) A minimum of two communication paths. The configuration shall include:
 - (1) Internet Connection. An internet service connection with a wireless router capable of providing service to a minimum of five devices. The internet service shall be for unlimited data with a minimum internet data download speed of 25 megabits per second. For areas where this minimum download speed is not available, the maximum speed available for the area shall be provided.

- (2) Telephone Line. One landline touch tone telephone with voicemail or answering machine. The telephone shall have an unpublished number.
- (i) One plain paper wireless color printer capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray. Separate paper trays for letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided. The wireless printer shall also be equipped to copy in color and scan documents.
- (j) One electric water cooler dispenser.
- (k) One first-aid cabinet fully equipped.
- (l) One microwave oven (minimum 700 watt) with a turntable and 1 cu ft (0.03 cu m) minimum capacity.
- (m) One fire-proof safe, 0.5 cu ft (0.01 cu m) minimum capacity.
- (n) One electric paper shredder.
- (o) One post mounted rain gauge, located on the project site for each 5 miles (8 km) of project length.”

Revise the last sentence of the first paragraph of Articles 670.04 and 670.05 of the Standard Specifications to read:

“Doors and windows shall be equipped with locks.”

Revise Article 670.04(c) through 670.04(n) of the Standard Specifications to read:

- “(c) Two folding chairs.
- (d) One equipment cabinet of minimum inside dimension of 44 in. (1100 mm) high x 24 in. (600 mm) wide x 30 in. (750 mm) deep with lock. The walls shall be of steel with a 3/32 in. (2 mm) minimum thickness with concealed hinges and enclosed lock constructed to prevent entry by force. The cabinet assembly shall be permanently attached to a structural element of the field office to prevent theft of the entire cabinet.
- (e) A minimum of two communication paths. The configuration shall include:
 - (1) Internet Connection. An internet service connection with a wireless router capable of providing service to a minimum of five devices. The internet service shall be for unlimited data with a minimum internet download speed of 25 megabits per second. For areas where this minimum download speed is not available, the maximum speed available for the area shall be provided.

(2) Telephone Line. One land line touch tone telephone with voicemail or answering machine. The telephone shall have an unpublished number.

(f) One electric desk type tape printing calculator.

(g) One first-aid cabinet fully equipped.

(h) One plain paper wireless color printer capable of reproducing prints up to 11 x 17 in. (280 x 432 mm) with an automatic feed tray. Separate paper trays for letter size and 11 x 17 in. (280 x 432 mm) paper shall be provided. The wireless printer shall also be equipped to copy in color and scan documents.

(i) A portable toilet meeting Federal, State, and local health department requirements shall be provided, maintained clean and in good working condition, and shall be stocked with lavatory and sanitary supplies at all times. The portable toilet shall be serviced once per week.

(j) One electric water cooler dispenser.

(k) One refrigerator with a minimum size of 14 cu ft (0.45 cu m) with a freezer unit.

(l) One microwave oven (minimum 700 watt) with a turntable and 1 cu ft (0.03 cu m) minimum capacity.”

Revise Article 670.05(f) of the Standard Specifications to read:

“(f) One landline touch tone telephone with voicemail or an answering machine. The telephone shall have an unpublished number.”

Delete the last sentence of the second paragraph of Article 670.06 of the Standard Specifications.

Revise the fifth sentence of the first paragraph of Article 670.07 of the Supplemental Specifications to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which remain the property of the Contractor after release by the Engineer, except the Department will pay that portion of the monthly long distance and monthly local telephone, when combined, exceed \$250.”

80423

GEOTECHNICAL FABRIC FOR PIPE UNDERDRAINS AND FRENCH DRAINS (BDE)

Effective: November 1, 2019

Revise Article 1080.01(a) of the Standard Specifications to read:

“(a) Fabric Materials. Fabric materials shall be as follows.

- (1) Knitted Fabric. Knitted fabric envelope shall be Type A according to ASTM D 6707 and be a continuous one piece knitted polymeric material that fits over the pipe underdrain like a sleeve. It shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (2) Woven or Nonwoven Fabric. The fabric shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (3) Physical Properties. The physical properties for knitted, woven, and nonwoven fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Knitted ^{1/}	Woven ^{2/}	Nonwoven ^{2/}
Grab Strength, lb (N) ASTM D 4632 ^{3/}	--	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{3/}	--	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{3/}	--	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{3/}	180 (800) min.	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{4/}	30 (0.60) max.	40 (0.425) max.	40 (0.425) max.
Permittivity, sec ⁻¹ ASTM D 4491	1.0 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	--	50 min.	50 min.

1/ Manufacturer's certification to meet test requirements.

2/ NTPEP results or manufacturer's certification to meet test requirements.

3/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

4/ Values represent the maximum average roll value.”

Revise Article 1080.05 of the Standard Specifications to read:

“1080.05 Geotechnical Fabric for French Drains and Pipe Underdrains, Type 2. Geotechnical fabric for french drains and pipe underdrains, Type 2 shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.

The fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{3/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	0.2 min.	
Ultraviolet Stability % retained strength after 500 hours of exposure - ASTM D 4355	50 min.	

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

3/ Values represent the maximum average roll value.”

80417

MANHOLES, VALVE VAULTS, AND FLAT SLAB TOPS (BDE)

Effective: January 1, 2018

Revised: March 1, 2019

Description. In addition to those manufactured according to the current standards included in this contract, manholes, valve vaults, and flat slab tops manufactured prior to March 1, 2019, according to the previous Highway Standards listed below will be accepted on this contract:

Product	Previous Standards		
Precast Manhole Type A, 4' (1.22 m) Diameter	602401-05	602401-04	602401-03
Precast Manhole Type A, 5' (1.52 m) Diameter	602402-01	602402	602401-03
Precast Manhole Type A, 6' (1.83 m) Diameter	602406-09	602406-08	602406-07
Precast Manhole Type A, 7' (2.13 m) Diameter	602411-07	602411-06	602411-05
Precast Manhole Type A, 8' (2.44 m) Diameter	602416-07	602416-06	602416-05
Precast Manhole Type A, 9' (2.74 m) Diameter	602421-07	602421-06	602421-05
Precast Manhole Type A, 10' (3.05 m) Diameter	602426-01	602426	
Precast Valve Vault Type A, 4' (1.22 m) Diameter	602501-04	602501-03	602501-02
Precast Valve Vault Type A, 5' (1.52 m) Diameter	602506-01	602506	602501-02
Precast Reinforced Concrete Flat Slab Top	602601-05	602601-04	

The following revisions to the Standard Specifications shall apply to manholes, valve vaults, and flat slab tops manufactured according to the current standards included in this contract:

Revise Article 602.02(g) of the Standard Specifications to read:

“(g) Structural Steel (Note 4) 1006.04

Note 4. All components of the manhole joint splice shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.”

Add the following to Article 602.02 of the Standard Specifications:

“(s) Anchor Bolts and Rods (Note 5) 1006.09

Note 5. The threaded rods for the manhole joint splice shall be according to the requirements of ASTM F 1554, Grade 55, (Grade 380).”

Revise the second paragraph of Article 1042.10 of the Standard Specifications to read:

“Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top (Highway Standard 602601) shall be manufactured according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be as shown on the plans. Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi

(31,000 kPa) at 28 days and manholes, valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days.”

80393

MOBILIZATION (BDE)

Effective: April 1, 2020

Replace Articles 671.02(a), (b), and (c) of the Standard Specifications with the following:

“(a) Upon execution of the contract, 90 percent of the pay item will be paid.

(b) When 90 percent of the adjusted contract value is earned, the remaining ten percent of the pay item will be paid along with any amount bid in excess of six percent of the original contract amount.”

80428

PORTLAND CEMENT CONCRETE – HAUL TIME (BDE)

Effective: July 1, 2020

Revise Article 1020.11(a)(7) of the Standard Specifications to read:

“(7) Haul Time. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work. The maximum haul time shall be as follows.

Concrete Temperature at Point of Discharge, °F (°C)	Maximum Haul Time ^{1/} (minutes)	
	Truck Mixer or Truck Agitator	Nonagitator Truck
50 - 64 (10 - 17.5)	90	45
> 64 (> 17.5) - without retarder	60	30
> 64 (> 17.5) - with retarder	90	45

1/ To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.”

80430

PORTLAND CEMENT CONCRETE BRIDGE DECK CURING (BDE)

Effective: April 1, 2015

Revised: November 1, 2019

Revise the following three entries and add the following footnote to the Index Table of Curing and Protection of Concrete Construction in Article 1020.13 of the Standard Specifications:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION"			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5)(6) ^{8/ 19/}	7	1020.13(d)(1)(2)
Superstructure (Approach Slab)	1020.13(a)(5)(6) ^{19/}	3	1020.13(d)(1)(2) ^{17/}
Deck	1020.13(a)(5)(6) ^{19/}	7	1020.13(d)(1)(2) ^{17/}

19/ The cellulose polyethylene or synthetic fiber with polymer polyethylene blanket method shall not be used on latex modified concrete, or vertical concrete surfaces greater than 1 ft (300 mm), e.g. parapets."

Add the following to Article 1020.13(a) of the Standard Specifications.

"(6)Cellulose Polyethylene Blanket Method and Synthetic Fiber with Polymer Polyethylene Blanket Method. After the surface of concrete has been textured or finished, it shall be covered immediately with a wetted cellulose polyethylene blanket or wetted synthetic fiber with polymer polyethylene blanket. The blankets shall be installed with the white perforated polyethylene side facing up. The blanket's fiber side shall be wetted immediately prior to placement or as the blanket is being placed, and the polyethylene side shall be thoroughly soaked with a gentle spray of water immediately after placement. For bridge decks, a foot bridge shall be used to place and wet the blankets.

Adjoining blankets shall overlap a minimum of 8 in. (200 mm). Bubbles and wrinkles shall be removed with a broom, squeegee, or as recommended by the manufacturer.

The blankets shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without indentations to the concrete surface. The soaker hoses shall be placed on top of the blankets at a maximum 4 ft (1.2 m) spacing. The blankets shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

For areas inaccessible to the blankets, curing shall be according to Article 1020.13(a)(3). "

Revise the first paragraph of Article 1022.03 of the Standard Specifications to read:

“1022.03 Waterproof Paper Blankets, White Polyethylene Sheeting, Burlap-Polyethylene Blankets, Cellulose Polyethylene Blankets, and Synthetic Fiber with Polymer Polyethylene Blankets. These materials shall be white and according to ASTM C 171.

The cellulose polyethylene blanket shall consist of a perforated white polyethylene sheeting with cellulose fiber backing and shall be limited to single use only. The cellulose polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.

The synthetic fiber with polymer polyethylene blanket shall consist of a perforated white polyethylene sheeting with absorbent synthetic fibers and super absorbent polymer backing, and shall be limited to single use only. The synthetic fiber with polymer polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.”

80359

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 and 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
BNSF Railway PO Box 140528 Kansas City, MO 64114	84 Trains/Day, 70 MPH	30 Trains/Day, 45 MPH
DOT/AAR No.: N/A RR Division: Chicago Divison	RR Mile Post: 12.2 RR Sub-Division: Chicago Subdivision	
For Freight/Passenger Information Contact: For Insurance Information Contact:	Daniel Peltier Jamie Johnson	Phone: 763-782-3495 Phone: 817-352-3485

DOT/AAR No.:	RR Mile Post:	
RR Division:	RR Sub-Division:	
For Freight/Passenger Information Contact:		Phone:
For Insurance Information Contact:		Phone:

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revised: January 2, 2021

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). RAS is the material produced from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material by weight of RAS, as defined in the Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”. RAS shall come from a facility source on the Department’s “Qualified Producer List of Certified Sources for Reclaimed Asphalt Shingles” where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual RAP stockpiles meeting one of the following definitions. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. “Homogeneous Surface”).

Prior to milling, the Contractor shall request the Department provide documentation on the quality of the RAP to clarify the appropriate stockpile.

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the No. 4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mixture composition of the mix design.
- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. Conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.
- (4) Conglomerate "D" Quality (Conglomerate DQ). Conglomerate DQ RAP stockpiles shall be according to Articles 1031.02(a)(1)-1031.02(a)(3), except they may also consist of RAP from HMA shoulders, bituminous stabilized subbases, or HMA (High or Low ESAL) binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, non-bituminous surface treatment (i.e. high friction surface treatments), pavement fabric, joint sealants, plant cleanout, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) or fine FRAP up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be B quality or better from an

approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

Additional processed RAP/FRAP/RAS shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the original stockpile after the test results for the working pile are found to meet the requirements specified in Articles 1031.03 and 1031.04.

1031.03 Testing. RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2,000 tons (1,800 metric tons) and one sample per 2,000 tons (1,800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4,000 tons (3,600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the Department proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Each sample shall be split to obtain two equal samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1,000 tons (900 metric tons) and one sample per 500 tons (450 metric tons) or a minimum of once per week, whichever is more frequent, thereafter. A minimum of five samples are required for stockpiles less than 1,000 tons (900 metric tons).

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The

Contractor shall perform a washed extraction and test for unacceptable materials on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

The Contractor shall obtain and make available all of the test results from the start of the original stockpile.

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

- (a) Limits of Precision. The limits of precision between the Contractor's and the Department's split sample test results shall be according to the following.

Test Parameter	Limits of Precision		
	RAP	FRAP	RAS
% Passing			
1/2 in. (12.5 mm)	6.0 %	5.0 %	
# 4 (4.75 mm)	6.0 %	5.0 %	
# 8 (2.36 mm)	4.0 %	3.0 %	4.0 %
# 30 (600 μm)	3.0 %	2.0 %	4.0 %
# 200 (75 μm)	2.5 %	2.2 %	4.0 %
Asphalt Binder	0.4 %	0.3 %	3.0 %
G _{mm}	0.035	0.030	

If the test results are outside the above limits of precision, the Department will immediately investigate.

- (b) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation, and when applicable G_{mm}. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous/ Conglomerate
1 in. (25 mm)	
1/2 in. (12.5 mm)	± 8 %
# 4 (4.75 mm)	± 6 %
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	
# 30 (600 μm)	± 5 %
# 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.4 % ^{1/}
G _{mm}	± 0.03 ^{2/}

1/ The tolerance for FRAP shall be ± 0.3 percent.

- 2/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Aggregate Bulk (Dry) Specific Gravity (Gsb) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)".

If more than 20 percent of the test results for an individual parameter (individual sieves, G_{mm} , and/or asphalt binder content) are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the Department for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for solvent extractions according to the document "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (c) Evaluation of RAS and RAS Blended with Manufactured Sand or Fine FRAP Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	± 5 %
# 30 (600 μm)	± 4 %
# 200 (75 μm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If more than 20 percent of the test results for an individual parameter (individual sieves and/or asphalt binder content) are out of the above tolerances, or if the unacceptable material exceeds 0.5 percent by weight of material retained on the No. 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the Department for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate DQ stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Class I binder, HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C quality coarse aggregate.

(3) RAP from BAM stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus No. 4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate sample to the District Office. Consultant laboratory services will be at no additional cost to the Department. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

1031.06 Use of RAP/FRAP and/or RAS in HMA. The use of RAP/FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

(1) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

(2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) surface and binder mixture applications.

(3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. FRAP from conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus No. 4 (4.75 mm) homogeneous FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.

(4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.

(5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, or conglomerate.

- (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.
- (1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement (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
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).

- (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
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	--	--	25

IL-4.75	--	--	35
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- 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).

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the individual parameter test results, as defined in Article 1031.04, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

The RAP, FRAP, and RAS stone bulk specific gravities (G_{sb}) shall be according to the "Determination of Aggregate Bulk (Dry) Specific Gravity (G_{sb}) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)" procedure in the Department's Manual of Test Procedures for Materials.

1031.08 HMA Production. HMA production utilizing RAP/FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP/FRAP and/or RAS feed system to remove or reduce oversized material.

If the RAP/FRAP and/or RAS control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and/or RAS and either switch to the virgin aggregate design or submit a new mix design.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.
- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within

± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAP/FRAP/RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP/RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP/RAS are recorded in a wet condition.)
- i. A positive dust control system shall be utilized when the combined contribution of reclaimed material passing the No. 200 sieve exceeds 1.5 percent.

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).

- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Applications. RAP in aggregate applications shall be according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications" and the following.

- (a) RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B shall be as follows.
 - (1) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
 - (2) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted.
- (b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Article 1031.06, except "Conglomerate DQ" and "Non-Quality" may be used."

80306

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revised: January 1, 2020

Revise Section 669 of the Standard Specifications to read:

“SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

669.01 Description. This work shall consist of the transportation and proper disposal of regulated substances. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their contents and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-Construction Submittals and Qualifications. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a “Regulated Substances Pre-Construction Plan (RSPCP)” to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the Contractor(s) or firm(s) performing the work shall meet the following qualifications.

- (a) Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

- (b) Underground Storage Tank Removal. Qualification for underground storage tank (UST) removal work shall require licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field and documented using BDE 2730A "Regulated Substances Pre-Construction Plan (RSPCP) Addendum" and submitted to the Engineer for approval.

CONSTRUCTION REQUIREMENTS

669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities at the contract specific work areas. 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)".

- (a) Environmental Observation. Prior to beginning excavation, the Contractor shall mark the limits of the contract specific work areas. Once work begins, the monitoring personnel shall be present on-site continuously during the excavation and loading of material.
- (b) Field Screening. Field screening shall be performed during the excavation and loading of material from the contract specific work areas, except for material classified according to Article 669.05(b)(1) or 669.05(c) where field screening is not required.

Field screening shall be performed with either a photoionization detector (PID) (minimum 10.6eV lamp) or a flame ionization detector (FID), and other equipment as appropriate, to monitor for potential contaminants associated with regulated substances. The PID or FID shall be calibrated on-site, and background level readings taken and recorded daily, and as field and weather conditions change. Field screen readings on the PID or FID in excess of background levels indicates the potential presence of regulated substances requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

669.05 Regulated Substances Management and Disposal. The management and disposal of soil and/or groundwater containing regulated substances shall be according to the following:

- (a) **Soil Analytical Results Exceed Most Stringent MAC.** When the soil analytical results indicate detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC, but still considered within area background levels by the Engineer, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable. If the soils cannot be utilized within the right-of-way, they shall be managed and disposed of at a landfill as a non-special waste.
 - (2) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County identified in 35 Ill. Admin. Code 742 Appendix A. Table G, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above and the materials do not contain special waste or hazardous waste, as determined by the Engineer, the soil shall be managed and disposed of at a landfill as a non-special waste.
 - (6) When analytical results indicate soil is hazardous by characteristic or listing pursuant to 35 Ill. Admin. Code 721, contains radiological constituents, or the Engineer otherwise determines the soil cannot be managed according to Articles 669.05(a)(1)

through (a)(5) above, the soil shall be managed and disposed of off-site as a special waste or hazardous waste as applicable.

(b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.

(1) The pH of the soil is less than 6.25 or greater than 9.0.

(2) The soil exhibited PID or FID readings in excess of background levels.

(c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 Ill. Admin. Code 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.

(d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Ill. Admin. Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste or hazardous waste as applicable. Special waste groundwater shall be containerized and trucked to an off-site treatment facility, or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sanitary sewer or combined sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sanitary sewer or combined sewer.

Groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench, it may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority, or it shall be containerized and trucked to an off-site treatment facility as a special waste or hazardous waste. The Contractor is prohibited from discharging groundwater within the trench through a storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive

soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Contractor shall obtain all documentation including any permits and/or licenses required to transport the material containing regulated substances to the disposal facility. The Contractor shall coordinate with the Engineer on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate waste disposal approvals with the disposal facility.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation that the Contractor is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

Transportation and disposal of material classified according to Article 669.05(a)(5) or 669.05(a)(6) shall be completed each day so that none of the material remains on-site by the close of business, except when temporary staging has been approved.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number provided by the Bureau of Design and Environment. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill permitted for disposal of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by their permit and whether the disposal 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 landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 Ill. Admin. Code 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 Ill. Admin. Code 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;
- (6) a material subject to the waste analysis and recordkeeping requirements of 35 Ill. Admin. Code 728.107 under land disposal restrictions of 35 Ill. Admin. Code 728;
- (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
- (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.

(b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:

- (1) the means by which the generator has determined the waste is not a hazardous waste;
- (2) the means by which the generator has determined the waste is not a liquid;
- (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
- (4) if the waste does not undergo testing, an explanation as to why no testing is needed;

(5) a description of the process generating the waste; and

(6) relevant material safety data sheets.

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. 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.

Temporary staging shall be accomplished within the right-of-way and the Contractor's means and methods shall be described in the approved or amended RSPCP. Staging areas shall not be located within 200 feet (61 m) of a public or private water supply well; nor within 100 feet (30 m) of sensitive environmental receptor areas, including wetlands, rivers, streams, lakes, or designated habitat zones.

The method of staging shall consist of containerization or stockpiling as applicable for the type, classification, and physical state (i.e., liquid, solid, semisolid) of the material. Materials of different classifications shall be staged separately with no mixing or co-mingling.

When containers are used, the containers and their contents shall remain intact and inaccessible to unauthorized persons until the manner of disposal is determined. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could cause the waste to be reclassified as a hazardous or special waste.

When stockpiles are used, they shall be covered with a minimum 20-mil plastic sheeting or tarps secured using weights or tie-downs. Perimeter berms or diversionary trenches shall be provided to contain and collect for disposal any water that drains from the soil. Stockpiles shall be managed to prevent or reduce potential dust generation.

When staging non-special waste, special waste, or hazardous waste, the following additional requirements shall apply:

- (a) **Non-Special Waste.** When stockpiling soil classified according to Article 669.05(a)(1) or 669.05(a)(5), an impermeable surface barrier between the materials and the ground surface shall be installed. The impermeable barrier shall consist of a minimum 20-mil plastic liner material and the surface of the stockpile area shall be clean and free of debris prior to placement of the liner. Measures shall also be taken to limit or discourage access to the staging area.
- (b) **Special Waste and Hazardous Waste.** Soil classified according to Article 669.05(a)(6) shall not be stockpiled but shall be containerized immediately upon generation in containers, tanks or containment buildings as defined by RCRA, Toxic Substances Control

Act (TSCA), and other applicable State or local regulations and requirements, including 35 Ill. Admin. Code Part 722, Standards Applicable to Generators of Hazardous Waste.

The staging area(s) shall be enclosed (by a fence or other structure) to restrict direct access to the area, and all required regulatory identification signs applicable to a staging area containing special waste or hazardous waste shall be deployed.

Storage containers shall be placed on an all-weather gravel-packed, asphalt, or concrete surface. Containers shall be in good condition and free of leaks, large dents, or severe rusting, which may compromise containment integrity. Containers must be constructed of, or lined with, materials that will not react or be otherwise incompatible with the hazardous or special waste contents. Containers used to store liquids shall not be filled more than 80 percent of the rated capacity. Incompatible wastes shall not be placed in the same container or comingled.

All containers shall be legibly labeled and marked using pre-printed labels and permanent marker in accordance with applicable regulations, clearly showing the date of waste generation, location and/or area of waste generation, and type of waste. The Contractor shall place these identifying markings on an exterior side surface of the container.

Storage containers shall be kept closed, and storage pads covered, except when access is needed by authorized personnel.

Special waste and hazardous waste shall be transported and disposed within 90 days from the date of generation.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Admin. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Admin. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the District Environmental Studies Unit (DESU). Upon confirmation of a release of contaminants and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the tank is located and the DESU Manager).

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank;
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the tank excavation zone and entered into subsurface structures (such as sewers or basements).

The tank excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substances Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a "Regulated Substances Final Construction Report (RSFCR)" to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof to the nearest 0.5 calendar day, for REGULATED SUBSTANCES MONITORING.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of UST removal, soil excavation, soil and content sampling, the management of excavated soil and UST content, and UST disposal, will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for

NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

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) will be paid for according to Article 109.04. The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

When the waste material for disposal requires sampling for landfill disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT.”

80407

SILT FENCE, INLET FILTERS, GROUND STABILIZATION AND RIPRAP FILTER FABRIC (BDE)

Effective: November 1, 2019

Revised: April 1, 2020

Revise Article 280.02(m) and add Article 280.02(n) so the Standard Specifications read:

“(m) Above Grade Inlet Filter (Fitted)..... 1081.15(j)
 (n) Above Grade Inlet Filter (Non-Fitted).....1081.15(k)”

Revise the last sentence of the first paragraph in Article 280.04(c) of the Standard Specifications to read:

“The protection shall be constructed with hay or straw bales, silt filter fence, above grade inlet filters (fitted and non-fitted), or inlet filters.

Revise the first sentence of the second paragraph in Article 280.04(c) of the Standard Specifications to read:

“When above grade inlet filters (fitted and non-fitted) are specified, they shall be of sufficient size to completely span and enclose the inlet structure.”

Revise Article 1080.02 of the Standard Specifications to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall consist of woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence.

The fabric for ground stabilization shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 2 and nonwoven fabrics shall be Class 1 according to AASHTO M 288.

The physical properties for silt fence and ground stabilization fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Silt Fence Woven ^{1/}	Ground Stabilization Woven ^{2/}	Ground Stabilization Nonwoven ^{2/}
Grab Strength, lb (N) ^{3/} ASTM D 4632	123 (550) MD 101 (450) XD	247 (1100) min. ^{4/}	202 (900) min. ^{4/}
Elongation/Grab Strain, % ASTM D 4632 ^{4/}	49 max.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{4/}	--	90 (400) min.	79 (350) min.

Puncture Strength, lb (N) ASTM D 6241 ^{4/}	--	494 (2200) min.	433 (1925) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{5/}	30 (0.60) max.	40 (0.43) max.	40 (0.43) max.
Permittivity, sec ⁻¹ ASTM D 4491	0.05 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	70 min.	50 min.	50 min.

- 1/ NTPEP results or manufacturer’s certification to meet test requirements.
- 2/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.
- 3/ MD = Machine direction. XD = Cross-machine direction.
- 4/ Values represent the minimum average roll value (MARV) in the weaker principle direction, MD or XD.
- 5/ Values represent the maximum average roll value.”

Revise Article 1080.03 of the Standard Specifications to read:

“1080.03 Filter Fabric. The filter fabric shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 3 for riprap gradations RR 4 and RR 5, and Class 2 for RR 6 and RR 7 according to AASHTO M 288. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. Nonwoven fabrics shall be Class 2 for riprap gradations RR 4 and RR 5, and Class 1 for RR 6 and RR 7 according to AASHTO M 288. After forming, the fabric shall be processed so that the yarns or filaments retain their relative positions with respect to each other. The fabric shall be new and undamaged.

The filter fabric shall be manufactured in widths of not less than 6 ft (2 m). Sheets of fabric may be sewn together with thread of a material meeting the chemical requirements given for the yarns or filaments to form fabric widths as required. The sheets of filter fabric shall be sewn together at the point of manufacture or another approved location.

The filter fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}				
	Gradation Nos. RR 4 & RR 5		Gradation Nos. RR 6 & RR 7	
	Woven	Nonwoven	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	157 (700) min.	247 (1100) min.	202 (900) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	56 (250) min.	90 (400) min.	79 (350) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	309 (1375) min.	494 (2200) min.	433 (1925) min.
Ultraviolet Stability, % retained strength after 500 hours of exposure - ASTM D 4355	50 min.			

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP's DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

As determined by the Engineer, the filter fabric shall meet the requirements noted in the following after an onsite investigation of the soil to be protected.

Soil by Weight (Mass) Passing the No. 200 sieve (75 µm), %	Apparent Opening Size, Sieve No. (mm) - ASTM D 4751 ^{1/}	Permittivity, sec ⁻¹ ASTM D 4491
49 max.	60 (0.25) max.	0.2 min.
50 min.	70 (0.22) max.	0.1 min.

1/ Values represent the maximum average roll value.”

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

“a. Inner Filter Fabric Bag. The inner filter fabric bag shall be constructed of woven yarns or nonwoven filaments made of polyolefins or polyesters with a minimum silt and debris capacity of 2.0 cu ft (0.06 cu m). Woven fabric shall be Class 3 and nonwoven fabric shall be Class 2 according to AASHTO M 288. The fabric bag shall be according to the following.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.	
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.	

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Revise Article 1081.15(i)(1) of the Standard Specifications to read:

“(i) Urethane Foam/Geotextile. Urethane foam/geotextile shall be triangular shaped having a minimum height of 10 in. (250 mm) in the center with equal sides and a minimum 20 in. (500 mm) base. The triangular shaped inner material shall be a low density urethane foam. The outer geotextile fabric cover shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters placed around the inner material and shall extend beyond both sides of the triangle a minimum of 18 in. (450 mm). Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288.

(1) The geotextile shall meet the following properties.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.

Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	30 (0.60) max.
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Add the following to Article 1081.15(i) of the Standard Specifications.

“(3) Certification. The manufacturer shall furnish a certificate with each shipment of urethane foam/geotextile assemblies stating the amount of product furnished and that the material complies with these requirements.”

Revise the title and first sentence of Article 1081.15(j) of the Standards Specifications to read:

“(j) Above Grade Inlet Filters (Fitted). Above grade inlet filters (fitted) shall consist of a rigid polyethylene frame covered with a fitted geotextile filter fabric.”

Revise Article 1081.15(j)(2) of the Standard Specifications to read:

(2) Fitted Geotextile Filter Fabric. The fitted geotextile filter fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288. The filter shall be fabricated to provide a direct fit to the frame. The top of the filter shall integrate a coarse screen with a minimum apparent opening size of 1/2 in. (13 mm) to allow large volumes of water to pass through in the event of heavy flows. The filter shall have integrated anti-buoyancy pockets capable of holding a minimum of 3.0 cu ft (0.08 cu m) of stabilization material. Each filter shall have a label with the following information sewn to or otherwise permanently adhered to the outside: manufacturer’s name, product name, and lot, model, or serial number. The fitted geotextile filter fabric shall be according to the table in Article 1081.15(h)(3)a above.”

Add Article 1081.15(k) to the Standard Specifications to read:

“(k) Above Grade Inlet Filters (Non-Fitted). Above grade inlet filters (non-fitted) shall consist of a geotextile fabric surrounding a metal frame. The frame shall consist of either a) a circular cage formed of welded wire mesh, or b) a collapsible aluminum frame, as described below.

(1) Frame Construction.

- a) Welded Wire Mesh Frame. The frame shall consist of 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh formed of #10 gauge (3.42 mm) steel conforming to ASTM A 185. The mesh shall be 30 in. (750 mm) tall and formed into a 42 in. (1.05 m) minimum diameter cylinder.
 - b) Collapsible Aluminum Frame. The collapsible aluminum frame shall consist of grade 6036 aluminum. The frame shall have anchor lugs that attach it to the inlet grate, which shall resist movement from water and debris. The collapsible joints of the frame shall have a locking device to secure the vertical members in place, which shall prevent the frame from collapsing while under load from water and debris.
- (2) Geotextile Fabric. The geotextile fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. The woven filter fabric shall be a Class 3 and the nonwoven filter fabric shall be a Class 2 according to AASHTO M 288. The geotextile fabric shall be according to the table in Article 1081.15(h)(3)a above.
- (3) Geotechnical Fabric Attachment to the Frame.
- a) Welded Wire Mesh Frame. The woven or nonwoven geotextile fabric shall be wrapped 3 in. (75 mm) over the top member of a 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh frame and secured with fastening rings constructed of wire conforming to ASTM A 641, A 809, A 370, and A 938 at 6 in. (150 mm) on center. The fastening rings shall penetrate both layers of geotextile and securely close around the steel mesh. The geotextile shall be secured to the sides of the welded wire mesh with fastening rings at a spacing of 1 per sq ft (11 per sq m) and securely close around a steel member.
 - b) Collapsible Aluminum Frame. The woven or nonwoven fabric shall be secured to the aluminum frame along the top and bottom of the frame perimeter with strips of aluminum secured to the perimeter member, such that the anchoring system provides a uniformly distributed stress throughout the geotechnical fabric.
- (4) Certification. The manufacturer shall furnish a certificate with each shipment of above grade inlet filter assemblies stating the amount of product furnished and that the material complies with these requirements.”

80419

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: August 1, 2017

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling) Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness) Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness) Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness) Other piling	23 lb/ft (34 kg/m) 32 lb/ft (48 kg/m) 37 lb/ft (55 kg/m) See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail Steel Plate Beam Guardrail, Type A w/steel posts Steel Plate Beam Guardrail, Type B w/steel posts Steel Plate Beam Guardrail, Types A and B w/wood posts Steel Plate Beam Guardrail, Type 2 Steel Plate Beam Guardrail, Type 6 Traffic Barrier Terminal, Type 1 Special (Tangent) Traffic Barrier Terminal, Type 1 Special (Flared)	20 lb/ft (30 kg/m) 30 lb/ft (45 kg/m) 8 lb/ft (12 kg/m) 305 lb (140 kg) each 1260 lb (570 kg) each 730 lb (330 kg) each 410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms Traffic Signal Post Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m) Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m) Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m) Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m) Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m) Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m) Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	11 lb/ft (16 kg/m) 14 lb/ft (21 kg/m) 21 lb/ft (31 kg/m) 13 lb/ft (19 kg/m) 19 lb/ft (28 kg/m) 31 lb/ft (46 kg/m) 65 lb/ft (97 kg/m) 80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence) Steel Railing, Type SM Steel Railing, Type S-1 Steel Railing, Type T-1 Steel Bridge Rail	64 lb/ft (95 kg/m) 39 lb/ft (58 kg/m) 53 lb/ft (79 kg/m) 52 lb/ft (77 kg/m)
Frames and Grates Frame Lids and Grates	250 lb (115 kg) 150 lb (70 kg)

80127

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

80397

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

80391

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled “Specific Equal Employment Opportunity Responsibilities,” and is in implementation of 23 U.S.C. 140(a).

As part of the contractor’s equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 2 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor’s needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor’s records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).
WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

| Revised: April 2, 2015

| The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

| The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact

attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH-16 compliant is available, an NCHRP 350 or MASH-2009 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”

80427

PIPE UNDERDRAINS FOR STRUCTURES

Effective: May 17, 2000

Revised: October 23, 2020

Add the following to the table following the second paragraph of Article 601.01:

Type	Description
Pipe Underdrains for Structures	A perforated pipe, encased in fabric, installed in a trench backfilled with coarse and fine aggregate
Pipe Underdrains for Structures (Special)	A non-perforated pipe installed in a trench to outlet Pipe Underdrains for Structures

Revise the first sentence of Article 601.02(e) as follows:

(e) Pipe Underdrains (Special) and Pipe Underdrains for Structures (Special). Materials for pipe underdrains (special) and pipe underdrains for structures (special) shall be according to the following.

Add the following to Article 601.02:

(g) Pipe Underdrains for Structures

Item	Article/Section
(1) Perforated Corrugated Steel Pipe (Note 1) (Note 3)	1006.01
(2) Perforated Polyvinyl Chloride (PVC) Pipe (Note 3)	1040.03
(3) Perforated Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior (Note 3)	1040.03
(4) Perforated Corrugated Polyethylene (PE) Pipe (Note 2) (Note 3)	1040.04
(5) Perforated Corrugated Polyethylene (PE) Pipe with a Smooth Interior (Note 3)	1040.04
(6) Fine Aggregate for Bedding and Backfill (Note 5).....	1003.04
(7) Coarse Aggregate for Bedding and Backfill (Note 5).....	1004.05
(8) Geotechnical Fabric.....	1080.05

Note 5. Fine and Coarse Aggregate shall meet the requirements of Section 586.

Revise the first sentence of Article 601.04(d) as follows:

(e) Pipe Underdrains (Special) and Pipe Underdrains for Structures (Special). Pipe underdrains (special) and pipe underdrains for structures (special) used for outletting pipe underdrains shall be according to the trench requirements for pipe underdrains.

Revise the first sentence of Article 601.05 as follows:

Concrete headwalls for pipe drains, pipe underdrains (special), pipe underdrains for structures (special), and backslope drains shall be constructed at the locations and according to the details shown on the plans.

Revise Article 601.07 as follows:

601.07 Method of Measurement. Pipe drains, pipe underdrains, pipe underdrains for structures, pipe underdrains (special), and pipe underdrains for structures (special) will be measured for payment in feet (meters) in place.

Measurement for pipe underdrain (special) and pipe underdrains for structures (special) will be made from the back of the headwall to the centerline of the pipe underdrain or pipe underdrain for structures.

Add the following sentence to Article 601.08:

Pipe underdrains for structures will be paid for at the contract unit price per foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES, of the diameter specified. Pipe underdrains for structures (special) will be paid for at the contract unit price per foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES (SPECIAL), of the diameter specified.

BOND BREAKER FOR PRESTRESSED CONCRETE BEAMS

Effective: April 19, 2012

Revised: October 23, 2020

Add the following to Article 504.02.

(l) Membrane Curing Compounds.....1022.01
(m) Protective Coat.....1023.01

Add the following to Article 504.06.

(g) Bond Breaker for Precast Prestressed Concrete Beams. Bond breaker shall be applied to the top flange of precast prestressed concrete beams. After the beams have been erected at the job site and just prior to installation of the bridge deck reinforcement, portions of the top surface of the beams identified on the plans shall have one of the following bond breakers applied:

1. Two coats of Type I, II or III membrane curing compound applied with a roller
2. Two coats of protective coat applied with a roller
3. Bonded Roofing felt - 30 lbs. (13.6 kg)

The concrete surface shall be clean of loose debris and dry for a minimum of 2 hours, prior to application of the bond breaking material. The temperature of the concrete and air shall be 40°F (4°C) or higher at the time of application.

For systems requiring multiple coats, the second coat may follow immediately after the first coat. The material shall not be exposed to rain, snow, or foot traffic for a minimum period of 4 hours after application.

Damaged or compromised bond breaker, as determined by the Engineer, shall be repaired.

BRIDGE DECK CONSTRUCTION

Effective: October 22, 2013

Revised: December 21, 2016

When Diamond Grinding of Bridge Sections is specified, hand finishing of the deck surface shall be limited to areas not finished by the finishing machine and to address surface corrections according to Article 503.16(a)(2). Hand finishing shall be limited as previously stated solely for the purpose of facilitating a more timely application of the curing protection. In addition the requirements of 503.16(a)(3)a. and 503.16(a)(4) will be waived.

Revise the Second Paragraph of Article 503.06(b) to read as follows.

“When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows.”

Revise Article 503.06(b)(1) to read as follows.

- “(1) Bracket Placement. The spacing of brackets shall be per the manufacturer’s published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket shall bear on the web within 6 inches (150 mm) of the bottom flange of the beam or girder.”

Revise Article 503.06(b)(2) to read as follows.

- “(2) Beam Ties. The top flange of exterior steel beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The top flange of exterior concrete beams supporting the cantilever forming brackets shall be tied to the top flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers. Permanent cross frames on steel girders may be considered a tie. Ties shall be a minimum of 1/2 inch (13 mm) diameter threaded rod with an adjusting mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange of steel beams. No welding will be permitted to the structural steel or stud shear connectors, or to reinforcement bars of concrete beams, for the installation of the tie bar system. After installation of the ties and blocking, the tie shall be drawn taut until the tie does not vary from a straight line from beam to beam. The tie system shall be approved by the Engineer.”

Revise Article 503.06(b)(3) to read as follows.

- “(3) Beam Blocks. Suitable beam blocks of 4 in x 4 in (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is not feasible to have

the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be placed at each bracket to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder.”

Delete the last paragraph of Article 503.06(b).

DRILLED SHAFTS

Effective: October 5, 2015

Revised: October 4, 2016

Revise Section 516 of the Standard Specifications to read:

“SECTION 516. DRILLED SHAFTS

516.01 Description. This work shall consist of constructing drilled shaft foundations.

516.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Reinforcement Bars.....	1006.10
(c) Grout (Note 2)	1024.01
(d) Permanent Steel Casing	1006.05(d)
(e) Slurry (Note 3)	

Note 1. When the soil contains sulfate contaminates, ASTM C 1580 testing will be performed to assess the severity of sulfate exposure to the concrete. If the sulfate contaminate is >0.10 to < 0.20 percent by mass, a Type II (MH) cement shall be used. If the sulfate contaminate is >0.20 to < 2.0 percent by mass, a Type V cement shall be used. If the sulfate contaminate is ≥ 2.0 percent by mass, refer to ACI 201.2R for guidance.

Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be two to five parts sand and one part Type I or II cement. The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm).

Note 3. Slurry shall be bentonite, emulsified polymer, or dry polymer, and shall be approved by the Engineer.

516.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Concrete Equipment	1020.03
(b) Drilling Equipment (Note 1)	
(c) Hand Vibrator	1103.17(a)
(d) Underwater Concrete Placement Equipment	1103.18

Note 1. The drilling equipment shall have adequate capacity, including power, torque and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20 percent beyond the depths shown on the plans.

516.04 Submittals. The following information shall be submitted on form BBS 133.

(a) Qualifications. At the time of the preconstruction conference, the Contractor shall provide the following documentation.

(1) References. A list containing at least three projects completed within the three years prior to this project's bid date which the Contractor performing this work has installed drilled shafts of similar diameter, length, and site conditions to those shown in the plans. The list of projects shall contain names and phone numbers of owner's representatives who can verify the Contractor's participation on those projects.

(2) Experience. Name and experience record of the drilled shaft supervisor, responsible for all facets of the shaft installation, and the drill operator(s) who will be assigned to this project. The supervisor and operator(s) shall each have a minimum of three years experience in the construction of drilled shafts.

(b) Installation Procedure. A detailed installation procedure shall be submitted to the Engineer for acceptance at least 28 days prior to drilled shaft construction and shall address each of the following items unless otherwise directed by the Engineer in writing.

(1) Equipment List. List of proposed equipment to be used including cranes, drill rigs, augers, belling tools, casing, vibratory hammers, core barrels, bailing buckets, final cleaning equipment, slurry equipment, tremies, or concrete pumps, etc.

(2) General Sequence. Details of the overall construction operation sequence, equipment access, and the sequence of individual shaft construction within each substructure bent or footing group. The submittal shall address the Contractor's proposed time delay and/or the minimum concrete strength necessary before initiating a shaft excavation adjacent to a recently installed drilled shaft.

(3) Shaft Excavation. A site specific step by step description of how the Contractor anticipates the shaft excavation to be advanced based on their evaluation of the subsurface data and conditions expected to be encountered. This sequence shall note the method of casing advancement, anticipated casing lengths, tip elevations and diameters, the excavation tools used and drilled diameters created. The Contractor shall indicate whether wet or dry drilling conditions are expected and if groundwater will be sealed from the excavation.

- (4) Slurry. When the use of slurry is proposed, details on the types of additives to be used and their manufacturers shall be provided. In addition, details covering the measurement and control of the hardness of the mixing water, agitation, circulation, de-sanding, sampling, testing, and chemical properties of the slurry shall be submitted.
- (5) Shaft Cleaning. Method(s) and sequence proposed for the shaft cleaning operation.
- (6) Reinforcement Cage and Permanent Casing. Details of reinforcement placement including rolling spacers to be used and method to maintain proper elevation and location of the reinforcement cage within the shaft excavation during concrete placement. The method(s) of adjusting the reinforcement cage length and permanent casing if rock is encountered at an elevation other than as shown on the plans. As an option, the Contractor may perform soil borings and rock cores at the drilled shaft locations to determine the required reinforcement cage and permanent casing lengths.
- (7) Concrete Placement. Details of concrete placement including proposed operational procedures for free fall, tremie or pumping methods. The sequence and method of casing removal shall also be stated along with the top of pour elevation, and method of forming through water above streambed.
- (8) Mix Design. The proposed concrete mix design(s).
- (9) Disposal Plan. Containment and disposal plan for slurry and displaced water. Containment and disposal plan for contaminated concrete pushed out of the top of the shaft by uncontaminated concrete during concrete placement.
- (10) Access and Site Protection Plan. Details of access to the drilled shafts and safety measures proposed. This shall include a list of casing, scaffolding, work platforms, temporary walkways, railings, and other items needed to provide safe access to the drilled shafts. Provisions to protect open excavations during non-working hours shall be included.

The Engineer will evaluate the drilled shaft installation procedure and notify the Contractor of acceptance, need for additional information, or concerns with the installation's effect on the existing or proposed structure(s).

CONSTRUCTION REQUIREMENTS

516.05 General. Excavation for drilled shaft(s) shall not proceed until written authorization is received from the Engineer. The Contractor shall be responsible for verification of the dimensions and alignment of each shaft excavation as directed by the Engineer.

Unless otherwise approved in the Contractor's installation procedure, no shaft excavation, casing installation, or casing removal with a vibratory hammer shall be made within four shaft diameters center to center of a shaft with concrete that has a compressive strength less than 1500 psi (10,300 kPa). The site-specific soil strengths and installation methods selected will determine the actual required minimum spacing, if any, to address vibration and blow out concerns.

Lost tools shall not remain in the shaft excavation without the approval of the Engineer.

Blasting shall not be used as a method of shaft excavation.

516.06 Shaft Excavation Protection Methods. The construction of drilled shafts may involve the use of one or more of the following methods to support the excavation during the various phases of shaft excavation, cleaning, and concrete placement dependent on the site conditions encountered. Surface water shall not flow uncontrolled into the shaft excavation, however water may be placed into the shaft excavation in order to meet head pressure requirements according to Articles 516.06(c) and 516.13.

The following are general descriptions indicating the conditions when these methods may be used.

- (a) **Dry Method.** The dry construction method shall only be used at sites where the groundwater and soil conditions are suitable to permit the drilling and dewatering of the excavation without causing subsidence of adjacent ground, boiling of the base soils, squeezing, or caving of the shaft side walls. The dry method shall consist of drilling the shaft excavation, removing accumulated water, cleaning the shaft base, and placing the reinforcement cage and concrete in a predominately dry excavation.
- (b) **Slurry Method.** The slurry construction method may be used at sites where dewatering the excavation would cause collapse of the shaft sidewalls or when the volume and head of water flowing into the shaft is likely to contaminate the concrete during placement resulting in a shaft defect. This method uses slurry, or in rare cases water, to maintain stability of the shaft sidewall while advancing the shaft excavation. After the shaft excavation is completed, the slurry level in the shaft shall be kept at an elevation to

maintain stability of the shaft sidewall, maintain stability of the shaft base, and prevent additional groundwater from entering the shaft. The shaft base shall be cleaned, the reinforcement cage shall be set, and the concrete shall be discharged at the bottom of the shaft excavation, displacing the slurry upwards.

- (c) Temporary Casing Method. Temporary casing shall be used when either the dry or slurry methods provide inadequate support to prevent sidewall caving or excessive deformation of the shaft excavation. Temporary casing may be used with slurry or be used to reduce the flow of water into the excavation to allow dewatering and concrete placement in a dry shaft excavation. Temporary casing shall not be allowed to remain permanently without the approval of the Engineer.

During removal of the temporary casing, the level of concrete in the casing shall be maintained at a level such that the head pressure inside the casing is a minimum of 1.25 times the head pressure outside the casing, but in no case is less than 5 ft (1.5 m) above the bottom of the casing. Casing removal shall be at a slow, uniform rate with the pull in line with the shaft axis. Excessive rotation of the casing shall be avoided to limit deformation of the reinforcement cage. In addition, the slump requirements during casing removal shall be according to Article 516.12.

When called for on the plans, the Contractor shall install a permanent casing as specified. Permanent casing may be used as a shaft excavation support method or may be installed after shaft excavation is completed using one of the above methods. After construction, if voids are present between the permanent casing and the drilled excavation, the voids shall be filled with grout. Permanent casing shall not remain in place beyond the limits shown on the plans without the specific approval of the Engineer.

When the shaft extends above the streambed through a body of water and permanent casing is not shown, the portion above the streambed shall be formed with removable casings, column forms, or other forming systems as approved by the Engineer. The forming system shall not scar or spall the finished concrete or leave in place any forms or casing within the removable form limits as shown on the plans unless approved as part of the installation procedure. The forming system shall not be removed until the concrete has attained a minimum compressive strength of 2500 psi (17,200 kPa) and cured for a minimum of 72 hours. For shafts extending through water, the concrete shall be protected from water action after placement for a minimum of seven days.

516.07 Slurry. When slurry is used, the Contractor shall provide a technical representative of the slurry additive manufacturer at the site prior to introduction of the slurry into the first shaft where slurry will be used, and during drilling and completion of a minimum of one shaft to adjust the slurry mix to the specific site conditions. During construction, the level of the slurry shall be maintained a minimum of 5 feet (1.5 m) above the height required to prevent

caving of the shaft excavation. In the event of a sudden or significant loss of slurry in the shaft excavation, the construction of that foundation shall be stopped and the shaft excavation backfilled or supported by temporary casing, until a method to stop slurry loss, or an alternate construction procedure, has been approved by the Engineer.

- (a) General Properties. The material used to make the slurry shall not be detrimental to the concrete or surrounding ground. Mineral slurries shall have both a mineral grain size that remains in suspension and sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. Polymer slurries shall have sufficient viscosity and gel characteristics to transport excavated material to suitable screening systems or settling tanks. The percentage and specific gravity of the material used to make the slurry shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement.

If approved by the Engineer, the Contractor may use water and excavated soils as drilling slurry. In this case, the range of acceptable values for density, viscosity and pH, as shown in the following table for bentonite slurry shall be met.

When water is used as the slurry to construct rock sockets in limestone, dolomite, sandstone or other formations that are not erodible, the requirements for slurry testing shall not apply if the entire fluid column is replaced with fresh water after drilling. To do so, fresh water shall be introduced at the top of the shaft excavation and existing water used during drilling shall be pumped out of the shaft excavation from the bottom of the shaft excavation until the entire volume of fluid has been replaced.

- (b) Preparation. Prior to introduction into the shaft excavation, the manufactured slurry admixture shall be pre-mixed thoroughly with clean, fresh water and for adequate time in accordance with the slurry admixture manufacturer's recommendations. Slurry tanks of adequate capacity shall be used for slurry mixing, circulation, storage and treatment. No excavated slurry pits will be allowed in lieu of slurry tanks without approval from the Engineer. Adequate desanding equipment shall be provided to control slurry properties during the drilled shaft excavation in accordance with the values provided in Table 1.
- (c) Quality Control. Quality control tests shall be performed on the slurry to determine density, viscosity, sand content and pH of freshly mixed slurry, recycled slurry and slurry in the shaft excavation. Tests of slurry samples from within two feet of the bottom and at mid-height of the shaft excavation shall be conducted in each shaft excavation during the excavation process to measure the consistency of the slurry. A minimum of four sets of tests shall be conducted during the first eight hours of slurry use on the project. When a series of four test results do not change more than 1% from the initial test, the testing frequency may be decreased to one set every four hours of slurry use. Reports of all tests, signed by an authorized representative of the Contractor, shall be furnished to the

Engineer upon completion of each drilled shaft. The physical properties of the slurry shall be as shown in Table 1.

The slurry shall be sampled and tested less than 1 hour before concrete placement. Any heavily contaminated slurry that has accumulated at the bottom of the shaft shall be removed. The contractor shall perform final shaft bottom cleaning after suspended solids have settled from the slurry. Concrete shall not be placed if the slurry does not have the required physical properties.

Table 1 – SLURRY PROPERTIES				
	Bentonite	Emulsified Polymer	Dry Polymer	Test Method
Density, lb/cu ft (kg/cu m) (at introduction)	65.2 ± 1.6 ¹ (1043.5 ± 25.6)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Density, lb/cu ft (kg/cu m) (prior to concrete placement)	67.0 ± 3.5 ¹ (1073.0 ± 56.0)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Viscosity ² , sec/qt (sec/L)	46 ± 14 (48 ± 14)	38 ± 5 (40 ± 5)	65 ± 15 (69 ± 16)	ASTM D 6910
pH	9.0 ± 1.0	9.5 ± 1.5	9.0 ± 2.0	ASTM D 4972
Sand Content, percent by volume (at introduction)	4 max.	1 max.	1 max.	ASTM D 4381
Sand Content, percent by volume (prior to concrete placement)	10 max.	1 max.	1 max.	ASTM D 4381
Contact Time ³ , hours	4 max.	72 max.	72 max.	

Note 1. When the slurry consists of only water and excavated soils, the density shall not exceed 70 lb/cu ft (1121 kg/cu m).

Note 2. Higher viscosities may be required in loose or gravelly sand deposits.

Note 3. Contact time is the time without agitation and sidewall cleaning.

516.08 Obstructions. An obstruction is an unknown isolated object that causes the shaft excavation method to experience a significant decrease in the actual production rate and requires the Contractor to core, break up, push aside, or use other means to mitigate the obstruction. Subsurface conditions such as boulders, cobbles, or logs and buried infrastructure such as footings, piling, or abandoned utilities, when shown on the plans, shall not constitute an obstruction. When an obstruction is encountered, the Contractor shall notify the Engineer immediately and upon concurrence of the Engineer, the Contractor shall mitigate the obstruction with an approved method.

516.09 Top of Rock. The top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Engineer, is encountered which cannot be drilled with augers and/or underreaming tools configured to be effective in the soils indicated in the contract documents.

516.10 Design Modifications. If the top of rock elevation differs from that shown on the plans by more than 10 percent of the length of the drilled shaft above the rock, the Engineer shall be contacted to determine if any drilled shaft design changes may be required. In addition, if the type of soil or rock encountered is not similar to that shown in the subsurface exploration data, the Contractor may be required to extend the drilled shaft length(s) beyond those specified in the plans. In either case, the Engineer will determine if revisions are necessary and the extent of the modifications required.

516.11 Excavation Cleaning and Inspection. Materials removed or generated from the shaft excavations shall be disposed of according to Article 202.03.

After excavation, each shaft shall be cleaned. For a drilled shaft terminating in soil, the depth of sediment or debris shall be a maximum of 1 1/2 in. (38 mm). For a drilled shaft terminating in rock, the depth of sediment or debris shall be a maximum of 1/2 in. (13 mm).

A shaft excavation shall be overreamed when, in the opinion of the Engineer, the sidewall has softened, swelled, or has a buildup of slurry cake. Overreaming may also be required to correct a shaft excavation which has been drilled out of tolerance. Overreaming may be accomplished with a grooving tool, overreaming bucket, or other approved equipment. Overreaming thickness shall be a minimum of 1/2 in. (13 mm) and a maximum of 3 in. (75 mm).

516.12 Reinforcement. This work shall be according to Section 508 and the following.

The shaft excavation shall be cleaned and inspected prior to placing the reinforcement cage. The reinforcement cage shall be completely assembled prior to drilling and be ready for adjustment in length as required by the conditions encountered. The reinforcement cage shall be lifted using multiple point sling straps or other approved methods to avoid reinforcement

cage distortion or stress. Cross frame stiffeners may be required for lifting or to keep the reinforcement cage in proper position during lifting and concrete placement.

The Contractor shall attach rolling spacers to keep the reinforcement cage centered within the shaft excavation during concrete placement and to ensure that at no point will the finished shaft have less than the minimum concrete cover(s) shown on the plans. The rolling spacers or other approved non-corrosive spacing devices shall be installed within 2 ft (0.6 m) of both the top and bottom of the drilled shaft and at intervals not exceeding 10 ft (3 m) throughout the length of the shaft to ensure proper reinforcement cage alignment and clearance for the entire shaft. The number of rolling spacers at each level shall be one for each 1.0 ft (300 mm) of shaft diameter, with a minimum of four rolling spacers at each level. For shafts with different shaft diameters throughout the length of the excavation, different sized rolling spacers shall be provided to ensure the reinforcement cage is properly positioned throughout the entire length of the shaft.

When a specific concrete cover between the base of the drilled shaft and the reinforcement cage is shown on the plans, the bottom of the reinforcement cage shall be supported so that the proper concrete cover is maintained.

If the conditions differ such that the length of the shaft is increased, additional longitudinal bars shall be either mechanically spliced or lap spliced to the lower end of the reinforcement cage and confined with either hoop ties or spirals. The Contractor shall have additional reinforcement available or fabricate the reinforcement cages with additional length as necessary to make the required adjustments in a timely manner as dictated by the encountered conditions. The additional reinforcement may be non-epoxy coated.

516.13 Concrete Placement. Concrete work shall be performed according to the following.

Throughout concrete placement the head pressure inside the drilled shaft shall be at least 1.1 times the head pressure outside the drilled shaft.

Concrete placement shall begin within 1 hour of shaft cleaning and inspection. The pour shall be made in a continuous manner from the bottom to the top elevation of the shaft as shown on the contract plan or as approved in the Contractor's installation procedure. Concrete placement shall continue after the shaft excavation is full and until 18 in. (450 mm) of good quality, uncontaminated concrete is expelled at the top of shaft. Vibration of the concrete will not be allowed when the concrete is displacing slurry or water. In dry excavations, the concrete in the top 10 ft (3 m) of the shaft shall be vibrated.

When using temporary casing or placing concrete under water or slurry, a minimum of seven days prior to concrete placement, a 4 cu yd (3 cu m) trial batch of the concrete mixture shall be

performed to evaluate slump retention. Temporary casing shall be withdrawn before the slump of the concrete drops below 6 in. (150 mm). For concrete placed using the slurry method of construction, the slump of all concrete placed shall be a minimum of 6 in. (150 mm) at the end of concrete placement.

Devices used to place concrete shall have no aluminum parts in contact with concrete.

When the top of the shaft is at the finished elevation and no further concrete placement above the finished elevation is specified, the top of the shaft shall be level and finished according to Article 503.15(a).

Concrete shall be placed by free fall, tremie, or concrete pump subject to the following conditions.

- (a) Free Fall Placement. Concrete shall only be placed by free fall when the rate of water infiltration into the shaft excavation is less than 12 in. (300 mm) per hour and the depth of water in the shaft excavation is less than 3 in. (75 mm) at the time of concrete placement.

Concrete placed by free fall shall fall directly to the base without contacting the reinforcement cage, cross frame stiffeners, or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed 60 ft (18.3 m) for conventional concrete or 30 ft (9.1 m) for self-consolidating concrete. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour.

- (b) Tremie and Concrete Pump Placement. Concrete placement shall be according to Article 503.08, except the discharge end of the steel pipe shall remain embedded in the concrete a minimum of 10 ft (3.0 m) throughout concrete placement when displacing slurry or water.

516.14 Construction Tolerances. The following construction tolerances shall apply to all drilled shafts.

- (a) Center of Shaft. The center of the drilled shaft shall be within 3 in. (75 mm) of the plan station and offset at the top of the shaft.

- (b) Center of Reinforcement Cage. The center of the reinforcement cage shall be within 1 1/2 in. (40 mm) of plan station and offset at the top of the shaft.
- (c) Vertical Plumbness of Shaft. The out of vertical plumbness of the shaft shall not exceed 1.5 percent.
- (d) Vertical Plumbness of Reinforcement Cage. The out of vertical plumbness of the shaft reinforcement cage shall not exceed 0.83 percent.
- (e) Top of Shaft. The top of the shaft shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.
- (f) Top of Reinforcement Cage. The top of the reinforcement cage shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.
- (g) Bottom of shaft. Excavation equipment and methods used to complete the shaft excavation shall have a nearly planar bottom. The cutting edges of excavation equipment used to create the bottom of shafts in rock shall be normal to the vertical axis of the shaft within a tolerance of 6.25 percent.

516.15 Method of Measurement. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be computed using the plan diameter of the shaft multiplied by the measured length of the shaft. The length of shaft in soil will be computed as the difference in elevation between the top of the drilled shaft shown on the plans, or as installed as part of the Contractor's installation procedure, and the bottom of the shaft or the top of rock (when present) whichever is higher. The length of shaft in rock will be computed as the difference in elevation between the measured top of rock and the bottom of the shaft.

When permanent casing is specified, it will be measured for payment in place, in feet (meters). Permanent casing installed at the Contractor's option will not be measured for payment.

Reinforcement furnished and installed will be measured for payment according to Article 508.07.

516.16 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for DRILLED SHAFT IN SOIL, and/or DRILLED SHAFT IN ROCK.

Permanent casing will be paid for at the contract unit price per foot (meter) for PERMANENT CASING.

Reinforcement furnished and installed will be paid for according to Article 508.08.

Obstruction mitigation will be paid for according to Article 109.04.”

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CROSSHOLE SONIC LOGGING TESTING OF DRILLED SHAFTS

Effective: April 20, 2016

Revised: August 9, 2019

Description. This work shall consist of furnishing and installing materials and equipment necessary to install access ducts in all drilled shafts of structures identified on the plans, and to perform Crosshole Sonic Logging (CSL) testing of selected drilled shafts on these structures. This work shall be according to Illinois Modified ASTM D6760. This work also includes analysis of the CSL data, preparation of reports summarizing the CSL data, and investigating anomalies identified in the CSL data. This work shall also include grouting of all access ducts after testing and approval by the Engineer.

Materials. Materials shall be according to the following.

- (a) Nonshrink Grout (Note 1).....1024.02
Note 1. Grout shall attain a minimum strength equal to the required strength of the drilled shaft concrete at 14 days.

Qualifications. A consulting firm experienced in CSL testing shall conduct this work. The CSL consulting firm shall be a company independent from the Contractor with a minimum of 3 years of experience in performing CSL testing of drilled shafts. The individual employee of the CSL consulting firm performing analysis of the CSL data and preparing the report shall be an Illinois Licensed Professional Engineer and have experience on a minimum of 5 projects performing CSL testing of drilled shafts.

The name, contact information, and qualifications of the CSL consulting firm, including the names and experience of the individual employees performing and analyzing the test results and preparing the report, shall be submitted to the Engineer at least 30 days prior to drilled shaft construction.

Construction. Access ducts shall be placed in all drilled shafts for the structures indicated on the plans, attached to the reinforcement cage and situated symmetrically around the diameter of the shaft according to the Illinois Modified ASTM D6760. The Engineer will determine which drilled shafts shall have CSL testing performed after the concrete has been placed in the drilled shafts, and may direct additional tests, if necessary, due to problems encountered or observed during drilled shaft construction.

After permission is given by the Engineer, the access ducts shall be grouted. The grout shall be placed with a pump, starting at the bottom of each access duct.

Superimposed loads, either dead or live, shall not be applied to a drilled shaft until CSL testing is completed, CSL reports have been submitted, any necessary repairs have been completed, access ducts have been grouted, and permission has been granted by the Engineer.

Reports. Reports shall be according to Illinois Modified ASTM D6760. Each anomalous zone detected by the CSL testing shall be identified and discussed in the report. An anomalous zone shall be defined as areas where velocity reduction exceeds 20 percent of the average velocity of properly placed and cured shaft concrete at the time of testing.

Anomalies. If anomalies are identified, they shall be investigated by coring or other methods approved by the Engineer.

Correction of Drilled Shaft Defects. When testing determines that a defect is present, the Engineer will direct the Contractor to submit remedial measures for approval. No compensation will be made for remedial work, or losses, or damage, due to remedial work of drilled shafts found defective or not in accordance with the drilled shaft specifications or plans. Modifications to the drilled shaft design, or any load transfer mechanisms required by the remedial action, must be designed, detailed, and sealed by an Illinois Licensed Structural Engineer, and submitted for approval.

Method of Measurement. Installation and grouting of access ducts will be measured for payment per shaft by the linear foot of drilled shaft(s) with access ducts.

CSL testing, analysis, and reporting will be measured for payment by each drilled shaft foundation tested.

Investigation of anomalies will not be measured for payment.

Basis of Payment. Installation and grouting of access ducts will be paid for at the contract unit price per foot for CROSSHOLE SONIC LOGGING ACCESS DUCTS. CSL testing, analysis, and reporting will be paid for at the contract unit price per each for CROSSHOLE SONIC LOGGING TESTING.

ILLINOIS MODIFIED ASTM D6760

Effective Date: August 9, 2019

Standard Test Method for

Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing

Reference ASTM D6760-14

ASTM SECTION	Illinois Modification										
3.1.1	Revise this section as follows: <i>access ducts, n</i> – preformed steel tubes or drilled boreholes, placed in the concrete to allow probe entry in pairs to measure pulse transmission in the concrete between the probes.										
6.1	Revise the second sentence of this section as follows: The tubes shall be mild steel. Delete the third, fourth, and fifth sentences of this section.										
7.1.1	<p>Revise this section as follows: The access ducts shall be installed during construction of the drilled shaft.</p> <p>For drilled shafts foundations, access ducts shall be provided according to the following table.</p> <table border="1"> <thead> <tr> <th>Reinforcing Cage Diameter (feet)</th> <th>Number of access ducts</th> </tr> </thead> <tbody> <tr> <td>≤ 4.0</td> <td>3</td> </tr> <tr> <td>4.1 to 5.0</td> <td>4</td> </tr> <tr> <td>5.1 to 7.0</td> <td>6</td> </tr> <tr> <td>> 7.0</td> <td>8</td> </tr> </tbody> </table> <p>Access ducts shall be spread equally around the perimeter and spaced at an equal distance from the axis.</p> <p>Delete Fig. 4.</p>	Reinforcing Cage Diameter (feet)	Number of access ducts	≤ 4.0	3	4.1 to 5.0	4	5.1 to 7.0	6	> 7.0	8
Reinforcing Cage Diameter (feet)	Number of access ducts										
≤ 4.0	3										
4.1 to 5.0	4										
5.1 to 7.0	6										
> 7.0	8										
7.1.2	Revise the second sentence of this section as follows: The exterior tube surface shall be free from contamination (for example, oil, dirt, loose rust, mill scale, etc.) to ensure a good bond between the tube surface and the surrounding concrete.										
7.1.3	Delete the third sentence of this section.										

ILLINOIS MODIFIED ASTM D6760

Effective Date: August 9, 2019

Standard Test Method for

Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing

Reference ASTM D6760-14

7.2	<p>Revise the first sentence of this section as follows: The access tubes shall be installed such that their bottom is within 4 inches of the bottom of the concrete deep foundation element so that the bottom condition can be tested.</p> <p>Revise the sixth sentence of this section as follows: Access tubes shall be filled with water prior to concrete placement to assure good bonding of the concrete to the tube after the concrete cools. The access tubes shall be kept full of water until the tubes are grouted.</p>
7.3	<p>Revise the first sentence of this section as follows: In cases where drilled shafts to be tested have access ducts that do not permit passage of the probes, do not retain water, are not plumb, are debonded from the concrete, or cannot be used for testing for other reasons, drilled boreholes shall be used to provide probe access.</p>
7.4.2	<p>Revise the second sentence of this section as follows: The tests shall be performed no later than 21 days after concrete casting.</p>
7.6	<p>Delete this section.</p>
7.8.1	<p>Revise the first sentence of this section as follows: If the ultrasonic profile indicates an anomaly, then the suspect anomaly zone shall be further investigated by special test procedures such as fan shaped tests, tests with the probes raised at a fixed offset distance, or other tomographical techniques (1, 2).</p>
7.8.2	<p>Delete Note 5 of this section.</p>

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor

performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection

for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#).

The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a

separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice

performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general 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 grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general 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 grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.