Illinois Department of Transportation

Check Sheet For Recurring Special Provisions

The Following Recurring Special Provisions Indicated By An “X” Are Applicable To This Contract And Are Included By Reference:

Recurring Special Provisions

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The Following Local Roads And Streets Recurring Special Provisions Indicated By An “X” Are Applicable To This Contract And Are Included By Reference:

Local Roads And Streets Recurring Special Provisions

INDEX OF SPECIAL PROVISIONS

BDE SPECIAL PROVISIONS
For the August 2, 2019 and September 20, 2019 Lettings

The following special provisions indicated by a "check mark" are applicable to this contract and will be included by the Project Coordination and Implementation Section of the BD&E. An * indicates a new or revised special provision for the letting.

File Name	#		Special Provision Title	Effective	Revised
80099	1	☐	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274	2	☐	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192	3	☐	Automated Flagger Assistance Device	Jan. 1, 2008	
80173	4	☑	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80241	5	☐	Bridge Demolition Debris	July 1, 2009	
5026I	6	☐	Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5048I	7	☐	Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5049I	8	☐	Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
5053I	9	☐	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80404	10	☐	Coarse Aggregate Quality for Micro-Surfacing and Cape Seals	Jan. 1, 2019	
80384	11	☑	Compensable Delay Costs	June 2, 2017	April 1, 2019
80198	12	☐	Completion Date (via calendar days)	April 1, 2008	
80199	13	☐	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293	14	☐	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311	15	☐	Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80277	16	☐	Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261	17	☑	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387	18	☐	Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
80029	19	☑	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	March 2, 2019
80402	20	☑	Disposal Fees	Nov. 1, 2018	
80378	21	☑	Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80405	22	☑	Elastomeric Bearings	Jan. 1, 2019	
* 80415	23	☑	Emulsified Asphalts	Aug. 1, 2019	
80388	24	☑	Equipment Parking and Storage	Nov. 1, 2017	
80229	25	☑	Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80304	26	☐	Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
80246	27	☑	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	Aug. 1, 2018
80398	28	☐	Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Jan. 1, 2019
80406	29	☐	Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Projects)	Jan. 1, 2019	
80399	30	☑	Hot-Mix Asphalt – Oscillatory Roller	Aug. 1, 2018	Nov. 1, 2018
80347	31	☐	Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	Aug. 1, 2018
80383	32	☑	Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	Jan. 1, 2019
80392	33	☑	Lights on Barricades	Jan. 1, 2018	
80336	34	☐	Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
80411	35	☐	Luminaires, LED	April 1, 2019	
80393	36	☑	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	March 1, 2019
80400	37	☑	Mast Arm Assembly and Pole	Aug. 1, 2018	
80045	38	☐	Material Transfer Device	June 15, 1999	Aug. 1, 2014
80394	39	☐	Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	April 1, 2018
80165	40	☐	Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
* 80412	41	☐	Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80349	42	☐	Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371	43	☑	Pavement Marking Removal	July 1, 2016	
80390	44	☑	Payments to Subcontractors	Nov. 2, 2017	
80389	45	☑	Portland Cement Concrete	Nov. 1, 2017	

	80359	46	☑	Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
	80300	47	☐	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
	80328	48	☑	Progress Payments	Nov. 2, 2013	
	3426I	49	☐	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
*	80157	50	☐	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
	80306	51	☐	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2019
	80407	52	☑	Removal and Disposal of Regulated Substances	Jan. 1, 2019	
	80395	53	☐	Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
	80340	54	☐	Speed Display Trailer	April 2, 2014	Jan. 1, 2017
	80127	55	☑	Steel Cost Adjustment	April 2, 2004	Aug. 1, 2017
	80408	56	☑	Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
*	80413	57	☐	Structural Timber	Aug. 1, 2019	
	80397	58	☑	Subcontractor and DBE Payment Reporting	April 2, 2018	
	80391	59	☑	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
*	80317	60	☐	Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	Aug. 1, 2019
	80298	61	☑	Temporary Pavement Marking	April 1, 2012	April 1, 2017
	20338	62	☑	Training Special Provisions	Oct. 15, 1975	
	80403	63	☐	Traffic Barrier Terminal, Type 1 Special	Nov. 1, 2018	
	80409	64	☑	Traffic Control Devices - Cones	Jan. 1, 2019	
	80410	65	☐	Traffic Spotters	Jan. 1, 2019	
	80318	66	☐	Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
	80288	67	☑	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
	80302	68	☑	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
*	80414	69	☐	Wood Fence Sight Screen	Aug. 1, 2019	
	80071	70	☐	Working Days	Jan. 1, 2002	

The following special provisions are in the 2019 Supplemental Specifications and Recurring Special Provisions.

File Name	Special Provision Title	New Location(s)	Effective	Revised
80382	Adjusting Frames and Grates	Articles 602.02(s) and (t), 1043.04, and1043.05	April 1, 2017	
80366	Butt Joints	Article 406.08(c)	July 1, 2016	
80386	Calcium Aluminate Cement for Class PP-5 Concrete Patching	Article 1001.01(e)	Nov. 1, 2017	
80396	Class A and B Patching	Articles 442.06(a)(1) and (2)	Jan. 1, 2018	Nov. 1, 2018
80377	Portable Changeable Message Signs	Articles 701.20(h) and 1106.02(i)	Nov. 1, 2016	April 1, 2017
80385	Portland Cement Concrete Sidewalk	Article 424.12	Aug. 1, 2017	

The following special provisions have been deleted from use.

File Name	Special Provision Title	Effective	Revised
80376	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
80401	Portland Cement Concrete Pavement Connector for Bridge Approach Slab	Aug. 1, 2018	

The following special provisions require additional information from the designer. The additional information needs to be submitted as a separate document. The Project Coordination and Implementation section will then include the information in the applicable special provision.

- Bridge Demolition Debris
- Building Removal - Case I
- Building Removal – Case II
- Building Removal - Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: April 26, 2019 Letting

√	File Name	Title	Effective	Revised
	GBSP4	Polymer Modified Portland Cement Mortar	Jun 7, 1994	Apr 1, 2016
✓	GBSP12	Drainage System	Jun 10, 1994	Jun 24, 2015
	GBSP13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Apr 1, 2016
	GBSP14	Jack and Remove Existing Bearings	Apr 20, 1994	April 13, 2018
	GBSP15	Three Sided Precast Concrete Structure	Jul 12, 1994	Dec 21, 2016
	GBSP16	Jacking Existing Superstructure	Jan 11, 1993	April 13, 2018
	GBSP17	Bonded Preformed Joint Seal	Jul 12, 1994	Jan 1, 2007
	GBSP18	Modular Expansion Joint	May 19, 1994	Dec 29, 2014
	GBSP21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	Jun 30, 2003	April 13, 2018
	GBSP25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Apr 22, 2016
	GBSP26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Apr 22, 2016
	GBSP28	Deck Slab Repair	May 15, 1995	April 13, 2018
	GBSP29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	March 1, 2019
	GBSP30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Oct 20, 2017
	GBSP31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	March 1, 2019
	GBSP33	Pedestrian Truss Superstructure	Jan 13, 1998	Dec 29, 2014
	GBSP34	Concrete Wearing Surface	Jun 23, 1994	Oct 4, 2016
	GBSP35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
✓	GBSP45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
✓	GBSP51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
	GBSP53	Structural Repair of Concrete	Mar 15, 2006	Apr 1, 2016
	GBSP55	Erection of Curved Steel Structures	Jun 1, 2007	
	GBSP56	Setting Piles in Rock	Nov 14, 1996	Apr 1, 2016
	GBSP59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Mar 29, 2017
	GBSP60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Apr 22, 2016
	GBSP61	Slipform Parapet	Jun 1, 2007	March 1, 2019
	GBSP67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	Oct 5, 2015
	GBSP71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011
	GBSP72	Bridge Deck Fly Ash or GGBF Slag Concrete Overlay	Jan 18, 2011	March 1, 2019
	GBSP75	Bond Breaker for Prestressed Concrete Bulb-T Beams	Apr 19, 2012	
✓	GBSP77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls and Culverts	Apr 19, 2012	Oct 22, 2013
	GBSP78	Bridge Deck Construction	Oct 22, 2013	Dec 21, 2016
	GBSP79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Mar 29, 2017
	GBSP81	Membrane Waterproofing for Buried Structures	Oct 4, 2016	March 1, 2019
	GBSP82	Metallizing of Structural Steel	Oct 4, 2016	Oct 20, 2017
	GBSP83	Hot Dip Galvanizing For Structural Steel	Oct 4, 2016	Oct 20, 2017
	GBSP85	Micropiles	Apr 19, 1996	Oct 5, 2015
	GBSP86	Drilled Shafts	Oct 5, 2015	Oct 4, 2016
	GBSP87	Lightweight Cellular Concrete Fill	Nov 11, 2001	Apr 1, 2016
	GBSP88	Corrugated Structural Plate Structures	Apr 22, 2016	April 13, 2018
✓	GBSP89	Preformed Pavement Joint Seal	Oct 4, 2016	March 1, 2019
	GBSP90	Three Sided Precast Concrete Structure (Special)	Dec 21, 2016	April 13, 2018
	GBSP91	Crosshole Sonic Logging Testing of Drilled Shafts	Apr 20, 2016	
	GBSP92	Thermal Integrity Profile Testing of Drilled Shafts	Apr 20, 2016	

√	File Name	Title	Effective	Revised
	GBSP93	Preformed Bridge Joint Seal	Dec 21, 2016	March 1, 2019
	GBSP94	Warranty for Cleaning and Painting Steel Structures	Mar 3, 2000	Nov 24, 2004
	GBSP95	Bituminous Coated Aggregate Slopewall	April 13, 2018	

LIST ADDITIONAL SPECIAL PROVISIONS BELOW

The following Guide Bridge Special Provisions have been incorporated into the 2016 Standard Specifications:

File Name	Title	Std Spec Location
GBSP32	Temporary Sheet Piling	522
GBSP38	Mechanically Stabilized Earth Retaining Walls	522
GBSP42	Drilled Soldier Pile Retaining Wall	522
GBSP43	Driven Soldier Pile Retaining Wall	522
GBSP44	Temporary Soil Retention System	522
GBSP46	Geotextile Retaining Walls	522
GBSP57	Temporary Mechanically Stabilized Earth Retaining Walls	522
GBSP62	Concrete Deck Beams	504
GBSP64	Segmental Concrete Block Wall	522
GBSP65	Precast Modular Retaining Wall	522
GBSP73	Cofferdams	2017 Supp
GBSP74	Permanent Steel Sheet Piling (LRFD)	522
GBSP76	Granular Backfill for Structures	2017 Supp
GBSP80	Fabric Reinforced Elastomeric	1028
GBSP84	Precast, Prestressed Concrete Beams	2017 Supp

The following Guide Bridge Special Provisions have been discontinued or have been superseded:

File Name	Title	Disposition:
GBSP70	Braced Excavation	Use TSRS per Sec 522
GBSP 95	Bridge Deck Concrete Sealer	Use July 1, 2012 version for Repair projects only

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 of Materials" in effect on the date of invitation of bids, and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included here in which apply to and govern the construction of Longmeadow Parkway Roadway Corridor Construction Section C2, from Sandbloom Road to Illinois Route 25, IDOT Contract 61G02, Section 18-00215-21-BR, Job No. C-91-190-18, Project No. XGDF(875), and in case of conflict with any parts, or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located between the intersections of Illinois Route 25 and Bolz Road on the east and Sandbloom Road and Bolz Road on the west in the Village of Carpentersville, Illinois, and the Township of Dundee in the County of Kane. The work involved includes 339.94 linear feet of improvements on Illinois Route 25, 2,817.21 linear feet of improvements on Bolz Road, 5,274.80 linear feet of new corridor construction of Longmeadow Parkway (including 82.64 linear foot bridge) and 515.36 linear feet of the new Bolz Connector roadway, for a total net and gross length of 8,947.31 linear feet (1.69 miles).

DESCRIPTION OF PROJECT

The project consists of constructing a portion of Longmeadow Parkway on a new alignment including a new bridge over Sandbloom Road, reconstruction of a portion of existing Bolz Road, as well as on a new alignment including a roundabout that will provide access to Longmeadow Parkway. Work on Illinois 25 will be construction of a raised median and PCC pavement and completion of a traffic signal installation that was partially completed in a previous contract . Proposed Longmeadow Parkway will consist of an urban section with two lanes in each direction separated by a variable width barrier/landscaped median, and auxiliary turn lanes for the intersection with Illinois Route 25 (Jointed PCC) and Bolz Connector (HMA). A new storm sewer system will be provided along Longmeadow Parkway and Bolz Road in conjunction with concrete curb and gutter. In addition, open ditch drainage will be utilized.

Additional work will include signing installation, pavement marking, extensive tree plantings, landscaping, as well as all incidental and collateral work as described in these special provisions and shown on the plans.

COOPERATION BY CONTRACTOR

The Contractor should take note of Article 105.08 of the "Standard Specifications". The Longmeadow Parkway Corridor Construction Project is broken into multiple sections and may require the Contractor on this section to work concurrently with adjacent Contractors.

- Section C1 (IDOT Contract 63955) is immediately adjacent to the west project limits.

WORKING HOURS

A large portion of this project is located within the Village of Carpentersville, IL. The Contractor is permitted to work on the project between the hours of 7:00am and 7:00pm, Monday through Friday, between 7:00am and 5:00pm on Saturday, and no work is allowed on Sundays. If the Contractor wishes to work outside of these hours, they must obtain written approval from both the Village of Carpentersville and the Engineer.

Village of Carpentersville
Kevin Gray – Village Engineer
1075 Tamarak Drive
Carpentersville, IL. 60110
224-293-1613

INTERIM COMPLETION DATE – ENVIRONMENTAL RESTRICTIONS

The Contractor shall take note that forested areas can be cleared only between the dates of **October 15th** and **March 14th** to avoid the active season for the Rusty Patched Bumble Bee. Due to the letting schedule of this Contract, tree removal work shall be scheduled to take place immediately following the Notice to Proceed and completed prior to the March 14th deadline.

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) – Local Route (Longmeadow Parkway)

☒ Preliminary Environmental Site Assessment (PESA) – Local Route (Longmeadow Parkway)

☒ Soils/Geotechnical Report

☒ Boring Logs

☒ Pavement Cores

☒ Location Drainage Study (LDS)
☒ Hydraulic Report

☒ Noise Analysis

☒ Other: LPC-663 Analytical Report – Local Route (Longmeadow Parkway)

Those seeking these reports should request access via email from:

Kane County Division of Transportation
c/o Michael Zakosek, P.E.
41W011 Burlington Road
St. Charles, Illinois 60175
Email: zakosekmike@co.kane.il.us
Office:(630) 406-7346
Hours 7:30 AM to 4:30 PM (Monday-Friday)

COMPLETION DATE PLUS WORKING DAYS

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

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 **June 30th, 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 cleanup 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.

RESTRICTION ON WORKING DAYS AFTER A COMPLETION DATE

Effective: January 21, 2003
Revised: January 1, 2007

All temporary lane closures during the period governed by working days after a completion date will not be permitted during the hours of 6:00 a.m. to 8:30 a.m. and 4:30 p.m. to 6:00 p.m. Monday through Friday.

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

Failure to Open Traffic Lanes to Traffic: Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable and shall pay to the Department the amount of $250 per lane blocked, not as a penalty but as liquidated and ascertained damages, for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. The Department may deduct such damages from any monies due the Contractor. These damages shall apply during the period governed by working days after a completion date and any extensions of that contract time.

STATUS OF UTILITIES (D-1)

Effective: June 1, 2016

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information in regard to 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.

UTILTIES 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 in the action column; 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.

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
		.		

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION

Stage 1: xx Days Total Installation
Stage 2: xx Days Total Installation

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

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
Comcast	Martha Gieras	688 Industrial Dr. Elmhurst, IL. 60126	224-229-5862	Martha_Gieras@cable.comcast.com
ComEd	Amir Mahmutagic	1 Lincoln Center Oakbrook Terrace, IL. 60181	630-407-2212	amir.mahmutagic@ComEd.com
NICOR	Bruce Koppang	1844 Ferry Road Naperville, IL. 60563	630-388-3046	BKoppan@southernco.com

AT&T	Hector Garcia	1000 Commerce Dr. Oak Brook, IL. 60523	630-573-5465	Hg2929@att.com
Village of Carpentersville	Kevin Gray	1075 Tamarak Dr.. Carpentersville, IL. 60110	224-293-1613	kgray@cville.org

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.

All Stages

STAGE / LOCATION	**TYPE**	**DESCRIPTION**	**OWNER**	**ACTION**
All	Existing 12" Watermain and associated Valve Vaults and Valve Boxes.	When the Contractor engages in work with existing watermain facilities and associated structures/valves, contact the Village of Carpentersville.	Village of Carpentersville.	Contact the Village of Carpentersville.

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

Comcast	Martha Gieras	688 Industrial Dr. Elmhurst, IL. 60126	224-229-5862	Martha_Gieras@cable.comcast.com
ComEd	Amir Mahmutagic	1 Lincoln Center Oakbrook Terrace, IL. 60181	630-407-2212	amir.mahmutagic@ComEd.com
NICOR	Bruce Koppang	1844 Ferry Road Naperville, IL. 60563	630-388-3046	BKoppan@southernco.com
AT&T	Hector Garcia	1000 Commerce Dr. Oak Brook, IL. 60523	630-573-5465	Hg2929@att.com
Village of Carpentersville	Kevin Gray	1075 Tamarak Dr.. Carpentersville, IL. 60110	224-293-1613	kgray@cville.org

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.

PUBLIC CONVENIENCE AND SAFETY (DIST 1)
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."

MAINTENANCE OF ROADWAYS
Effective: September 30, 1985
Revised: November 1, 1996

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

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

KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC (LANE CLOSURES ONLY)
Effective: January 22, 2003
Revised: August 10, 2017

The Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards, and the District Details.

Arterial lane closures shall be in accordance with the Standard Specifications, Highway Standards, District Details, and the direction of the Engineer. The Contractor shall request and

gain approval from the Engineer seventy–two (72) hours in advance of all long-term (24 hrs. or longer) lane closures.

Arterial lane closures not shown in the staging plans will not be permitted during peak traffic volume hours.

Peak traffic volume hours are defined as weekdays (Monday through Friday) from

6:00 AM to 8:30 AM and 4:30 PM to 6:00 PM.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at locations approved by the Engineer in accordance with Articles 701.08 and 701.11 of the Standard Specifications.

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable to the Department for the amount of:

One lane or ramp blocked = **$1000.00**

Two lanes blocked = **$2500.00**

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

TRAFFIC CONTROL AND PROTECTION (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.

TRAFFIC CONTROL PLAN

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	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15’ AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-09	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

DETAILS:

TC10	Traffic control protection for sideroads, intersections, and driveways
TC13	District One typical pavement markings
TC14	Traffic control and protection at turn bays (to remain open to traffic)
TC16	Short term pavement marking letters and symbols
TC22	Arterial road information sign
TC26	Driveway entrance signing

SPECIAL PROVISIONS:

BDE Special Provisions

BDE 80388 – Equipment Parking and Storage
BDE 80392 – Lights on Barricades
BDE 80371 – Pavement Marking Removal
BDE 80377 – Portable Changeable Message Signs
BDE 80298 – Temporary Pavement Marking

IDOT Special Provisions

Keeping Arterial Roadways Open to Traffic (Lane Closures Only)
Traffic Control and Protection (Arterials)
Temporary Information Signing
Public Convenience and Safety
Maintenance of Roadways
Temporary Pavement
Cooperation by Contractor

25200200 SUPPLEMENTAL WATERING

Description: This work will include watering turf, trees, shrubs, vines and perennial plants at the rates specified and as directed by the Engineer.

Schedule: Watering will only begin after the successful completion of all period of establishment requirements and will continue through the construction year growing season as directed by the Engineer.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 24 hours of notice. A minimum of 10 units of water per day must be applied until the work is complete.

Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

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

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

Trees:	35 gallons per tree
Seeding, Class 2A	10 gallons per sq yd
All other seed areas	3 gallons per sq yd

Method of Application: A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. An open hose may be used to water trees, shrubs, and vines if mulch and soil are not displaced by watering. Water shall trickle slowly into soil and completely soak the root zone. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

Method of Measurement: Supplemental watering will be measured in units of 1000 gallons (3,785 liters) of water applied as directed.

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

SECTION 253 PLANTING WOODY PLANTS

Revise Section 253 of the Standard Specifications as follows:

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

"The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine some dimensions. Tree locations within each planting area shall be marked with a different color stake/flag and labeled to denote the different tree species. Shrub beds limits must be painted. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of seven working (7) days prior to installation for approval."

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

"The Contractor is responsible for plant care until receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance. The Contractor shall properly care for all plants including weeding, watering, adjusting of braces, repair of water saucers, or other work which is necessary to maintain the health, vigor, and satisfactory appearance of the plantings. This may require pruning, cultivating, tightening and repairing supports, repair of wrapping, and furnishing and applying sprays as necessary to keep the plants free of insects and disease. The Contractor shall provide plant care a minimum of every two weeks, or within 3 days following notification by the Engineer. All requirements for plant care shall be considered as included in the cost of the contract."

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

"During plant care watering shall be performed at least every two weeks beginning in May until receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance. The contractor shall apply a minimum of 35 gallons of water per tree, 25 gallons per large shrub, and 15 gallons per small shrub. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions."

Revise Basis of Payment as follows:

"Basis of Payment: This work shall be paid for at the contract unit price per each for TREES (PER INDIVIDUAL PLANT CODE PAY ITEM) and no additional compensation will be allowed. Refer to material list on planting plans for individual tree and shrub species.

50300285 FORM LINER TEXTURED SURFACE

Description: This work shall consist of the construction of form liner textured surfaces on designated surfaces in the contract plans. The same style of form liner shall be used on all surfaces to receive form liner textured surface within the project limits.

Materials: The materials shall be according to Article 503.02 of the "Standard Specifications" and the following:

Form liners shall duplicate closely the appearance of natural stone masonry and be non-repeating. Seam lines or match lines caused from two or more molds coming together will not be apparent when viewing final wall.

The molds shall not compress more than ¼ inch when concrete is poured at a rate of 10 vertical feet per hour. The molds shall be removable without causing deterioration of surface or underlying concrete.

Form liners shall be high quality, highly reusable, and capable of withstanding anticipated concrete pour pressures without causing leakage or causing physical defects. Form liners shall attach easily to pour-in-place forms and be removable without causing concrete surface damage or weakness in the substrate. Form release agents shall be non-staining, non-residual, non-reactive and shall not contribute to the degradation of the form liner material.

The forms shall be constructed so that the completed concrete structures conform to the shape, lines and dimensions of the members of the approved pattern. The forms shall be properly braced or tied together to maintain position and shape. The forms shall be made sufficiently tight to prevent leakage of the mortar. The formwork shall have the strength and stability to ensure finished concrete dimensions within the tolerances specified herein.

The following form liner suppliers and patterns have been pre-approved for Form Liner Textured Surface:

Manufacturer	Pattern Number	Pattern Name
Custom Rock Formliner 2020 West 7th Street St. Paul, Minnesota 55116 (651) 669-1345 info@customrock.com	Pattern Number 1208	Drystack Stone

Pre-approval of the form liner does not include material acceptance at the job site.

The form ties shall be made of either metal or fiberglass. Metal ties, which result in a portion of the tie permanently embedded in the concrete, shall be designed to separate at least one inch back from finished surface, leaving only a neat hole that can be plugged with patching material. Contractor shall submit the type of form ties to the Engineer for approval prior to use in this work.

Concrete used for the cast-in-place concrete designated to receive form liner textured surfaces shall contain a high range water-reducing admixture according to Article 1021.03(c) of the "Standard Specifications" to obtain a 5" to 7" slump.

Submittals: Upon approval of the form liner plans and installation procedure in accordance with Article 503.06(a), the Contractor shall submit three 6' by 6' (minimum) mock-up cast concrete panels of the simulated stone masonry finish of the Form Liner Textured Surface for approval by the Engineer. Include an area to demonstrate wall mold butt joint. The mock-up panels shall also include the concrete staining and anti-graffiti coating as indicated in the Special Provision for STAINING CONRETE STRUCTURES and ANTI- GRAFFITI COATING.

The sample panels shall be delivered and positioned on the job site at a location to be determined by the Engineer. The approved form liners shall be used throughout the project to replicate natural stone surfaces unless otherwise noted in the plans. The approved mock-ups shall be the standard for replicated natural stone surfaces where required throughout the project.

Construction Requirements: The work shall be performed according to the applicable portions of Article 503.06 of the "Standard Specifications" with emphasis on Article 503.06(a), except as modified herein, and the following:

The form liners shall be installed according to the manufacturers' recommendations to achieve the highest quality concrete appearance possible. The form liners shall withstand the concrete placement pressures without leakage, physical or visual defects.
The Contractor shall clean the form liners, removing any buildup prior to each use. The Contractor shall inspect each form for blemishes or tears and make repairs as needed following manufacturer's recommendations.

The Contractor shall install the form liners with less than ¼ inch separation between them. The molds shall be attached securely to the forms following manufacturer's recommendations. The form liner panels shall be attached to each other with flush seams and seams filled as necessary to eliminate visible evidence of seams in the cast concrete.

The liner butt joints shall be blended into the pattern so as to eliminate visible vertical or horizontal seams and conspicuous form butt joint marks. The liner joints shall fall within pattern joints or reveals. The finished textures shall be continuous without visual disruption and properly aligned over adjacent and multiple liner panels. Continuous or single liner panels shall be used where liner joints may interrupt the intended pattern. Panel remnants shall not be pieced together.

The Contractor shall notify the Engineer at least 48 hours prior to placing concrete. Concrete shall not be placed until the Engineer has inspected the formwork and the placement of reinforcing bars for compliance with the plans.

The Contractor shall apply the form release agent to all surfaces of the form liner which will come in contact with concrete, according to the manufacturer's recommendations.

The Contractor shall employ proper consolidation methods to ensure the highest quality finish. Internal vibration shall be achieved with a vibrator of appropriate size, the highest frequency and low to moderate amplitude. Concrete placement shall be in lifts not to exceed 1.5 feet. Internal vibrator operation shall be at appropriate intervals and depths and withdrawn slowly enough to assure a minimal amount of surface air voids and the best possible finish without causing segregation. An external form vibrator may be required to assure the proper results. The use of an external form vibrator must be approved by the form liner manufacturer and the Department. The Contractor shall coordinate concrete pours to prevent visible differences between individual pours or batches. Concrete pours shall be continuous between construction or expansion joints. Cold joints shall not occur within continuous form liner pattern fields.

The form liners shall be stripped between 12 and 24 hours as recommended by the manufacturer. When stripping the forms, the Contractor shall avoid creating defects in finished surface.

Wall ties shall be coordinated with the liner and form to achieve the least visible result. Place form ties at thinnest points of molds (high points of finished wall). Neatly patch the remaining hole after disengaging the protruding portion of the tie so that it will not be visible after coloring the concrete surface.

Where an expansion joint must occur at a point other than rustication joints, such as at the face of concrete texture, which is to have the appearance of stone, consult manufacturer for proper treatment of expansion material.

Curing methods shall be according to Article 1020.13 of the “Standard Specifications” and compatible with the desired aesthetic result. The use of curing compounds will not be allowed. No rubbing of flat areas or other repairs should be required after form removal. The finished exposed formed concrete surfaces shall be free of visible vertical seams, horizontal seams, and butt joint marks. Grinding and chipping of finished formed surfaces shall be avoided.

Releasing Form Liners: Products and application procedures for form liner release agents shall be approved by the form liner manufacturer. Release agents shall not cause swelling of the form liner material or delamination of the form liner. Release agents shall not stain the concrete or react with the form liner material. Release agent shall coat form liner with a thin film. Following application of release agent, the form liner surface shall be cleaned of excess amounts of release agent using compressed air. Buildup of release agent caused by reuse of a form liner shall be removed at least every 5 uses.

Form liners shall release without leaving particles or pieces of form liner material on concrete and without pulling or breaking concrete from the textured surface. The concrete and textured surfaces exposed by removing form liners shall be protected from damage. Form stripping and related construction shall avoid creating defects in the concrete.

All concrete shall be cured in conformance with the "Standard Specifications" except that curing compounds will not be allowed.

Method of Measurement: This work will be measured for payment in place and the area computed in square feet. Measurement will include all costs associated with providing the aesthetic treatment on the walls including the furnishing, installing, stripping and reusing the form liner and providing the required submittals.

Cast concrete form liner mock-ups with finished stained and anti-graffiti coated surfaces will not be measured for payment but will be included in the square foot price for this item. Required adjustments or corrections needed to address mock-up form liner comments and the cost for additional mock-ups, if required, will also be included in the square foot price for this item.

Basic of Payment: The work will be paid for at the contract unit price per square foot for FORM LINER TEXTURED SURFACE.

542JC036 PIPE CULVERTS, CLASS C 36" (JACKED)

Description: This work shall consist of furnishing and installing, by jacking, a pipe culvert at the location shown on the plans. This pipe is a temporary pipe used to convey drainage during construction staging and will be removed when permanent storm sewer is installed.

Materials: Materials shall be according to Article 542.02 and shall be suitable for a jacking operation.

Construction Requirements: Work shall be performed according to Section 552 of the Standard Specifications.

When the pipe culvert is to be replaced by the permanent storm sewer, it shall be removed and disposed of by the Contractor.

Method of Measurement: This work will be measured for payment in place in feet. Removal will not be measured for payment separately.

Basis of Payment: This work will be paid for at the contract unit price per foot for PIPE CULVERTS, CLASS C 36" (JACKED). Removal will not be paid for separately.

56103300 DUCTILE IRON WATER MAIN 12"

Description: This work shall consist of constructing a watermain system at the locations shown on the plans.

Materials: All materials shall be domestic and according to the following:

a. Pipe - Shall be minimum thickness Class 52 Ductile Iron complying with ANSI/AWWA C151/A21.51 and ANSI/AWWA C150/A21.50, with cement coating in accordance with ANSI/AWWA C104/A21.4. Minimum lay length of 18 feet.
b. Fittings/Plugs – Ductile iron with mechanical joints complying with ANSI A21.10 or A21.53 SSB-Compact. Cement lined in accordance with ANSI/AWWA C104/A21.4.
c. Joints – Mechanical joints complying with ANSI/AWWA C111/A21.11.
d. Tracer Wire – Trace-Safe Water Blocking Tracer Wire System in conjunction with conductive wedges.
e. Valves – Valves 3-inch through 16-inch shall be gate valves designed in accordance with AWWA C515 with a ductile iron body, and seat type with non-rising stem and O- ring packing. Valves installed in vaults shall have ANSI Class 125 flange ends or mechanical joint ends. Valves buried shall have mechanical joint ends. Valves shall be Clow or Waterous as shown on the plan details.
f. Valve Box – EJIW-664-S or Tyler 664-S (domestic)
g. Valve Box Stabilizer – As manufactured by Valve Box Stabilizer Inc., Joliet Il. (815-722-2517)
h. Pipe Restraint – EBAA Mega-Lug, Series 1100 (no exceptions) for all MJ fittings (pre-cast concrete thrust block restraint is required in conjunction with Mega-Lugs)
i. All ductile iron pipe and fittings shall be encased in polyethylene sheets of not less than 8 mil thick and complying with ANSI/AWWA C105/A21.5 at the discretion of the Village Engineer.

General: The construction of water mains, including protection from sewers, pressure testing, and disinfection, shall be according to the "Standard Specifications for Water and Sewer Main Construction in Illinois" latest edition and these special provisions. Excavation shall be according to the applicable requirements of Article 550.04 of the "Standard Specifications". Backfilling around joints shall not be performed until the pressure testing has been completed and passed.

Construction Requirements: Pipe Bedding: Crushed gravel or crushed stone complying with the requirements of Section 1004, Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction", latest edition: The gradation shall be either CA-7, CA-8, CA-11 or CA-13. The pipe shall be laid so that it will be uniformly supported, and the entire length of the pipe barrel will have full bearing. No blocking of any kind shall be used to adjust the pipe to grade. Bedding shall be required for all water main construction and shall be a minimum thickness of four inches (4") under the pipe barrel and two inches under pipe bells.

Backfill to one foot (1') above the top of the pipe shall be done with acceptable bedding material as indicated above or crushed gravel or stone complying with gradation CA-6 of the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction. placed in six-inch (6") lifts compacted to ninety-five percent (95%) maximum density as determined according to ASTM D1557.

Meg-A-Lug pipe restraints shall be used to protect water main piping from moving at change of directions, plugs, caps, tees, valves, fire hydrants and bends of 11¼ degree or greater. In addition to the Meg-A-Lug Pipe Restraining System, pre-cast concrete thrust blocks shall be used.

Water mains and appurtenances shall be installed in conformance with AWWA C-600, the material manufacturer's recommendations, the Standard Specifications for Water and Sewer Main construction in Illinois and this section.

Trench backfill shall be required in all locations where the water main trench is under or within two feet (2') of existing or proposed pavements including but not limited to streets, sidewalks and driveway. The trench backfill shall be placed in lifts no exceeding eight inches (8") and shall be mechanically compacted to do not less than ninety-five percent (95%) of the standard laboratory density. Backfilling shall not be done in freezing weather nor made with frozen material.

Where water is encountered in the trench, it shall be removed during pipe-laying and joint operations. Trench water shall not be allowed to enter the pipe at any time.

All connections to the existing water system shall be made under full water service pressure unless otherwise approved by the Village Engineer. See CONNECTION TO EXISTING WATER MAIN 12.

Required Water Main Locator: Secure an insulated No. 6 AWG, single strand, single conductor, locator wire to the top of the all water mains. The locator wire shall be brought up inside the valve so no person shall have to enter the valve vault to attach the pipe locator. The locator wire shall be brought up inside the valve vaults and fastened to the inside of the top of the cone so that no person shall have to enter the valve vault to attach the pipe locator. Locator wire connections must be connected by wire connectors approved by the Village Engineer. A locator box shall be installed at all changes in direction of the main where valve vaults are not required. Continuity testing and documentation of the locator wire must be performed with satisfactory results prior to acceptance into the maintenance period and again prior to the expiration of the maintenance

period. In addition, brass wedges are to be installed at all required locations to provide electrical continuity between all pipe and fittings.

All newly laid pipe shall be subjected to a hydrostatic pressure of one hundred fifty (150) pounds per square inch for a duration period of two hours. Each valve isolated section of pipe shall be filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe. Before applying the specified test pressure, all air shall be expelled from the pipe. The pipe must be pressurized and stabilized at a minimum of 150 PSI when the two hour test begins. If no PSI drop is recorded at the end of the first hour the test is complete with a passing result. However, if a pressure drop is recorded the test will continue for the duration of the two hours. Allowable make-up water will be determined by the Village representative according to the AWWA standard listed below for allowable leakage per 1000 feet in gallons per hour.

(Linear footage X GPH X 2 Hours)/1000

Pipe Size	3	4	6	8	10	12
GPH	.28	.37	.55	.74	.92	1.1-

If the required amount of make-up water is less then the allowable amount of make-up water the test is complete with a passing result.

NOTE: If at any time after the test begins, a drop of 5 PSI or greater is recorded, the test is complete with a failing result regardless of the allowable make-up.

Leakage is defined as the quantity of water required to be supplied to the newly laid pipe necessary to re-establish the specified leakage test pressure.

All leaks shall be repaired until tight. Any cracked or defective pipes, fittings, valves, or fire hydrants discovered as a result of this pressure test shall be removed and replaced and the test repeated until satisfactory results are obtained.

All pressure tests shall be done in the presence of a representative of the Water Superintendent.

Preliminary Flushing: Prior to chlorination, the main shall be flushed as thoroughly as possible with the water pressure and outlets available. Flushing shall be done after the pressure test is made. It must be understood that such flushing removes only the lighter solids and cannot be relied upon to remove heavy material allowed to get into the main during laying. If no fire hydrant is installed at the end of the main, a tap should be provided large enough to effect a velocity in the main of at least 2.5 feet per second.

Disinfection: Water main disinfection will be in accordance with the State of Illinois Rules and Regulations Title 35, Subtitle F. Chapter II, Section 652.203 of the Technical Policy Statement.

The following procedures will be followed when disinfection of new water main is required.

1. The contractor shall provide and install corporation cocks with a copper-tube goose-neck assembly for the purpose of sample collection. Fire hydrants shall not be used as sample points. Corporation cocks will be located at a point not more than 10 feet from the beginning of the new main and approximately every 1,000 feet thereafter. Branch and dead end mains less than 1000 feet shall also have corporation cocks not more than 10 feet from the end of the main. The Water Superintendent may require additional corporation cocks at various locations depending on the configuration of the system. All contractors are advised to contact the Water Superintendent prior to installing corporation cocks for testing.

2. Water from the existing distribution system shall be made to flow at a constant rate into the new main.

3. At a point not more than 10 feet downstream from the beginning of the new main the water entering the new main will receive a dose of chorine fed at a constant rate such that the water will have not less than 25 mf/l free chlorine.

4. During the application of chlorine, valves shall be positioned so that the strong chlorine solution in the main being treated will not flow into water mains in active service. Chlorine application shall not cease until the entire main is filled with heavily Chlorinated water. The chlorinated water shall be retained in the main for at least 24 hours, and at the end of the 24 hour period the treated water in all portions of the main shall have a residual of not less than 10 mg/l free chlorine.

5. After the applicable retention period, heavily chlorinated water shall be flushed from the main until chlorine residuals are consistent with that of the existing system.

6. The environment to which the chlorinated water is to be discharged shall be inspected. If there are any questions that the chlorinated discharge will cause damage to the environment, then an approved neutralizing agent shall be applied to the water being wasted to thoroughly neutralize the chlorine residual in the water.

7. A minimum of twenty-four hours after the final flush and before the water main is placed into service, 1 set of samples shall be collected from approved sample points. Each sample will be tested for bacterial quality, and show the absence of coliform organisms. If all samples tested for bacterial quality are satisfactory the main may be placed into service.

8. If at any sample point the bacterial quality is unsatisfactory, that sample point will be required to resample. The system may be flushed prior to resampling. Resampling

will consist of two consecutive samples collected 24 hours apart. Each sample will be tested for bacterial quality and show the absence of coliform organisms. If all samples tested for bacterial quality are satisfactory the main may be placed in service. If samples are unsatisfactory repeat resampling procedures.

9. All system flushing, chlorine injecting and sampling will be done in the presence of a representative of the Water Superintendent. A representative of the Water Superintendent will deliver all samples to a certified lab of the Village's choice.

Method of Measurement: This work will be measured for payment in accordance with Article 561.04 of the "Standard Specifications".

Basis of Payment: This work will be paid for in accordance with Article 561.05 of the "Standard Specifications".

Fittings, bends, plugs, restraints, and all other associated items as described herein will not be paid for separately.

60108204 PIPE UNDERDRAINS, TYPE 2, 4"

Description: This work shall consist of constructing pipe underdrains of the type and size specified at the locations shown on the plans. This work shall be performed according to the applicable portions of Section 601 of the "Standard Specifications", IDOT Standard 601001-05, and as specified herein.

601.04 Pipe Drain Installation. Add the following to this Article.

"The top of pipe underdrains shall be placed a minimum of 6" below the Aggregate Subgrade Improvement layer.

Method of Measurement: This work will be measured for payment according to Article 601.07 of the "Standard Specifications".
Basis of Payment: This work will be paid for according to Article 601.08 of the "Standard Specifications". The cost of making pipe underdrain connections to drainage structures and pipes shall not be paid for separately but shall be included in the cost of the pipe underdrain.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PROJECT SPECIFIC)

Description: This work shall be according to Article 669 of the Standard Specifications and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (lust) cleanups or that is pre-qualified in hazardous waste by the department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste

oil in accordance with all federal, state, or local regulatory requirements and shall be provided to the engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

General: This special provision will likely require the contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as either "uncontaminated soil" or non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances. The environmental firm shall continuously monitor all soil excavation for worker protection and soil contamination. Phase I preliminary engineering information is available through Kane County DOT (refer to SP for AVAILABLE REPORTS). Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less.

The Contractor shall manage any excavated soils and sediment within the following areas:

SITE #23: FORMER FOX VALLEY RIFLE RANGE/CARPENTERSVILLE QUARRY. 33994 BOLZ ROAD, CARPENTERSVILLE, IL

STATION 2227+75 TO STATION 2231+00, 110 FEET LT (NORTH OF) AND RT (SOUTH OF) OF CENTERLINE (CL) OF LONGMEADOW PARKWAY. BASED ON IDOT REQUIREMENTS, THE ENGINEER HAS PRELIMINARILY DETERMINED THIS MATERIAL MEETS THE CRITERIA OF AND SHALL BE MANAGED IN ACCORDANCE WITH ARTICLE 669.05(A)(5). *"THE SOIL SHALL BE MANAGED AND DISPOSED OF OFF-SITE AS A NON-SPECIAL WASTE, SPECIAL WASTE, OR HAZARDOUS WASTE AS APPLICABLE.* POTENTIAL CONTAMINANTS OF CONCERN SAMPLING PARAMETERS PNAS AND METALS INCLUDING LEAD IMPACTED SOIL IN SOIL MANAGEMENT ZONE (SMZ).

SITE #24: MEYER MATERIAL CO./CARPENTERSVILLE QUARRY. 800 BOLZ ROAD, CARPENTERSVILLE, IL

STATION 2234+50 TO STATION 2235+75, 110 FEET LT (NORTH OF) AND RT (SOUTH OF) OF CENTERLINE (CL) OF LONGMEADOW PARKWAY. BASED ON IDOT REQUIREMENTS, THE ENGINEER HAS PRELIMINARILY DETERMINED THIS MATERIAL MEETS THE CRITERIA OF AND SHALL BE MANAGED IN ACCORDANCE WITH ARTICLE 669.05(A)(5). *"THE SOIL SHALL BE MANAGED AND DISPOSED OF OFF-SITE AS A NON-SPECIAL WASTE, SPECIAL WASTE, OR HAZARDOUS WASTE AS*

APPLICABLE. POTENTIAL CONTAMINANTS OF CONCERN SAMPLING PARAMETERS PNAS.

85000205 MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL)

Description: This work shall consist of the monitoring and maintenance of existing or newly-constructed traffic signal infrastructure and appurtenances.

Prior to the transfer of maintenance of the site and following the construction of traffic signal equipment defined in this Contract, the Contractor shall propose a means to protect, bury or secure from damage all exposed permanent traffic signal elements so defined by the Engineer, including but not limited to all exposed bolts, foundations, and ends of conduit. Means of protection shall be approved by the Engineer in advance of installation.

Once installed, Contractor shall be responsible for the condition of the means of protection, as well as the protected elements, until the transfer of maintenance to the Owner or another party as directed by the Engineer.

Basis of Payment: All work defined or referenced above, including all materials and labor required, will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION (SPECIAL). Payment shall be made in equal parts, the first upon the installation of means of protection and the second upon transfer of maintenance.

89502400 REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE

Description: This work shall consist of the removal and disposal of existing flashing beacons and associated appurtenances at the locations shown on the plans.

Construction Requirements: The flashing beacon, conduits, concrete foundation in it's entirety, and electric cable in the conduit shall be removed. The power feed to the beacon shall be located and the electric cables terminated at the source to the satisfaction of the Engineer.

Method of Measurement: This work will be measured for payment per each, which will include the beacon, concrete foundation, conduits, electric cable in conduits, and other associated appurtenances.

Sign removal will be measured separately.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE.

K0013030 PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG

Description: This work shall consist of furnishing and installing sedge meadow and/or wetland plugs as shown in the details on the plans and only at locations as directed by the Engineer.

Add the following to Article 254.02 Materials:

All plants shall be healthy, vigorous, and true to species and variety. All materials shall be provided by a certified nursery and shall be free of pests and disease. All plant materials shall comply with State and federal laws with respect to inspection for plant diseases and infestations. Written approval shall be necessary for substitutions.

Plugs shall be obtained as close to possible to the project site. Written approval will be required for substitutions and plant material purchased outside a 150-mile radius of the site.

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

Plugs shall only be planted between May 1 and June 15. Approval from the Engineer must be received for all planting dates outside of this time frame. See Standard Specifications Article 254.03(b) for alternate planting schedule.

Add the following to Article 254.04 Transporting and Storing Plants:

Each species should be handled and packed in the manner approved for the plant, having regard for the soil climatic conditions at the time and place of digging and delivery, and for the time that will be consumed for transit and delivery.

Plant materials shall be packed to ensure adequate protection against damage during transit. The plants shall be protected with wet material to ensure that the plant materials are delivered in a moist and cool condition. The vehicle should be ventilated to prevent overheating.

Plant materials shall be stored in a shaded area. Watering shall occur to maintain plant vigor during on-site storage.

An on-site inspection will be made prior to the installation of plant material. Any plant material not meeting specification (that being of good health) must be moved off the site.

Delete Article 254.05 Layout of Planting and substitute the following:

When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. Bed limits shall be painted or flagged. Individual plants layout shall be marked prior to installation.

Delete Article 254.06(b) Planting Procedures and substitute the following:

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

Permanent Seeding and Erosion Control Blanket must be installed prior to planting plugs to avoid damage to plantings.
Trees and shrubs must be installed first to establish proper layout and to avoid damage to other plantings.

Install plugs through erosion control blanket with planting bar. Planting holes shall be as deep or slightly deeper than the plug roots to allow placing the plant without bending roots. Plant shall be placed flush with the earth surface. Hole shall be filled with soil carefully to avoid damage to roots and to leave no voids and pressed to firm earth surface.

Contractor shall provide and maintain all equipment necessary for planting, including watering equipment, water, and hoses. Immediately after planting, thoroughly water plant beds. Do not wash soil onto crowns of plants. The soil surface should be damp for the first three weeks following planting.

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

The plugs are not required to be mulched.

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

Plugs must undergo a 30-day period of establishment. Additional watering shall be performed not less than three times a week for four weeks following installation. Water shall be applied at the rate of at least 2 gallons per square foot. Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional watering.

A spray nozzle that does not damage small plants must be used when watering native plant plugs. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. The plants

to be watered and the method of application will be approved by the Engineer. The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the amount of watering.

Plug planting material shall be selected from the following list:

SCIENTIFIC NAME	COMMON NAME
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER
CALAMAGROSTIS CANADENSIS	BLUE JOINT GRASS
CAREX CRISTATELLA	CRESTED OVAL SEDGE
CAREX LACUSTRIS	COMMON LAKE SEDGE
CAREX STIPATA	COMMON FOX SEDGE
CAREX STRICTA	COMMON TUSSOCK SEDGE
CAREX TRICHOCARPA	HAIRY-FRUITED LAKE SEDGE
CAREX VULPINOIDEA	BROWN FOX SEDGE
ELYMUS VIRGINICUS	VIRGINIA WILD RYE
GLYCERIA STRIATA	FOWL MANNA GRASS
IRIS VIRGINICA SHREVERI	BLUE FLAG
LIATRIS SPICATA	MARSH BLAZINGSTAR
PONTEDERIA CORDATA	PICKEREL WEED
SAGITTARIA LATIFOLIA	COMMON ARROW-HEAD
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH
SCIRPUS ATROVIRENS	DARK GREEN BULRUSH
SCIRPUS CYPERINUS	WOOL GRASS
SCIRPUS PUNGENS	CHAIRMAKER'S RUSH
SCIRPIS VALIDUS CREBER	GREAT BULRUSH
SPARTINA PECTINATA	PRAIRIE CORD GRASS
VERBENA HASTATA	BLUE VERVAIN
ZIZIA AUREA	GOLDEN ALEXANDERS

The Contractor shall provide the Engineer with a planting plan for approval, showing plug planting types and spacing and layout prior to ordering materials.

The perimeter of the planting area shall be protected with a temporary fence according to Article 201.05(a) of the "Standard Specifications".

Method of Measurement:

Add the following to Article 254.09 Method of Measurement:

Disposal of debris (rock, stones, concrete, bottles, plastic bags, Goose Grid Barrier, etc.) removed from the plug plantings as specified in Article 202.03.

Perennial plants will be measured for payment per UNIT planted. One hundred (100) perennial plants are equal to one (1) UNIT.

Basis of Payment:

Delete Article 254.10 Basis of Payment and substitute the following:

> The unit price will include the cost of all materials, equipment, labor, plant care, removal, disposal and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.
> This work will be paid for at the contract unit price per UNIT for PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG. Payment is incumbent on the health and vigor of the plants after the establishment period, and correction/replacement must be made by the Contractor of those plants not living before full payment is allowed.

TEMPORARY FENCE will be paid for separately.

X0301797 GATE REMOVAL

Description: This work shall consist of the removal and disposal of the existing tubular steel gate(s) at the entrance for the Carpentersville Quarry.

General Requirements: The existing gate(s), gate posts, and foundations shall be removed in their entirety. The materials shall become property of the Contractor and shall be disposed of off-site.

Method of Measurement: This work shall be measured for payment as each for the entire gate system at the entrance to Carpentersville Quarry. Individual gate sections, posts or foundations will not be measured for separately.

Basis of Payment: This work shall be paid for at the contract unit price per each for GATE REMOVAL AND will include the entire gate system at the entrance to Carpentersville Quarry.

X0322917 PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE

Description: This work shall consist of providing a connection to an existing manhole on the plans. This pay item shall include providing all time, labor, and materials to make the proposed connection. All time, labor, excavation, materials, necessary to complete the operation are considered included in this pay item.

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/Basis of Payment: This work shall be paid for at the contract unit price per EACH for PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE made.

X0322936 REMOVE EXISTING FLARED END SECTION

Description. This work shall consist of the complete removal and legal disposal of existing flared end sections, toe blocks, and gratings at the locations shown on the plans.

Method of Measurement. This work shall be measured for payment as EACH for the locations shown on the plans and as directed by the Engineer.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for REMOVE EXISTING FLARED END SECTION.

X0323013 TUBULAR STEEL GATE

Description: This work shall consist of installing a Tubular Steel Gate along with foundations at the location shown on the plans or as designated by the Engineer.

General Requirements: The proposed Tubular Steel Gate shall span the entire width of the cell tower access road when both gates are closed. The connection between the two separate sections of the proposed gate shall have an acceptable means of connection at the middle to provide a secure gate closure. The gate and posts shall consist of pre-galvanized pipe.

Details and shop drawings for the gate, foundations and all associated accessories shall be submitted to the Engineer for approval prior to fabricating and installing the gate and foundations.

Proposed foundations to accommodate the proposed steel gate shall consist of Class SI concrete and be installed at a minimum of 5'-0".

Upon construction of the gate, the contractor shall install a pad lock with two (2) sets of keys.

The proposed gate shall be painted with a heavy coat of Zinc rich paint. The proposed color shall be submitted to the Engineer for approval prior to fabrication and installation.

Method of Measurement: This work shall be measured for payment as each for TUBULAR STEEL GATE. Foundations, reinforcement, locks, keys and all other materials required to construct and install the Tubular Steel Gate shall not be measured separately but shall be included in this item.

Basis of Payment: This work shall be paid for at the contract unit price per each for TUBULAR STEEL GATE.

X0324044 EROSION CONTROL, TEMPORARY PIPE SLOPE DRAIN

Description: This work shall consist of installing temporary slope drain pipes in order to

control groundwater along embankments during construction. This shall follow the details in the plans, IUM/NRCS detail IL-670 with a minimum diameter of 12".

The downstream (outlet) end shall be stabilized in the rock check dams as depicted on the plans to control energy release.

Material shall be a heavy-duty flexible material such as non-perforated corrugated plastic tubing.

Basis of Payment: This work shall be measured and paid for at the contract unit price per EACH for SEDIMENT CONTROL, TEMPORARY PIPE SLOPE DRAIN regardless of length (as the length will vary based on groundwater concentration) and shall include all labor, excavation, material, tubing, hold-down stakes, temporary end sections, maintenance, and disposal of pipes following permanent slope stabilization for groundwater control.

X0326447 FORCEMAIN CLEANOUT VAULT

Description:

Basis of Payment:

X0326749 AIR RELEASE VALVE MANHOLE

Description:

Basis of Payment:

X0327036 BIKE PATH REMOVAL

Description: This work shall consist of the removal of existing Hot-Mix asphalt bike/multi-use paths at the locations shown on the plans. This work shall be performed in accordance with Article 440.03 and Article 440.06 of the "Standard Specifications".

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

Basis of Payment: This work will be paid for at the contract unit price per Square Yard for BIKE PATH REMOVAL.

X0327078 REMOVE FIRE HYDRANT AND VALVE ASSEMBLY

Description: This work shall consist of the removal and disposal of existing fire hydrants, hydrant auxiliary valves, barrel sections, valve boxes and any water main pipe between the hydrant and auxiliary valve.

Construction Requirements: The backfill for excavations made in the subgrade of the proposed improvement, and trenches where the inner edge of the trench is within 2 ft of the proposed edge of pavement, curb and gutter, or sidewalk shall be trench backfill according to Section 208 of the Standard Specifications. Backfill should be Method 1 in accordance with Article 550.07 of the Standard Specifications.

All material resulting from the removal of existing fire hydrant and valve assemblies shall be dispose of by the Contractor according to Article 202.03 of the Standard Specifications.

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

X0327369 SANITARY SEWER, DUCTILE IRON, 10”

Description:

Basis of Payment:

X0327583 STAMPED COLORED PORTLAND CEMENT CONCRETE PAVEMENT 10” (JOINTED)
X6062206 STAMPED COLORED PORTLAND CEMENT CONCRETE MEDIAN SURFACE 6 INCH

Description: Work under this item must be performed in accordance with the Standard Specifications except as herein modified. This item must consist of providing Decorative Concrete Stamping as shown on the Drawings, consisting of plain and integral colored concrete imprinted with custom stamps, release agent, and treated with concrete sealer. Provide all custom stamps, skins, and partial stamps to achieve finish result.

General Requirements.

Installer Qualifications: Installer must have substantial years of experience installing imprinted concrete in aesthetic design patterns, for projects of similar size and scope, and must use experienced supervisor and crews throughout the installation of designated systems.

Finish Quality: Textural imprint must be consistent within and between pours. Remove and dispose of off the site all non-conforming work, including concrete with surface defects such as texture irregularities, chips, cracks, spalls, scales, air bubbles, honeycomb, rock pockets, fins or other projections, depressions or elevations on surface, stains or discolorations which cannot be removed, or pattern irregularities, such as too deep or too shallow grooves, pillow effects, wrinkles between patterns, or unmatched patterns.

Submittals: Supply well labeled concrete samples for Engineer's acceptance at least one month prior to pour. Submit manufacturer's data for all proprietary materials. Furnish ready mix plant tickets giving strength and classification. Submit show drawings of all patterns, including the sample panel of corner, for approval by the Engineer, prior to creating sample panel.

Weather: Schedule work for predicted favorable weather conditions. For cold weather or hot weather placement, conform to ACI 306 and ACI 305 standards, respectively. Concrete that arrives on the job site with the temperatures in access of 90 degrees Fahrenheit must not be used.

Confirm Grades: Verify grades and elevations shown on the drawings before proceeding with the work. Confirm subgrade compaction at 95% minimum.

Coordination: Coordinate installation of all underground utilities, footings, above ground improvements and other fixtures. Obtain templates from fixture installers.

Utilities: Prior to the start of the work, determine whether underground installations; i.e., sewer, telephone, water fuel, electric lines, etc., will be encountered, and if so, where such underground installations are exactly located. Have utility owners stake locations of existing utility structures prior to pour. Do not pave over utility structures. Notify Resident Engineer immediately of any obstructions encountered.

Proximity of Ready-Mix Plant: Plant must be located within thirty minutes driving time to site.

General: All products must be by one manufacturer and used per manufacturer's written instructions.

Other Materials: All ingredients that form the surface characteristics, including patterns, must be provided from one manufacturer, not from multiple manufacturers.

Wood Forms: Forms must be nominal 2" thick lumber or steel of same strength. Forms must be free from warp, tight enough to prevent leakage of concrete, and substantial enough to maintain their shape and position without springing or settlement, when concrete is placed or vibrated. Forms must be staked, braced and tied together securely. Forms must be clean and those for surfaces to be exposed must produce a smooth, even finish without fins or board marks. Forms must be true to finish grade and sloped where indicated to obtain finish grade.

Form Joints: Clean all wood form joints of release agent residue and seal with 2" wide vinyl or polyester film tape to prevent leaking of water. Silicone sealant may be used for joint sealing. Plastic snap-tie cones must be non-leaking. Seal form liners by fusing edges together.

Curved Forms: Form curves with flexible or curved forms conforming to radius shown on Drawings. Straight sections are not acceptable to form curves. Transition from straight to curve must be tangent to curve.

Coordination and Confirmation: Coordinate with all installers working adjacent to work of this section including placement and compaction prior to construction of decorative concrete.

Sequence: Snap lines to establish center stamp and lines of pattern as shown on the Drawings, keeping straight lines, perpendicular and parallel. Form and pour handicap ramps and medallions first, according to specifications below. Use expansion material where shown and cold joints between pours. Fully protect ramps from damage during concrete pouring, imprinting, and coloring operations.

Saw-cut Joints: After 24 hours of pouring concrete, saw-cut control joints one quarter the thickness of the slab. Do not intersect saw lines at angles less than 90 degrees. Saw lines in the stamped joints, not through the middle of patterns, as directed by the Engineer. Joints must not disrupt intended pattern of stamps. Saw-cut joint locations shall be as directed by the Engineer.

Concrete: Concrete shall follow the Standard Specifications for each type of concrete specified to be stained and stamped.

Curing: Cure concrete according to manufacturer's recommendations.

Remove and Replace Uneven Impressions: Uneven stamped impressions must be brought to a uniform condition by grinding and work shall be acid washed. Grossly uneven impressions will be removed by removing the entire section of pavement, and re-pouring at no additional cost to the Contract, at the determination of the Engineer.

Apply Sealer: Clean concrete area and apply two (2) coats of final sealing agent. Do not seal when slab temperature is below 50 degrees Fahrenheit.

Protect Concrete: Protect at all times all concrete exposed to view from oil, mud, tar, mortar, grease, paint and damaging traffic. The finish surface must present a uniformly colored, clean appearance until acceptance. Protect any adjacent landscaping from acid runoff.

Perform final quality control work, repair and cleaning with specified materials and methods. Surface finish and color on repairs must exactly match. Saw-cut, remove and legally dispose of off the site all non-conforming or defective work and replace with specified quality. Where defect

occurs within a panel, remove and replace entire panel from joint to joint. Clean and remove from premises all unused material and debris resulting from work.

Method of Measurement: Stamped colored portland cement concrete shall be measured per square yard for jointed pavement and per square foot for median surfaces as noted on the plans, complete in place including imprinting concrete; color hardening; staining and sealing concrete; furnishing all other system components and performing all specified operations to provide the complete item. Removing existing unsuitable concrete and base material; excavating, furnishing, placing and compacting base material will be measured elsewhere.

Basis of Payment: This work shall be paid for at the contract unit price per square yard for STAMPED COLORED PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED), and at the contract unit price per square foot for STAMPED COLORED PORTLAND CEMENT CONCRETE MEDIAN SURFACE 6 INCH, including all labor, materials, and equipment.

X0327999 ANTI-GRAFFITI COATING

Description: This work shall consist of the furnishing and application of an anti-graffiti coating to exposed concrete surfaces designated on the plans.

General Requirements: The following anti-graffiti coating manufactures have been pre-approved to provide the anti- graffiti coating system:

Monopole Incorporated 4661 Alger Street
Los Angeles, CA 90039 (815) 500-8585
Product: Permashield Premium Graffiti Control System Item 5600/5650

Product features shall include: Zero VOC, 10 year unlimited warranty for graffiti removals, binary prime coat, non-yellowing, non-chalking and breathable.

The anti-graffiti coating shall consist of a permanent, color stable, UV, stain, chemical and abrasion resistant coating. The removal of graffiti from the protected surfaces shall be accomplished by applying a separate removal agent as recommended by the manufacturer of the permanent coating. The removal agent shall have the capability of completely removing all types of paints and stains. After graffiti removal there shall be no damage to the anti-graffiti coating or the surface to which it is applied. Additionally, there shall be no evidence of ghosting, shadowing, or staining of the protected surface.

Qualifications: The anti-graffiti coating shall be a product that has been commercially available for a period of at least five (5) years. Contractor shall apply the material to a test patch following the manufacturer's recommendation. After the manufacturer's recommended curing period, the Engineer will apply various types of graffiti materials to the coating. After three (3) days the removal agent shall be used to remove the graffiti. If after graffiti removal the anti-graffiti coating is clean and undamaged, with no evidence of ghosting, shadowing or staining, then the anti-graffiti coating is approved for use.

Surface Preparation: Prior to application of the anti-graffiti coating, all designated surfaces shall be cleaned of loose debris, previous coatings (except staining) and all foreign matter by a method as recommended by the coating manufacturer and approved by the Engineer. All surfaces shall be thoroughly clean, dry and free of dust that might prevent penetration of the coating. New concrete should be thoroughly cured before application of the coating. Glossy, glazed and slick troweled surfaces of unstained concrete should be lightly etched or abraded before application of the coating. Concrete surfaces shall be properly sealed according to the manufacturer's recommendations, so the application of the system does not produce any noticeable long-term change in color of the surfaces being treated. A technical representative of the manufacturer shall be present to approve surface preparation and application of the anti-graffiti coating.

Weather Conditions: Coatings shall not be applied in the rain, snow, fog or mist, nor shall they be applied if these conditions are expected within twelve (12) hours of application. Coatings

shall not be applied when the surface or air temperatures are less than 40º F nor greater than 100º F, or is expected to exceed these temperatures within twelve (12) hours of application.

Application: The manufacturer's product data sheets and application guides shall be submitted to the Engineer prior to coating application. All information contained in the data sheets and application guides shall be strictly followed. All coatings shall be applied in the presence of the Engineer. Film thickness shall be measured by the Contractor in the presence of the Engineer and shall be according to the manufacturer's recommendation. Application of the clear protective coating shall take place after the application and curing of the concrete staining as appropriate for the surface to be treated (see the special provision for STAINING CONCRETE STRUCTURES).

In a contrasting color of the same anti-graffiti system, the name of the system used and the date of application shall be stenciled in letters not to exceed 2 inches high. The location of the stencil shall be near one end of the work at the bottom of the surface to be protected. For projects greater than 3,000 sq. ft. the stencil shall be periodically repeated once for every 3,000 sq. ft. near the bottom at the locations designated by the Engineer.

Cleaning Agent: The Contractor shall supply the Engineer with an initial quantity of the removal agent and written instructions for its use, as recommended by the manufacturer for graffiti removal. The amount shall be furnished at a rate of one (1) gallon per 81 sq. yd. of treated surface.

Method of Measurement: This work will be measured in place per square foot of surface area upon which the anti-graffiti coating has been applied and accepted by the Engineer. No surface area will be measured for payment for areas below final grade. Applying anti-graffiti coating to mock-up will not be measured for payment.

Basis of Payment: This Work will be paid for at the contract unit price per square foot for ANTI-GRAFFITI COATING which shall be payment in full for the cleaning of designated surfaces, the application of the anti-graffiti coating, supplying the manufacturer's technical representative and supplying the initial quantity of cleaning agent.

X1200068 FORCE MAIN BYPASS PUMPING

Description:

Basis of Payment:

X1400238 LUMINAIRE, LED, SPECIAL

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed luminaire at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 821.02 of the "Illinois Department of Transportation Standard Specifications", plan details, and the following:

Luminaire shall be LED with a 4000K color temperature, Type 3 distribution and operate at 240 volts. Luminaire housing color shall be black. Luminaire on 30-foot aluminum light pole with 6-foot mast arm shall be catalog number DMS55-70W64LED4K-R-LE3F-240-BKTX as manufactured by LUMEC, or approved equal.

General: The work shall be completed in accordance with Section 821 of the "Standard Specifications", plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per each for LUMINAIRE, LED, SPECIAL. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the luminaire.

X1700045 REMOVE TEMPORARY CONCRETE BARRIER NO SALVAGE

Description: This work shall consist of removing existing precast temporary concrete barriers, including all fixtures attached to the temporary concrete barrier, at the locations shown on the plans and which has been installed in previous contracts either adjacent to this contract, or within the project limits of this contract.

Construction Requirement: When the Engineer determines the existing precast temporary concrete barrier is no longer required, or the Contractor requests to remove the barrier and is given approval from the Engineer, the installation shall be dismantled with all of the components becoming the property of the Contractor.

When the existing precast temporary concrete barrier has been anchored to the pavement, the anchor holes shall be repaired with rapid set mortar with only enough water to permit placement. Consolidation by rodding shall be used and the material shall be struck-off finish.

Method of Measurement: This work will be measured for payment in feet in place along the centerline of the barrier. If the Contractor requests and is approved to temporarily relocate the barrier during construction operations, this will not be measured separately for payment.

Basis of Payment: This work will be paid for at the contract unit price per foot for REMOVE TEMPORARY CONCRETE BARRIER NO SALVAGE regardless of the size or type of barrier, which price shall include complete removal and disposal of existing barrier systems.

X2501100 SEEDING, CLASS 3 (SPECIAL)
X2501750 SEEDING, CLASS 4 (SPECIAL)
X2502019 SEEDING, CLASS 4B (SPECIAL)

Description: This work shall consist of Seeding of Class 3 (Special), 4 (Special) and 4B (Special) in areas as shown on the plans or a directed by the Engineer.

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

Each Seeding Class (Special) seed mixture shall be supplied in separate bags of the three mixture components: Temporary Cover, Permanent Grasses, and Forbs. All native species will be local genotype and verified that original seed collection source will be from a radius of 150 miles from the project site. Fertilizer is not required.

Article 250.07 Seeding Mixtures – Delete sentence 4. Add the following to Table 1 – Seeding Mixtures:

CLASS – TYPE	SEEDS	PURE LIVE SEED LB/ACRE
3 (Special)		
	Native Grass	**25.0**
	Bouteloua curtipendula (Side-Oats Grama)	10.0
	Elymus canadensis (Canada Wild Rye)	5.0
	Schizachyrium scoprarium (Little Bluestem)	10.0
	Temporary Cover	**30.0**
	Avena sativa (November 1 to May 31) (Annual Oats)	30.0
	OR	
	Lolium multipflorum (June 1 to October 31) (Annual Rye)	30.0
	Native Forbs	**2.80**
	Asclepias tuberosa (Butterfly Weed)	0.10
	Asclepias verticillata (Whorled Milkweed)	0.25
	Astragalus canadensis	

(Canada Milk Vetch)	0.25
Baptisia leucantha	
(White Wild Indigo)	0.10
Coreopsis lanceolata	
(Sand Coreopsis)	0.25
Dalea candida	
(White Prairie Clover)	0.25
Dalea purpurea	
(Purple Prairie Clover)	0.25
Monarda fistulosa	
(Wild Bergamot)	0.25
Rudbeckia hirta	
(Black-Eyed Susan)	0.50
Symphyotrichum oolentangiensis	
(Sky Blue Aster)	0.10
Symphyotrichum oolentangiensis	
(Sky Blue Aster)	0.25
Verbena stricta	
(Hoary Vervain)	0.25

4 (Special)

Native Grass	**22.0**
Andropogon gerardii	
(Big Bluestem)	4.0
Bouteloua curtipendula	
(Side-Oats Grama)	5.0
Elymus canadensis	
(Canada Wild Rye)	3.0
Panicum virgatum	
(Switch Grass)	3.0
Schizachyrium scoparium	
(Little Bluestem)	5.0
Sorghastrum nutans	
(Indian Grass)	2.0
Temporary Cover	**30.0**
Avena sativa (November 1 to May 31)	
(Annual Oats)	30.0
OR	
Lolium multipflorum (June 1 to October 31)	
(Annual Rye)	30.0

Native Forbs	**2.75**
Asclepias syriaca (Common Milkweed)	0.25
Dalea candida (White Prairie Clover)	0.10
Dalea purpurea (Purple Prairie Clover)	0.10
Desmodium illinoensis (Illinois Bundleflower)	0.25
Heliopsis helianthoides (Ox-eye Sunflower)	0.25
Monarda fistulosa (Bergamot)	0.25
Penstemon digitalis (Foxglove Beardtongue)	0.25
Ratibida pinnata (Yellow Coneflower)	0.50
Rudbeckia hirta (Black-Eyed Susan)	0.50
Solidago rigida (Stiff Goldenrod)	0.25
Symphyotrichum novae-angliae (New England Aster)	0.25

4B (Special)

Native Grass and Sedges	**9.25**
Andropogon gerardii (Big Bluestem)	3.00
Carex vulpinoidea (Brown Fox Sedge)	0.25
Elymus virginicus (Virginia Wild Rye)	2.00
Glyceria striata (Fowl Manna Grass)	0.25
Juncus torreyi (Torrey's Rush)	0.25
Leersia oryzoides (Rice Cut Grass)	0.25
Panicum virgatum (Switch Grass)	3.00
Scirpus atrovirens (Dark Green Bulrush)	0.25

Temporary Cover	**30.0**
Avena sativa (November 1 to May 31)	
(Annual Oats)	30.0
OR	
Lolium multipflorum (June 1 to October 31)	
(Annual Rye)	30.0
Native Forbs	**2.05**
Asclepias incarnata	
(Marsh Milkweed)	0.25
Eupatorium perfoliatum	
(Common Boneset)	0.25
Lycopus americana	
(Common Water Horehound)	0.15
Penthorum sedoides	
(Ditch Stonecrop)	0.15
Rudbeckia laciniata	
(Wild Goldenglow)	0.25
Silphium perfoliatum	
(Cup Plant)	0.25
Verbena hastata	
(Blue Vervain)	0.25
Verbesina alternifolia	
(Wingstem)	0.25
Zizia aurea	
(Golden Alexanders)	0.25

Notes:

1. The seeding time for this work shall be October 15 to June 1. Seeding done outside of this time frame will not be measured for payment. No seed shall be sown during high winds or when the ground is not in proper condition for seeding, such as when raining or when the ground is covered with snow.
2. Purity and germination tests no older than twelve months of the date of sowing must be submitted to verify all bulk seed required to achieve LB PLS specified.
3. The seedbed shall be prepared and approved by the Engineer prior to seeding. The Contractor shall delineate the perimeter of the seedbed with wooden lathe. The wooden lathe shall remain in place.
4. The Engineer must witness the delivery of seed with original labels attached in the field. Provide to the Engineer the seed labels from the bags in which the seed is delivered in.
5. Temporary cover seed shall be kept separate from the native seed mixture. It shall be mixed on site under the direction of the Engineer.

6. In order to eliminate potential introduction of invasive or exotic species, all equipment used on the planting site shall be free of mud and/or plant material. This includes tires, mower decks, undercarriage, etc.
7. The Temporary cover (Cover Crop) shall be thoroughly mixed with native grass seed mix of each class and seeded using a mechanical seeder that applies the seed uniformly at a depth of 1/4 inch. Second, the native forb seed shall be thoroughly mixed with 2 bushels of moistened horticultural grade vermiculite per acre and uniformly seeded at a depth of 1/8 inch. The seedbed shall be immediately mulched as specified.
8. Within two hours after the seeding and mulching are complete, water shall be applied at a rate of 5 gal/sq yd.
9. The Contractor shall have on hand enough equipment to completely water all seeded areas in two days at the watering rate specified above. The Engineer will make periodic checks of the Contractor's watering equipment to determine its adequacy and operating condition.
10. All watering described shall be done with a spray application. An open-end hose will not be acceptable. The method of watering shall meet the approval of the Engineer.
11. Supplemental Watering: During periods exceeding 26 degree C (80 degree F) or subnormal rainfall (less than 1" of rainfall per week) supplemental watering may be required after the initial watering and prior to acceptance of the work. Supplemental watering shall be performed when directed by the Engineer. Water shall be applied at the rate specified by the Engineer within 24-hour notice.

If specified seed material is unavailable, the Engineer shall approve the substitutes in writing. Adjustments will be made at no cost to the contract. Approval of substitutes shall in no way waive any requirements of the contract.

Method of Measurement: This work will be measured in acres of surface area seeded.

Initial watering of seeded areas as described will not be measured for payment.

Seeding, native forb mix horticultural grade vermiculite will not be measured for payment.

Supplemental watering will be measured for payment as specified in the Special Provision for SUPPLEMENTAL WATERING.

Basis of Payment: This work will be paid for at the contract unit price per acre for SEEDING, CLASS XX (SPECIAL), of the type specified.

X2503110 MOWING (SPECIAL)

Revised on: 9/28/2017

Description: This work shall consist of mowing all grassed, turfed, and/or temporary seeded areas within the project right-of-way limits to keep floral resources from blooming, or as directed by the Engineer. The equipment used shall be capable of adequately mowing all areas surrounding existing trees and shredding all regeneration of brush 2 inches in diameter or less to the satisfaction of the Engineer. Mowing shall be completed weekly, between March 15th and October 14th. The mowed area(s) shall be no greater than approximately 3-inches in height or as approved by the Engineer.

Method of Measurement: Each mowing occurrence will be paid for separately.

Basis of Payment: This work shall be paid for at the contract unit price per ACRE for MOWING (SPECIAL), which price shall include all labor, material, and equipment necessary to complete the work described above.

X2510635 HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL

Description: This work shall consist of furnishing, transporting, installing, and maintaining heavy duty erosion control blanket (Turf Reinforcement Mat) over seeded areas.

Typical locations to be used in conjunction with permanent seeding in high-flow channel bottoms, areas susceptible to direct-contact flow with high volumes of storm water runoff, and within stream channels adjacent to permanent stone stabilized channels as shown on the plans.

Materials: Materials shall be according to the following:

A high-strength reinforcement mat from the following list of approved manufacturers shall be used:

(a) Tensar/North American Green – C350 TRM
(b) ADS Geosynthetics – PP5-10 TRM
(c) Western Excelsior Corporation – PP5-10 TRM
(d) East Coast Erosion Control – ECC-3 Coconut TRM
(e) Propex – Landlok TRM 1051/1060

Mat shall be secured with 12” degradable stakes. Staking shall be installed as necessary to prevent the mat from dislodging.

Construction Requirements: The furnishing, transporting, and placing of turf reinforcement mat shall be performed according to **Article 251.05** of the “Standard Specifications”.

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

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

X2511630 EROSION CONTROL BLANKET (SPECIAL)

Description: This work shall consist of furnishing, transporting, installing, and maintaining erosion control blanket over seeded areas.

Typical locations to be used in conjunction with permanent seeding in areas where the finish grades are 3:1 or flatter and in low-flow channel lining applications as shown on the plans.

Materials: Materials shall be according to the following.

A single net straw blanket from the following list of approved materials shall be used:

(f) Tensar/North American Green – S75BN
(g) ADS Geosynthetics – 00S2AN
(h) Western Excelsior Corporation – Excel SR-1AN (All-Natural)
(i) American Excelsior Company – Premier Single Straw
(j) East Coast Erosion Control – ECS-1B
(k) ErosionControlBlanket.com – S31 BD "Big Daddy"

Construction Requirements: The furnishing, transporting, and placing of erosion control blanket shall be performed according to **Article 251.04** of the "Standard Specifications".

Each blanket shall be secured with a 12" degradable stake. Securing devices are not paid for separately but included in the cost of the pay item.

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

Basis of Payment: This work will be paid for at the contract unit price per square yard for EROSION CONTROL BLANKET (SPECIAL). *The unit price shall include all equipment, materials, and labor required to furnish and place the erosion control blanket as described.*

X2511640 EROSION CONTROL BLANKET (MODIFIED)

Description: This work shall consist of furnishing, transporting, installing, and maintaining erosion control blanket over seeded areas.

Typical locations to be used in conjunction with permanent seeding in areas where the finish grades are 3:1 or flatter, and in areas anticipated to see low to medium-flows.

Materials: Materials shall be according to the following:

A double net straw-coconut blanket from the following list of approved materials shall be used:

(a) Tensar/North American Green – SC150BN
(b) ADS Geosynthetics – 0CS2TT
(c) Western Excelsior Corporation – Excel CS-3
(d) American Excelsior Company – Premier Straw/Coconut
(e) East Coast Erosion Control – ECSC-2
(f) ErosionControlBlanket.com – SC32
(g) Propex – Landlok ECB-CS2

Construction Requirements: The furnishing, transporting, and placing of erosion control blanket shall be performed according to **Article 251.04** of the "Standard Specifications".

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

Basis of Payment: This work will be paid for at the contract unit price per square yard for EROSION CONTROL BLANKET (MODIFIED).

X2800302 TEMPORARY DITCH CHECKS (SPECIAL)

Description: This work shall consist of constructing, maintaining, and removing temporary ditch checks.

General: The work shall be performed according to Section 280 of the "Standard Specifications", the details shown in the plans, and the following:

The temporary ditch check shall be triangular shaped, urethane foam covered with a geotextile fabric. The temporary ditch check shall be installed on a geotextile fabric apron. The temporary ditch check shall have a triangle base 16" – 20" wide and a minimum triangle height of 10". The temporary ditch checks shall be installed at the locations specified on the Erosion Control Plan,

and/or as directed by the Engineer. The temporary ditch check installation shall be according to the detail shown on the plans and the manufacturer's recommendations.

The geotextile fabric shall conform to Article 1080.05 of the "Standard Specifications", for Geotechnical Fabric for French Drains.

The temporary ditch checks shall remain in place until just before placing the final landscaping in the ditch area. The Contractor shall not remove the temporary ditch checks if it is raining and/or rain is in the immediate forecast.

The ditch checks shall become the property of the Contractor upon their removal.

Method of Measurement: Temporary Ditch Checks (Special) will be measured in place and the length calculated in feet for each ditch check section actually installed.

Basis of Payment: This work will be paid for at the contract unit price per foot for TEMPORARY DITCH CHECKS (SPECIAL). The unit price shall include all labor, equipment and materials necessary for their installation, maintenance, and removal.

X2800400 PERIMETER EROSION BARRIER, SPECIAL

Description: This work shall consist of constructing, maintaining, removing and disposing of perimeter erosion barrier as part of the project's temporary erosion control system.

General: The work shall be performed according to Section 280 of the "Standard Specifications" and the following:

The perimeter erosion barrier shall be limited to temporary silt filter fence meeting the requirements of AASHTO Standard M 288-00. This specification is applicable to the use of a geotextile as a vertical, permeable interceptor designed to remove suspended soil from overland water flow. The function of a temporary silt fence is to filter and allow settlement of soil particles from sediment-laden water. The purpose is to prevent the eroded soil from being transported off the construction site by water runoff.

All removed materials shall be disposed of outside the right-of-way according to Article 202.03 of the "Standard Specifications".

Materials:

Geotextile Requirements: The geotextile used for the temporary silt fence shall be classified as supported (with a wire or polymeric mesh backing) or unsupported (no backing). The temporary silt fence geotextile shall meet the requirements of Table 6 included below. All numeric values except Apparent Opening Size (AOS) represent Minimum Average Roll Values (MARV as defined in ASTM D4439). The values for AOS are the Maximum Average Roll Values.

Table 6 – Temporary Silt Fence Requirements

Requirements	Test Methods	Wire Backed Supported Silt Fence [a]	Unsupported Silt Fence	
			Geotextile Elongation >=50% [b]	Geotextile Elongation <50% [b]
Maximum Post Spacing		4 feet	4 feet	6 feet
Grab Strength	ASTM D 4632			
Machine direction		90 lbs	124 lbs	124 lbs
X-Machine direction		90 lbs	100 lbs	100lbs
Permittivity [c]	ASTM D 4491	0.05 sec^{-1}	0.05 sec^{-1}	0.05 sec^{-1}
Apparent Opening Size	ASTM D 4751	0.024in maximum average roll value		
Ultraviolet stability (retained strength)	ASTM D 4355	70% after 500 hours of exposure		

Notes:

a) Silt fence support shall consist of 14-guage steel wire with a mesh backing of 6" x 6" or prefabricated polymeric mesh of equivalent strength.
b) As measured according to ASTM D 4632.
c) These default filtration property values are based on empirical evidence with a variety of sediments. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests should be performed by the agency to confirm suitability of these requirements.

Support Posts: The support posts may be composed of wood, steel or a synthetic material. The posts shall be a minimum length of 3 feet plus the buried depth. They shall have sufficient strength to resist damage during installation and to the support the applied loads due to material build up behind the silt fence.

1. Hardwood posts shall be a minimum of 1.2" x 1.2"
2. No. 2 southern pine posts shall be a minimum of 2.6" x 2.6"
3. Steel posts may be U, T, L, or C shape, weighing 1.3 lbs per foot.

Fence Support: The wire or polymer support fence shall be at least 30" high and strong enough to support the applied loads. Polymer support fences shall meet the same ultraviolet degradation requirements as the geotextile material (see table 6).

The wire support fence shall:

- Be a minimum of 14-gauge.
- Have a minimum of six horizontal wires.
- The maximum vertical wire spacing shall be 6".

Construction:

The silt fence shall be installed with a minimum height above ground of 30". The geotextile at the bottom of the fence shall be buried, in a "J" configuration to a minimum depth of 6", in a trench so that no flow can pass under the silt fence. The trench shall be backfilled and the soil compacted over the geotextile.

The geotextile shall be spliced together with a sewn seam or two sections of fence may be overlapped instead. The sewn seam shall be positioned only at a support post.

The Contractor must demonstrate to the satisfaction of the Engineer that the geotextile can withstand the anticipated sediment loading.

The posts shall be placed at the spacing shown on the project plans. The posts shall be driven or placed a minimum of 20" into the ground. The depth shall be increased to 24" if the fence is placed on a slope of 3:1 or greater. If the 20" depth is impossible to obtain, the posts shall be adequately secured to prevent overturning of the fence due to sediment loading.

The support fence shall be securely fastened to the upslope side of the fence post. The support fence shall extend from the ground surface to the top of the geotextile.

When un-supported fence is used, the geotextile shall be securely fastened to the fence posts.

Field monitoring shall be performed to verify that the placement of an armor system does not damage the geotextile.

Silt fences should be continuous and transverse to the flow. The silt fence should follow the contours of the site as closely as possible. The fence shall also be placed such that run off cannot flow around the end(s) of the fence.

The silt fence should be located so that the drainage area is limited to an area equivalent to 1000 square feet for each 10 feet of fence length. Caution should be used where the site slope is greater than 1:1, and/or water flow rates exceed 0.1 cubic feet per second for each 10 feet of fence length.

Maintenance:

The Contractor shall inspect all temporary silt fences immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct any deficiencies.

The Contractor shall also make a daily review of the location of silt fences in areas where construction activities have altered the natural contour and drainage runoff to ensure that the silt fences area properly located for effectiveness. Where deficiencies exist as determined by the Engineer, additional silt fence shall be installed as directed by the Engineer.

Damaged or otherwise ineffective silt fences shall be repaired or replaced promptly.

Sediment deposits shall either be removed when the deposit reaches half the height of the fence or a second silt fence shall be installed as directed by the Engineer.

The silt fence shall remain in place until the Engineer directs it to be removed. After the fence removal, the Contractor shall remove and dispose of any excess sediment accumulations, dress the area to give it a pleasing appearance, and cover with vegetation all bare areas according to the contract requirements.

The removed silt fence may be used at other locations provided the geotextile and other material requirements continue to be met to the satisfaction of the Engineer.

During the construction operation when any loose material is deposited in the flow line of ditches, gutters or drainage structures so the natural flow of water is obstructed, the material shall be removed at the close of each working day.

At the conclusion of the construction operations all drainage structures shall be free from all dirt and debris. This work will not be paid for separately but shall be considered included in the unit cost of PERIMETER EROSION BARRIER.

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

Basis of Payment: This work will be paid for at the contract unit price per foot for PERIMETER EROSION BARRIER. *The unit price will include all work and materials necessary to properly install the perimeter erosion barrier, maintain the perimeter erosion barrier throughout the project, and to remove and dispose of the used materials at the completion of the project.*

X4240800 DETECTABLE WARNINGS (SPECIAL)

Description: This work shall consist of furnishing and installing detectable warnings in accessibility ramps.
Materials: The detectable warnings shall be cast iron panels of the sizes shown on the plans and shall meet the following material specification:

The detectable warning plate shall be constructed of gray iron meeting the requirements of Article
1006.14 of the "Standard Specifications" and ASTM A48, CLASS 35B; or cast ductile iron meeting the requirements of Article 1006.15 of the "Standard Specifications".
The coating system shall consist of a rust inhibiting epoxy primer and a finish coat. The epoxy primer shall have the following properties:

Property	Test Method	Performance
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Corrosion Resistance (Salt Spray)	ASTM B117	1000 Hours Minimum

Cold Rolled Steel Lab Panels

The finish coat shall be a powder coat and shall have the following properties:

Property	Test Method	Performance
Color	---	Federal Yellow
Corrosion Resistance (Salt Spray)	ASTM B117	1000 Hours Minimum

Cold Rolled Steel Lab Panels

General: The installation of detectable warnings shall meet the requirements of Article 424.09 of the "Standard Specifications". Grey iron plates shall be installed in concrete accessibility ramps only.
Ductile iron plates may be installed in either concrete or hot-mix asphalt (HMA) accessibility ramps.

Method of Measurement: This work will be measured for payment in place installed, in square feet. The concrete area under the detectable warnings will be measured for payment as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified, with no deductions made for the detectable warnings panels located within the ramp.

Basis of Payment: This work will be paid for at the contract unit price per square foot of DETECTABLE WARNINGS (SPECIAL). The unit price shall include all equipment, materials and labor required to install the panels.

X5030290 STAINING CONCRETE STRUCTURES

Description: This work shall consist of staining the Form Liner Textured Surface as shown on the plans to replicate the look of actual stone masonry. The staining shall match the color variations present in natural limestone, accurately simulating the appearance of real stone including the multiple colors, shades, flecking, and veining that is apparent in real stone. It shall also simulate the colors that may be present from aging, such as staining from oxidation, rusting and/or organic staining from soil and vegetation. An example of the desired staining is shown below.

Materials: The stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight, and/or weathering. The stain shall be odor free and V.O.C. compliant. The stain shall meet the requirements for weathering resistance of 2000 hours accelerated exposure.

Store concrete stain materials in an area where temperatures will not be less than 50°F (10°C) or more than 100°F (38°C) and in accordance with OSHA and local Fire Code Requirements. Deliver materials in original and sealed containers, clearly marked with the manufacturer's name, brand name, type of material, batch number, and date of manufacture.

Submittal: Contractor shall submit to the Engineer for approval evidence of the selected subcontractor's five years experience making color stains to match natural stone colors on concrete surfaces.

Upon receipt of notification of the style of form liner to be used the Contractor shall submit a proposed procedure for obtaining the simulated finish using the approved architectural form liner style and stain (see the Special Provision for FORM LINER TEXTURED SURFACE). The procedure shall include plans and details for the form liner pattern and dimensions, and be submitted for the Engineer's approval no later than 30 calendar days from the date of notification of approval of the style type. If such plans and details are not satisfactory to the Engineer and Kane County, the Contractor shall make any changes as may be required by the Engineer or Kane County at no additional cost to the Department.

Upon approval of the form liner plans and details, the Contractor shall submit three 6' by 6' (minimum) mock-up cast concrete panel of the simulated stone masonry finish including the staining. One of the stained panels shall also include Anti-Graffiti Coating (see the Special Provision for ANTI-GRAFFITI COATING). The sample panels shall be delivered and positioned on the job site at a location to be determined by the Engineer. The approved sample panel shall be the standard for concrete staining to replicate the look of actual stone masonry throughout the project (see the Special Provision for FORM LINER TEXTURED SURFACE).

General: The surfaces to be stained shall be structurally sound, clean, dry, and fully cured. The concrete shall be at least 30 days old prior to applying the stain. Curing agents must be removed a minimum of 14 days prior to staining to allow the concrete to dry out.

Temperature and relative humidity conditions shall meet the manufacturer's application instructions. Do not apply the stain under rainy conditions or within three (3) days after surfaces became wet from rainfall or other moisture. Do not apply when the weather is foggy or overcast.

The concrete surface shall be cleaned prior to the applying the stain materials. The methods and materials used for cleaning the substrate shall be as recommended by the manufacturer of the water- repellent stain. The Contractor shall insure that the surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material. The Contractor shall not use sandblasting as a cleaning method. The preferred method to remove latency is pressure washing with water, at a minimum 3000 psi (3-4 gal/min), using fan nozzle. The nozzle should be positioned perpendicular to and at a distance of 1-2 feet from the concrete surface. The cleaned surface shall be free of blemished, discoloration, surface voids and unnatural form marks.

The stain shall be thoroughly mixed according to the manufacturer's directions using an air-driven or other explosion-proof power mixer. Mix all containers thoroughly prior to application. Do not thin the material. Materials shall be applied at the rate as recommended by the manufacturer. Absorption rates may be increased or decreased depending upon the surface texture and porosity of the substrate so as to achieve even staining.
A test area of 10 square feet shall be prepared and the stain applied to the surface to verify the surface preparation, adhesion and color. Once the Engineer has approved the results from the test area the application of the stain to the rest of the exposed surfaces may be completed.

Take precautions to ensure that workman and work areas are adequately protected from fire and health hazards resulting from handling, mixing and application of materials. Furnish all the necessary equipment to complete the work. Provide drop cloths and other forms of protection necessary to protect all adjoining work and surfaces to render them completely free of overspray and splash from the concrete stain work. Any surfaces, which have been damaged or splattered, shall be cleaned, restored, or replaced to the satisfaction of the Engineer.
Schedule the color stain application with earthwork and back-filling of any wall areas making sure that all simulated stone texture that might fall below grade is colored prior to back-filling. Delay adjacent plantings until color application is completed. Coordinate work to permit coloring applications without interference from other trades. Where exposed soil or pavement is adjacent

which may splatter dirt or soil from rainfall, or where surface may be subject to over-spray from other processes, provide temporary cover of completed work.

Anti-Graffiti Coating shall be applied to the final exposed surface (see the Special Provision for ANTI- GRAFFITI COATING).

Method of Measurement: The exposed surfaces will be measured in place and the area computed in square feet. Staining mock-ups will not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per square foot for STAINING CONCRETE STRUCTURES.

X5150110 NAME PLATES SPECIAL

Description: This work shall consist of furnishing and installing decorative name plates and associated mounting bases and hardware according to the details shown on the plans and as specified herein.

Materials: Name plates shall be made of brass, bronze, or other material as specified on the plans or by the Engineer.

Construction Requirements: The general features of the design; the type, size and spacing of letters and figures; the items of information to be shown on all name plates for structures constructed under a given contract; and the arrangement of these items shall be as specified on the plans or by the Engineer. The surface of the name plate shall be polished.

Installation of the name plates shall be as follows:

a) Concrete Structures – On concrete structures, the name plate shall be embedded in the concrete and fastened by means of four brass or bronze bolts with countersunk heads, or four lugs cast integral with the plate. The bolts or lugs shall project at least 3 inches into the concrete beyond the back of the plate.

Basis of Payment: This work will be paid for at the contract unit price per each for NAME PLATES (SPECIAL). Concrete Structures, Reinforcement Bars, Form Liner, Anti-Graffiti Coating, and Staining Concrete will be paid for separately.

X5610700 WATER MAIN REMOVAL

Description: This work shall consist of the complete removal and disposal of existing water main, regardless of size, at the locations shown on the plans. Water main between hydrant auxiliary valves and the main branch line will also be included in this work.

Construction Requirements: The backfill for excavations made in the subgrade of the proposed improvement, and trenches where the inner edge of the trench is within 2 ft of the proposed edge of pavement, curb and gutter, or sidewalk shall be trench backfill according to Section 208 of the Standard Specifications. Backfill should be Method 1 in accordance with Article 550.07 of the Standard Specifications.

All material resulting from the removal of existing water main shall be dispose of by the Contractor according to Article 202.03 of the Standard Specifications.

Method of Measurement: This work will be measured for payment in feet of water main removed. Backfilling, including trench backfill, will not be measured separately but shall be considered included in the cost of removal.

Basis of Payment: This work will be paid for at the contract unit price per foot for WATER MAIN REMOVAL, regardless of size, and shall include all labor, equipment and materials necessary for removal and disposal of water main, and backfilling of the resulting excavation.

X5630712 CONNECTION TO EXISTING WATER MAIN 12

Description: This work shall consist of connecting a proposed water main facility to an existing water main facility under full service pressure, according to the Village of Carpentersville details shown on the plans (Pressure Connection W-3 012908) and as described herein.

Materials: All materials shall be domestic and according to the following:

a. Clow F-5207, Cascade CXTEX, or Romac SST-full stainless-steel 12" x 8" tapping sleeve for D.I., full stainless clamps for A.C.
b. C-515 resilient wedge Clow F-6100 of C-515 resilient wedge Clow of Waterous 8".
c. Valve Vault: Materials shall be according to Article 602.02 of the "Standard Specifications", the detail for Pressure Connection W-3 012908, and the following:
    i. Valve vaults shall consist of precast reinforced concrete sections meeting ASTM C478 standards, split base with bottom barrel section being "Doghouse" type.
    ii. Valve vault steps shall consist of a copolymer plastic with a continuous ½-inch steel reinforcement as manufactured by M.A. Industries, Inc.
    iii. Frames and lids for valve vaults shall be Neenah R-1713, Type B, self-sealing, or East Jordan Iron Works 1050Z1, with recessed pick holes, and embossed "WATER" and "Carpentersville".
    iv. PSX Direct Drive rubber boot connector manufactured by Press-Seal Corporation.
    v. Adco WY-64 Butyl Sealant for barrel sections joints and adjustment ring joints. Adapter Inc. Internal/External Chimney Seal in paved areas as shown on the plans.
d. All other associated materials shall be according to the specification for DUCTILE IRON WATER MAIN, 8" DIAMETER, RESTRAINED JOINT PIPE and the details shown on the plans.

General Requirements: Unless otherwise approved by the Village Engineer of Carpentersville, all connections to the existing water system shall be made under full water service pressure. Operation of water valves by the Contractor is forbidden.

Method of Measurement: This work will be measured for payment per each location requiring a connection of a proposed water main to an existing water main, performed under full service pressure. All associated materials required to complete the connection as shown on the plans and described herein will not be measured separately, including valves and valve vaults.

Basis of Payment: This work will be paid for at the contract unit price per each for CONNECTION TO EXISTING WATER MAIN of the size specified.

X5631210 CONNECTION TO EXISTING FORCE MAIN 10"

Description:

Method of Measurement:

Basis of Payment:

X5640150 FIRE HYDRANT ASSEMBLY COMPLETE

Description: This work shall consist of installing a fire hydrant assembly, including all associated items as shown in detail W-2 022818 as shown on the plans, including an 8" x 6" M.J. tee and 6" D.I. lead pipe, and as described herein.

Materials: All materials shall be domestic and according to the following:

a. Fire hydrants shall be dry barrel type with breakaway type flange and auxiliary gate valves and shall conform to AWWA C502.
    a. Clow Medallion F2545. The fire hydrant shall have a flanged shoe for bury less than 6 feet and an M.J. shoe, minimum 24", maximum 36" stub with Mega-Lug, for bury greater than 6 feet.
    b. Fire hydrants shall have two (2), two and one-half inch (2-1/2") hose outlets and one four and one-half (4-1/2") national standard thread outlet.
    c. Fire hydrants shall have a main valve opening of five and one-quarter inches (5-1/4").
    d. Fire hydrants shall have a 6-inch auxiliary resilient seat type gate valve in accordance with AWWA C515 with a ductile iron body, non-rising stem and O-ring packing. Valve shall be Clow resilient wedge gate valve.
    e. Auxiliary Valve Box shall be a Tyler 664-S or EJIW-664 and shall include a valve box stabilizer as manufactured by Valve Box Stabilizer, Inc. Lid should read "WATER".
    f. Fire hydrant shall be painted Safety Red, with one full application per hydrant. Primer shall be Safety Gray, with one full application per hydrant.
        i. Paint - Rust-Oleum High Performance – 9800 System DTM Urethane Mastic
        ii. Primer – Rust-Oleum High Performance – 9100 System DTM Epoxy Matic.
    g. All other materials shall be according to the special provision for DUCTILE IRON WATER MAIN, 8" DIAMETER, RESTRAINED JOINT PIPE.

Construction Requirements: Fire hydrants shall have a minimum of one (1) cubic yard of one-quarter (1/4) to three-quarters (3/4) inch of washed river stone placed at the base of the fire

hydrant to provide drainage at the barrel. The top of the stone shall be covered with eight (8) mil thick polyethylene plastic prior to backfilling around the fire hydrant.

Auxiliary valves shall be connected to fire hydrants.

The break line flange of fire hydrants shall be not less than one inch (1") nor more than three inches (3") above finished ground elevation. Fire hydrants in street rights-of-way shall be placed not less than three feet (3'), nor more than five feet (5') from back of curb.

Zinc anodes shall be installed on every other bolt of each mechanical joint fitting.

Precast concrete thrust blocking shall be installed against undisturbed earth as shown on the plan details.

Basis of Payment: This work will be paid for at the contract unit price per each for FIRE HYDRANT ASSEMBLY COMPLETE and will include all materials as shown on the plan details and described herein.

X6026622 VALVE VAULTS TO BE REMOVED

Description: This work shall include the complete removal and disposal of existing valve vaults at the locations shown on the plans, including the frame and lid, and the backfilling of the resulting excavation.

Construction Requirements: The backfill for excavations made in the subgrade of the proposed improvement, and trenches where the inner edge of the trench is within 2 ft of the proposed edge of pavement, curb and gutter, or sidewalk shall be trench backfill according to Section 208 of the Standard Specifications. Backfill should be Method 1 in accordance with Article 550.07 of the Standard Specifications.

All material resulting from the removal of existing valve vaults shall be dispose of by the Contractor according to Article 202.03 of the Standard Specifications.

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

X7800100 PAINT PAVEMENT MARKING – RAISED MEDIAN

Description: This work shall consist of preparing surfaces and painting raised medians and median noses at the locations as shown on the plans and according to the applicable portions of Section 780 of the "Standard Specifications".

Materials: Materials shall be according to Article 780.02(b) of the "Standard Specifications".

Method of Measurement: This work will be measured for payment in place per square foot and will include the adjacent curbed portion of the median.

Basis of Payment: This work will be paid for at the contract unit price per square foot for PAINT PAVEMENT MARKING – RAISED MEDIAN, and shall include all surface preparation, layout, equipment and materials required to complete the work as described.

X7800200 PAINT PAVEMENT MARKING CURB

Description: This work shall consist of preparing surfaces and painting curbs at the locations as shown on the plans and according to the applicable portions of Section 780 of the "Standard Specifications".

Materials: Materials shall be according to Article 780.02(b) of the "Standard Specifications".

Method of Measurement: This work will be measured for payment in place per foot measured along the flowline of the curb.

Basis of Payment: This work will be paid for at the contract unit price per foot for PAINT PAVEMENT MARKING CURB, and shall include all surface preparation, layout, equipment and materials required to complete the work as described.

X8211000 UNDERPASS LUMINAIRE, SPECIAL

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed luminaire at locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 821.02 of the "Illinois Department of Transportation Standard Specifications", plan details, and the following:

Underpass luminaire shall be a TunnelPass LED Series from Halophane. Underpass luminaire shall have 3 LED modules, 4,000K color temperature, ceiling mounted long and narrow optical distribution, 700mA driver with 0-10V dimming and operate at 240 volts, Underpass luminaire housing color shall be black. Underpass luminaire shall be catalog number TNLED-3-4K-7-AS-CLN-DBKA-S-DM as manufactured by Halophane, or an approved equal.

General: The work shall be completed in accordance with Section 821 of the "Standard Specifications", plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per each for UNDERPASS LUMINAIRE, SPECIAL. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the underpass luminaire.

X8250505 LIGHTING CONTROLLER, SPECIAL

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed lighting controller as specified at the location as indicated on the plans.

Materials: The materials shall be in accordance with Article 825.02 of the "Illinois Department of Transportation Standard Specifications", plan details, and the following:

All components within the controller shall be manufactured and supplied by a company regularly engaged in business of furnishing the specified component. If required by Owner's representative, manufacturer shall submit a certification to a minimum experience of five years in manufacture of the specified component.

1. **Panelboard**
    a. Panelboard shall be provided with bolt-on circuit breakers of size and rating as detailed in on the plans. Breakers shall be 1 or 2-pole with an integral crossbar to assure simultaneous opening of all poles in multipole circuit breakers. Breakers shall have an overcenter, trip-free, toggle-type operating mechanism with quick-make, quick-break action and positive handle indication. Handles shall have "ON", "OFF" and "TRIPPED" positions. Circuit breakers shall be UL listed in accordance with UL Standard 489.

    b. Panelboards bus structure and main circuit breaker shall have current ratings of 100A. Bus material shall be copper with either silver or tin plating. Bus ratings shall be in accordance with UL Standard 67. Bus bar connections to branch circuit breakers shall be the "distributed phase" or phase sequence type.

    c. Panelboard bus assembly shall be enclosed in a steel cabinet rated NEMA 1 (unless otherwise noted on the drawings). Box front shall include a door and have a flush, cylinder tumbler-type lock and catch and spring-loaded stainless steel door pull. Door shall have completely concealed hinges when closed and shall not be removable when locked. A circuit directory frame and card with a clear plastic cover shall be provided on door interior.

    d. Panelboards shall be nominal 20-inch in width unless otherwise noted.

e. Panelboards rated 240 VAC or less shall have short-circuit ratings of 22kA, but not less than an integrated equipment rating of 10,000 amps RMS symmetrical. All units shall bear UL label.

f. Except where noted otherwise on the drawings, all panelboards shall have neutral bar and ground bar bonded together. Where neutral bar and ground bar are noted to be isolated, the contractor shall verify during wiring installation that neutral and ground conductors are terminated on the correct bar.

g. Where schedule on drawings indicates "SPARE", a complete circuit breaker of the ampacity and number of poles indicated is to be provided. Where schedule on drawings does not indicate a specific size circuit breaker provide a 20 AMP single pole circuit breaker for each of the remaining unused poles. Therefore, panelboard shall be filled with feeder circuit breakers.

h. All circuit breakers feeding HVAC equipment shall be HACR rated.

i. Multi-pole circuit breakers with removable tie-links are not acceptable.

j. Tandem circuit breakers (two circuit breakers on single pole frame) are not acceptable.

2. ROAMview System

a. ROAMview Desktop Computer shall be a Precision Workstation T3420 with an Intel i5-7500 Processor, 8GB RAM, 500GB Hard Drive, VGA video port and Windows 10 Pro License installed as manufactured by DELL. Keyboard and mouse shall be provided with desktop computer.

b. ROAMview 20-inch Monitor shall be Model Number E2016H as manufactured by DELL.

c. ROAMview Gateway shall be Model Number REG127-EX-5-V as manufactured by Acuity Brands. Contractor shall provide all mounting hardware required for the ROAMview Gateway.

d. Contractor shall provide all mounting hardware and cables necessary within the cabinet for a complete and operational system.

e. Contractor shall have the manufacturer come to the site for a one-day startup, testing and training for the ROAMview System.

3. Lay-in Wireway

a. Lay-in wireway shall be NEMA 1 hinge cover steel enclosed wiring trough. Wireway shall be sized as shown on drawings, as a minimum, or as required by NEC, and shall be as manufactured by Square D, Hoffman, or approved

equal. Install hinged wireway with hinges on bottom such that doors will not interfere with maintenance and installation when open.

4. **Outdoor Air Conditioner with Heater Package**
    a. Outdoor Air Conditioner with Heat Package shall mount to the side of the lighting controller cabinet, operate at 120VAC, cooling performance of 4000BTU/Hr., heat performance of 2000W and enclosure protection of NEMA 4X. Outdoor Air Conditioner with Heater shall be thermostat controlled to temperatures as shown on the plans. Outdoor Air Conditioner with Heat Package shall be Model Number G280416G051 as manufactured by HOFFMAN, or approved equal.

5. **Computer Tower Stand**
    a. Computer tower stand shall be of steel construction and mount the computer 6-inches minimum above the floor. Computer Tower Stand shall be Model Number ERK-CS-01B as manufactured by Eureka Ergonomic, or approved equal.

6. **Led Luminaire, Enclosed and Gasketed**
    a. LED Luminaire shall be Model Number VTC-5K-G-U-W2-G-GR as manufactured by HUBBELL, or approved equal.

General: The work shall be completed in accordance with Section 825 of the "Standard Specifications", plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per each for LIGHTING CONTROLLER, SPECIAL as specified. The unit price shall include the cost of all materials, equipment, labor, programming, start-up and training required to furnish and install the lighting controller.

X8300001 LIGHT POLE, SPECIAL

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed light pole as specified at the locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 830.02 of the "Illinois Department of Transportation Standard Specifications", plan details, and the following:

Light pole shall be a 17-foot mounting height with an acorn fixture, LED luminaire, 0-10V dimming driver, and Roamview Wireless Node. Light pole color shall be black.

Light pole shall be Model Number PT-A880SRLED-5P-6ARC45T3R-MD-03-A/5211'-8.5"FP5/STD as manufactured by Sternberg Lighting, or approved equal.

Light pole manufacturer shall install Roamview wireless node Model Number REN127 DV, within the fixture.

General: The work shall be completed in accordance with Section 830 of the "Standard Specifications", plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per each for LIGHT POLE, SPECIAL. The unit price shall include the cost of the material type, mounting height, luminaire type specified, and Roamview wireless node.

X8304515 LIGHT POLE, ALUMINUM, 30 FT. M.H., 6 FT M.A. SPECIAL

Description: This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed light pole with mast arm and banner hangers as specified at the locations as indicated on the plans.

Materials: The materials shall be in accordance with Article 830.02 of the "Illinois Department of Transportation Standard Specifications", plan details, and the following:

Light pole shall be 30-foot mounting height with 6-foot mast arm. Light pole color shall be black.

Light pole shall be Model Number RTA927, Mounting Model VR6, Luminaire Adapter Model SMB with Banner Hangers as manufactured by LUMEC, or approved equal.

General: The work shall be completed in accordance with Section 830 of the "Standard Specifications", plan details, and as modified herein.

Basis of Payment: The work will be paid for at the contract unit price per each for LIGHT POLE, ALUMINUM, 30 FT. M.H., 6 FT M.A. (SPECIAL). The unit price shall include the cost of the material type, mounting height, arm (quantity and length) type specified, luminaire adapter and banner hangers.

X8360103 LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL

Description: This work shall be done in accordance with the information shown in the plans, per **Section 836** of the IDOT Standard Specifications insofar as applicable and the following provisions.

Materials: Materials shall be according to the following.

(a) Anchor Rods 1070.02

Foundation Procedures: The anchor rods shall be installed as shown in the plans, per IDOT standard specifications Section 836 for bridge mounted light poles, per manufacturers recommendation, and as directed by the Engineer.

Once the anchor bolts have been installed and concrete has cured, build and install a box out of ½ in. thick pressure-treated plywood with holes drilled to match the anchor bolts size and pattern, and so the edge of the plywood is parallel with barrier wall with no protruding corners. The plywood box shall be able to be bolted down to the anchor bolts with galvanized steel nuts and medium split lock washers that fit the anchor bolts. The plywood box shall be installed to protect the empty conduit stubs and exposed anchor bolts for each light pole foundation.

Method of Measurement: Light pole foundation, integral with barrier wall shall measure per each to include all cost for materials, labor, equipment, etc. required for the light pole foundation, integral with barrier wall. Portland cement concrete and rebar shall be measured separate as part of the barrier wall.

Basis of Payment: This work shall be paid for at the contract unit price per each for LIGHT POLE FOUNDATION, INTEGRAL WITH BARRIER WALL.

XX001249 ORNAMENTAL FENCE

Description: This work shall consist of furnishing and installing a steel fence and accessories as shown on the plans.

Materials:

A. The steel material for the fence framework (i.e.., tubular pickets, rails and posts) shall meet the following:

   I. Galvanized after forming:
      a. Conform to the requirements of ASTM A1011/1011M
      b. Minimum yield strength of 50,000 psi.
      c. The exterior shall be hot-dip galvanized with a 0.45 oz/ft^2 minimum zinc weight.
      d. The interior surface shall be coated with a minimum 81% normal zinc pigmented coating, 0.3 mils minimum thickness.
   II. Galvanized prior forming
      a. Conform to the requirements of ASTM A924/A924M
      b. Minimum yield strength of 50,000 psi.
      c. The steel shall be hot-dip galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.90 oz/ft^2, Coating Designation G-90.

B. The manufactured galvanized framework shall be subjected to a thermal stratification coating process (high-temperature, in-line, multi-stage, multi-layer) including as a minimum, a six-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a zinc-rich thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils. The topcoat shall be a "no-mar" TGIC polyester powder coat finish with a minimum thickness of 2 mils. The color shall be as specified on the standard drawing included in the plans. The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in the following table.

Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	*D3359 – Method B*	*Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).*
Corrosion Resistance	*B117 & D1654*	*Corrosion Resistance over 3,500 hours (Scribed per D1654; failure mode is accumulation of ⅛" coating loss from scribe or medium #8 blisters).*
Impact Resistance	*D2794*	*Impact Resistance over 60 inch lb. (Forward impact using 0.625" ball).*
Weathering Resistance	*D822, D2244, D523 (60° Method)*	*Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).*

Table 1 – Coating Performance Requirements

C. The material for the fence pickets shall be 1" square x 16 gauge tubing. The cross-sectional shape of the rails shall conform to the manufacturer's design with outside cross section dimensions of 1.75" square and a minimum thickness of 14 gauge. Picket holes in the horizontal rail shall be spaced 4.98" on center. The picket retaining rods shall be made of 0.125" diameter galvanized steel. The minimum post size shall be 2½" square x 12 gauge. High quality PVC grommets shall be supplied to seal all picket-to-rail intersections.

The manufacturer's literature (or shop drawings and specifications) shall be submitted to the Engineer prior to ordering the fence. The ornamental fence, as shown on the plans, and as specified herein, is an industrial quality ornamental steel fence system. The drawings and dimensions were furnished by one manufacturer. An equivalent fence system may be proposed for substitution. The Engineer is the sole judge of what is an equivalent substitution.

General: Installation of the fence shall be according to the applicable portions of Section 664 [Chain Link Fence] of the "Standard Specifications", except as follows:

1. Dimensions and design details are as shown on the plans.

2. At some locations, the fencing shall be attached to concrete retaining walls. The attachment methods shall conform to the requirements of the "AASHTO LRFD (Load and Resistance Factor Design) Bridge Design Specifications" (AASHTO 2007) Section 13, "Railings". The allowable attachment methods include coring the concrete to 9" depth and grouting the fence posts in the holes or using mounting brackets and anchors.

3. Fence post installation in soil shall be done using concrete footings as shown on the plans.

Fence Fabrication:

A. The pickets, rails and posts shall be precut to specified lengths. The horizontal rails shall be pre-punched to accept the pickets.

B. The grommets shall be inserted into the pre-punched holes in the rails and the pickets shall be inserted through the grommets so that the pre-drilled picket holes align with the internal upper raceway of the horizontal rails. (Note: This can best be accomplished by using an alignment template.) Retaining rods shall be inserted into each horizontal rail so that they pass through the predrilled holes in each picket completing the panel assembly.

C. The completed panels shall be capable of supporting a 600lb load (applied at midspan) without any permanent deformation. Panels with rings shall be biasable to a 12.5% change in grade. Panels without rings shall be biasable to a 25% change in grade.

D. Gates shall be fabricated using the same components as the fence system. The panel material and gate ends will have the same outside cross section dimensions as the horizontal rail. All rail and upright intersections shall be joined by welding. Picket and rail intersections shall be joined by welding or the same retaining rod used for the panel assembly.

Installation:

The fence posts shall be set according to the spacing shown in Table 2, ±½", depending on the nominal span specified.

Span	6’ Nominal (67¾" Rail)				8’ Nominal (92⅝" Rail)			
Post Size	*2½"*	*3"*	*2½"*	*3"*	*2½"*	*3"*	*2½"*	*3"*
Bracket Type	*Standard (BB301)*		*Angle (BB304)*		*Standard (BB301)*		*Angle (BB304)*	
Post Settings ± ½” o.c.	*71½"*	*72"*	*73"*	*73½"*	*96"*	*96½"*	*97½"*	*98"*

Table 2 – Post Spacing Requirements

For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. For fencing installed in soil, posts shall be set in concrete footings having a minimum depth of 36” as shown on LCDOT standards LC6000, LC6601 or LC6602 included in the plans.

For fence installed on top of a concrete retaining wall, posts shall be set by methods such as plated posts or grouted core-drilled footings. The anchor method shall conform to the requirements of the “AASHTO LRFD (Load and Resistance Factor Design) Bridge Design Specifications” (AASHTO 2007), Section 13, “Railings”. The Contractor shall provide shop drawings of the anchor method to the Engineer for review and approval.

FENCE INSTALLATION MAINTENANCE
When cutting/drilling rails or posts adhere to the following steps to seal the exposed surfaces:

1) Remove all metal shavings from cut area.
2) Apply custom finish paint matching fence color.

Method of Measurement: Ornamental Fence will be measured for payment in feet along the top of the fence from center to center of the end posts.

Basis of Payment: This work will be paid for at the contract unit price per foot for ORNAMENTAL FENCE. *The unit price shall include furnishing and installing the fence, including all fence connections, connection to a retaining wall (where required), concrete foundations, fence openings and gates (where indicated) and electric grounding. The unit price shall also include all equipment, materials and labor required to install the fence.*

XX008829 REMOVAL AND DISPOSAL OF EXISTING FORCE MAIN

Description:

Method of Measurement:

Basis of Payment:

XX008865 PERMEABLE PLASTIC BERM

Description: This work shall consist of furnishing, installing, and removing a permeable plastic berm. The plastic berm may be used in conjunction with erosion control mat, sediment bags and other components of a water treatment train and/or as a temporary ditch check while establishing final landscaping.

For this project the Permeable Plastic Berms shall be used for:

☐ *A component of a water treatment train*

☒ *A temporary ditch check while establishing final landscaping*

Materials: The permeable plastic berm shall be constructed of High Density Polyethylene (HDPE) with a UV inhibitor. The permeable plastic berm shall have 35-40% porosity. The berm shall be a minimum of 8¾" tall.

General: The work shall be performed according to Section 280 of the "Standard Specifications", and the manufacturer's recommendations.

Temporary Ditch Check:
The permeable plastic berm shall be used as a temporary ditch check in ditch lines where the erosion control blanket has been placed and the seeding operations performed. The permeable plastic berms shall be placed in the locations of the Temporary Ditch Checks and/or as directed by the Engineer. Their installation shall be according to the detail shown on the plans and the manufacturer's recommendations. After the final landscaping has been established to the satisfaction of the Engineer the permeable plastic berm shall be removed by the Contractor. The permeable plastic berm shall become the property of the Contractor upon removal.

Method of Measurement: The Permeable Plastic Berm will be measured in place and the length calculated in feet for each permeable plastic berm actually installed.

Basis of Payment: This work will be paid for at the contract unit price per foot for PERMEABLE PLASTIC BERM. The unit price shall include all labor, equipment and materials necessary for the installation, maintenance, and removal of the plastic berm.

Z0013796 SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE

Description: This work shall consist of constructing a stabilized construction entrance, including furnishing, installing, maintaining and removing a stabilized pad of aggregate underlain with filter fabric, as shown on the plans or directed by the Engineer.

Materials: The materials used shall meet the requirements of the following:

- Aggregate: The aggregate shall be limited to IDOT Coarse Aggregate Gradation CA-1, CA-2, CA-3 or CA-4.

- Filter Fabric: The filter fabric shall be made of synthetic polymers composed of at least 85 percent by weight polypropylene, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene-chlorides. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet lights.

Construction Requirements: The aggregate shall be at least six inches thick. The aggregate shall not be placed until the entrance area has been inspected and approved by the Engineer.

The aggregate shall be dumped and spread into place in approximately horizontal layers. The layer(s) shall not exceed three feet in thickness. The aggregate shall be placed in such a manner as to produce a reasonably homogeneous stable fill that contains no segregated pockets of larger or smaller fragments or large unfilled space caused by bridging of larger fragments. No compaction shall be required beyond that resulting from the placing and spreading operations.

The construction entrance shall follow the dimensions shown on the plans and/or have a minimum width of 14 feet for one-way and 20 feet for two-way traffic, and a minimum length of 100 feet.

All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Any pipe used for this will be considered included in the unit price for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE. The stabilized construction entrance shall have positive drainage away from the roadway.

The entrance shall remain in place and be maintained until the disturbed area is stabilized. Any sediment spilled onto public right-of-way(s) shall be removed immediately. All removed materials shall be disposed of outside the limits of the right-of-way according to Article 202.03 of the “Standard Specifications” and/or as directed by the Engineer.

Maintenance may include the removal of sediment clogged aggregate and replacement with fresh aggregate as directed by the Engineer.

Method of Measurement: The Stabilized Construction Entrance will be measured in place and the area computed in square yards.

Basis of Payment: This work will be paid for at the contract unit price per square yard for SEDIMENT CONTROL, STABILIZED CONSTRUCTION ENTRANCE. The unit price shall include all material, including filter fabric, labor, equipment and any other items required to install, maintain, and remove the construction entrance.

Z0018000 DRAINAGE SCUPPERS (SPECIAL)

Description: This work shall include furnishing and installing drainage scuppers, as shown in the Plans and in accordance with these Specifications. Also included shall be furnishing and installing steel slip plates required to properly position and support the scuppers during concrete placement and all galvanized inserts, grout, expansion anchors, threaded rods, nuts, washers, strap, structural steel shapes and miscellaneous hardware to properly install and support the drain pipe.

Materials: Materials for scuppers and drains shall conform to the requirements of Division 1000 Materials. Specific references are as follows:
Concrete Superstructure 1020
Reinforcing Bars 1006.10
Gray Iron Castings 1006.14
Structural Steel 1006.04
Steel Pipe 1006.18
Structural Steel Coatings 1008
Polyvinyl Chloride (PVC) Pipe 1040.03
Note: PVC Pipe, when called for, shall be Schedule 80
Threaded Rods 1006.09
H.S. Steel Bolts and Washers 1006.08

Construction Requirements: The scuppers shall be in compliance with Americans with Disabilities Act (ADA) standards. The scuppers shall be placed and properly positioned in accordance with details and to the lines, grades and dimensions shown in the Plans. The drain pipe and fittings shall be installed and securely fastened to the structure as shown in the Plans. All pipe joints shall be watertight and shall be of the type shown in the Plans. After installation of scuppers and drain pipe, all exposed steel pipe and all miscellaneous hardware not hot dipped galvanized shall be cleaned and painted in accordance with the applicable provisions of Section 506 of the Standard Specifications. All paint shall conform to the requirements of Section 1008.

Method of Measurement: Scuppers will be measured for payment per each furnished installed, and accepted, for each type specified.

Basis of Payment: This work will be paid for at the contract unit price per each for DRAINAGE SCUPPERS (SPECIAL).

Z0019600 DUST CONTROL WATERING

Description: This work shall be according to Article 107.36 of the "Standard Specifications" insofar as applicable and the following provisions.

General Requirements: This item shall be used strictly for dust control measures generated by construction activities, and not as a means of achieving compaction of earth embankments, or for compacting of aggregate bases.

Revise Article 107.36(d) of the "Standard Specifications" as follows:

> "(d) Dust shall be controlled by the uniform application of sprinkled/sprayed clean water and shall be applied only when directed by the Engineer. All equipment used to transport and discharge the clean water shall meet the approval of the Engineer, and shall have a metering device that allows for the accurate measurement of the amount of clean water discharged".

If the Contractor wishes to obtain water from existing fire hydrants, Article 107.18 of the "Standard Specifications" shall be strictly adhered to.

Method of Measurement: This work shall be measured for payment in units of gallons of water applied. One unit is equal to 1,000 gallons of water applied.

Basis of Payment: This work shall be paid for at the contract unit price per unit for DUST CONTROL WATERING. The unit price shall include all equipment, materials, and labor required to procure and apply the clean water.

Z0022800 FENCE REMOVAL

Description: This work shall consist of the removal and disposal of all existing fence from the project site as shown on the plans or as directed by the Engineer. This work shall also include backfilling of the resulting void left from the removal of all fence posts.

General Requirements: The contractor shall remove all components of the existing fence including any concrete used to anchor fence posts, bracing, guy wires, posts, or gates. All material shall be disposed of according to **Article 202.03** of the "Standard Specifications".

Backfilling if the resulting void from post removals shall be accomplished with materials and methods approved by the Engineer.

Method of Measurement: This work shall be measured for payment in feet along the top of the fence including any length occupied by gates.

Basis of Payment: This work shall be paid for at the contract unit price per foot for FENCE REMOVAL, and shall include all equipment, materials, and labor required to remove and dispose of the fence.

Z0023202 SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING

Description: This work shall consist of cleaning sediment out of a drainage structure inlet filters when directed by the Engineer. The Engineer will be the sole judge of the need for cleaning based on the rate that debris and silt has collected at each inlet filter.

Cleaning of the inlet filter shall consist of inspecting, cleaning (includes removal and proper disposal of debris and silt that has accumulated) by vactoring, removing and dumping, or any other method that has been approved by the Engineer.

For purposes of this contract, it is anticipated that inlet filter cleaning will be performed three times for each inlet filters on the project. Some filters may require no cleaning, others will require multiple cleanings. The Contractor may use some or all quantity for this pay item.

Trapped sediment and accumulated silt shall be disposed of according to Article 202.03 of the "Standard Specifications".

Basis of Payment: This work shall be paid at the contract unit price for EACH for SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING.

Z0054406 ROCKFILL – FOUNDATION

Description: This work consists of constructing a stable embankment of rockfill below mechanically stabilized earth retaining wall (MSE wall) in areas where the bottom of the MSE wall is above the level of bearing soil. The bearing soil requirements and expected elevations of bearing soil can be found in the plans; however, the Contractor shall verify that bearing soil has been reached prior to constructing the Rockfill-Foundation.

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

CA-6 and CA-7……..Article 1004.04
Rockfill……..Article 1005.01

All Rockfill shall be well graded. The gradation of rockfill shall be selected based on layer thickness as shown below:

Less than or equal to 1 ft…….Gradations with a max size of 4 inches[b]
Greater than 1 ft……Primary Crusher Run
Greater than 3 ft……Primary Crusher Run or Shot Rock (18" max size)

[b]Gradations with a maximum size of 2 inches or smaller shall have less than 6% passing the No. 200 sieve.

Excavation: Excavation shall be performed according to Section 202 of the Standard Specifications. Excavated material may be placed in fills according to Article 202.03 with the approval of the Engineer.

Placement: The method of rockfill placement shall be approved by the Engineer. Rockfill shall be capped with 6 inches of CA-6. The CA-6 cap shall be compacted to the satisfaction of the Engineer.

Measurement: This work will be measured by average end areas of the Rockfill-Foundation limits at a maximum of 50 foot intervals and computed in cu yds.

Basis of Payment: This work will be paid for at the contract unit price per cu yd of ROCKFILL-FOUNDATION.

Z0066700 STABILIZED DRIVEWAYS 10”

Description: This work shall consist of preparing subgrades, placing and compacting aggregate subbases, and furnishing, placing and compacting hot-mix asphalt driveway pavement, at locations shown on the plans and as directed by the Engineer.

This work shall conform to the applicable Sections of Articles 311, 355 and 406.

Indicated driveways to be stabilized shall be constructed to a nominal thickness of 10 inches for a commercial entrance. Each shall have a minimum 2” thick surface course (HMA Surface Course, Mix “D”, N50) with the balance constructed using 8” hot mix asphalt base course (HMA Binder IL-19 mm). Aggregate and bituminous material prime/tack coats shall be applied according to Article 406 and as directed by the Engineer. The driveway shall be constructed on a 6 inch compacted aggregate subbase conforming to the applicable Sections of Article 311 for Subbase Granular Materials Type B.

Method of Measurement: This work shall be measured for payment per square yard for completed Stabilized Driveways 10”. HMA surface course, HMA base course, aggregate base course, aggregate prime coats, HMA tack coats, subgrade preparation and all other work necessary to complete this work as described will not be measured separately.

Basis of Payment: This work shall be paid for at the contract unit price per square yard for STABILIZED DRIVEWAYS 10”.

Z0077900 WOOD POST AND RAIL FENCE

Description: This work shall consist of furnishing and installing a wood post and rail fence in accordance with applicable portions of Sections 507 and 641 of the Standard Specifications, as per the details shown on the plans and as directed by the Engineer.

General Requirements: The posts and rails shall comply with the requirements of Section 1007 of the Standard Specifications for No. 1 Dense SR 1550 F for southern pine or No. 1 Dense 1400 F for Douglas fir. All lumber shall be sound and free from excessive splitting or deterioration. Dimensions shown on the plans are for surfaced (S4S) lumber. All wood used for posts and rails shall be treated with ACA or CCA according to Article 1007.12, Miscellaneous Lumber for Human Contact. After erection of the fence, the Contractor shall apply two (2) coats of a commercially available water seal for treated lumber meeting the approval of the Engineer.

Hardware shall include all necessary fasteners and appurtenances for construction of the fence and shall be according to Article 1006.17.

Wooden fence construction shall conform to the applicable portions of Sections 507 and 641 of the Standard Specifications. The backfill for posts shall be CA 6, CA 10, or CA 12 aggregate according to Article 1004.01. Backfill shall be thoroughly compacted, meeting the approval of the Engineer.

Method of Measurement: The wood posts and rail fence will be measured for payment in feet along the top of the fence from center to center of end posts.

Basis of Payment: This work will be paid for at the contract unit price, per foot, for WOOD POST AND RAIL FENCE, of the type and size indicated on the plans which price will include all equipment and labor required to complete the work as specified.

ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

"**602.04 Concrete.** Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020."

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

"Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.05 to read:

"**603.05 Replacement of Existing Flexible Pavement.** After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.06 to read:

"**603.06 Replacement of Existing Rigid Pavement.** After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface."

Revise the first sentence of Article 603.07 to read:

"**603.07 Protection Under Traffic.** After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b."

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.

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

	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
Grad No.	Sieve Size and Percent Passing				
	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.

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 coarse 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:

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

(b) 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."

COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)

Effective: November 1, 2011
Revised: November 1, 2013

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

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

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

EMBANKMENT I

Effective: March 1, 2011
Revised: November 1, 2013

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

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

a) The laboratory Standard Dry Density shall be a minimum of 90 lb/cu ft (1450 kg/cu m) when determined according to AASHTO T 99 (Method C).

b) The organic content shall be less than ten percent determined according to AASHTO T 194 (Wet Combustion).

c) Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 3 ft (900 mm) of soil not considered detrimental in terms of erosion potential or excess volume change.

    1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.

    2) A plasticity index (PI) of less than 12.

    3) A liquid limit (LL) in excess of 50.

d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.

e) The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

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

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition

activities shall be placed in 6 inches (150 mm) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum blade diameter of 24 inches (600 mm).

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

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

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

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

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

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

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

FRICTION AGGREGATE (D-1)

Effective: January 1, 2011
Revised: April 29, 2016

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	Allowed Alone or in Combination [5/]: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete

<table>
<tr><th>Use</th><th>Mixture</th><th>Aggregates Allowed</th></tr>
<tr><td>HMA
Low ESAL</td><td>Stabilized Subbase or Shoulders</td><td><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</td></tr>
<tr><td>HMA
High ESAL
Low ESAL</td><td>Binder
IL-19.0
or IL-19.0L

SMA Binder</td><td><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/]</td></tr>
<tr><td>HMA
High ESAL
Low ESAL</td><td>C Surface and Leveling Binder
IL-9.5 or IL-9.5L

SMA
Ndesign 50
Surface</td><td><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/]</td></tr>
<tr><td rowspan="4">HMA
High ESAL</td><td rowspan="4">D Surface and Leveling Binder
IL-9.5

SMA
Ndesign 50
Surface</td><td><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/]</td></tr>
<tr><td><u>Other Combinations Allowed:</u>
<table><tr><th>Up to...</th><th>With...</th></tr><tr><td>25% Limestone</td><td>Dolomite</td></tr><tr><td>50% Limestone</td><td>Any Mixture D aggregate other than Dolomite</td></tr></table></td></tr>
</table>

Use	Mixture	Aggregates Allowed	
		75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> [5/ 6/]: Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		Up to...	*With...*
		50% Dolomite[2/]	Any Mixture E aggregate
		75% Dolomite[2/]	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
		75% Crushed Gravel[2/] or Crushed Concrete[3/]	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> [5/ 6/]: Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed</u>:	
		Up to...	*With...*

Use	Mixture	Aggregates Allowed	
		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."

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.

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013
Revised: January 1, 2018

1) Design Composition and Volumetric Requirements

Revise the table in Article 406.06(d) of the Standard Specifications to read:

"MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19)
SMA-9.5, IL-9.5, IL-9.5L	1 1/2 (38)
SMA-12.5	2 (50)
IL-19.0, IL-19.0L	2 1/4 (57)"

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

"Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-19.0 IL-9.5	CA 11 1/ CA 16, CA 13 3/
HMA Low ESAL	IL-19.0L IL-9.5L Stabilized Subbase or Shoulders	CA 11 1/ CA 16
SMA 2/	1/2 in. (12.5mm) Binder & Surface IL 9.5 Surface	CA13 3/, CA14 or CA16 CA16, CA 13 3/

1/ CA 16 or CA 13 may be blended with the gradations listed.
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/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.

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

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

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

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

Revise the nomenclature table in Article 1030.01 of the Standard Specifications to read:

"High ESAL	IL-19.0 binder; IL-9.5 surface; IL-4.75; SMA-12.5, SMA-9.5
Low ESAL	IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA)[1/]; HMA Shoulders[2/]

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift."

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 an Elvaloy or 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 current Bureau of Materials and Physical Research Approved List, "Warm Mix Asphalt Technologies"."

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

"(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) 1/										
Sieve Size	IL-19.0 mm		SMA 4/ IL-12.5 mm		SMA 4/ IL-9.5 mm		IL-9.5 mm		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 5/	16	32 5/	34 6/	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/
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/ The maximum percent passing the #635 (20 μm) sieve shall be ≤ 3 percent.

5/ 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.

6/ 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 and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and 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	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"

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

"(3) SMA Mixtures.

Volumetric Requirements SMA 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/ 16.0 3/	75 - 83

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."

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).

2) Design Verification and Production

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

"(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification and shall meet the following requirements:

(1) Hamburg Wheel Test criteria. 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/]

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, 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.

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.
For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

(2) Tensile Strength Criteria. 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. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa)."

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

"(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for SMA mixtures it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture at the beginning of 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."

Add the following after the sixth paragraph in Article 1030.06 (a) of the Standard Specifications:

"The Hamburg Wheel test shall also be conducted on all HMA mixtures from a sample taken within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.
If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

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 fourth paragraph of Article 406.14 of the Standard Specifications with the following:

"Stone matrix asphalt will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified."

RECLAIMED ASPHALT PAVEMENT FOR NON-POROUS EMBANKMENT AND BACKFILL

Effective: April 1, 2001
Revised: January 1, 2007

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

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

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

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

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012
Revise: January 1, 2018

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 resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. 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). Reclaimed asphalt shingles (RAS). RAS is 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, as defined in Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS 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, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc…).

(1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent 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. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #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 mix the FRAP will be used in.

(2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, HMA (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 in. (75 mm) single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.

(3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent 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. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(4) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or HMA (Low ESAL)/HMA (Low ESAL) IL-19.0L 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. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

RAP or FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), 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 be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of Type 1 RAS with Type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer’s written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be “B Quality” or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and 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.

1031.03 Testing. FRAP and RAS testing shall be according to the following.

(a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.

(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 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.

(3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District 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.

Before extraction, each field sample of FRAP, shall be split to obtain two 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 extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”. The Contractor shall also sample as incoming material at the HMA plant.

(1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

(2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than

1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

Before extraction, each field sample shall be split to obtain two 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 extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

(a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G_{mm}. A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.3 %
G_{mm}	± 0.03 1/

1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the ITP, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

(b) Evaluation of RAS 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. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

(c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision	
% Passing:[1/]	FRAP	RAS
1/2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	4.0%
No. 200	2.2%	4.0%
Asphalt Binder Content	0.3%	3.0%
G_{mm}	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

(d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

1031.05 Quality Designation of Aggregate in RAP and FRAP.

(a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate "D" quality 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 HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.

(3) RAP from Class I, HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

(4) RAP from bituminous 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. Fractionated RAP stockpiles containing plus #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 to the District Office. The cost for this testing shall be paid by the Contractor. 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. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of FRAP and/or RAS in HMA. The use of FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) FRAP. The use of FRAP in HMA shall be as follows.

(1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

(2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.

(3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.

(4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.

(5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.

When FRAP is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures 1/ 2/ 4/	Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified 3/
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
4.75 mm N-50			40
SMA N-80			30

1/ For Low ESAL HMA shoulder and stabilized subbase, the percent asphalt binder replacement shall not exceed 50 % of the total asphalt binder in the mixture.

2/ When the binder replacement exceeds 15 % for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall

each be reduced by one grade (i.e. 25 % binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 %, the required virgin asphalt binder grade shall be PG64-28.

3/ When the ABR for SMA or IL-4.75 is 15 % or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.

4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10 %.

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) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original 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 specific gravities (G_{sb}) shall be according to the "Determination of Aggregate Bulk (Dry) Specific Gravity (G_{sb}) or 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 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 RAS and FRAP feed system to remove or reduce oversized material. .

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

(a) 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.

(b) HMA Plant Requirements. HMA plants utilizing 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 RAS and FRAP 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 RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)

i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.

j. Accumulated mixture tonnage.

k. Dust Removed (accumulated to the nearest 0.1 ton (0.1 metric ton))

(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).

f. RAS and FRAP weight to the nearest pound (kilogram).

g. Virgin asphalt binder weight to the nearest pound (kilogram).

h. Residual asphalt binder in the RAS and FRAP 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 Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

(a) 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. RAP used shall be according to the current Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

(b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation."

SLIPFORM PAVING (D-1)

Effective: November 1, 2014

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

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

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

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

STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Effective: February 1, 1996
Revised: January 1, 2007

This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to 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; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Encasing of standard type storm sewer, according to the details for "Water and Sewer Separation Requirements (Vertical Separation)" in the "STANDARD DRAWINGS" Division of the "Standard

Specifications for Water and Sewer Main Construction in Illinois", may be used for storm sewers crossing water mains.

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified.

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996
Revised: January 2, 2007

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

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

	Item	Article/Section
a.)	Sign Base (Notes 1 & 2)	1090
b.)	Sign Face (Note 3)	1091
c.)	Sign Legends	1092
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 4)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
Note 2. Type A sheeting can be used on the plywood base.
Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.
Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIRMENTS

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

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

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

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

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

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

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

TEMPORARY PAVEMENT

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

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

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

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

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

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

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

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

TRAFFIC SIGNAL GENERAL REQUIREMENTS

Effective: May 22, 2002
Revised: March 25, 2016
800.01TS

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

- All material furnished shall be new unless otherwise noted herein.
- Traffic signal construction and maintenance work shall be performed by personnel holding current IMSA Traffic Signal Technician Level II certification. A copy of the certification shall be immediately available upon request of the Engineer.
- The work to be done under this contract consists of furnishing, installing and maintaining all traffic signal work and items as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Definitions of Terms.
Add the following to Section 101 of the Standard Specifications:

101.56 Vendor. Company that sells a particular type of product directly to the contractor or the Equipment Supplier.

101.57 Equipment supplier. Company that supplies, represents and provides technical support for IDOT District One approved traffic signal controllers and other related equipment. The Equipment Supplier shall be located within IDOT District One and shall:

- Be full service with on-site facilities to assemble, test and trouble-shoot traffic signal controllers and cabinet assemblies.
- Maintain an inventory of IDOT District One approved controllers and cabinets.
- Be staffed with permanent sales and technical personnel able to provide traffic signal controller and cabinet expertise and support.
- Technical staff shall hold current IMSA Traffic Signal Technician Level III certification and shall attend traffic signal turn-ons and inspections with a minimum 14 calendar day notice.

Submittals.
Revise Article 801.05 of the Standard Specifications to read:

All material approval requests shall be submitted electronically through the District's SharePoint System unless directed otherwise by the Engineer. Electronic material submittals shall follow the District's Traffic Operations Construction Submittals guidelines. General requirements include:

1. All material approval requests shall be made prior to or no later than the date of the preconstruction meeting. A list of major traffic signal items can be found in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
2. Product data and shop drawings shall be assembled by pay item. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except

shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.

3. Original manufacturer published product data and shop drawing sheets with legible dimensions and details shall be submitted for review.
4. When hard copy submittals are necessary, four complete copies of the manufacturer's descriptive literatures and technical data for the traffic signal materials shall be submitted. For hard copy or electronic submittals, the descriptive literature and technical data shall be adequate for determining whether the materials meet the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
5. When hard copy submittals are necessary for structural elements, four complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials shall be submitted.
6. Partial or incomplete submittals will be returned without review.
7. Certain non-standard mast arm poles and special structural elements will require additional review from IDOT's Central Office. Examples include ornamental/decorative, non-standard length mast arm pole assemblies and monotube structures. The Contractor shall account for the additional review time in his schedule.
8. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of correspondence, catalog cuts and mast arm poles and assemblies drawings.
9. Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.
10. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
11. The Contractor shall secure approved materials in a timely manner to assure construction schedules are not delayed.
12. All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
13. Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.
14. Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure

proper placement of contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.

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

Add the following to Article 801.09 of the Standard Specifications:

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

Inspection of Electrical Systems.
Add the following to Article 801.10 of the Standard Specifications:

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

Maintenance and Responsibility.
Revise Article 801.11 of the Standard Specifications to read:

a. Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, Municipality or Transit Agency in which they are located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. The Contractor shall supply the Engineer, Area Traffic Signal Maintenance and Operations Engineer, IDOT ComCenter and the Department's Electrical Maintenance Contractor with two 24-hour emergency contact names and telephone numbers.

b. Automatic Traffic Enforcement equipment such as red lighting running and railroad crossing camera systems are owned and operated by others and the Contractor shall not be responsible for maintaining this equipment.

c. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

d. When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. The Department will attempt to full-fill the Contractor's inspection date request(s), however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested inspection date(s) cannot be scheduled by the Department. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

e. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

f. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals and other equipment noted herein. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of $1000 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 $1000 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department may inspect any signalizing device on the Department's highway system at any time without notification.

g. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be

avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

h. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.

i. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be for separately but shall be included in the contract.

Damage to Traffic Signal System.
Add the following to Article 801.12(b) of the Standard Specifications to read:

Any traffic signal control equipment damaged or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices are only allowed at the bases pf post and mast arms.

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

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, shall be the responsibility of the municipality or the Automatic Traffic Enforcement company per Permit agreement.

Traffic Signal Inspection (TURN-ON).
Revise Article 801.15(b) of the Standard Specifications to read:

It is the intent to have all electric work completed and equipment field tested by the Equipment Supplier prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will attempt to full-fill the Contractor's turn-on and inspection date request(s), however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested turn-on and inspection date(s) cannot be scheduled by the Department. The Department will not grant a field inspection until written or electronic notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. When the contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, or TEMPORARY TRAFFIC SIGNAL TIMINGS, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

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

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

Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

The District requires the following Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. A CD/DVD shall be submitted with separate folders corresponding to each numbered title below. The CD/DVD shall be labelled with date, project location, company and contract or permit number. Record Drawings, Inventory and Material Approvals shall be submitted prior to traffic signal turn-on for review by the Department as described here-in.

Final Project Documentation:

1. Record Drawings. Signal plans of record with field revisions marked in red ink. One hard copy set of 11"x17" record drawings shall also be provided.
2. Inventory. Inventory of new and existing traffic signal equipment including cabinet types and devices within cabinets in an Excel spread sheet format. One hard copy shall also be provided.
3. Pictures. Digital pictures of a minimum 12M pixels of each intersection approach showing all traffic signal displays and equipment. Pictures shall include controller cabinet equipment in enough detail to clearly identify manufacture and model of major equipment.

4. Field Testing. Written notification from the Contractor and the equipment vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13). One hard copy of all contract required performance measurement testing shall also be provided.
5. Materials Approval. The material approval letter. A hard copy shall also be provided.
6. Manuals. Operation and service manuals of the signal controller and associated control equipment. One hard copy shall also be provided.
7. Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies 11” x 17" of the cabinet wiring diagrams shall be provided along with electronic pdf and dgn files of the cabinet wiring diagram. Five hard copies of the cable logs and electronic excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.
8. Controller Programming Settings. The traffic signal controller’s timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The controller manufacturer shall also supply a printed form, not to exceed 11” x 17” for recording that data noted above. The form shall include a location, date, manufacturer’s name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.
9. Warrantees and Guarantees. All manufacturer and contractor warrantees and guarantees required by Article 801.14.
10. GPS coordinate of traffic signal equipment as describe in the Record Drawings section herein.

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

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

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Electrical Maintenance Contractor to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of $500 per month per incident.

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

Record Drawings.

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the 2nd paragraph of Article 801.16 of the Standard Specifications to read:

"When the work is complete, and seven days before the request for a final inspection, the reduced-size 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 for review and approval. If the contract consists of multiple intersections, each intersection shall be saved as an individual PDF file with TS# and location name in its file name.

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

As part of the record drawings, the Contractor shall inventory all traffic signal equipment, new or existing, on the project and record information in an Excel spreadsheet. The inventory shall include equipment type, model numbers, software manufacturer and version and quantities.

Add the following to Article 801.16 of the Standard Specifications:

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

- All Mast Arm Poles and Posts
- Traffic Signal Wood Poles
- Rail Road Bungalow
- UPS
- Handholes
- Conduit roadway crossings
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV Camera installations
- Fiber Optic Splice Locations
- Conduit Crossings

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:

- File shall be named: TSXXX-YY-MM-DD (i.e. TS22157_15-01-01)
- Each intersection shall have its own file
- Row 1 should have the location name (i.e. IL 31 @ Klausen)
- Row 2 is blank
- Row 3 is the headers for the columns
- Row 4 starts the data
- Column A (Date) – should be in the following format: MM/DD/YYYY
- Column B (Item) – as shown in the table below
- Column C (Description) – as shown in the table below
- Column D and E (GPS Data) – should be in decimal form, per the IDOT special provisions

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2015	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	-87.793378
01/01/2015	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	-87.792571
01/01/2015	ES (Electrical Service)	Ground mount, Pole mount	41.765532	-87.543571
01/01/2015	CC (Controller Cabinet)		41.602248	-87.794053
01/01/2015	RSC (Rigid Steel Crossing)	IL 31 east side crossing south leg to center HH at Klausen	41.611111	-87.790222
01/01/2015	PTZ (PTZ)	NEQ extension pole	41.593434	-87.769876
01/01/2015	POST (Post)		41.651848	-87.762053
01/01/2015	MCC (Master Controller Cabinet)		41.584593	-87.793378
01/01/2015	COMC (Communication Cabinet)		41.584600	-87.793432
01/01/2015	BBS (Battery Backup System)		41.558532	-87.792571
01/01/2015	CNCR (Conduit Crossing)	4-inch IL 31 n/o of Klausen	41.588888	-87.794440

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 1 foot. 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.

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 a minimum 1 foot 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."

Delete the last sentence of the 3rd paragraph of Article 801.16.

Locating Underground Facilities.
Revise Section 803 to the Standard Specifications to read:

IDOT traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger. If this Contract requires the services of an Electrical Contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT electrical facilities prior to performing any work. If this Contract does not require the services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

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

Restoration of Work Area.
Add the following article to Section 801 of the Standard Specifications:

801.17 Restoration of work area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/un-energized signal sections and visors. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service.

SERVICE INSTALLATION (TRAFFIC SIGNALS)

Effective: May 22, 2002
Revised: June 15, 2016
805.01TS

Revise Section 805 of the Standard Specifications to read:

Description.
This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the "District One Standard Traffic Signal Design Details".

General.
The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of contract preparation. The Contractor must request in writing for service and/or service modification within 10 days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the contractor and utility company to the Engineer and Area Traffic Signal Maintenance and Operations Engineer. The service agreement and sketch shall be submitted for signature to the IDOT's Traffic Operations Programs Engineer.

Materials.

a. General. The completed control panel shall be constructed in accordance with UL Std. 508A, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

b. Enclosures.
    1. Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the vendor.

    2. Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The

door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel .075-inch (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

3. All enclosures shall include a green external power indicator LED light with circuitry as shown in the Electrical Service-Panel Diagram detail sheet. For pole mounted service enclosures, the power indicator light shall be mounted as shown in the detail. For ground mounted enclosures, the power indicator light shall be mounted on the side of the enclosure most visible from the major roadway.

c. Electric Utility Meter Housing and Riser. The electric meter housing and meter socket shall be supplied and installed by the contractor. The contractor is to coordinate the work to be performed and the materials required with the utility company to make the final connection at the power source. Electric utility required risers, weather/service head and any other materials necessary for connection shall also be included in the pay item. Materials shall be in accordance with the electric utility's requirements. For ground-mounted service, the electric utility meter housing shall be mounted to the enclosure. The meter shall be supplied by the utility company. Metered service shall not be used unless specified in the plans.

d. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of –40C to +85C. The surge protector shall be UL 1449 Listed.

e. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

f. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.

g. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to

accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.

h. Utility Services Connection. The Contractor shall notify the Utility Company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Utility Company marketing representative has received service charge payments from the Contractor. Prior to contacting the Utility Company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.

i. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10 feet (3.0m) in length, and 3/4 inch (20mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation.

a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.

b. Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.

c. Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

Basis of Payment.

The service installation shall be paid for at the contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The CONCRETE FOUNDATION, TYPE A, which includes the ground rod, shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4 inch (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility companies shall be approved by the engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

COILABLE NON-METALLIC CONDUIT

Effective: May 22, 2002
Revised: July 1, 2015
810.01TS

Description.
This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC).

General.
The CNC installation shall be in accordance with Sections 810 and 811 of the Standard Specifications except for the following:

Add the following to Article 810.03 of the Standard Specifications:

CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes.

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

Basis of Payment.
All installations of CNC for loop detection shall be included in the contract and not paid for separately.

UNDERGROUND RACEWAYS

Effective: May 22, 2002
Revised: July 1, 2015
810.02TS

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 or 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."

HANDHOLES

Effective: January 01, 2002
Revised: July 1, 2015
814.01TS

Description.
Add the following to Section 814 of the Standard Specifications:

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

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (13 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (152 mm). Hooks shall be placed a minimum of 12 inches (305 mm) below the lid or lower if additional space is required.

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

The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

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

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

Add the following to Article 814.03 of the Standard Specifications:

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

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

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

The minimum wall thickness for heavy duty hand holes shall be 12 inches (305mm).

Precast Round Handholes.
All precast handholes shall be concrete, with inside dimensions of 30 inches (762mm) diameter. Frames and covers shall have a minimum opening of 26 inches (660mm) and no larger than the inside diameter of the handhole.

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

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

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

Materials.
Add the following to Section 1042 of the Standard Specifications:

"1042.17 Precast Concrete Handholes. Precast concrete handholes shall be according to Articles 1042.03(a)(c)(d)(e)."

CONCRETE FOUNDATIONS

Effective: May 22, 2002
Revised: July 01, 2015
878.01TS

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. (300 mm) at the threaded end.

Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

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

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

The price shall include a concrete apron in front of the cabinet and UPS as shown in the plans or as directed by the engineer.

DETECTOR LOOP

Effective: May 22, 2002
Revised: January 5, 2016
886.01TS

Procedure.
A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall mark the proposed loop locations and contact the Area Traffic Signal Maintenance and Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

Installation.
Revise Article 886.04 of the Standard Specifications to read:
Loop detectors shall be installed according to the requirements of the "District One Standard Traffic Signal Design Details." Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plan.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a water proof tag, from an approved vendor, secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

(a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop cable.

(b) Loop sealant shall be two-component thixotropic chemically cured polyurethane from an approved vendor. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface. If installed above the surface the excess shall be removed immediately.

(c) Preformed. This work shall consist of furnishing and installing a rubberized or cross linked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:

(d) Preformed detector loops shall be installed in new pavement constructed of Portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary protective enclosure near the proposed handhole location. The protective enclosure shall provide sufficient protection from other construction activities and may be buried for additional protection.

(e) Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. CNC, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.

(f) Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16 inch (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating or a similarly sized XLPE cable jacket. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. For XLPE jacketed preformed loops, all splice connections shall be soldered, sealed, and tested before being sealed in a high impact glass impregnated plastic splice enclosure. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Method of Measurement.
Add the following to Article 886.05 of the Standard Specifications:

Preformed detector loops will be measured along the detector loop embedded in the pavement, rather than the actual length of the wire. Detector loop measurements shall include the saw cut and the length of the detector loop wire to the edge of pavement. The detector loop wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the price of the detector loop. CNC, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.

Basis of Payment.
This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

LUMINAIRE, LED, HORIZONTAL MOUNT, 190 WATT (SPECIAL)

Description. This work shall consist of furnishing and installing Light Emitting Diode (LED) luminaire with photocell at locations shown on the plans. The luminaire will be nominal wattage of 190 watt.

General. Luminaires shall be installed in accordance with Sections 821.02, 821.03, and 821.04 of the Standard Specifications except as modified herein.

Materials. The material requirements shall be in accordance with Sections 1067.01 and

1067.02 of the Standard Specifications except as modified herein. In the case of any conflicting information, this special provision supersedes the Standard Specifications.

Replace Article 1067.01(e) with the following:

Housing. The luminaire shall be gasketed and sealed, and shall be UL listed for wet locations. The luminaire optical assembly shall have a minimum IEC ingress penetration rating of IP65. When furnished with a lens and frame, the lens shall be made of crystal clear, impact and heat resistant flat glass. The lens and frame shall be securely attached to the main housing and be readily removable for servicing the LED assembly. The drivers shall be mounted in the rear of the luminaire on the inside of a hinged removable door or on a removable mounting pad. The removable door or pad shall be secure when fastened in place and all individual components shall be secure upon the removable element. Each component shall be readily removable from the removable element for replacement. The luminaire mounting shall slip fit on a mast arm with a 2-inch tenon (2.375-inch outer diameter), and shall have a barrier to limit the amount of insertion. A tenon guard shall be provided to protect against wildlife intrusion. The luminaire shall be provided with a leveling surface and shall be capable of being tilted by +- 5 degrees and rotated to any degree with respect to the supporting arm. The housing shall be designed for natural removal of dirt and debris and to ensure maximum heat transfer and long LED life.

Replace Article 1067.01(f) with the following:

Electrical. The luminaire shall be suitable for operation at 120 volts. Terminal blocks shall be provided for incoming 10 gauge power wiring. Electronic LED drivers shall be provided for each luminaire. Each electronic driver shall have a power factor of greater than 90% and total harmonic distortion of less than 20%. The wattage of the luminaire shall not exceed 210 watts. The electronic drivers shall be installed in a manner to keep them mechanically and thermally separated for the LED array heat sink. Integral surge protection shall be provided for each luminaire. Surge protection shall be tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario 1 Category High Exposure 10kV/10kA waveforms. The luminaire shall be furnished with NEMA twistlock photo control 7-pin receptacle and photo electric control sensor. Color Temperature shall be 3000k unless otherwise approved by the engineer. The Backlighting, Uplighting, and Glare (BUG) shall be 3-0-3 respectively or less, unless otherwise approved by the engineer.

Basis of Payment. This item will be paid for at the contract unit price per each for LUMINAIRE, LED, HORIZONTAL MOUNT, 190 WATT (SPECIAL), which price shall be payment in full for all materials, labor, and equipment required to perform the work.

FIBER OPTIC CABLE

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 872.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be supplied under FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE. The Fiber Optic Cable shall provide twelve fibers per tube. Fiber Optic Cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A nominal twelve single-mode fibers minimum from each cable shall be terminated with approved optical connectors at the distribution enclosure/Patch Panel. ST type connectors shall be used on the Patch Panel unless otherwise directed by the Engineer or detailed on the plans. Remaining fibers will either be “spliced through” in spice trays or connectorized into pigtails but left unconnected to the interface panel of the enclosure.

The Patch panel/enclosure shall be minimally sized to be 1 Rack Unit (1U/1RU) in size or larger if one or two fiber cables are entering the enclosure OR sized to a minimum of 2 Rack Unit (2U/2RU) in size if three or more fiber cables (Legs of an intersection) are entering the enclosure. The 1U size enclosure shall have capacity for 3 adapter plates with each adapter plate installed with 12 ST ports per adapter plate with unused/unterminated ports capped with a protective cover. The 2U size enclosure shall have capacity for 6 adapter plates and be installed with 12 ST port adapter plates in each slot. All terminated ST ports shall be labeled on the exterior of the enclosure to identify the fiber and cable each port corresponds to. Enclosure shall be a Slide-Out type and shall be mounted to the top or bottom of the signal cabinet shelf or cabinet side-wall to ensure no movement of enclosure, adequate clearance infront of adapter plates, and full range of motion of slide out mechanism.

Pre-connectorized pigtails shall be used as part of terminations at the patch panel/enclosure. All splices for “through” connections and pigtail connections shall be performed in a splice tray within the Patch panel/distribution enclosure. All Splice Trays shall be labeled to indicate tube color/fiber numbers contained within a splice tray and indicate if the tray is for “local splices” or “splice through” or both. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The remaining fibers from each cable shall fusion spliced to preconnectorized ST pigtails left unconnected to the adapter plate unless otherwise directed by the engineer or as shown on the plans. In cases where Tied and bundeled or “T+B” are indicated on the plans, those fibers shall be spliced to preconnectorized ST pigtails and left unconnected to the adapter plate unless otherwise directed by the engineer. The controller cabinet extra cable length shall be coiled and stored as approved by the Engineer.

Pre-connectorized Pigtail

The pre-connectorized cable connects the adapter plate ports in the patch panel to the splice in the mainline fiber cable. ST-connectors are factory-installed on one end of a cable pigtail. The other end of the cable is spliced to appropriate fibers in the mainline cable. The cable shall be optically and mechanically equivalent to the fiber optic mainline cable specified for this project. These cables shall contain either 36 fibers for the 36-fiber termination. The pigtails shall be factory-tested and shall have loss not exceeding 0.5 dB per connector. Pigtails connectors shall have tube colors matching the fiber color they connect with.

Upon completing all splicing operations for a cable span, the Contractor shall measure the mean bi-directional loss at each splice using an Optical Time Domain Reflectometer. This loss shall not exceed 0.1 dB. For each splice.

The Contractor shall measure the end-to-end attenuation of each fiber, from connector to connector, using an optical power meter and source. This loss shall be measured at from both directions and shall not exceed 0.5 dB per installed kilometer of single mode cable. For cables less than 1.6 km (1 mile), the measured loss should not exceed 2 dB. Measurements shall be made at both 1300 and 1550 nm for single mode cable.

As directed by the Engineer, the Contractor at no additional cost to the Department shall replace any cable splice not satisfying the required objectives.

General Requirements

All mounting hardware and labeling materials are included. Also included are jumper cables with ST connectors on one end and SC (or LC) connectors on the other to match the connectors on the equipment. These jumpers connect the terminated fibers to the ports on the Ethernet switches or other field devices. Each 12-fiber ST Adapter plate shall include two (2) jumpers. Each jumper will be 72 inches long. Jumpers not used for this project will be stored in plastic pouches as maintenance spares and placed in the controller cabinets. If pigtails are used to attach connectors to the mainline cables, excess pigtails shall be similarly stored in plastic bags and placed in the controller cabinet.

New Fiber Cable Added to Existing Signal Cabinet / Fiber Patch Panel/Enclosure

For every new added fiber cable, there must exist at least twelve open and unused ST ports in the patch panel for the termination of each new cable. Should insufficient ports be available in the existing enclosure (even after considering higher ST port density adapter plates), Contractor shall remove and replace existing enclosure and re-establish all pre-existing fiber cable terminations and splices as they were in addition to terminating the new cable to this specification and the enclosure and related Patch panel requirements for sizing, ST port quantities, and other requirements of a new fiber enclosure. Documentation of the existing fiber cables, connections, and splices shall be shared by the contractor to the County and Engineer. The County shall then verify in writing If we concur with the documentation prior to any removal or impacts to the existing fiber connections.

Include in paragraph (b) of Article 1076.02:

Single mode fiber shall satisfy the criteria of ITU Recommendation. G.652.

Basis of Payment:

This work will be paid for at the contract unit price per foot for FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE

THREE CELL FABRIC INNERDUCT

Description

This work shall consist of providing and installing a detectable 3-cell fabric innerduct within existing and proposed conduits as shown on the plans.

Materials

Fabric innerduct shall contain three individual cells each capable of housing cables up to 1.3" diameter cables. Fabric innerduct shall be sized to be placed in a 4" or larger conduit. Fabric innerduct shall be constructed of a flexible nylon-6 resin polymer material meeting UL 2024A standards for Optical Fiber Communications raceways. Innerduct material shall be factory lubricated.

Pull Tape: Pull tape shall be constructed of synthetic fiber and shall be pre-installed within each innerduct cell. Pull tape shall have sequential footage marks every 5 feet. Pull tape must be color coated to differentiate between cells.

Fabric Innerduct shall be installed in accordance with manufactures guidelines.

Basis of Payment

This work will be paid for at the contract unit price per FOOT for THREE-CELL FABRIC INNERDUCT which price shall include all equipment, labor, and materials necessary to complete this work as specified including mounting hardware and terminating connectors.

INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA

Description

The Contractor shall furnish and install a video surveillance camera system consisting of a special video camera in a dome, a dome mount to the video monitoring pole, all mounting hardware, brackets, outdoor rated network cable (to be paid for separately) supplied to the required length by the video system manufacturer with fast disconnect at the camera mount, video camera controller and special electronics/cabling for video transmission and pan/tilt/zoom controls, video controller unit to link all electronic components between the controller unit and the camera dome** to include heater, fan, PTZ camera, video coax, video decoders with video encoding and decoding software.

Materials

The camera shall be designed and optimized for roadway video monitoring. The items shall have a minimum mechanical zoom of thirty (30x) and a minimum digital zoom of twelve (12x).

The camera, joystick controller (required for field adjustments and video verification at the cabinet), camera controller and auxiliary devices necessary for a complete and functional video operation shall be provided as part of this pay item; however if joystick capability is provided through a web browser interface, a physical joystick controller will not be required. The camera shall be digital with IP port(s) and a built-in encoder for connection to the central office. A separate encoder shall not be required. The camera shall provide for 360-degree rotation on the horizontal plane and +20-degree to -90-degree Tilt allowing for full visibility within the lower hemisphere of the dome and partial uptilt into the upper hemisphere**. The Camera housing shall have at minimum an environmental dust and water resistance requirement of IP66 and be NEMA 4X- Rated. Camera shall be rated to withstand temperatures of at least -58 to +140 Fahrenheit (-50 to +60 Celsius)

**Pan, Tilt, Zoom cameras which allow for 360-degree rotation in both the horizontal and vertical planes are also allowable and are not restricted to a “Dome” style enclosure.

Video resolution of video feed shall have a minimum image quality of HDTV 1080p and shall natively support 16:9 aspect ratio (1920x1080 pixel resolution at 1080p).

The camera shall natively support H.264 and MPEG4 (part 10) streaming in both unicast and multicast modes for at least 4 simultaneous full resolution streams at a minimum of 30 frames per second. The Camera shall natively support automatic settings for white balance, Exposure (day/night modes), and digital image stabilization.

The Contractor shall install an auxiliary cabinet when the distance between the camera and traffic controller cabinet exceeds 300 feet. The auxiliary cabinet shall be NEMA rated to provide appropriate environmental protection for the hardware contained within. The use of a cabinet would be to house any communication or power boosters or media conversion to allow for proper functions, communication, and power of the camera. The costs shall be considered incidental to the cost of the video traffic monitoring system and no additional compensation shall be provided for the cabinet, cables, additional fiber optic cable, jumpers, etc.

The Contractor shall furnish and install the video software for decoding and encoding so that camera operations work with the local controller joystick as well as function through the camera’s native web interface. Optional to providing a physical joystick, the camera could support native web browser interface to allow for viewing and configuring the camera. Full web browser functionality should then be supported on at least two (latest version) web browsers (such as: Internet Explorer, Google Chrome, Firefox, etc.)

This item includes furnishing and installing the video monitoring camera, power injector (if required), and an auxiliary cabinet as shown on the intersection wiring diagrams (or as needed to provide reliable functionality), box prints and fiber optic wiring diagram (if copper to fiber conversion is required due to distance). This item also includes furnishing, installing and testing all auxiliary cabling, connectors, couplers, in-building hardware and software, jacks, splitters, conversion adapters, equipment racks, power supplies, power strips, surge suppressors, etc., necessary for a complete and fully functional system. This item includes all necessary network configurations and testing to ensure proper function in the network. The cable to be used for

connecting the video monitoring camera to the local Ethernet switch shall be paid for separately under the pay item “OUTDOOR RATED NETWORK CABLE.”

All mounting platforms, connecting hardware and auxiliary devices to test and operate this system to the satisfaction of the Engineer shall be incidental to this pay item and no additional compensation will be allowed.

The contractor shall coordinate with Kane County prior to installing the PTZ camera and associated wiring, to receive final approval on the camera location, mounting height, and aiming.

Basis of Payment

This item will be paid for at the contract unit price each for INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA, which price shall be payment in full for furnishing all associated equipment required, installing the system complete and in place, and placing the system in operation to the satisfaction of Kane County.

FULL-ACTUATED CONTROLLER AND CABINET

Effective: January 1, 2002
Revised: July 1, 2015
KDOT amended: May 14, 2019
857.02TS

Description.
This work shall consist of furnishing and installing a traffic actuated solid state digital controller in the controller cabinet of the type specified, meeting the requirements of Section 857 of the Standard Specifications, as modified herein, including malfunction management unit, load switches and flasher relays, with all necessary connections for proper operation.

If the intersection is part of an existing system and/or when specified in the plans, this work shall consist of furnishing and installing a(n) "N/A" brand traffic actuated solid state controller.

Materials.
Add the following to Article 857.02 of the Standard Specifications:

For installation as a stand-alone traffic signal, connected to a closed loop system or integrated into an advance traffic management system (ATMS), controllers shall be Econolite Cobalt, Intelight X3, or Eagle/Siemens M62 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment suppliers will be allowed. Unless specified otherwise on the plans or these specifications, the controller shall be of the most recent model and software version supplied by the equipment supplier at the time of the traffic signal TURN-ON. A removable controller data key shall also be provided. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all preemption events and shall inhibit simultaneous display of circular yellow and yellow arrow indications.

Controller cabinet shall be compartmentalized to include a side oriented battery backup compartment sufficiently sized to accommodate the required Uninterruptible Power Supply System (paid for separately) In addition to the required volume required for the traffic signal control compartment.

Controller cabinet shall come installed with a sidewall interior mounted power strip with additional Ethernet/IP functionality detailed later in specification.

For integration into an ATMS such as Centracs, Tactics, or TransSuite, the controller shall have the latest ATMS compatible version of NTCIP software installed. For operation prior to integration into an ATMS, the controller shall maintain existing close loop management communications.

Kane County Division of Transportation (KCDOT) Requirements

The following controllers and associated firmware versions are compatible with KCDOT ATMS, TransSuite.

Controller Description	Firmware Version
Eagle/Siemens M62 (Linux)	4.58
Econolite Cobalt (ASC/3 Firmware)	2.65

Add the following to Article 1074.03 (KCDOT Requirements)

(b) (1) (g) Malfunction Management Unit shall be have a Network interface card (NIC) and associated RJ45 port so that device can be communicative over an Ethernet (fiber optic) network.

(b) (1) (h) Malfunction Management Unit (Make/model/firmware) shall natively support flashing yellow arrow monitoring capability.

(b) (5) Power Strip, shall have a Network Interface through RJ 45 port Ethernet communications. The power switch shall have a minimum of 8 outlets which are remotely switched and 2 outlets which are always on. Shall also support functionality for automatically pinging IP addresses with a programmable function to reboot user designated outlets.

Add the following to Article 1074.03 of the Standard Specifications:

(a) (6) Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.

(b) (1) Revise “conflict monitor” to read “Malfunction Management Unit”

(b) (5) Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.

(b) (6) Controller Harness – Provide a TS2 Type 2 “A” wired harness in addition to the TS2 Type 1 harness.
(b) (7) Surge Protection – Shall be a 120VAC Single phase Modular filter Plug-in type, supplied from an approved vendor.
(b) (8) BIU – shall be secured by mechanical means.
(b) (9) Transfer Relays – Solid state or mechanical flash relays are acceptable.
(b) (10) Switch Guards – All switches shall be guarded.
(b) (11) Heating – One (1) 200 watt, thermostatically-controlled, electric heater.
(b) (12) Lighting – One (1) LED Panel shall be placed inside the cabinet top panel and one (1) LED Panel shall be placed on each side of the pull-out drawer/shelf assembly located beneath the controller support shelf. The LED Panels shall be controlled by a door switch. The LED Panels shall be provided from an approved vendor.
(b) (13) The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1 ½ inch (38mm) deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lbs. (23 kg) in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 18 inches (610mm) wide.
(b) (14) Plan & Wiring Diagrams – 12” x 15” (305mm x 406mm) moisture sealed container attached to door.
(b) (15) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.
(b) (16) Field Wiring Labels – All field wiring shall be labeled.
(b) (17) Field Wiring Termination – Approved channel lugs required.
(b) (18) Power Panel – Provide a nonconductive shield.
(b) (19) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
(b) (20) Police Door – Provide wiring and termination for plug in manual phase advance switch.

Basis of Payment.

This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET; FULL-ACTUATED CONTROLLER AND TYPE V CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET; FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL); FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL).

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 _____.

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:

County of Kane

Village of Carpentersville

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

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section
FAU 2298	Longmeadow Parkway	18-00215-21-BR
Project Number	**County**	**Contract Number**
XGDF(875)	Kane	61G02

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	Title	Agency
Carl Schoedel, P.E.	County Engineer	Kane County DOT

Signature	Date

I. Site Description

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

The project is located between the intersections of Illinois Route 25 and Bolz Road on the east and Sandbloom Road and Bolz Road on the west in the Village of Carpentersville, Illinois, and the Township of Dundee in the County of Kane. The work involved includes 339.94 linear feet of improvements on Illinois Route 25, 2,817.21 linear feet of improvements on Bolz Road, 5,274.80 linear feet of new corridor construction of Longmeadow Parkway (including 82.64 linear foot bridge) and 515.36 linear feet of the new Bolz Connector roadway, for a total net and gross length of 8,947.31 linear feet (1.69 miles). Latitude: 42 deg 08 min 22 sec / Longitude: 88 deg 16 min 02 sec / Section 11, Township 42N, R08E

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

The project consists of constructing a portion of Longmeadow Parkway on a new alignment including a new bridge over Sandbloom Road, reconstruction of a portion of existing Bolz Road, as well as on a new alignment including a roundabout that will provide access to Longmeadow Parkway. Work on Illinois 25 will be construction of a raised median and PCC pavement as well as traffic signal installation. Proposed Longmeadow Parkway will consist of an urban section with two lanes in each direction separated by a variable width barrier/landscaped median, and auxiliary turn lanes for the intersection with Illinois Route 25 (Jointed PCC) and Bolz Connector (HMA). A new storm sewer system will be provided along Longmeadow Parkway and Bolz Road in conjunction with concrete curb and gutter. In addition, open ditch drainage will be utilized. Stormwater detention is provided in compliance with Kane County and IDOT requirements. Water quality runoff volume retention is also provided in compliance with Kane County requirements. Temporary and permanent soil erosion and sediment control is provided for a stage by stage basis.

C. Provide the estimated duration of this project:

1.5 construction seasons

D. The total area of the construction site is estimated to be 40 acres.

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

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

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

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

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

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.):

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:

IL-25 = Illinois DOT / Longmeadow Parkway = Kane County DOT

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

Kane County DOT, Illinois DOT, Village of Carpentersville

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:

West of 25 - Tributaries to the Fox River, ultimately the Fox 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.

All areas outside of the grading limits of the proposed improvement and all areas outside of the proposed ROW shall be protected and remain undisturbed.

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):

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

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:

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

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

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

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

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:

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:

☒ Soil Sediment	☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
☒ Concrete	☒ Antifreeze / Coolants
☒ Concrete Truck waste	☒ Waste water from cleaning construction equipment
☒ Concrete Curing Compounds	☐ Other (specify) _____
☐ Solid waste Debris	☐ Other (specify) _____
☒ Paints	☐ Other (specify) _____
☒ Solvents	☐ 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:

- ☐ Preservation of Mature Vegetation
- ☐ Vegetated Buffer Strips
- ☐ Protection of Trees
- ☒ Temporary Erosion Control Seeding
- ☐ Temporary Turf (Seeding, Class 7)
- ☒ Temporary Mulching
- ☒ Permanent Seeding
- ☒ Erosion Control Blanket / Mulching
- ☐ Sodding
- ☐ Geotextiles
- ☒ Other (specify) Dust Control Watering
- ☐ Other (specify)
- ☐ Other (specify)
- ☐ Other (specify)

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

All disturbed areas will be stabilized with Mulch, Method 3 along with Temporary Seeding within 7 calendar days of initial disturbance. Additional temporary seeding will be placed as directed by the Engineer.
Permanent Seeding along with the applicable Erosion Control Blanket will be installed once the location has been completed to the finished grades as shown on the plans. Various erosion control blankets have been provided depending on steepness of slopes, flow rates through ditches, etc.
Dust Control Watering will be utilized to minimize the airborne transfer of sediment

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

Permanent seeding and erosion control blanket will be incorporated into the final stabilization of the site. Temporary Seeding, Temporary Mulching, and Dust Control Watering will be utilized throughout construction activities until final stabilization has occurred.

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:

- ☒ Perimeter Erosion Barrier
- ☒ Temporary Ditch Check
- ☒ Storm Drain Inlet Protection
- ☐ Sediment Trap
- ☐ Temporary Pipe Slope Drain
- ☐ Temporary Sediment Basin
- ☐ Temporary Stream Crossing
- ☒ Rock Outlet Protection
- ☒ Riprap
- ☐ Gabions
- ☐ Slope Mattress
- ☒ Retaining Walls
- ☐ Slope Walls
- ☐ Concrete Revetment Mats

- [x] Stabilized Construction Exits
- [ ] Level Spreaders
- [ ] Turf Reinforcement Mats
- [x] Other (specify) Permeable Plastic Berms
- [ ] Permanent Check Dams
- [ ] Other (specify)
- [ ] Permanent Sediment Basin
- [ ] Other (specify)
- [ ] Aggregate Ditch
- [ ] Other (specify)
- [ ] Paved Ditch
- [ ] Other (specify)

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

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

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.

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

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

Description of permanent storm water management controls:

Infiltration of stormwater will be enhanced by the use of open vegetated swales. Site Drainage east of IL-25 will discharge into the detention basin constructed as part of Longmeadow Parkway Section D. Outlet protection in the form of RipRap is proposed at all storm sewer outlet ends.

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:

The soil erosion and sediment control for this site must meet the requirements of the following agencies:
- Kane-Dupage Soil and Water Conservation District
- Kane County Division of Transportation
- Illinois Department of Transportation
- Illinois EPA
- Army Corps of Engineers

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.

Perimeter Erosion Barrier will be maintained and repaired as necessary, and accumulated silt removed as directed by the Engineer.
Temporary Seeding and Mulch, Method 3 shall be placed in all disturbed areas within 7 days of initial disturbance. Additional Temporary Seeding shall be placed as directed by the Engineer.
Inlet Filters shall be cleaned as described in the Contract, and as directed by the Engineer.
Stabilized Construction Entrances shall be maintained as described in the Contract and as directed by the Engineer.
Maintenance shall be in accordance with Article 280.05 of the Standard Specifications.

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.

Illinois Department of Transportation

Contractor Certification Statement

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

Route	Marked Route	Section
FAU 2298	Longmeadow Parkway	18-00215-21-BR
Project Number	**County**	**Contract Number**
XGDF(875)	Kane	61G02

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	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:

Illinois Department of Transportation

Storm Water Pollution Prevention Plan
Erosion Control Inspection Report

Date of Inspection: _____ County: Kane

Name of Inspector: _____ Section: 18-00215-21-BR

Type of Inspection: Weekly ☐ Route: FAU 2298

>0.5" Precip. ☐ Precip. Amt: _____ " District: One

Contractor: _____ Contract No: 61G02

Subs: _____ Job No. C-91-190-18

_____ Project: XGDF(875)

NPDES/ESC Deficiency Deduction: $ _____ NPDES Permit No: _____

Total Disturbed Area: _____ acre Ready for Final Cover: _____ acre

Final Cover Established: _____ acre

Erosion and Sediment Control Practices

Item # / BMP			YES	NO	N/A
1.	**Slopes:**	Do all slopes and exposed areas where soil disturbing activities have temporarily or permanently ceased, and not permanently stabilized, have adequate temporary seed or other stabilization in accordance with the NPDES permitted 7 and 14 day rule?	☐	☐	☐
2.	**Ditches**	Are all ditches (existing and temporary) clear of sediment and/or debris?	☐	☐	☐
		Do all ditches have adequate stabilization and structural practices in place?	☐	☐	☐
3.	**Perimeter Erosion Barrier:**	Are all perimeter erosion barriers in good working order?	☐	☐	☐
		Has perimeter barrier no longer needed been removed and the area stabilized?	☐	☐	☐
4.	**Temporary Ditch Checks:**	Are all temporary ditch checks in good working order?	☐	☐	☐
		Are the current ditch checks adequate to control erosion?	☐	☐	☐
5.	**Temp Diversions/ Slope Drains:**	Are all Temporary Diversions and Slope Drains functioning properly?	☐	☐	☐
6.	**Inlet Protection:**	Are ALL inlet protection devices in good working order?	☐	☐	☐
		Are ALL inlet filters less than 25% full and fabric unobstructed?	☐	☐	☐
7.	**Sediment Basins/Traps:**	Are ALL sediment basins/traps in good working order?	☐	☐	☐
		Does sufficient capacity exist for the design stormwater event?	☐	☐	☐
8.	**Areas of Interest – Wetland/Prairie/Tree Preservation:**	Has the contractor remained clear of all designated "no entry" areas?	☐	☐	☐
		Are all "no intrusion" areas adequately marked to prevent accidental entry?	☐	☐	☐
9.	**Stock Piles:**	Are all stockpiles properly situated and maintained to prevent runoff and protected to minimize discharge of materials or residue in case of erosion?	☐	☐	☐
10.	**Borrow/Waste Sites:**	Are all borrow and waste locations, including those located offsite, in compliance with NPDES requirements?	☐	☐	☐
11.	**Other Installations:**	Are all other BMP installations shown in the plans properly functioning? (note in comments)	☐	☐	☐

General Site Maintenance Required of the Permit

12.	**Vehicle Tracking:**	Is the site free from mud, sediment and debris from the vehicles entering/leaving off road areas throughout the site?	☐	☐	☐
		Are Stabilized Construction field entrances properly located?	☐	☐	☐
		Are Stabilized Construction field entrances in good working condition?	☐	☐	☐

Item # / BMP			YES	NO	N/A
13.	**Concrete Washout Areas:**	Are concrete washout areas adequately signed and maintained?	☐	☐	☐
		Has all washout occurred only at designated washout locations?	☐	☐	☐
14.	**Staging/Storage Areas:**	Are all staging/storage facilities free of litter, leaking containers, leaking equipment, spills, etc?	☐	☐	☐
15.	**Fuel/Chemical Storage:**	Are all fuels and chemicals stored only in designated locations?	☐	☐	☐
		Are all designated locations free of evidence of leaks and or spills?	☐	☐	☐
16.	**Previous Inspection Follow Up:**	Have all corrections from the last report been properly completed?	☐	☐	☐
		If not, has a NPDES/ESC Deficiency Deduction been assessed?	☐	☐	☐
17.	**Update SWPPP:**	Have all changes to the projects SWPPP been noted on the graphic site plan, signed and dated?	☐	☐	☐
18.	**Off-site Dischare of Sediment:**	Has sediment or other pollutants of concern been released from the project site?	☐	☐	☐
		If Yes, has the Illinois Environmental Protection Agency been notified within 24 hours of your observation of the discharge and an Incidence of Non-Compliance (ION) mailed within 5 days?	☐	☐	☐

Specific Instructions Related to "No" Answers From Above:

Item #	Station or Station to Station	Practice	Comments/Actions Required	Time for Repair

Other Comments:

Additional Pages (Attached As Needed)

☐ Outfalls / Receiving Waters
☐ Drainage Structure/Ditch Check Locations
☐ Additional Instructions to Contractor

Other: _____

If the answer to any of Items 1-16 above is "No", the contractor is hereby ordered to correct the deficiency. Repairs and stabilization are to be completed within 24 hours of this report (or as indicated above) or the DAILY NPDES/ESC Deficiency Deduction will be assessed for each noted deficiency until the required action is completed.

Inspector's Signature _____ Date/Time: _____

Contractor's Signature _____ Date/Time: _____

Original: Project File
cc: Contractor

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control
Notice of Intent (NOI) for General Permit
to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

Permit No. ILR10 _____

OWNER INFORMATION

Company/Owner Name: Kane County Division of Transportation

Mailing Address: 41 W 011 Burlington Road Phone: 630-584-1170

City: St. Charles State: IL Zip: 60175 Fax: 630-584-5265

Contact Person: Carl Schoedel, P.E. E-mail: schoedelcarl@co.kane.il.us

Owner Type (select one) County

MS4 Community: ☑ Yes ○ No

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: ◉ New ○ Change of information for: ILR10 _____

Project Name: Longmeadow Parkway : 18-00215-21-BR County: Kane

Street Address: Longmeadow Parkway City: Carpentersville IL Zip: 60110

Latitude: 42 (Deg) 08 (Min) 22 (Sec) Longitude: 88 (Deg) 16 (Min) 02 (Sec) 11 Section 42N Township **R08E** Range

Approximate Construction Start Date Jan 1, 2020 Approximate Construction End Date May 15, 2021

Total size of construction site in acres: 40

If less than 1 acre, is the site part of a larger common plan of development?

○ Yes ☑ No

Fee Schedule for Construction Sites:
Less than 5 acres - $250
5 or more acres - $750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? ☑ Yes ○ No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: On Site City: _____

SWPPP contact information:

Inspector qualifications:

Contact Name: _____

Phone: 630-584-1170 Fax: 630-584-5265 E-mail: _____

Project inspector, if different from above

Inspector qualifications:

Inspector's Name: _____

Phone: _____ Fax: _____ E-mail: _____

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) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)

Construction Type Transportation

SIC Code: _____

Type a detailed description of the project:

The project consists of constructing a portion of Longmeadow Parkway on a new alignment including a new bridge over Sandbloom Road, reconstruction of a portion of existing Bolz Road, as well as on a new alignment including a roundabout that will provide access to Longmeadow Parkway. Work on Illinois 25 will be construction of a raised median and PCC pavement as well as traffic signal installation. Proposed Longmeadow Parkway will consist of an urban section with two lanes in each direction separated by a variable width barrier/landscaped median, and auxiliary turn lanes for the intersection with Illinois Route 25 (Jointed PCC) and Bolz Connector (HMA).

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency	⊘ Yes	○ No
Endangered Species	⊘ Yes	○ No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: ☑ Waters of the State or ☐ Storm Sewer

Owner of storm sewer system: Kane County DOT / Illinois DOT / Village of Carpentersville

Name of closest receiving water body to which you discharge: Fox River

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this 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. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

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))

_____	_____
Owner Signature:	Date:
Carl Schoedel, P.E.	County Engineer
Printed Name:	Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610

FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is $250.

Construction sites with 5 or more acres of land disturbance - fee is $750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov. When submitting electronically, use Project Name and City as indicated on NOI form.

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. You may email this completed form to:
epa.swnoncomp@illinois.gov

For Office Use Only
Permit No. ILR10_____

Permittee Information:

Name: Kane County Division of Transportation

Street Address: 41 W 011 Burlington Road P.O. Box: _____

City: St. Charles State: IL Zip Code: 60175 County: Kane

Phone: 630-584-1170 Email: schoedelcarl@co.kane.il.us

Construction Site Information:

Site Name: Longmeadow Parkway : 18-00215-21-BR

Street Address: Longmeadow Parkway

City: Carpentersville State: IL Zip Code: 60110

Latitude:	42	08	22	Longitude:	88	16	02	11	42N	R08E
	(Deg)	(Min)	(Sec)		(Deg)	(Min)	(Sec)	Section	Township	Range

Cause of Non-Compliance

Actions Taken to Prevent Any Further Non-Compliance

Environmental Impact Resulting From the Non-Compliance

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

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))

Owner Signature: Date:

Carl Schoedel, P.E. County Engineer

Printed Name: Title:

IL 532 2105 WPC
624 Rev. 10/2011

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) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

DIVISION OF WATER POLLUTION CONTROL
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
FIELD OPERATIONS SECTION

GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION) FORM

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email, telephone or fax (see region fax numbers) of any incidence of non-compliance for any violation. Submit email copy to: epa.swnoncomp@illinois.gov. After 24 hours notification, submit signed original ION within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

FIELD OPERATIONS HEADQUARTERS
Bruce Yurdin, Manager
Phone: 217/782-3362 Fax: 217/785-1225
EMAIL: epa.swnoncomp@illinois.gov

Region 1 - ROCKFORD
Chuck Corley, Manager
Phone: 815/987-7760 Fax: 815/987-7005

Region 2 - DESPLAINES
Jay Patel, Manager
Phone: 847/294-4000 Fax: 847/294-4058

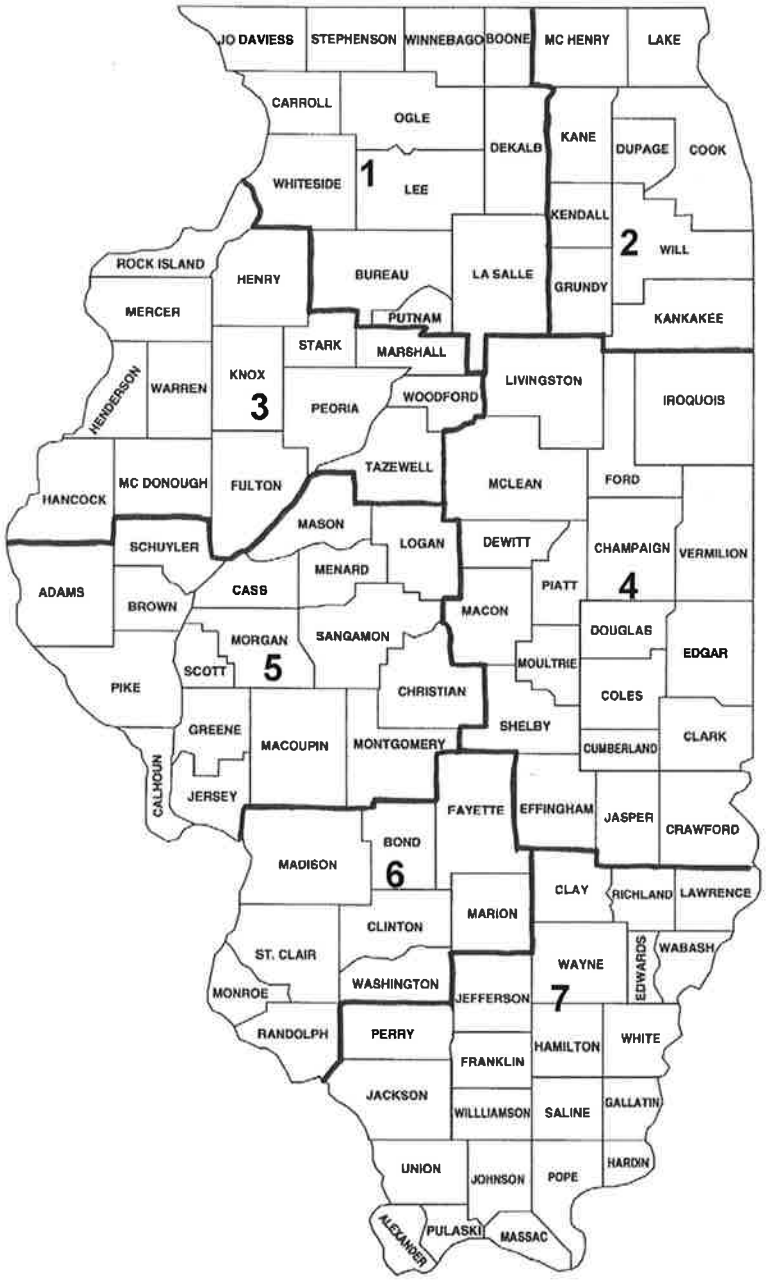
Region 3 - PEORIA
Jim Kammueller, Manager
Phone: 309/693-5463 Fax: 309/693-5467

Region 4 - CHAMPAIGN
Joe Koronkowski, Manager
Phone: 217/278-5800 Fax: 217/278-5808

Region 5 - SPRINGFIELD
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 6 - COLLINSVILLE
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 7- MARION
Byron Marks, Manager
Phone: 618/993-7200 Fax: 618/997-5467



Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
NOTICE OF TERMINATION (NOT)
of Coverage under the General Permit for Storm Water Discharges Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

Permit No. ILR10 _____

OWNER INFORMATION

Owner Name: Kane County Division of Transportation

Owner Type (select one) County

Mailing Address: 41 W 011 Burlington Road Phone: 630-584-1170

City: St. Charles State: IL Zip: 60175 Fax: 630-584-5265

Contact Person: Carl Schoedel, P.E. E-mail: schoedelcarl@co.kane.il.us

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Facility Name: Longmeadow Parkway : 18-00215-21-BR

Street Address: Longmeadow Parkway

City: _____ IL Zip: _____ County: Kane

NPDES Storm Water General Permit Number: ILR10 _____

Latitude:	42	08	22	Longitude:	88	16	02	11	42N	**R08E**
	(Deg)	(Min)	(Sec)		(Deg)	(Min)	(Sec)	Section	Township	Range

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED: _____

NOTE: Coverage under this permit cannot be terminated without the completion date.

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES Permit.

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))

_____ _____

Owner Signature: Date:

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

(Do not submit additional documentation unless requested)

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) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

IL 532 2102
WPC 621 Rev 12/11

GUIDELINES FOR COMPLETION OF NOTICE OF TERMINATION (NOT) FORM

Please adhere to the following guidelines:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible.

Submit completed forms to:

Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

Final stabilization has occurred when:

(a) all soil disturbing activities at the site have been completed;

(b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas not covered by permanent structures; or

(c) equivalent permanent stabilization measures have been employed.

ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

August 30, 2017

Mr. Thomas C. Brooks
Bureua of Design and Environment
Natural Resources Unit
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62674

Re: Longmeadow Parkway
Sequence Number: 12662 A-D
IDNR EcoCAT Project Number: 1510710
Alternate Project Number(s): 1502159 (OWR)
County: Kane County

Dear Mr. Brooks:

This letter concerns the Endangered Species Consultation for the Longmeadow Parkway, located in Kane County. This project was submitted for consultation in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The project was re-opened due to the listing of the Rusty Patched Bumble Bee (*Bombus affinis*).

E&T Review
The following protected resources occur in the vicinity of the project area and proposed action:
Blanding's Turtle (*Emydoidea blandingii*) and the **Rusty Patched Bumble Bee (*Bombus affinis*)**

Per the requested fish and mussel surveys conducted in August of 2016 for this project site, no T&E species were collected and the Department has no additional recommendations for T&E fish or mussels based on these findings.

The Department has reviewed the Environmental Assessment Reevaluation and concurs with the commitments made for Blanding's Turtles and in-stream work restriction dates.

The Department has reviewed the updated IDOT Natural Resources Review (NRR) Memorandum dated 08/30/2017 and concurs with the commitments made for Rusty Patched Bumble Bees.

Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Sincerely,

Sheldon R. Fairfield
Impact Assessment Section
Division of Ecosystems & Environment
Phone: (217) 782-0031

Illinois Department of Transportation

Memorandum

To:	Maureen E. Kastl	Attn:	Greg S. Lupton
From:	Maureen M. Addis	By:	Thomas C. Brooks
Subject:	Natural Resources Review – Update		
Date:	08-30-2017		

Longmeadow Parkway
T 42N, R 8E, S 1-12
Seq. No. 12662 A-D
Kane County

CONCUR
By _____ 08/30/17
Impact Assessment Section
IDNR

We updated our review of the Longmeadow Parkway project for segments B-2, C and D. These segments are scheduled for construction the autumn of 2017. Segments A-1 and A-2/B-1 have previously been coordinated with IDNR and USFWS and consultation was terminated. Segment A-1 has been constructed and Segment A-2/B-1 is currently under constructed.

The Longmeadow Parkway project consists of the construction of a new roadway and 1600-ft bridge crossing of the Fox River. A bike path, open space, drainage and floodplain storage will be included.

The entire project requires a total of 216.31 acres of land acquisition. In-stream work is required in the Fox River. A total of 45.3 ac of trees will be removed as a result of this project. Land cover in the project area is agricultural, residential, riparian and forested land.

Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

We updated our review to include the rusty patched bumble bee (RPBB). The species was listed as endangered under the federal Endangered Species Act effective 03-21-2017. Consultation with the Illinois Department of Natural Resources for endangered species was most recently updated and terminated on 10-12-2016.

In our review we consulted The Rusty Patched Bumble Bee (*Bombus affinis*): Interagency Cooperation under Section 7(a)(2) of the Endangered Species Act, Voluntary Implementation Guidance Version 1.1, US Fish and Wildlife Service, 03-21-2017. We also queried the Illinois Natural Heritage Database data. The database shows records of occurrences of the species in the vicinity of Longmeadow Parkway, the closest of which is approximately 1,500 feet from the boundary of segment C.

We initiated a field survey to locate potential suitable habitat within the limits of segments B-2, C and D. Field biologists followed their own methods and those in Rusty-patched Bumble Bee Habitat Assessment Form and Guide by the Xerces Society, 2017. No **high-potential habitats** were identified within segments B-2, C or D. We determined that segments B-2, C and D will not adversely affect the federally and state endangered rusty patched bumble bee. A copy of the survey report is attached to this memorandum.

To aid in conserving the species we have committed to implement the following measures:

A. Construction:

- forested areas will be cleared between October 15 and March 14 to avoid the RPBB active season
- grassed areas within the project construction limits will be mowed weekly from March 15 to October 14 the year of construction to keep floral resources from blooming
- no parking or staging should occur outside the project construction limits between the east side of IL 31 and the Fox River
- temporary fence shall be placed along the construction limits from the east side of IL 31 and the Fox River to prohibit encroachment

B. Post-construction:

- from IL 31 and the Fox River 15 feet of right of way from the edge of pavement must be mowed in accordance to the IDOT mowing policy
- if mowing during the active flight season, create a mosaic of patches with variable vegetation structure
- The IDOT and Kane County intend to create roadside habitats that are favorable to the rusty patched bumble bee. The general approach to landscaping Longmeadow Parkway in sections B-2, C and D is to plant IDOT class 2A (salt tolerant roadside mixture) on the highway embankment and where the right-of-way allows, class 3 (special), class 4 (special), or class 4B (special). Many of the plant species listed at https://www.fws.gov/midwest/endangered/insects/rpbb/plants.html are included on the roadside seed mixes.

This review for compliance with 17 Ill. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

Review for Illinois Interagency Wetland Policy Act – Part 1090

There will be 4.16 ac of permanent wetland impacts to 11 wetland sites as a result of this project. Mitigation has been approved to occur at a wetland bank site in the Fox River Basin as well as through a cooperative project between KDOT and the Forest Preserve District of Kane County. A portion of this project occurs on new alignment. As such, it qualifies as a Standard Review Action and coordination with IDNR was required. This office coordinated the wetland information with IDNR and received concurrence on March 31, 2015 via email. **Consultation under Part 1090 is closed.**

Attachment— RPBB survey report

cc: Sheldon Fairfield, IDNR

TB

DEPARTMENT OF THE ARMY

PERMIT

PERMITTEE: Carl Schoedel, Kane County Division of Transportation

APPLICATION: LRC-2013-839

ISSUING OFFICE: U.S. Army Corps of Engineers, Chicago District

DATE:

You are hereby authorized to perform work in accordance with the terms and conditions specified below.

Note: The term "you" and its derivatives, as used in this authorization, means the permittee or any future transferee. The term "this office" refers to the U.S. Army Corps of Engineers, Chicago District.

PROJECT DESCRIPTION: Proposed Longmeadow Parkway corridor, including 5.6 miles of roadway and a new bridge over the Fox River, as described in your notification and as shown on the five sets of plans titled:

Section A-1: "State of Illinois, Department of Transportation, Division of Highways, Volume 1, Plans for Proposed Federal-Aid Highway, F.A.U. 2298 (Longmeadow Parkway), Section 13-00215-00-PV, Project RS-CMM-4003(396), Huntley Road to Randall Road, New Construction, Kane County, C-91-063-15", dated August 10, 2015, prepared by Hampton, Lenzini and Renwick, Inc., and Thomas Engineering Group.

Sections A2-B1: "State of Illinois, Department of Transportation, Plans for Proposed Federal-Aid Highway, FAU 2298 Longmeadow Parkway to Karen Drive, FAP 336 (Randall Road), Section 13-00215-10-PV, Project RS-M-4003(397), Roadway Widening and Reconstruction, Kane County, C-91-064-15", dated October 28, 2016, prepared by Bollinger, Lach & Associates, Inc.

Section B2: "State of Illinois, Department of Transportation, Plans for Proposed Federal-Aid Highway, FAP 361 (Longmeadow Parkway) & FAP 336 (Randall Road), Section 13-00215-10-PV, Roadway Widening and Reconstruction, Kane County, C-91-393-94", dated October 9, 2015, prepared by Bollinger, Lach & Associates, Inc.

Section C: "State of Illinois, Department of Transportation, Division of Highways, Volume 1, Plans for Proposed Federal-Aid Highway, FAP 361 (Longmeadow Parkway),

Section 13-00215-20-BR, Project Number M-0019(008), Roadway Corridor Construction, Kane County, C-91-513-08", dated March 5, 2015, prepared by Crawford, Murphy & Tilly.

Section D: "State of Illinois, Department of Transportation, Division of Highways, Plans for Proposed Federal-Aid Highway, FAU 2298 (Longmeadow Parkway), Section 13-00215-30-PV, IL Route 25 to IL Route 62, Roadway Corridor Construction, Kane County, C-91-066-15", dated April 22, 2016, prepared by Burns McDonnell.

To offset project impacts to jurisdictional wetlands, approximately 12.052 acres of certified credits has been purchased from both Blackberry Creek Headwaters Mitigation Bank (9.45 credits) and Slough Creek Mitigation Bank (2.602 credits), as indicated in the correspondence from V3 (Blackberry Creek, dated September 7, 2016) and Ecologic Planning (Slough Creek, dated August 22, 2016).

PROJECT LOCATION: Longmeadow Parkway, From Approximately Huntley Road to Route 62, Located in Algonquin, Barrington Hills, Carpentersville, and unincorporated Kane County, IL, (Sections 1 and 12, T42N, R7E and Sections 1, 2, 3, 4, 5, 6 ,7, 8, 9, 10, 11, and 12 T42N, R8E, 3rd PM)

GENERAL CONDITIONS:

1. The time limit for completing the authorized work ends on December 1, 2023. If you find that you need more time to complete the authorized activity(s), submit your request for a time extension to this office for consideration at least 60 days before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. You shall comply with the water quality certification issued under Section 401 of the

Clean Water Act by the Illinois Environmental Protection Agency for the project. Conditions of the certification are conditions of this authorization. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being accomplished in accordance with the terms and conditions of your permit.

The following special conditions are a requirement of your authorization:

1. This authorization is based on the materials submitted as part of application number LRC-2013-839. Failure to comply with the terms and conditions of this authorization may result in suspension and revocation of your authorization.

2. You shall undertake and complete the project as described in the plans titled:

   Section A-1: "State of Illinois, Department of Transportation, Division of Highways, Volume 1, Plans for Proposed Federal-Aid Highway, F.A.U. 2298 (Longmeadow Parkway), Section 13-00215-00-PV, Project RS-CMM-4003(396), Huntley Road to Randall Road, New Construction, Kane County, C-91-063-15", dated August 10, 2015, prepared by Hampton, Lenzini and Renwick, Inc., and Thomas Engineering Group.

   Sections A2-B1: "State of Illinois, Department of Transportation, Plans for Proposed Federal-Aid Highway, FAU 2298 Longmeadow Parkway to Karen Drive, FAP 336 (Randall Road), Section 13-00215-10-PV, Project RS-M-4003(397), Roadway Widening and Reconstruction, Kane County, C-91-064-15", dated October 28, 2016, prepared by Bollinger, Lach & Associates, Inc.

   Section B2: "State of Illinois, Department of Transportation, Plans for Proposed Federal-Aid Highway, FAP 361 (Longmeadow Parkway) & FAP 336 (Randall Road), Section 13-00215-10-PV, Roadway Widening and Reconstruction, Kane County, C-91-393-94", dated October 9, 2015, prepared by Bollinger, Lach & Associates, Inc.

   Section C: "State of Illinois, Department of Transportation, Division of Highways, Volume 1, Plans for Proposed Federal-Aid Highway, FAP 361 (Longmeadow Parkway), Section 13-00215-20-BR, Project Number M-0019(008), Roadway Corridor Construction, Kane County, C-91-513-08", dated March 5, 2015, prepared by Crawford, Murphy & Tilly.

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3. 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 Ms. Kimberly Kubiak of my staff by telephone at 312-846-5541, or email at kimberly.j.kubiak@usace.army.mil.

4. To avoid potential impacts to the northern long-eared bat (*Myotis septentrionalis*), tree clearing (trees 3" DBH or greater) shall only occur between October 1 and March 31 of any construction year.

5. To avoid any potential impacts to smallmouth bass (*Micropterus dolomieu*) and other fishes, no in-stream work shall occur between April 1 and June 30. Once the causeway is in place, all work in the Fox River shall be contained within the causeway.

6. To mitigate for the removal of approximately 5,765 trees, you shall replace the trees at a 2:1 ratio for a total of 11,530 trees, in accordance with the memo dated March 3, 2016, prepared by Hampton, Lenzini, and Renwick, Inc.

    a. Trees are to be planted within the road right-of-way and on other nearby public land;
    b. Any tree plantings on Forest Preserve land shall be coordinated with and approved by the Forest Preserve District of Kane County;
    c. The final tree mitigation plan must be reviewed and approved by the U.S. Fish and Wildlife Service;
    d. Planted trees that do not survive shall be replaced according to contract requirements and any agreements with both the Forest Preserve District of Kane County and the U.S. Fish and Wildlife Service.

7. You shall educate construction crews and all on-site personnel about Blanding's turtles (*Emydoidea blandingii*), and discuss the site management plan for responding to turtle encounters. If a turtle is encountered on site, crews must immediately stop construction in the surrounding area and contact appropriate staff at the Illinois Department of Natural Resources.

8. At Sleepy Hollow Road and Highmeadow Lane, work will be limited to late October to late March, when Blanding's turtles are hibernating, to prevent injuring turtles. If work is necessary outside of this window, exclusionary fencing will be installed along the construction limits to prevent turtles from entering the area. Daily inspections will occur daily for the first two weeks and be maintained weekly throughout the construction period, to confirm that fencing is properly installed and to check for the presence of any turtles. Trenches shall be covered at the end of each work day. At the beginning of each day, trenches and excavations shall be inspected to ensure no turtles or other herpetofauna have become trapped within.

9. Prior to the installation of any causeway, the stream substrate shall be inspected for the presence of any mussel species. These animals shall be collected and relocated to a suitable nearby location in accordance with any guidance from the Illinois Department of

Natural Resources (IDNR). If any state threatened or endangered species are encountered, stop work and contact the IDNR.

10. After project construction any disturbed Fox River substrate will be restored to pre-construction conditions.

11. 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 Kane/DuPage Soil and Water Conservation District's (SWCD) written and verbal recommendations regarding the soil erosion and sediment control (SESC) plan and the installation and maintenance requirements of the SESC practices on-site.

    a. You shall schedule a preconstruction meeting with the SWCD to discuss the SESC plan and the installation and maintenance requirements of the SESC practices on the site.
    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 construction 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.

12. Ditches near Route 31 shall be lined with clay to reduce the amount of chlorides reaching nearby shallow groundwater and sensitive wetland areas. You shall notify the SWCD prior to backfilling these ditches to field-confirm the presence of cut-off walls within the trench.

13. You shall fully implement the practices identified in the Best Management Practices (BMP) Three-Year Maintenance and Monitoring (M&M) Plan titled, "Best Management Practices (BMP), Management and Monitoring Plan, USACE # LRC-2013-839, Longmeadow Parkway, Algonquin, Barrington Hills, Carpentersville, & Unincorporated Kane County, Illinois" dated December 2016, prepared by Kane County Division of Transportation and Huff & Huff, Inc., within the first year of project construction. All BMP's shall meet performance criteria in accordance with the approved document. Your responsibility to complete the plan will not be considered fulfilled until you have demonstrated BMP success and have received written verification of that success from the U.S. Army Corps of Engineers.

14. You shall provide written notification to this office and to the SWCD at least ten (10) days prior to the commencement of work indicating the start date and estimated end date of construction.

15. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization.

16. A copy of this authorization must be present at the project site during all phases of construction.

17. 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.

18. You shall notify this office prior to the transfer of this authorization and liabilities associated with compliance with its terms and conditions. The transferee must sign the authorization in the space provided and forward a copy of the authorization to this office.

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

20. 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.

21. The plan will be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the causeway. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.

22. Water shall be isolated from the in-stream work area using a causeway constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams or causeways are not permissible.

23. The causeway must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the causeway cannot be completed from shore and access is needed to reach the area of the causeway, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water.

24. 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.

25. 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.

26. 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.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this Authorization.

a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. The Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities

undertaken by or on the behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modifications, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in the reliance on the information you provided.

5. Reevaluation of Permit Decision. The office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 established a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this authorization.

2.6.2017

PERMITTEE DATE
Carl Schoedel
Kane County Division of Transportation

LRC-2013-839

Corps Authorization Number

This authorization becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

2-7-2017

For and on behalf of DATE
Christopher T. Drew
Colonel, U.S. Army
District Commander

If the structures or work authorized by this authorization are still in existence at the time the property is transferred, the terms and conditions of this authorization will continue to be binding on the new owner(s) of the property. To validate the transfer of this authorization and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below. The document shall be attached to a copy of the permit and submitted to the Corps.

TRANSFEREE DATE

ADDRESS

TELEPHONE

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, ACTING DIRECTOR

217/782-3362

JAN 18 2017

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

Re: Kane County Division of Transportation (Kane County)
Longmeadow Parkway – Fox River, Tributaries to the Fox River and Unnamed Wetlands
Log # C-0396-14 [CoE appl. # 2013-00839]

Gentlemen:

This Agency received a request on September 15, 2014 from the Kane County Division of Transportation requesting necessary comments concerning the Longmeadow Parkway impacting the Fox River, tributaries to the Fox River and unnamed wetlands. We offer the following comments.

Based on the information included in this submittal, it is our engineering judgment that the proposed project may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

These comments are directed at the effect on water quality of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These comments do not supplant any permit responsibilities of the applicant toward the Agency.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:
   a. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulations;
   b. water pollution defined and prohibited by the Illinois Environmental Protection Act; or
   c. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards. Contaminated soils shall not be placed in waterways.

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120
9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
412 SW Washington St., Suite D, Peoria, IL 61602 (309)671-3022
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601

4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of staked straw bales, sedimentation basins and temporary mulching. All construction within the waterway shall be constructed during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.

5. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).

6. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, straw bales, etc.) to prevent transport of sediment and materials to the adjoining wetlands and downstream.

7. Asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/streambanks, or 3) placed in waters of the State.

8. The mitigation plan received by the Agency on January 4, 2017 in an email entitled "Longmeadow Parkway - Wetland Mitigation Questions" shall be implemented. Modifications to the mitigation plan must be submitted to the Agency for approval. The permittee shall submit annual reports by July 1 of each calendar year on the status of the mitigation. The first annual report shall include a hydric soils determination that represents the soils at the completion of initial construction for the wetland mitigation site(s). The permittee shall monitor the mitigation for 5 years after the completion of initial construction. A final report shall be submitted within 90 days after completion of a 5-year monitoring period. Each annual report and the final report shall include the following: IEPA Log No., date of completion of initial construction, representative photographs, floristic quality index, updated topographic maps, description of work in the past year, the performance standards for the mitigation as stated in the mitigation plan, and the activities remaining to complete the mitigation plan. For wetland mitigation sites containing non-hydric soils at the time of initial construction, the final report shall include a hydric soils determination that represents the soils at the end of the 5-year monitoring period. For mitigation provided by purchase of mitigation banking credits, in lieu of the above monitoring and reporting, the permittee shall submit written proof from the mitigation bank that the mitigation credits have been purchased within thirty (30) days of said purchase. The subject reports and proof of purchase of mitigation credits shall be submitted to:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

This certification becomes effective when the Department of the Army, Corps of Engineers, includes the above conditions # 1 through # 8 as conditions of the requested permit issued pursuant to Section 404 of PL 95-217.

This certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

Sincerely,

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:TJF:0396-14docx

cc: IEPA, Records Unit
IEPA, DWPC, FOS, Des Plaines
IDNR, OWR, Bartlett
USEPA, Region 5
Mr. Carl Schoedel, Kane County Division of Transportation, 41W011 Burlington Road, St. Charles, IL 60175
Ms. Nikki Pisula, Huff & Huff, Inc., 915 Harger Road, Suite 330, Oak Brook, IL 60523
Ms. Kelly Farley, Crawford Murphy and Tilly, 550 North Commons Drive, Suite 116, Aurora, IL 60504
Ms. Amy McSwane, Hampton, Lenzini and Renwick, 380 Shepard Drive, Elgin, IL 60123

IEPA WATER MAIN PERMIT

TO BE INCLUDED

IEPA WPC-PS-1 PERMIT TO
BE INCLUDED

KDSWCD PERMIT TO BE INCLUDED

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: Longmeadow Parkway Project (Section C2) Office Phone Number, if available: 630-584-1170

Physical Site Location (address, including number and street):

Longmeadow Parkway Section C2 from Sta. 2217+65 to Sta. 2269+67.9 (W. side Sandbloom Rd to W. side IL Route 25 ~5,200')

City: Algonquin State: IL Zip Code: 60102

County: Kane Township: Dundee

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.13987 (Decimal Degrees) Longitude: - 88.26716 (-Decimal Degrees)

Identify how the lat/long data were determined:

○ GPS ◉ Map Interpolation ○ Photo Interpolation ○ Survey ○ Other

Google Earth (lat/Long is approximate midpoint of C2 corridor).

IEPA Site Number(s), if assigned: BOL: See Attach 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: Kane County Division of Transportation
Street Address: 41W011 Burlington Road
PO Box:
City: St. Charles State: IL
Zip Code: 60175 Phone: 630-584-1170
Contact: Carl Schoedel, PE, Dir. of Trans. Co. Eng.
Email, if available: SchoedelCarl@co.kane.il.us

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.

Project Name: Longmeadow Parkway Project (Section C2) Latitude: 42.13987 Longitude: - 88.26716

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)]:

Based on PESA (Sept. 2014), PSI (Jan. 2015) and updated database (2018) five PIPs were identified in close proximity to Section C2. A total of 17 borings were completed within Section C2 of the larger Project Corridor to address the PIPs and / or for non-PIP areas. Laboratory analysis included pH, VOCs, BTEX, PNAs, and RCRA metals (total analysis method + 1 Cr TCLP).

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]:

All results achieve MACs except PNAs at CCDD-C-09 (exclusion from Station 2234+50 to Station 2235+75 for width of corridor). In addition, a Soil Management Zone (SMZ) exists on quarry property which includes lead and petroleum impacted soils. The entire SMZ is excluded from CCDD disposal (Station 2227+75 to Station 2231+00 for full width of corridor and full extent of SMZ)

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Jeremy J. Reynolds (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. / GZA, Inc.
Street Address:	915 Harger Road - Suite 330
City:	Oak Brook State: IL Zip Code: 60523
Phone:	630-684-9100

Jeremy J. Reynolds
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

5/30/19
Date:

LICENSED PROFESSIONAL GEOLOGIST
JEREMY J. REYNOLDS
196-001170
ILLINOIS
P.E or L.P.G
3/20

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
Project Owner: Kane County Division of Transportation (KDOT)
Project Name: Longmeadow Parkway Project – SECTION C2 (Sta. 2217+65 to Sta. 2269+67.9)

III. Basis for Certification and Attachments

Explain the basis upon which you are certifying that the soil from this site is uncontaminated soil.

This form pertains to excavated soils generated from Section C2 of the proposed Project Corridor of Longmeadow Parkway in Kane County, from Station 2217+65 to Station 2269+67.9 with limits described as extending from approximately the west side of Sandbloom Road to the west side of IL-25 limit of IDOT jurisdiction (approximately 5,200 feet in length).

The planned improvements along Section C2 of the larger Project Corridor involve an extension and reconstruction of Longmeadow Parkway as a four-lane highway. Other Sections (A, B, B2, C1, C3 and D) have their own respective CCDD documents that have previously been submitted to CCDD facilities for pre-approval). The attached Site Location Map (Figure 1-1) depicts the entire Project Corridor and Section C2 of the Project Corridor covered by this CCDD document.

A Preliminary Environmental Site Assessment (PESA) was conducted for the entire Project Corridor, including Section C2, (September 2014) following the general protocols associated with ASTM E1527-13, which is a standard environmental site assessment methodology and IDOT procedures. The referenced PESA was completed for the Local Roads portions of the project, IDOT/ISGS also completed PESAs for the portions of the Project Corridor under IDOT jurisdiction.

The Local Roads portion PESA included a database search of nearby impacted properties to cover the entire project area and included review of historical aerial maps to confirm past land-use practices. In addition, a site visit was completed to verify the database findings and confirm distances to the nearest identified potentially impacted properties (PIPs). Based on a review of the historic documentation and the site reconnaissance, 12 PIPs were identified within 500 feet of the entire Project Corridor with 5 PIPs identified within close proximity to Section C2.

Due to the age of the prior documents, H&H obtained an updated database search including the C2 Contract corridor on July 19, 2018. No additional PIPs were identified, corroborating the prior due diligence.

The Local Roads portion PESA was followed by a Preliminary Site Investigation (PSI) of the Project Corridor, report dated May 2015. Similar to the Local Roads PESA, the referenced PSI was only conducted for the Local Roads portion of the project and IDOT has performed a PSI for portions of the Project Corridor under their jurisdiction.

The PSI included advancing 34 soil borings to depths consistent with the project plans to address the PIPs along the entire project corridor and/or specifically for CCDD purposes in areas without PIPs identified. Seventeen (17) soil borings were advanced within Section C2, including CCDD-C-02 to CCDD-C-14; and CCDDD-C-20 to CCDD-C-23. The sample depth selected for analytical testing was dependent on PID screening in the field, with preference given to the highest PID result

of all samples collected in conjunction with proposed project excavation depth considerations. Multiple samples submitted for laboratory analysis for the following parameters:

- Volatile Organic Compounds (VOCs, 1 sample);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX, 12 samples);
- Polynuclear aromatic hydrocarbons (PNAs, 19 samples);
- Resource Conservation and Recovery Act (RCRA) 8 metals via total analysis (13 samples) and 1 supplemental analysis for chromium via TCLP method; and
- Soil pH (29 samples).

The Project Area is depicted in the Figures included in **Attachment A**.

Justification in Support of CCDD Determination

The nine items listed as the minimum considerations for determining acceptance at a CCDD facility have been met based on historical research and site reconnaissance and none of the conditions are true or present for the project corridor. Evidence to support this determination is included below.

A database search was conducted for the entire Longmeadow Parkway Project Corridor, including coverage of Section C2. In addition, publicly available historical aerial photographs were reviewed to determine land-use within the Project Area, and a site visit was completed to verify the database findings, confirm distances to the nearest identified sites from the database review, and the collection of four samples for VOCs, BTEX, PNAs, RCRA metals and soil pH. Samples that do not achieve MAC values have been cited as exclusion zones that are not eligible for consideration of off-site final disposition at a CCDD or USFO facility and shall be managed and disposed properly.

Records Search

Historic aerial photographs were examined during the PESA, from the years 1939, 1954, 1961, 1967, 1974, 1980, 1988, 1999, 2005, 2009, and 2012. Aerial photographs depict the area with similar conditions dating back to 1999. Contract C2 area had Bolz Road present dating back to at least 1939 and the western half of the existing quarry north of Bolz Road appears to have already begun quarrying activity by 1939 and similarly, the south side of Bolz Road shows signs of quarry activity. The remaining areas adjacent to the project corridor are open space/agricultural use. By 1961, the area adjacent to the south of Bolz Road was developed into a residential neighborhood and there is increased residential development along the east side of the Fox River, just west of Sandbloom Road. By 1988 the quarry north of Bolz Road had expanded eastward in close proximity to IL25 and was subsequently developed into a residential neighborhood by 2005.

On February 28, 2014, a record search was performed by Environmental Risk Information Services (ERIS) as part of the PESA. Based on the data presented in the PESA, 5 PIPs were identified associated with Section C2 of the Project Area. Due to the age of the document, H&H obtained an updated database document. **Attachment B** contains the portion of the PESA that summarizes the identified PIPs and also the 2018 database information.

SUMMARY OF PESA FINDINGS (SECTION C2)

Property Name	Site #	PIP(s)	Address
Residence	21	AST, drums	18N998 Old Williams Road
Target Manufacturing Inc.	22	Potential chemical use	33W961-33W963 Bolz Road
Former Fox Valley Rifle Range	23	Lead and PNA impacts identified during previous investigations	33994 Bolz Road
Meyer Material Co./Carpentersville Quarry	24	LUSTs, dumping, potential past chemical use	800 Bolz Road
Night Shift Transmission/Discount Muffler Brakes and More/Skeeter's Saloon	29	LUST, potential past chemical use, AST, drum	1695 IL Rt. 25

Residence (Site 21)

This residence was located at 18N998 Old Williams Road. This property did not appear in the ERIS database report. During the site visit on April 4, 2014, one AST was observed near the center of the property. This AST did not appear to be a residential propane AST. The AST appeared old and rusty. The contents of the AST are unknown. The 2010 PESA prepared for the Project Corridor also noted two rusty drums on this property. These drums were not observed during the April 4, 2014 site visit. The following PIPs were identified at this site: AST, drums.

5.3.6 Target Manufacturing Inc. (Site 22)

Target Manufacturing, Inc. was located at 33W961 and 33W963 Bolz Road, near the southeast corner of the intersection of Bolz Road and Williams Road. The website for this business states the following, "Target Mfg. Inc. is a manufacturer of precision machined parts for various industries." Contaminants of concern associated with a machine shop normally include solvents and metals. The address 33W961 Bolz Road appeared in the IEPA BOL database (# 0894055009) under the name Perkins Products. No other information was available in this database. This site did not appear in the ERIS database report or in the OSFM LUST database. During the site visit on April 4, 2014, this address had a sign that read "Target Mfg., Inc." There were four buildings located on the site. The site was paved, and the pavement was in good condition. The following PIPs were identified at this site: Potential chemical use.

5.3.7 Former Fox Valley Rifle Range (Site 23)

The Fox Valley Rifle Range is a 58-acre site located at 33994 Bolz Road. This site was listed in the ERIS database report. The site appears in the IEPA Site Remediation Program (SRP) database with IEPA BOL #0890205071. The database indicates that the site enrolled in the SRP program on August 30, 2002. A FOIA request was submitted to the IEPA for more information about this site. Information received from IEPA states that the site was enrolled in the SRP in order to obtain a NFR as part of the agreements of a property transfer for industrial reuse of property. The information from IEPA also states that the site was operated as a sand and gravel mining site until the 1930s and was then operated as a rifle range for approximately 50 years starting in the 1950s. The former Fox Valley Rifle Range covers approximately 65 acres and is a former gun and rifle range that is currently part of a larger sand and gravel mining operation conducted by Carpentersville Quarry.

From 1999 to 2002, approximately 28,000 CY of lead impacted soil from the site was removed, treated by mixing with trisodium phosphate (TSP), and stockpiled on-site. From 2002 to 2005, as additional lead and PNA impacted soil was discovered on site during site investigations, this soil was staged, treated, and incorporated into the existing stockpile. Only one area on site near a diesel tanker AST had levels of benzo(a)pyrene in soil above the Tier 1 industrial/commercial ingestion objective. No other area on site had PNAs above the Tier 1 industrial/commercial objectives.

Approximately 10,000 CY of additional material was added to the stockpile during this time. In 2004, a remedial action plan was submitted and approved by IEPA which established a Tier II SRO of 790 mg/kg for lead and also established a Class II groundwater designation. Before material was incorporated into the stockpile, it was assessed for total and leachable lead concentrations. Any material with a TCLP result >5 mg/L (characteristically hazardous for lead) was treated until TCLP was <5mg/L. Any material with a total lead concentration greater than 790 mg/kg was also treated prior to being incorporated into the stockpile.

Groundwater investigations and modeling demonstrate that levels of lead and antimony detected in groundwater achieve the Class II groundwater remediation objectives at compliance points of nearest well setback zone and at the property line.

In February 2006, a remedial action completion report (RACR) was submitted and approved by IEPA in September 2006. The RACR documented placement of a 3-foot clean soil cap on the stockpile as a requirement for establishing a soil management zone (SMZ). Documents state that the footprint of the SMZ was configured so that it would be located within the planned reconstruction of Bolz Road to be used as structural fill under the roadway, right-of-way, and/or easement.

In September 2006, a draft comprehensive NFR was issued by IEPA proposing a restriction on groundwater for potable use at the site. The draft NFR also includes an industrial/commercial land use restriction and an engineering control (the 3-foot layer of clean soil over the stockpile) maintenance requirement.

Issuance of the final NFR has been delayed while a notice of violation (NOV) issued by IEPA in 2006 for the site is resolved. The NOV alleges that fill material brought onto the site by the property owner is considered by IEPA to be solid waste, and placement of this fill material at the site is in violation of the Environmental Protection Act. Accordingly, any activities towards finalizing the draft NFR was suspended pending satisfactory resolution of this matter.

A summary of the FOIA information received for this site as well as a site map showing the location of the SMZ is included in Appendix D. The following PIPs were identified at this site: The lead and PNA impacts identified in previous site investigations. The SMZ area is identified as a CCDD exclusion zone and must be handled and disposed of properly by other means and methods.

5.3.8 Meyer Material Company/Carpentersville Quarry (Site 24)

The Meyer Material Company is located at 800 Bolz Road. This site is also referred to in databases as Carpentersville Quarry, Healy Asphalt Co., and Arrow Road Construction Co. This site appears in the IEPA database with BOL # 0890250004 and BOL # 0890250005. This site was listed in the ERIS database report as having four IEMA Incident numbers related to releases of fuel oil, diesel, and gasoline. The OSFM database states that seven USTs were removed from the site from 1990 to 1997; four diesel USTs, one gasoline UST, and 2 heating oil USTs. The following IEMA Incident numbers have been

assigned to the site: #900511, #950764, #962311, and #972401. According to the IEPA LUST database, all four incidents have received NFR letters with no restrictions. The ERIS database also listed the site in the Emergency Response Notification System (ERNS) database under the unplottable summary section of the report. The ERNS database states that on September 16, 2002, a caller reported an asphalt odor coming from the site.

This site also appears in the RCRA database with RCRA ID # ILD981788102. The RCRA database lists the site as a small quantity generator (SQG) of hazardous waste. This indicates that they generate more than 100 kilograms but less than 1,000 kilograms per month. The database did not describe the type of hazardous waste generated. There were no RCRA violations in the database.

A FOIA request was submitted to the IEPA for more information about this site. Information received from IEPA states that a site inspection conducted by IEPA on August 2, 2006, noted an open dumping violation at the site. The inspection records state that the facility accepted recycled asphalt binder and this material was spread over an area measuring approximately 300 feet wide by 600 feet long on the west side of the site. A sample of the dumped material was collected and analyzed for SVOCs, PCBs, total and TCLP RCRA metals.

FOIA information from IEPA also states that violations regarding failure to inspect incoming loads, failure to make and keep records, and failure to post a sign were noted during a 2007 IEPA inspection. An IEPA inspection conducted in 2008 resulted in no violations at the site. An IEPA inspection record dated December 2012 states that the facility has returned to compliance with respect to the August 2, 2006, violations. A portion of the FOIA information received for this site is included in Appendix B.

During the site visit on April 4, 2014, this site had a sign that read "Healy Asphalt Company LLC Arrow Road Construction Company" at the entrance to the site on the north side of Bolz Road, between Sandbloom Road and Elgin Road (Rt. 25). Aerial photos show this to be a large site and only a portion of the site could be seen form Bolz Road. A residence was noticed on the southwest portion of the site, with no visible address, adjacent to Bolz Road. One pole mounted transformer was observed on Bolz Road just west of the residence. Aerial photographs show this residence present on the site in 1939. The 2010 PESA prepared for the Project Corridor lists the residential address as 33W880 Bolz Road and states that city directories list an auto repair business at 880 Bolz Road from 1990 to 1997.

<u>Night Shift Transmission/Discount Muffler Brakes & More/Skeeter's Saloon (Site 29)</u>

This site is located at 1695 Illinois Rt. 25, near the intersection of Rt. 25 and Bolz Road. Night Shift Transmission is listed in the ERIS database report as being located at Rt. 25 and Boltz Road. The site appears in the IEPA BOL database with IEPA BOL #0890205046. The site also appears in the OSFM UST and LUST databases with facility ID #2032216 and IEMA Incident # 932242. According to the OSFM database, five USTs were removed from the site in 1993. At the time of this removal, a used oil release was detected and Incident # 932242 was assigned to the site. According to the IEPA database, an NFR with no restrictions was received for this incident on January 27, 1994.

According to a previous PESA prepared for the Project Corridor in 2005, a gasoline station formerly occupied this site. The PESA also states that during site visits, a plastic tote, a rusty drum, a pile of waste tires, and a 250-gallon waste oil AST were noted along the east side of the building.

During the site visit on April 4, 2014, Discount Muffler Brakes and More was found to be located at this site. A sign indicated that Skeeter's Saloon was located behind the site. According to a previous PESA, the Skeeter's Saloon property is listed as a tavern and an auto repair shop in the 1980 and 1984 city directories.

During the site visit, one pole-mounted transformer was observed at the northwest corner of the site. Tires could be seen piled up along the west side of the building. The site was paved and the pavement was in good condition. The AST, drum, and plastic tote mentioned in the previous PESA were not observed during this site visit.

The following PIPs were identified at this site: Former use as a gasoline station and auto repair shop, former LUST incident, potential past chemical use, formerly observed AST and drum. However, since this site is actually within Section C3, soil borings were not conducted within Section C2 and no further discussion is needed for this site relative to Section C2.

Analytical Results

Seventeen (17) soil borings were advanced during the PSI within Section C2 including CCDD-C-02 to CCDD-C-14; and CCDDD-C-20 to CCDD-C-23, depicted on Figure 2-1. The borings were advanced along the Project Corridor in Section C2 for CCDD consideration and to address the five REC/PIPs identified in the PESA. Multiple samples submitted for laboratory analysis for the following parameters:

- Volatile Organic Compounds (VOCs, 1 sample);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX, 11 samples);
- Polynuclear aromatic hydrocarbons (PNAs, 18 samples);
- Resource Conservation and Recovery Act (RCRA) 8 metals via total analysis (13 samples) and 1 supplemental analysis for chromium via TCLP method; and
- Soil pH (28 samples).

Field assessment of each soil sample was conducted including use of a photoionization detector (PID) as noted below:

Sample ID/Depth (ft)	PID (ppm)	Sample ID/Depth	PID (ppm)	Sample ID/Depth	PID (ppm)
CCDD-C-02 (6-8)	NA	CCDD-C-06 (18.5-20)	NA	CCDD-C-11 (13.5-15)	NA
CCDD-C-03 (1-2.5)	NA	CCDD-C-07 (6-7.5)	NA	CCDD-C-12 (6-7.5)	NA
CCDD-C-03 (3.5-5)	NA	CCDD-C-07 (13.5-15)	NA	CCDD-C-12 (16-17.5)	NA
CCDD-C-03 (11-12.5)	NA	CCDD-C-08 (8.5-10)	NA	CCDD-C-13 (8-10)	NA
CCDD-C-04 (3.5-5)	NA	CCDD-C-09 (3.5-5)	NA	CCDD-C-14 (6-8)	NA
CCDD-C-04 (8.5-10)	NA	CCDD-C-09 (6-7.5)	NA	CCDD-C-20 (6-7.5)	0.1
CCDD-C-04 (21-22.5)	NA	CCDD-C-09 (8.5-10)	NA	CCDD-C-20 (16-17.5)	0.1
CCDD-C-05 (3-5.5)	NA	CCDD-C-10 (8.5-10)	NA	CCDD-C-21 (3.5-5)	0.9
CCDD-C-05 (13.5-15)	NA	CCDD-C-11 (1-2.5)	NA	CCDD-C-22 (3.5-5)	0.7
CCDD-C-06 (6-7.5)	NA	CCDD-C-11 (6-7.5)	NA	CCDD-C-23 (3.5-5)	0.1

PID with 10.6 eV lamp, background = 0.0 to 0.4 ppm
NA = PID readings are not available for these samples due to equipment failure and/or availability

The following table summarizes the constituents analyzed by boring and depth.

ANALYTICAL SUMMARY TABLE

Sample ID/Depth (ft)	*PIP Investigated*	VOCs	BTEX	PNAs	RCRA Metals	Total Arsenic	Soil pH
CCDD-C-02 (6-8)	*Residence AST / Drums 18N998 Old Williams Road*		X	X			X
CCDD-C-03 (1-2.5)	*Meyer Material Co. / Carpentersville Quarry/Former Fox Valley Rifle Range / Unknown Fill / SRP Site with IEPA Violations*			X	X		X
CCDD-C-03 (3.5-5)			X	X	X		X
CCDD-C-03 (11-12.5)				X	X		X
CCDD-C-04 (3.5-5)			X	X	X		X
CCDD-C-04 (8.5-10)				X	X		X
CCDD-C-04 (21-22.5)							X
CCDD-C-05 (3-5.5)			X	X	X		X
CCDD-C-05 (13.5-15)				X	X		X
CCDD-C-06 (6-7.5)			X	X	X		X
CCDD-C-06 (18.5-20)				X	X		X
CCDD-C-07 (6-7.5)			X	X	X		X
CCDD-C-07 (13.5-15)				X	X		X
CCDD-C-08 (8.5-10)			X	X	X		X
CCDD-C-09 (3.5-5)				X			
CCDD-C-09 (6-7.5)				X			
CCDD-C-09 (8.5-10)			X	X			X
CCDD-C-10 (8.5-10)			X	X			X
CCDD-C-11 (1-2.5)			X	X			X
CCDD-C-11 (6-7.5)							X
CCDD-C-11 (13.5-15)							X
CCDD-C-12 (6-7.5)							X
CCDD-C-12 (16-17.5)			X		X		X
CCDD-C-13 (8-10)	*Target Manufacturing Inc. / Potential Chemical Use*						X
CCDD-C-14 (6-8)		X					X
CCDD-C-20 (3.5-5)	*None (CCDD only)*						X
CCDD-C-20 (16-17.5)							X
CCDD-C-21 (3.5-5)							X
CCDD-C-22 (3.5-5)							X
CCDD-C-23 (3.5-5)							X

VOC and BTEX

The VOC and BTEX results from one and eleven samples, respectively, were below detection limits and therefore achieve the MAC values. The VOC and BTEX results are summarized in the tables in **Attachment C.**

PNAs

The PNA results from CCDD-C-02 (6-8), CCDD-C-03 (11-12.5), CCDD-C-04 (8.5-10), CCDD-C-05 (13.5-15), CCDD-C-06 (6-7.5 and 18.5-20), CCDD-C-07 (13.5-15), CCDD-C-08 (8.5-10), and CCDD-C-10 (8.5-10) were below detection limits and therefore achieve the MAC values.

Low levels of PNA compounds were detected in samples from CCDD-C-05 (3.5-5), CCDD-C-07 (6-7.5), and CCDD-C-11 (1-2.5), but results were all below the most stringent MAC value.

Benzo(a)pyrene was detected in CCDD-C-03 (1-2.5), CCDD-C-03 (3.5-5) and CCDD-C-04 (3.5-5) with results of 0.1 mg/kg, 0.115 mg/kg, and 0.445 mg/kg, respectively, which exceeds only the most stringent MAC value for CCDD/USFO facilities located outside of populated areas.

Results from CCDD-C-09 (3.5-5, 6-7.5, and 8.5-10) have PNA compounds above MAC values established for outside populated areas; within a populated area in a non-MSA county; within a populated area in a MSA county excluding Chicago; within Chicago corporate limits. The PNA results are summarized in the tables in **Attachment C.**

RCRA Metals

RCRA metals were detected in each of the four samples but all results achieve their respective MAC values with the exception of total chromium detected at 22.2 mg/kg at CCDD-C-04 (3.5-5) above the MAC value of 21 mg/kg. Based on this result, supplemental analysis was conducted on the same sample for the toxicity characteristic leaching procedure (TCLP) method to determine compliance with MAC values. The supplemental TCLP chromium result was <0.005 mg/L results achieve the MAC value of 0.1 mg/L.

Soil pH

All soil samples collected from Section C3 have pH results within the MAC range of 6.25 to 9.0 (7.09 to 8.95). The soil pH results are summarized below.

Sample ID/Depth (ft)	pH	Sample ID/Depth	pH	Sample ID/Depth	pH
CCDD-C-02 (6-8)	8.63	CCDD-C-06 (18.5-20)	8.37	CCDD-C-11 (13.5-15)	7.73
CCDD-C-03 (1-2.5)	8.4	CCDD-C-07 (6-7.5)	8.18	CCDD-C-12 (6-7.5)	8.94
CCDD-C-03 (3.5-5)	8.64	CCDD-C-07 (13.5-15)	8.72	CCDD-C-12 (16-17.5)	8.95
CCDD-C-03 (11-12.5)	8.58	CCDD-C-08 (8.5-10)	7.46	CCDD-C-13 (8-10)	8.71
CCDD-C-04 (3.5-5)	8.81	CCDD-C-09 (3.5-5)	N/A	CCDD-C-14 (6-8)	8.33
CCDD-C-04 (8.5-10)	8.71	CCDD-C-09 (6-7.5)	N/A	CCDD-C-20 (6-7.5)	7.6
CCDD-C-04 (21-22.5)	8.43	CCDD-C-09 (8.5-10)	8.22	CCDD-C-20 (16-17.5)	8.82
CCDD-C-05 (3-5.5)	8.15	CCDD-C-10 (8.5-10)	8	CCDD-C-21 (3.5-5)	7.86
CCDD-C-05 (13.5-15)	8.44	CCDD-C-11 (1-2.5)	8.01	CCDD-C-22 (3.5-5)	8.07
CCDD-C-06 (6-7.5)	8.13	CCDD-C-11 (6-7.5)	7.26	CCDD-C-23 (3.5-5)	7.09

CCDD Determination

In summary, soil from Section C2 of the Project Corridor has been analyzed for VOCs, BTEX, PNAs, RCRA metals, and soil pH. All soil results, with the exception of the soil from CCDD-C-09 (Station 2235+00, located on the Meyer Material Co./Carpentersville Quarry property), achieve the MAC objectives for PNAs. Soil results from CCDD-C-09 (3.5-5) and CCDD-C-09 (6-7.5) do not achieve the MAC PNA objectives for CCDD disposal. Therefore, material from approximately 3.5-7.5 feet bgs in the vicinity of CCDD-C-09 is considered unsuitable for CCDD disposal. Per IDOT Article 669.05, these soils are classified as a(5) and the soil shall be managed as non-special waste (Station 2234+50 to Station 2235+75 for the full width of the corridor).

In addition, a series of eight (8) soil borings were completed within the Soil Management Zone (SMZ) associated with the Site Remediation Program (SRP) voluntary remediation of lead and petroleum impacted soils on the adjacent quarry property. Based on the results from that sampling effort, the entire SMZ area is excluded from CCDD or USFO disposal. Since some levels of lead were detected above the threshold for hazardous waste, the excavation and disposal of the SMZ will be handled separately and will include additional treatment and off-site disposal. Per IDOT Article 669.05, these soils are classified as a(5) and the soil shall be managed as a non-special waste, special waste, or hazardous waste as applicable (Station 2227+75 to Station 2231+00 for the full width of the corridor and extending to full width and length of the SMZ).

Given the history of the quarry property and the two (2) cited exclusion zones (SMZ-lead impacted area and PNA impacts associated with CCDD-C-09 soil boring location), we recommend on-site monitoring during excavation activities, consistent with IDOT section 669. Specifically, petroleum compounds should be screened with a photoionization detector (PID) and the metals associated with the SMZ area should be monitored with a field X-ray fluorescence (XRF) meter.

In addition, soils from other adjacent portions of the project corridor are excluded from this document as they have their own respective LPC-663 documents including: Contract C1 adjacent to west of Contract C2; IDOT jurisdiction of IL Route 25; and Contract C3 adjacent to east of Contract C2.

Should conditions within the Project Corridor change, such as unusual staining, odors, or if loads become rejected, additional analytical assessment may be required for final disposition of spoils from this Project Corridor.

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 _____% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

(a) The bidder documents enough DBE participation has been obtained to meet the goal or,

(b) The bidder documents a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:
http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the

bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.

(c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:

(1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.

(e) DBE as a material supplier:

(1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.

(3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

(a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at DOT.DBE.UP@illinois.gov.

(b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.

(c) SUBCONTRACT. The Contractor must provide copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.

(d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

(1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or

(2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or

(3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

(1) The listed DBE subcontractor fails or refuses to execute a written contract;

(2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;

(3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;

(4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

(6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;

(7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;

(8) The listed DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;

(10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

(f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

(g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be

made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

(h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

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 XX. 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 then 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.

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