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Letting January 18, 2019

Notice to Bidders, Specifications and Proposal



**Contract No. 61F24
COOK County
Section 18-00068-00-RS (Elk Grove Village)
Route FAU 1700 (Lively Boulevard)
Project B5RU-721 ()
District 1 Construction Funds**

Prepared by

Checked by

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(Printed by authority of the State of Illinois)



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. January 18, 2019 at which time the bids will be publicly opened from the iCX SecureVault.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 61F24
COOK County
Section 18-00068-00-RS (Elk Grove Village)
Project B5RU-721 ()
Route FAU 1700 (Lively Boulevard)
District 1 Construction Funds**

Resurfacing on Lively Boulevard from Devon Avenue to Landmeier Road in the Village of Elk Grove Village.

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

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

By Order of the
Illinois Department of Transportation

Randall S. Blankenhorn,
Secretary

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FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2019

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 4-1-16) (Revised 1-1-19)

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BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099		Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274		Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192		Automated Flagger Assistance Device	Jan. 1, 2008	
80173	135	X Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80241		Bridge Demolition Debris	July 1, 2009	
50261		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
* 80404		Coarse Aggregate Quality for Micro-Surfacing and Cape Seals	Jan. 1, 2019	
80384	137	X Compensable Delay Costs	June 2, 2017	
80198		Completion Date (via calendar days)	April 1, 2008	
80199		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311		Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80277		Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261	141	X Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387		Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
* 80029	144	X Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 2, 2019
80402	154	X Disposal Fees	Nov. 1, 2018	
80378		Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
* 80405		Elastomeric Bearings	Jan. 1, 2019	
80388	156	X Equipment Parking and Storage	Nov. 1, 2017	
80229		Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80304		Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
80246	157	X Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	Aug. 1, 2018
* 80406		Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Projects)	Jan. 1, 2019	
* 80398	159	X Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Jan. 1, 2019
80399	163	X Hot-Mix Asphalt – Oscillatory Roller	Aug. 1, 2018	Nov. 1, 2018
80347		Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	Aug. 1, 2018
* 80383		Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	Jan. 1, 2019
80376	165	X Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
80392	166	X Lights on Barricades	Jan. 1, 2018	
80336		Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
* 80393		Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	Jan. 1, 2019
80400		Mast Arm Assembly and Pole	Aug. 1, 2018	
80045		Material Transfer Device	June 15, 1999	Aug. 1, 2014
80394		Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	April 1, 2018
80165		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80349		Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371	168	X Pavement Marking Removal	July 1, 2016	
80390	169	X Payments to Subcontractors	Nov. 2, 2017	
80389	170	X Portland Cement Concrete	Nov. 1, 2017	
80359		Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
80401		Portland Cement Concrete Pavement Connector for Bridge Approach Slab	Aug. 1, 2018	

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80300		Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	171	X Progress Payments	Nov. 2, 2013	
34261	172	X Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157		Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306		Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2019
* 80407	174	X Removal and Disposal of Regulated Substances	Jan. 1, 2019	
80395		Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340		Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127	186	X Steel Cost Adjustment	April 2, 2014	Aug. 1, 2017
* 80408		Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
80397	189	X Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	190	X Subcontractor Mobilization Payments	Nov. 2, 2017	
80317		Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
80298		Temporary Pavement Marking	April 1, 2012	April 1, 2017
20338	191	X Training Special Provision	Oct. 15, 1975	
80403		Traffic Barrier Terminal, Type 1 Special	Nov. 1, 2018	
* 80409	194	X Traffic Control Devices – Cones	Jan. 1, 2019	
* 80410		Traffic Spotters	Jan. 1, 2019	
80318		Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
80288	195	X Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	197	X Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80071		Working Days	Jan. 1, 2002	

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

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80382	Adjusting Frames and Grates	Articles 602.02(s) and (t), 1043.04, and 1043.05	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	

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction”, adopted April 1, 2016 (hereinafter referred to as the “Standard Specifications”); the latest edition of the “Manual on Uniform Traffic Control Devices for Streets and Highways” (MUTCD); the “Manual of Test Procedures for Materials” in effect on the date of invitation for bids; and the “Supplemental Specifications and Recurring Special Provisions”, adopted January 1, 2019, indicated on the Check Sheet included here in which apply to and govern the construction of FAU 1700 (Lively Boulevard), Section 18-00068-00-RS, Project No. B5RU(721), Contract No. 61F24, and in case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

This project is located on in the Village of Elk Grove Village, Cook County. The project limits are on Lively Boulevard from south of Devon Avenue to south of Landmeier Road with an omission at Devon Avenue. The project has a total gross length of 7,252.68 feet (1.374 miles) and a net length of 7,188.40 feet (1.361 miles).

DESCRIPTION OF PROJECT

The work consists of pavement patching and resurfacing with HMA surface course, the installation of sidewalk curb ramps, detectable warnings, pavement markings, signing, detector loop replacement, pedestrian signal replacement, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

COMPLETION DATE PLUS WORKING DAYS

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

Completion Date – The Contractor shall complete all contract items by 11:59 PM on September 20, 2019.

The Contractor shall complete all punch list items within 5 working days after the Completion Date.

Article 108.09 shall apply to the Completion Date and the number of Working Days.

PERMIT REQUIREMENTS (EGV)

This Project requires a permit from the Cook County Department of Transportation and Highways. It is the Contractor's responsibility to post the required insurance certificates and bonds prior to starting any work within the County right-of-way or work that would affect the County's signal at the intersection of Lively Boulevard and Devon Avenue and at Lively Boulevard and Landmeier Road.

No extra compensation will be allowed the Contractor for any expense incurred by complying with the requirements of this Special Provision.

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".

MAINTENANCE OF ACCESS TO BUSINESSES (EGV)

This work shall be in accordance with Article 107.09 of the Standard Specifications, insofar as applicable, and the following provisions:

Access to commercial and industrial properties shall be continual or interrupted only for a period less than two (2) hours. The Contractor should adjust construction operations adjacent to these driveways to meet this requirement. The Contractor may completely close one access point to a commercial property with the permission of the Engineer if another existing driveway will serve the loading and parking area(s).

The Contractor shall be responsible for contacting adjacent businesses to determine access or schedule restrictions of the business.

PROTECTION OF EXISTING INFRASTRUCTURE (EGV)

This work shall consist of the protection of the existing concrete sidewalks, driveway aprons and concrete pavers during the construction from damage by the Contractor's trucks, excavating equipment, placement of bituminous prime coat and any other equipment used by the Contractor.

When removing curb and gutter, pavement or any other structure, the Contractor shall take every precaution necessary to ensure that there will be no damage to underground public or private utilities. Under no circumstances will the use of a frost ball concrete breaker be allowed.

The Contractor shall use plywood sheets, wood planks or other approved material to protect the existing sidewalk and aprons from damage by the Contractor's equipment and trucks. Sand shall be used to protect concrete pavers and concrete crosswalks in the roadway.

The Contractor shall provide sufficient planking or other approved materials needed to protect the existing concrete surfaces from damage during construction.

The Contractor may ride his equipment on the sidewalk area, but not on the top of the curb unless he can prove that no damage will result to the curb.

If any asphalt or bituminous materials are required, the Contractor shall place protection over all concrete pavers and concrete crosswalks within the vicinity of the job or as requested by the Engineer as coordinated with the Village. Cleaning afterward with environmentally safe chemicals if required or directed by the Engineer, shall not be paid for separately, but shall be at the Contractor's own expense.

The cost to furnish, place, move and dispose of plywood, planking, or other approved materials needed to continually protect and clean the existing roadways, concrete sidewalk, aprons and curb and gutter will not be paid for separately, but shall be considered included in the cost of the various HMA and concrete pay items.

KEEPING ROADS OPEN TO TRAFFIC (EGV)

All roads shall remain open to traffic. The Contractor may close one (through traffic) lane because of construction only between the hours of 7:00 AM and 7:00 PM. The Contractor shall maintain at least one (through traffic) lane in each direction with the use of signs, barricades, and arrow boards as shown on the Traffic Control Standards. All lanes of traffic will be maintained between 7:00 PM and 7:00 AM and when no construction activities are being carried out.

The restricted lane closure time may be adjusted by the Resident Engineer. The Contractor shall provide a start and end time and a procedure plan 48 hours prior to the lane(s) to be closed. The Resident Engineer will notify the Contractor 24 hours in advance with the decision.

If the Contractor fails to provide notification or disregards the decision by the Resident Engineer, a Traffic Control Deficiency Charge will be applied per Article 105.03 of the Standard Specifications.

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.

UTILITIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances resolution will be a function of the construction staging. The responsible agency must relocate or complete new installations as noted 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/ LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
Sta. 18+63, 46' RT	Manhole lid	To be adjusted	ComEd	Contractor for ComEd to adjust manhole lid. 1 Days Total Contractor to provide 4 weeks advance notice.
Sta. 19+33, 60' LT	Manhole lid	To be adjusted	MCI	Contractor for MCI to adjust manhole lid. 1 Day Total
Sta. 19+67, 34' RT	Manhole lid	To be adjusted	AT&T	Contractor for AT&T to adjust manhole lid. 1 Day Total
Sta. 19+69, 27' LT	Manhole lid	To be adjusted	AT&T	Contractor for AT&T to adjust manhole lid. 1 Day Total
Sta. 28+17, 53' LT	Manhole lid	To be adjusted	AT&T	Contractor for AT&T to adjust manhole lid. 1 Day Total
Sta. 63+93, 36' LT	Gas valve	To be adjusted	NICOR	Contractor for NICOR to adjust manhole lid. 1 Days Total Contractor to provide 2 weeks advance notice.

3 Days Total Installation for AT&T
1 Day Total Installation for ComEd
1 Day Total Installation for MCI
1 Day Total Installation for NICOR
Total: 6 Days

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
AT&T	Bruce Robbins	1000 Commerce Drive, Floor 1, Oak Brook, IL 60523	630.573.6471	br1831@att.com
ComEd	Carla Strungas		630.576.7237	Carla.strunga@comed.com
MCI/Verizon	Mel Conn	1515 E. Woodfield Road, Schaumburg, IL 60173	847.706.2315	Mel.conn@verizon.com
Nicor	Bruce Koppang	1844 Ferry Road, Naperville, IL 60563	630.388.3046	bkoppan@southernco.com

UTILITIES TO BE WATCHED AND PROTECTED

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

No facilities requiring extra consideration.

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
Adesta	Douglas Gones	565 Willowbrook Centre Pkwy, Willowbrook, IL 60527	630.343.2826	Douglas.gones@usa.q4s.com
Comcast	Martha Gieras			Martha_gieras@cable.comcast.com

Crown Caste	David Antol	2000 Corporate Drive, Canonsburg, PA 15317	714.416.2180	David.Antol@crowncastle.com
Level3 / CenturyLink	Xan Marie Rypkema	1025 Eldorado Blvd, Broomfield, CO 80021	720.888.1089	Xan.rypkema@centurylink.com
Vinakon	Dicky Patel	860 Remington Road, Schaumburg, IL 60173	847.592.5785	dicky.patel@vinakom.com
Zayo	Timothy Payment	810 Jorie Blvd, Oak Brook, IL 60523	630.203.8003	Timothy.payment@zayo.com

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

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

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

AVAILABLE REPORTS

No project specific reports were prepared.

When applicable, the following checked reports and record information is available for Bidders' reference upon request:

- Record structural plans
- Preliminary Site Investigation (PSI) (IDOT ROW)
- Preliminary Site Investigation (PSI) (Local ROW)
- Preliminary Environmental Site Assessment (PESA) (IDOT ROW)
- Preliminary Environmental Site Assessment (PESA) (Local ROW)
- Soils/Geotechnical Report
- Boring Logs
- Pavement Cores
- Location Drainage Study (LDS)
- Hydraulic Report
- Noise Analysis
- Other: _____

Those seeking these reports should request access from:

Mr. Brian Lovering
Chief Infrastructure Engineer
Village of Elk Grove Village
847.734.8800
blovering@elkgrove.org

SAW CUTTING (EGV)

The Contractor shall saw cut pavement, curb and gutter, driveways, sidewalk, and patches to separate the existing material to be removed by means of an approved concrete saw to a depth as shown on the plans or as directed by the Engineer. This work shall be included in the cost of the item being removed.

The Contractor shall be required to saw vertical cuts so as to form clean vertical joints. Should the Contractor deface any edge, a new sawed joint shall be provided and any additional work, including removal and replacement, shall be done at the Contractor's expense.

PROTECTION OF EXISTING TREES (EGV)

The Contractor shall be responsible for taking measures to minimize damage to the tree limbs, tree trunks, and tree roots at each work site. All such measures shall be included in the contract price for other work except that payment will be made for TEMPORARY FENCE, TREE ROOT PRUNING, and TREE PRUNING.

All work, materials and equipment shall conform to Section 201 and 1081 of the Standard Specifications except as modified herein.

All tree protection, tree removal, tree pruning and root pruning shall be completed before construction operations commence in any area. At no time shall the Contractor prune or remove any trees unless specifically directed by the Engineer.

A. Earth Saw Cut of Tree Roots (Root Pruning):

1. Whenever proposed excavation falls within a drip-line of a tree, the Contractor shall:
 - a. Root prune 6-inches behind and parallel to the proposed edge of trench a neat, clean vertical cut to a minimum depth directed by the Engineer through all affected tree roots.
 - b. Root prune to a maximum width of 4-inches using a root cutting wheel. Trenching machines will not be permitted.
 - c. Exercise care not to cut any existing utilities.
 - d. If during construction it becomes necessary to expose tree roots which have not been precut, the Engineer shall be notified and the Contractor shall provide a clean, vertical cut at the proper root location, nearer the tree trunk, as necessary, by means of hand-digging and trimming with chain saw or hand saw. Ripping, shredding, shearing, chopping or tearing will not be permitted.
 - e. Top Pruning: When thirty percent (30%) or more of the root zone is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

2. Whenever curb and gutter is removed for replacement, or excavation for removal of or construction of a structure is within the drip line/root zone of a tree, the Contractor shall:
 - a. Root prune 6-inches behind the curbing so as to neatly cut the tree roots.
 - b. Depth of cut shall be 12 inches for curb removal and replacement and 24 inches for structural work. Any roots encountered at a greater depth shall be neatly saw cut at no additional cost.
 - c. Locations where earth saw cutting of tree roots is required will be marked in the field by the Engineer.
3. All root pruning work is to be performed through the services of a licensed arborist to be approved by the Engineer.

Root pruning will be paid for at the contract unit price each for TREE ROOT PRUNING, which price shall be payment for all labor, materials and equipment.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), which price shall include labor, materials, and equipment.

B. Temporary Fence:

1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone" before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored or vehicles driven or parked within the "tree protection zone".
2. The exact location and establishment of the "tree protection zone" fence shall be approved by the Engineer prior to setting the fence.
3. The fence shall be erected on three sides of the tree at the drip-line of the tree or as determined by the Engineer.
4. All work within the "tree protection zone" shall have the Engineer's prior approval. All slopes and other areas not regarded should be avoided so that unnecessary damage is not done to the existing turf, tree root system ground cover.
5. The grade within the "tree protection zone" shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

The fence shall be similar to wood lath snow fence (48 inches high), plastic poly-type or and other type of highly visible barrier approved by the Engineer. This fence shall be

properly maintained and shall remain up until final restoration, unless the Engineer directs removal otherwise. Tree fence shall be supported using T-Post style fence posts. Utilizing re-bar as a fence post will not be permitted.

Temporary fence will be paid for at the contract unit price per foot for TEMPORARY FENCE, which price shall include furnishing, installing, maintaining, and removing.

C. Tree Limb Pruning:

1. The Contractor shall inspect the work site in advance and arrange with the Roadside Development Unit (847.705.4171) to have any tree limbs pruned that might be damaged by equipment operations at least one week prior to the start of construction. Any tree limbs that are broken by construction equipment after the initial pruning must be pruned correctly within 72 hours.
2. Top Pruning: When thirty percent (30%) or more of the root zone of a tree is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), which price shall include labor, materials, and equipment.

D. Removal of Driveway Pavement and Sidewalk:

1. In order to minimize the potential damage to the tree root system(s), the Contractor will not be allowed to operate any construction equipment or machinery within the "tree protection zone" located between the curb or edge of pavement and the right-of-way property line.
2. Sidewalk to be removed in the areas adjacent to the "tree protection zones" shall be removed with equipment operated from the street pavement. Removal equipment shall be Gradall (or similar method), or by hand or a combination of these methods. The method of removal shall be approved by the Engineer prior to commencing any work.
3. Any pavement or pavement related work that is removed shall be immediately disposed of from the area and shall not be stockpiled or stored within the parkway area under any circumstances.

E. Backfilling:

1. Prior to placing the topsoil and/or sod, in areas outside the protection zone, the existing ground shall be disked to a depth no greater than one (1"), unless otherwise directed by the Engineer. No grading will be allowed within the drip-line of any tree unless directed by the Engineer.

F. Damages:

1. In the event that a tree not scheduled for removal is injured such that potential irreparable damage may ensure, as determined by the Roadside Development Unit, the Contractor shall be required to remove the damage tree and replace it on a three to one (3:1) basis, at his own expense. The Roadside Development Unit will select replacement trees from the pay items already established in the contract.

2. The Contractor shall place extreme importance upon the protection and care of trees and shrubs which are to remain during all times of this improvement. It is of paramount importance that the trees and shrubs which are to remain are adequately protected by the Contractor and made safe from harm and potential damage from the operations and construction of this improvement. If the Contractor is found to be in violation of storage or operations within the "tree protection zone" or construction activities not approved by the Engineer, a penalty shall be levied against the Contractor with the monies being deducted from the contract. The amount of the penalty shall be two hundred fifty dollars (\$250.00) per occurrence per day.

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)

Effective: April 1, 2011
 Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- "(i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1) 1030
- (j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)"

Revise Article 603.07 of the Standard Specifications to read:

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

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting ± 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer’s specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03.”

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

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

Use	Mixture	Aggregates Allowed	
		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>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel ^{2/} , Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.

- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

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 \leq 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 steel 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				
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %, 2/
	IL-19.0	IL-9.5	IL-4.75 ^{1/}	
50	13.5	15.0	18.5	65 – 78
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/}	75 - 83
		16.0 ^{3/}	

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

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

3/ Applies when specific gravity of coarse aggregate is < 2.760 .

4/ Blending of different types of aggregate will not be permitted.

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

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

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

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 Gmb.”

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 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	± 2.0 %

Content	
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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	
	FRAP	RAS
% Passing: ^{1/}		
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 <i>1/ 2/ 4/</i>	Maximum % ABR		
	Ndesign	Binder/Leveling Binder	Surface
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.”

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
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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.

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.”

COMBINATION CONCRETE CURB AND GUTTER (MODIFIED) (EGV)

Description. This work shall consist of the construction of combination concrete curb and gutter of various types, as directed by the Engineer. This work shall be done in accordance with Section 606 of the Standard Specifications, IDOT Highway Standard No. 606001, and the details included in the plans.

Materials. Materials shall comply with the requirements of Sections 1006, 1020 and 1051 of the Standard Specifications.

The new curb and gutter shall be tied to the existing curb and gutter with two #8 (1 inch) steel dowel bars (18" long), drilled into the existing curb and gutter end. Two continuous #4 reinforcement bars shall be installed throughout combination concrete curb and gutters. When adjacent to existing concrete pavement, the curb and gutter shall be tied to the concrete pavement with No. 6 tie bars (24" long) at 24" centers, drilled and grouted (embedded 8" minimum). The Engineer must inspect and approve the base and formwork before any concrete is poured. A minimum 24 hour notice shall be provided for form work inspection.

When the existing, adjacent pavement is full depth asphalt, a maximum 6 inch width of the pavement shall be removed to allow for forming of the curb and gutter. This void shall be replaced with concrete, poured monolithically with the adjacent curb and gutter. The top of the concrete within the void shall be placed at the elevation of the bottom of the resurfacing thickness. The cost of the saw cutting to remove the pavement, the pavement removal, and the replacement with concrete shall be included in the cost of COMBINATION CONCRETE CURB AND GUTTER (MODIFIED).

Depressed curb for driveway openings, sidewalk ramps accessible to the disabled, and any other designated areas shall be constructed at the locations shown on the Plans or as designated by the Engineer. No additional compensation will be made for depressed curbs.

Method of Measurement. Combination concrete curb and gutter will be measured for payment in feet in the flow line of the gutter, which measurement will include drainage castings incorporated in the curb and gutter.

Basis of Payment. This work will be paid for at the contract unit price per foot of COMBINATION CONCRETE CURB AND GUTTER (MODIFIED) of the type specified.

EXPLORATION TRENCH, SPECIAL (EGV)

Description. This item shall consist of excavating a trench at locations designated by the Engineer for the purpose of locating existing tile lines or other underground facilities within the limits of the proposed improvement. The trench shall be deep enough to expose the line but not more than one foot deeper than the line, and the width of the trench shall be sufficient to allow proper investigation to determine if the line needs to be relocated or replaced.

The exploration trench shall be backfilled with gradation CA 6 stone, the cost of which shall be included in the item of EXPLORATION TRENCH, SPECIAL.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, SPECIAL, regardless of the depth required, and no extra compensation will be allowed for any delays, inconveniences or damages sustained by the Contractor in performing the work.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

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

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

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

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

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

Add the following to Article 402.12 of the Standard Specifications:

“Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road is to be constructed under multiple stages, the aggregate needed to construct the second or

subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified.”

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

“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.”

PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH, SPECIAL (EGV)

Description. This work shall consist of the construction of Portland Cement Concrete driveways at the locations designated on the plans in accordance with Section 423 of the Standard Specifications and the details included in the plans.

The Contractor shall machine-saw a perpendicular joint between that portion of a driveway to be removed and that which is to remain in place. If the Contractor removes or damages the existing driveway or parking area outside the limits designated by the Engineer for removal and replacement, the Contractor will be required to repair or replace that portion at his/her own expense to the Engineer’s satisfaction. All required excavation shall be included in the contract unit price for this item. Removal of the existing driveway pavement will be paid for separately.

Materials. Materials shall comply with the requirements of Sections 1006, 1020 and 1051 of the Standard Specifications. High-early strength concrete, meeting the requirements of Class PP-1 concrete, shall be required.

Commercial driveways shall consist of 8” of concrete with 6” x 6” x #6 wire mesh.

Method of Measurement. Measurement for concrete driveway shall be per square yard.

Basis of Payment. Payment for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH, SPECIAL shall be made at the contract unit price per square yard. Payment shall be full compensation for all materials including labor, equipment and incidentals to complete the item as shown on the plans and as specified. Removal of the existing driveway pavement shall be paid for as DRIVEWAY PAVEMENT

REMOVAL. Granular subbase under the driveway will be measured separately for payment as SUBBASE GRANULAR MATERIAL, TYPE B, 8".

PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL (EGV)

Description. This work shall consist of the construction of Portland Cement Concrete sidewalks at the locations designated on the plans in accordance with Section 424 of the Standard Specifications with the following modifications.

Materials. Materials shall comply with the requirements of Sections 1006, 1020 and 1051 of the Standard Specifications.

All sidewalk constructed over a utility trench shall be reinforced with three #4 rebars which extend 5 feet beyond the trench walls.

All forms used for sidewalk shall be 2" x 6" lumber, 2" x 10" lumber, or approved metal forms. The Engineer must inspect and approve the base and formwork before any concrete is poured. A minimum 24 hour notice shall be provided for formwork inspection.

All proposed sidewalk and sidewalk curb ramps shall be constructed to the slopes and grades shown on the IDOT Highway Standards. The proposed sidewalk limits shown on the plans are approximate. The Engineer shall make the final determination of the sidewalk replacement limits in the field.

The maximum cross slope at any point in the traversable area of the sidewalk, including the area through driveways, shall be 2.00%. All areas of new sidewalk that exceed this maximum shall be removed and replaced at the Contractor's expense.

Side curbs adjacent to sidewalks, when shown on the plans, the IDOT Highway Standards, or required by the Engineer, shall be included in the measured area and paid for as PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL, of the thickness specified.

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

Basis of Payment. This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL, of the thickness specified.

DETECTABLE WARNINGS (SPECIAL) (EGV)

Description. This work shall consist of furnishing and installing pre-fabricated panels of truncated domes in accordance with Article 424 of the Standard Specifications, the IDOT Highway Standards, and the following provisions.

Materials. Panels shall be 24 inches (24") wide, with lengths varying from 36 inches (36") to 60 inches (60") and shall be Dark Gray (Federal Color #36118). The Detectable Warning panel shall be one of the following products:

- (a) Cast In Place Tactile Surface by ADA Solutions, Inc.
- (b) Armor-Tile Cast-In Place System by Armor-Tile

All cutting of tiles shall be included in the cost of DETECTABLE WARNINGS (SPECIAL).

Method of Measurement. Measurement for detectable warnings shall be per square foot for the actual length of detectable warning multiplied by the width of detectable warning placed. When side curbs are required for construction of the curb ramp in accordance with the IDOT Highway Standard(s), the side curbs will be measured for payment as PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL, of the thickness specified.

Basis of Payment. Detectable warning will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).

CATCH BASINS TO BE ADJUSTED WITH SPECIAL FRAME AND GRATE (VOS)

Description. This work shall consist of adjusting drainage and utility structures in accordance with Section 602 of the Standard Specifications, with the following modifications:

Adjustment will be made with new Neenah R-3281-A frames with an open curb grate, for use in depressed curbs.

The existing frames shall be removed by the Contractor and transported to the Village's Public Works facility at 600 Landmeier Road, Elk Grove. This work shall be included in the cost of CATCH BASINS TO BE ADJUSTED WITH SPECIAL FRAME AND GRATE.

Concrete adjustment rings less than 4 inches thick shall not be allowed. High Density Polyethylene (HDPE) plastic adjusting rings and ring wedges shall be used for all adjustments less than 4" or in combination with 4 inch minimum concrete adjustment rings. Bricks shall not be used.

Basis of Payment. When adjustment is specified, this work will be paid for at the contract unit price per each for CATCH BASINS TO BE ADJUSTED WITH SPECIAL FRAME AND GRATE.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) (EGV)

Description. This work shall consist of adjusting frames and lids for drainage and utility structures located within the pavement area in accordance with Section 603 of Standard Specifications and the following modifications:

All work shall follow and be according to the District One Detail BD-8 "Details for Frames and Lids Adjustment with Milling".

Concrete adjustment rings less than 4 inches thick shall not be allowed. High Density Polyethylene (HDPE) plastic adjusting rings and ring wedges shall be used for all adjustments less than 4" or in combination with 4 inch minimum concrete adjustment rings. Bricks shall not be used.

Add the following to Article 603.09 of the Standard Specifications:

"Removing frames and lids on drainage and utility structures in the pavement prior to milling, and adjusting to final grade prior to placing the surface course, will be paid for at the contract unit price each for FRAMES AND LIDS TO BE ADJUSTED (SPECIAL).

COMBINATION CONCRETE CURB AND GUTTER (SPECIAL) (EGV)

Description. This work shall consist of the construction of combination concrete curb and gutter of various types, as directed by the Engineer. This work shall be done in accordance with Section 606 of the Standard Specifications, IDOT Highway Standard No. 606001, and the details included in the plans.

Materials. Materials shall comply with the requirements of Sections 1006, 1020 and 1051 of the Standard Specifications. High-early strength concrete, meeting the requirements of Class PP-1 concrete, shall be required.

The new curb and gutter shall be tied to the existing curb and gutter with two #8 (1 inch) steel dowel bars (18" long), drilled into the existing curb and gutter end. Two continuous #4 reinforcement bars shall be installed throughout combination concrete curb and gutters. The Engineer must inspect and approve the base and formwork before any concrete is poured. A minimum 24 hour notice shall be provided for form work inspection.

When the existing, adjacent pavement is full depth asphalt, a maximum 6 inch width of the pavement shall be removed to allow for forming of the curb and gutter. This void shall be replaced with concrete, poured monolithically with the adjacent curb and gutter. The top of the concrete within the void shall be placed at the elevation of the bottom of the resurfacing thickness. The cost of the saw cutting to remove the pavement, the pavement removal, and the replacement with concrete shall be included in the cost of COMBINATION CONCRETE CURB AND GUTTER (SPECIAL).

Depressed curb for driveway openings, sidewalk ramps accessible to the disabled, and any other designated areas shall be constructed at the locations shown on the Plans or

as designated by the Engineer. No additional compensation will be made for depressed curbs.

Method of Measurement. Combination concrete curb and gutter will be measured for payment in feet in the flow line of the gutter, which measurement will include drainage castings incorporated in the curb and gutter.

Basis of Payment. This work will be paid for at the contract unit price per foot of COMBINATION CONCRETE CURB AND GUTTER (SPECIAL) of the type specified.

ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED) (EGV)

Description. This work shall consist of furnishing and maintaining a Type A field office in accordance with Section 670 of the Standard Specifications:

The field office shall be located within a 1 mile radius of the construction site and within the corporate limits of Elk Grove Village.

Basis of Payment. This work will be paid for at the contract unit price per calendar month for ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED).

SIGN PANEL – TYPE 1 (SPECIAL) (EGV)

Description. This work shall consist of furnishing and installing sign panels complete with sign face, legend, and backing material in accordance with Section 720 of the Standard Specifications.

Materials. Materials shall be in accordance with Section 1090, 1091, and 1093 of the Standard Specifications for Road and Bridge Construction, except as herein modified:

The sign panel shall be flat sheet aluminum. The sign face shall be as specified in Table AP Sheeting of article 1091.03. The sign back shall have a black high performance cast vinyl (2 Mil) film.

The collapsible stop signs shall be aluminum tri-fold panel with a locking mechanism. The sign face shall be as specified in Table AP Sheeting of article 1091.03.

The Contractor shall submit four (4) copies of shop drawings for the sign panels, backing material, and hardware for approval by the Engineer prior to manufacturing.

Construction Methods. Sign panels shall be installed in accordance with contract details and as specified in Article 720.04.

Each sign panel shall have a 2.5" x 2" vinyl date sticker adhered to the back of panel. The sticker shall be located in the lower right rear-facing corner. The Village will supply these stickers to the contractor at the preconstruction meeting.

All signs shall be mounted a minimum of seven (7) feet above the ground line in accordance with the MUTCD, unless otherwise directed by the Engineer. The sign post shall extend three (3) inches above the top of the sign.

Minor scratches to the existing posts caused by the installation of the sign panels shall be repaired to the satisfaction of the Engineer. Sign post units that are damaged beyond repair, as determined by the Engineer, shall be replaced by the Contractor at no additional cost to the contract.

Method of Measurement. The pay item SIGN PANEL - TYPE 1 (SPECIAL) will be measured by square foot of sign panel required.

Basis of Payment. This work will be paid for at the contract unit price per square foot for SIGN PANEL - TYPE 1 (SPECIAL). The cost of the sign panels, face and back materials, mounting hardware and adhering of date sticker shall be included in the unit cost of this item.

CONCRETE WASHOUT FACILITY

Description. The Contractor shall take sufficient precautions to prevent pollution of streams, lakes, reservoirs, and wetlands with fuels, oils, bitumens, calcium chloride, or other harmful materials according to Article 107.23 of the "Standard Specifications".

General. To prevent pollution by residual concrete and/or the by-product of washing out the concrete trucks, concrete washout facilities shall be constructed and maintained on any project which includes cast-in-place concrete items. The concrete washout shall be constructed, maintained, and removed according to this special provision. Concrete washout facilities shall be required regardless of the need for NPDES permitting. ON projects requiring NPDES permitting, concrete washout facilities shall also be addressed in the Storm Water Pollution Prevention Plan.

The concrete washout facility shall be constructed on the job site in accordance with Illinois Urban Manual practice standard for Temporary Concrete Washout Facility (Code 954). The Contractor may elect to use a pre-fabricated portable concrete washout structure. The Contractor shall submit a plan for the concrete washout facility, to the Engineer for approval, a minimum of 10 calendar days before the first concrete pour. The working concrete washout facility shall be in place before any delivery of concrete to the site. The Contractor shall ensure that all concrete washout activities are limited to the designated area.

The concrete washout facility shall be located no closer than 50 feet from any environmentally sensitive areas, such as water bodies, wetlands, and/or other areas indicated on the plans. Adequate signage shall be placed at the washout facility and elsewhere as necessary to clearly indicate the location of the concrete washout facility to the operators of concrete trucks.

The concrete washout facility shall be adequately sized to fully contain the concrete washout needs of the project. The contents of the concrete washout facility shall not

exceed 75% of the facility capacity. Once the 75% capacity is reached, concrete placement shall be discontinued until the facility is cleaned out. Hardened concrete shall be removed and properly disposed of outside the right-of-way. Slurry shall be allowed to evaporate, or shall be removed and properly disposed of outside the right-of-way. The Contractor shall immediately replace damaged basin liners or other washout facility components to prevent leakage of concrete waste from the washout facility. Concrete washout facilities shall be inspected by the Contractor after each use. Any and all spills shall be reported to the Engineer and cleaned up immediately. The Contractor shall remove the concrete washout facility when it is no longer needed.

Basis of Payment. The cost of all materials required and all labor necessary to comply with the above will be paid for at the lump sum price for CONCRETE TRUCK WASHOUT. The unit price shall include all labor, equipment and materials necessary to complete the work, regardless of the number washout facilities required.

REMOVE AND REPLACE LAWN SPRINKLER SYSTEM (EGV)

Description. Work under this item shall consist of removing and replacing portions of a lawn sprinkler system that is required to be replaced as a result of construction operations and not as a result of Contractor negligence.

The Contractor shall determine all existing lawn sprinkler systems that are proposed to be relocated and replaced in the presence of the Engineer. The Contractor shall take all necessary precautions to protect existing lawn sprinkler systems that are to remain in place. The Contractor shall replace only that portion of the lawn sprinkler system that is required by legitimate construction operations and approved by the Engineer. The replacement sections of the lawn sprinkler system shall be compatible with the existing system. The Engineer shall approve locations of the replacement appurtenances prior to demolition activities. Once the replacement sprinklers are replaced and have been tested by the Contractor in the presence of the Engineer, the item will be measured for payment.

The Contractor shall be responsible for coordinating all work involving the sprinkler systems with the business owners. The Contractor shall obtain written approval of any relocations or repairs from the Engineer prior to final payment.

Method of Measurement. This work shall be measured for payment in feet of sprinkler system replaced.

Basis of Payment. This work shall be paid for at the contract unit price per foot for REMOVE AND REPLACE LAWN SPRINKLER SYSTEM in accordance with the plans and as described herein for all materials (including sprinkler heads and valves) and labor necessary to complete the work.

DRAINAGE AND UTILITY STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED (EGV)

Description. This work shall consist of adjusting or reconstructing drainage and utility structures in accordance with Section 602 of the Standard Specifications, with the following modifications:

Adjustment or reconstruction will be made with existing frames and grates or lids unless otherwise specified. New frames and grates or lids will be paid for separately when shown on the plans.

When new frames are installed, the existing frames shall be removed by the Contractor and transported to the Village's Public Works facility at 600 Landmeier Road, Elk Grove. This work shall be included in the cost of DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED or DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED.

Concrete adjustment rings less than 4 inches thick shall not be allowed. High Density Polyethylene (HDPE) plastic adjusting rings and ring wedges shall be used for all adjustments less than 4" or in combination with 4 inch minimum concrete adjustment rings. Bricks shall not be used.

Basis of Payment. When adjustment or reconstruction is specified, this work will be paid for at the contract unit price per each for DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED or DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED; regardless of the type of structure or type of frame and lid or grate, which price shall include resetting the frame with grate or lid, and excavation and backfill, except excavation in rock.

DRAINAGE STRUCTURES AND STORM SEWERS (EGV)

Whenever during construction operations any loose material is deposited in the flow line of drainage structures such that the natural flow of water is obstructed, it shall be removed at the close of each working day. At the conclusion of construction operations, all utility structures shall be free from dirt and debris. The cost of all materials required and all labor necessary to comply with these provisions will not be paid for separately, but shall be considered as included in the cost of the storm sewers installed and drainage structures installed, adjusted, or reconstructed as part of this project.

The Contractor shall furnish all labor, equipment and material necessary for dewatering trench excavations as well as shoring trench walls during storm sewer operations. The cost to comply with the above shall be included in the cost of the storm sewers and drainage structures installed as part of this project.

The cost of making storm sewer or pipe underdrain connections to existing or proposed storm sewer or drainage structures shall be included in the cost of the storm sewer or drainage structure being constructed.

When existing drainage facilities are disturbed, the Contractor shall provide and maintain temporary outlets and connections for all private or public drains, sewers or catch basins. The Contractor shall provide facilities to take in all storm water which will be received by these drains and sewers and discharge the same. The Contractor shall provide and maintain an efficient pumping plant, if necessary, and a temporary outlet. The Contractor shall be prepared at all times to dispose of the water received from temporary connections until such time as the permanent connections with sewers are built and in service. This work will not be paid for separately, but shall be included in the cost of the storm sewers and drainage structures installed as part of this project.

Top of frame (“rim”) elevations given on the plans are only to assist the Contractor in determining the approximate overall height of each structure. Frames on all new structures shall be adjusted to the final elevations of the areas in which they are located. This work will not be paid for separately, but shall be included in the cost of the drainage structures installed as part of this project.

During construction, the Contractor encounters or otherwise becomes aware of any sewers, underdrains, or field drains within the right-of-way other than those shown on the plans, he shall so inform the Engineer, who shall direct the work necessary to maintain or replace the facilities in service and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of the non-compliance with this provision shall be replaced at the Contractor’s own expense. Should the Engineer have directed the replacement of a facility, the necessary work and payment shall be in accordance with Sections 550 and 601, and Article 104.02 of the Standard Specifications.

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 instead of 3/4-inch 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 thick.

GENERAL CONSTRUCTION REQUIREMENTS

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

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Articles 701.14 and 720.04. The signs shall be 7 feet above the near edge of the pavement and shall be a minimum of 2 feet beyond the edge of the paved shoulder. A minimum of 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.

STORM SEWERS (WATER MAIN REQUIREMENTS)

Description. This work shall consist of the installation of watermain quality pipe in areas where the storm sewer line crosses above the watermain. All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 40 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," 7th edition.

Materials. All pipe materials shall conform to Section 40-2 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 7th edition, except that only ductile iron pipe shall be allowed. The materials shall be approved by the Engineer prior to their installation. The watermain quality pipe shall be connected to the storm sewer pipe on both ends by use of non-shear mission couplings with stainless steel

bands or a method approved by the Engineer. The cost of these connections shall be included in the cost of STORM SEWERS (WATER MAIN REQUIREMENTS).

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for STORM SEWERS (WATER MAIN REQUIREMENTS) of the size specified which price shall include all labor, equipment, and materials necessary to perform said work.

REFLECTIVE SIGN TAPE

Description. This work shall consist of furnishing and installing permanent reflective sign tape on the back side of existing railroad crossbuck sign panels as directed by the Engineer.

Materials. The tape shall be white in color, 2" wide, with high intensity reflective properties.

Installation. The existing sign panel shall be cleaned in a manner meeting the approval of the Engineer to provide for the necessary bonding between the tape and the sign panel. The tape shall be installed per the manufacturer's recommendations.

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for REFLECTIVE SIGN TAPE which price shall include all labor, equipment, and materials necessary to perform said work.

REFLECTIVE SIGN SUPPORT COVER

Description. This work shall consist of furnishing and installing reflective panels on existing railroad crossbuck sign supports.

Materials. The sign support covers shall be a minimum of 2" wide, white in color, with high intensity reflective properties. The panels shall be capable of being installed on the existing square telescoping steel sign supports.

Installation. The sign support covers shall be installed per the manufacturer's recommendations. The panels shall extend from the bottom of the existing sign panels to within 2 feet above the ground. Panels shall be installed on both the front and the back of the support.

Basis of Payment. This work shall be measured and paid for at the contract unit price per each for REFLECTIVE SIGN SUPPORT COVER which price shall include all labor, equipment, and materials necessary to perform said work.

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-Road Operations, 2L, 2W, 15' to 24" From Pavement Edge
- 701301-04 Lane Closure, 2L, 2W, Short Time Operations
- 701311-03 Lane Closure, 2L, 2W, Moving Operations – Day Only
- 701501-06 Urban Lane Closure, 2L, 2W, Undivided
- 701502-09 Urban Lane Closure, 2L, 2W, with Bidirectional Left Turn Lane
- 701701-10 Urban Lane Closure, Multilane Intersection
- 701801-06 Sidewalk, Corner, or Crosswalk Closure
- 701901-08 Traffic Control Devices

DETAILS:

- Traffic Control and Protection for Side Roads, Intersections & Driveways (TC-10)
- District One Typical Pavement Markers (TC-13)
- Traffic Control and Protection at Turn Bays (To Remain Open to Traffic) (TC-14)
- Pavement Marking Letters and Symbols for Traffic Staging (TC-16)
- Driveway Entrance Signing (TC-26)

SPECIAL PROVISIONS:

- "Public Convenience and Safety (Dist 1)"
- "Maintenance of Roadways"
- "Maintenance of Access to Businesses"
- "Keeping Roads Open to Traffic"
- "Temporary Information Signing"
- "Equipment Parking and Storage (BDE)"
- "Lights on Barricades (BDE)"
- "Pavement Marking Removal (BDE)"
- "Temporary Pavement Marking (BDE)"

“Traffic Control Devices – Cones (BDE)”
LRS 3: Work Zone Traffic Control Surveillance

**SPECIAL PROVISION
FOR
TRAFFIC SIGNAL WORK GENERAL**

All work and equipment performed and installed under this contract, shall be governed and shall comply to the State of Illinois "Standard Specifications for Road and Bridge Construction" latest edition, herein referred to as the Standard Specifications and the "District One Standard Design Details"; the State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition; the "National Electrical Code" latest edition herein referred to as the NEC; the National Electrical Manufacturers Association, herein referred to as NEMA (all publications for traffic control items) latest editions; the International Municipal Signal Association, herein referred to as IMSA "Official Wire & Cable Specifications Manual" latest edition; the Institute of Transportation Engineers, herein referred to as the ITE, Technical Report No.1, "A Standard for Adjustable Face Vehicular Traffic Control Heads"; AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals" and the "Supplemental Specifications" and "Recurring Special Provisions" noted herein.

The following Special Provisions supplement the above specifications, manuals, and code. 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. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. Traffic signal construction and maintenance work shall be performed by personnel holding IMSA Traffic Signal Technician Level II certification. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

In order to reduce possible vehicular conflicts with fixed objects and avoid public criticism, it is necessary to require that no posts, poles, heads, or controller cabinets be installed until all traffic signal control equipment is brought to and located on the job site.

The construction, installation and/or removal work shall be accomplished at all the intersections within the limits of this project or as shown in the plans.

Description of Work. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Control of Traffic Signal Materials.

All work shall meet the requirements of the "Standard Specifications for Road and Bridge Construction", except as follows:

The controller and all control equipment shall be of a manufacturer that is approved by this Department. All equipment shall have a representative and shop located in the six (6) county Chicago areas. All equipment installed in the controller cabinet shall be from a single supplier. The supplier shall be responsible for service and support for this equipment.

The intent of this Section 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 materials and equipment shall bear the U.L. label whenever such labeling is available.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

The application of all coatings, epoxy, galvanizing, painting, etc., to metal products shall be domestically applied.

Metal material other than iron and steel, which are not domestically produced, may be accepted provided:

- (a) The contractor notifies the Department in advance of his/her intention to use other than domestically manufactured or produced material.
- (b) Written evidence is provided in English of compliance with all requirements of the specifications.
- (c) Physical tests conducted by the department verify the acceptability of the material.

Before any signal equipment, including mast arm assemblies, poles, controller cabinets, all control equipment and signal heads, are delivered to the job site, the Contractor shall obtain and forward to the Engineer a certified, notarized statement from the manufacturer, containing the catalog numbers of the equipment and/or material, guaranteeing that the equipment and/or material, after manufacture, comply in all respects with the requirements of the Specifications and these Special Provisions.

All material approval requests shall be within thirty (30) consecutive calendar days after the Contract is awarded, or at the pre-construction meeting, whichever is first. 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.

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 that have been installed on the job will be done at the Contractor's own risk and may be subject to removal and disposal at the Contractor's expense.

The Contractor must submit the following for approval by the Engineer:

- Four (4) complete set of manufacturer's descriptive literature, drawings, and specifications of the traffic signal equipment, handholes, junction box, cable, conduit and all associated items that will be installed on the contract. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
- Partial or incomplete submittal will be returned without review.

- The contractor shall supply samples of all wire and cable, and shall make up and supply samples of each type of cable splice proposed for use in the work for the-Engineer's approval.
- Seven (7) complete shop drawings of the mast arm assemblies and poles including combination mast arm poles are required, showing in detail the fabrication, anchor bolts, reinforcing materials, design material, thickness of sections and weld sizes. These drawing shall be approved by IDOT at least 11" x 17" (275mm x 425mm) in size and adequate quality for microfilming.
- Certain non-standard mast arm poles and assemblies will require additional review. The Contractor shall account for additional review time in their schedule.
- Seven (7) copies of a letter from the Traffic Signal Contractor on company letterhead listing contract number or permit number, project location limits, pay item number and description and listing the manufacturer's name and model numbers of the proposed equipment to be supplied and stating that the proposed equipment meets all Contract requirements. The letter will be reviewed by the Engineer to determine whether the equipment to be used is approvable. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
- Five (5) copies of a letter from the Traffic Signal Contractor listing the System Coordination and Timing (SCAT) consultant's name shall be supplied. The letter will be reviewed by the Engineer to determine whether the SCAT consultant to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
- 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.
- All above shall be stamped with the Section Number, Permit Number, or Contract Number and Intersection(s) name(s). Pay item numbers shall also be included. If the above required information is not on each sheet of the above literature or letters, the equipment and material cuts will not be reviewed and shall be returned to the Contractor.
- All submitted items reviewed and marked 'APPROVED AS SUBMITTED', 'APPROVED AS NOTED', 'DISAPPROVED', 'INCOMPLETE' or ' NOT REVIEW' 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.
- Exceptions, Deviations and Substitutions. In general, 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.
- After the engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status. Since the Engineer's review is for conformance

with 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 Departments approval thereof. The Contractor must be in full compliance with contract and specification requirements.

- 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 the following to Article 801.09 of the Standard Specifications:

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

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.

Maintenance and Responsibility.

Revise Article 801.11 to read as follows.

- 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, Cook County Highway Department, Private Developer, or the Municipality 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. Automatic Traffic Enforcement equipment is not owned by the County and the Contractor shall not be responsible for maintaining it during construction. The Contractor shall supply the engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number.
- b) 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 Design Engineer at (312) 603-1730 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. 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.

- 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) Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops may not require maintenance transfer, unless a pay item of "Maintenance of Existing Traffic Signal Installation" is included in the project. When the pay item of "Maintenance of Existing Traffic Signal Installation" is not included, the Contractor is required to notify of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Design Engineer at (312) 603-1730, the Department's Electrical Maintenance Contractor and the owner of automatic traffic enforcement prior to the loop removal, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. Damaged Automatic Traffic Enforcement equipment, including cameras, detectors, or other peripheral equipment, shall be replaced by others, per Permit agreements or other agreements., at no cost to the contract except for City of Chicago projects in which the detectors shall be replaced. See additional requirements in these specifications under Inductive Loop Detector.
- e) The Contractor is further advised that the existing traffic signal(s), and/or the existing temporary installation(s), must remain in operation during all construction stages except for the most essential down time. Any shutdown of the traffic signal installation(s), for a period to exceed fifteen (15) minutes, must have the prior approval of the Engineer. Such approval will generally only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns will not be allowed during inclement weather or during Holiday periods. Any other traffic signal shutdown, either for periods in excess of one (1) hour or outside of the 10:00 a.m. to 3:00 p.m. weekday period must have prior approval of the Engineer. The Contractor, prior to the commencement of his work, shall notify the State Electrical Maintenance Contractor, the Cook County Electrical Maintenance Contractor, or the concerned Municipality, of his intent to perform this work.
- f) The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. 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's Electrical Maintenance Contractor may inspect any signaling 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.
- 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.

Damage to Traffic Signal System.

Add the following to Article 801.12(b).

- a) Any damaged equipment or equipment not operating properly from any cause whatsoever shall be replaced with new equipment 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 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 will not be accepted. Cable splices outside the controller cabinet will not be allowed.
- b) 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.
- c) Automatic Traffic Enforcement equipment, such as Red-Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause whatsoever, shall be the responsibility of the municipality or the Automatic Traffic Enforcement Company per Permit agreement or other agreements.

Traffic Signal Inspection (Turn – On).

Revise Article 801.15b to read as follows.

- a) The Contractor must have all electric work completed, the electrical service installation connected by the utility company and equipment field tested by the Vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines the 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. The Department will not grant a field inspection until written certification is provided from the Contractor stating the equipment has been field tested and the intersection is operating according to Contract requirements.

- b) When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specification, 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 Design Engineer at (312) 603-1730 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until 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 Pre-emption (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 schedule, as well as stage changes and phase changes during construction.
- c) 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 direct traffic at the time of testing.
- d) The Contractor shall provide a representative from the control Equipment Vendor's office 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.
- e) 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.
- f) 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 acceptable from the Department.
- g) All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Design Engineer at (312) 603-1730 to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.
- h) 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 that have been installed on the job will be at the Contractor's own risk and shall be subject to removal and disposal at the Contractor's expense.
- i) The Contractor shall furnish the Cook County Highway Department with any special tools or wrenches that may be required for assembling or maintaining the control equipment and traffic control signal head assemblies.

- j) All control cable, when complete in place but before permanent connection, shall be subject to insulation tests at the discretion of the Engineer. The tests shall be made with approved insulation resistance testing equipment rated at 500 volts D.C. and witnessed by the Engineer. Results of these tests shall be submitted to the Department in written form, bearing the Engineers signature and shall become part of the project records. A final inspection of the traffic signal installation shall not be held until results of this insulation test have been received.
- k) All equipment such as new controllers and allied central equipment with the exception of cable, conduit, and other materials which require the use of the State of Illinois Materials Testing Laboratories, shall be built in the suppliers shop and inspected by a representative of this Department prior to the installation of such equipment, and upon approval of this equipment an inspection ticket will be issued to the Contractor by the inspection agency (State of Illinois Material Testing Laboratory or the Cook County Highway Mechanical-Electrical Section). The controller and allied control equipment shall be prepared in the suppliers shop and run under a load of a minimum of 500 watts per phase for at least 48 hours before it is inspected for proper operation and sequencing. After it passes this test an inspection ticket will be issued by the Cook County Highway Mechanical-Electrical Section representative and it can then be delivered to the job site for installation.
- l) Upon completion of the installation, a final inspection will be carried out by qualified representatives of the Highway Agencies involved.
- m) If the Contractor fails to comply with any of the requirements, the County shall impose such sanction as it may determine to be appropriate including but not limited to withholding all payments to the Contractor on this contract until the provisions of this special provision are complete with and/or implementation of article 108.10 of the standard specifications.

At the final inspection it will be required that the Contractor will have submitted to the Engineer all necessary inspection tickets for all new equipment and materials installed under this Contract. If the Contractor has not obtained the inspection tickets on any portion of the new equipment and materials, the representative of this Department will have the authority to postpone the final inspection until the above has been satisfied. Any postponement of the final inspection for this reason shall not relieve the Contractor of his full maintenance responsibilities until such time as the installation is re-inspected and accepted by the County.

The County 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.

The County requires the following from the Contractor at traffic signal turn-on.

- 1) The Contractor shall, at the turn-on furnish one hard copy set of signal plans (24"x36") of record with field revisions marked in red ink to the maintaining agency.
- 2) 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.

- 3) A knowledgeable representative of the controller equipment supplier shall be required at the permanent and temporary traffic signal turn-on. The representative shall be knowledgeable of both cabinet design and controller functions and shall have sufficient test and spare equipment to make the traffic signal installation operational.
- 4) 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.
- 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) All Manufacturer and Contractor warranties and guaranties required by Article 801.14.
- 10) GPS coordinate of traffic signal equipment as describe in the Record Drawings section herein.

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:

- a. When the work is complete, and seven days before the request for a final inspection, the full-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.
- b. 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.”

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:

1. File shall be named: TSXXX-YY-MM-DD (i.e. TS22157_15-01-01)
2. Each intersection shall have its own file
3. Row 1 should have the location name (i.e. 103rd Street at Central Avenue)
4. Row 2 is blank
5. Row 3 is the headers for the columns
6. Row 4 starts the data
7. Column A (Date) – should be in the following format: MM/DD/YYYY
8. Column B (Item) – as shown in the table below
9. Column C (Description) – as shown in the table below
10. Column D and E (GPS Data) – should be in decimal form, per the County 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

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 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

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."

Location of Underground State and County Maintained Facilities.

Revise Article 803 to read as follows.

County 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 and CCHD facilities prior to performing any work. If this contract does not require the services of electrical contractor, the Contractor may request one free locate for existing IDOT and CCHD electrical facilities from the Electrical Maintenance Contractor(s) 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 D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

Restoration. All areas and plant material damaged by the installation of Traffic Signal posts, mast arm poles, underground cables or conduits, handholes and control cabinets shall be replaced as follows:

- Grass Areas: Replace top soil to a depth of four (4) inches (100 mm), re-grade shoulders, ditch slopes, and open areas back to former existing grades, fertilize, seed and mulch all damaged areas.

- Sod Areas (areas adjacent to residential, commercial and industrial properties and any other areas as directed by the engineer): Fertilize and re-sod damaged areas.
- Plant Materials: Remove and replace damaged trees, shrubs and vines with the same varieties that existed prior to damage.
- Shoulders other than Stabilized and Backslopes, medians, sidewalks, pavement, etc.: Replace shoulder to original condition and restore edge of backslope to original lines and grades. Medians, sidewalks and pavement shall be replaced in kind.
- All brick pavers disturbed in the work area shall be restored to their original configuration or as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer

All damaged landscape shall be replaced in accordance with Section 250 through 254 of the Standard Specifications.

Any damage, due to the installation of traffic signal equipment; or necessary removal at handholes, jacking pits, and inspection openings, of sidewalks, curbs, gutters, median and island paving, and/or pavement, shall be repaired or replaced by the Contractor. Repair or replacement shall be made with a like material of like thickness to the existing surface. Restoration of traffic signal work area shall be included in related pay items such as foundation, conduit, handhole, trench and backfill, etc.

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.

**SPECIAL PROVISION
FOR
LIGHT EMITTING DIODE (LED) PEDESTRIAN COUNTDOWN SIGNAL HEAD**

The installation of an Pedestrian Countdown Signal Head, Light Emitting Diode shall meet the requirements of Section 881 and 1078.02 of the Standard Specifications, except as follows:

Description.

This work shall consist of furnishing and installing a pedestrian countdown signal head, with light emitting diodes (LED) of the type specified in the plans.

Pedestrian Countdown Signal Head, Light Emitting Diode, shall conform fully to the SIGNAL HEAD, LIGHT EMITTING DIODE specification, with the following modifications:

Application.

1. Pedestrian Countdown Signal Heads shall not be used at signalized intersections where traffic signals and railroad warning devices are interconnected.
2. All pedestrian signals at an intersection shall be the same type and have the same display. No mixing of countdown and other types of pedestrian traffic signals will be permitted.

Installation.

1. Pedestrian Countdown Signal Heads shall be 16 inch (406mm) x 18 inch (457mm), for single units with the housings glossy black polycarbonate. All pedestrian head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on.
2. Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

Material.

1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.

2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.
3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.
4. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.
5. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.
6. The next cycle, following the preemption event, shall use the correct, initially programmed values.
7. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.
8. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.
9. The countdown numerals shall be two (2) "7 segment" digits forming the time display utilizing two rows of LEDs.
10. The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, "Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules," or applicable successor ITE specifications, except as modified herein.
11. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
12. In the event of a power outage, light output from the LED modules shall cease instantaneously.
13. The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.
14. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

Electrical.

1. Maximum power consumption for LED modules is 20 watts.
2. The measured chromaticity shall remain unchanged over the input line voltage range listed of 80 VAC to 135 VAC.

Basis of Payment. This item shall be paid for at the contract unit price EACH for PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER, which shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition. The type specified will indicate the number of faces and the method of mounting.

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

**SPECIAL PROVISION
FOR
TRAFFIC SIGNAL POST AND PEDESTRIAN PUSHBUTTON POST**

The furnishing and installation of this item shall meet the requirements of Sections 106.01, 875, 876, 1077.01 and 1077.02 of the Standard Specifications, except as follows:

All posts (steel), bases (cast iron), and related mounting hardware shall be hot-dipped galvanized in accordance with AASHTO M 111. A magnetic field tester may be utilized at any time to determine the thickness of galvanization. Average galvanization thickness shall be 2.0 oz. per square foot and minimum thickness shall be 1.8 oz. per square foot. The Contractor shall use a fabric post tightener to attach the post to the base. If the galvanization on the post is removed using a chain post tightener exposing bare metal, the post shall be rejected and replaced with a new post.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

If the fabricator elects to cut and thread the post after the galvanization process, the bare metal shall immediately be cleaned to remove all cutting solvents and oils, then sprayed with two (2) coats of galvanized compound. If the Department approves painting, powder coating by the manufacturer will be required over the galvanizing.

At intersections where all the posts are not being replaced, the traffic signal base shall match existing condition (octagonal or square). Square base shall be used when all new posts and bases are installed at an intersection.

When octagonal bases are used, the bases shall be cast iron, approximately 15 inches (375 mm) high and 16 inches (400 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced in a 12-1/2" (312 mm) diameter circle.

Bases shall be cast iron and square in shape, approximately 15 inches (375 mm) high and 14 inches (350 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced between 12" (300mm) and 14" (350mm) diameter circle.

Welded extensions onto the post shall not be permitted.

Posts are to be erected plumb and no shims are allowed between the bottom of the base and the foundation.

When a new post is installed on an existing foundation, the foundation shall be plumbed before the post is installed. It shall not be paid for separately but shall be included in cost for Traffic Signal Post or Pedestrian Push-Button Post.

Basis of Payment. This work will be paid for at the contract unit price EACH for TRAFFIC SIGNAL POST, GALVANIZED STEEL, of the length specified or PEDESTRIAN PUSH-BUTTON POST, TYPE A, which price shall be payment in full for furnishing and installing the traffic signal post, base, foundation for pedestrian post, nuts and washers, and pipe cap complete. If the Department approves painting, powder coating by the

manufacturer will be required over the galvanization in accordance with TRAFFIC SIGNAL PAINTING Special Provisions.

**SPECIAL PROVISION
FOR
DETECTOR LOOP**

This work shall consist of furnishing and installing detector loop in accordance with the requirements of Section 886 and 1079 of the Standard Specifications, except as follows:

Description.

This work shall consist of furnishing and installing a detector loop in the pavement.

Procedure.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the CCHD Design Engineer at (312) 603-1730 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.

Failure to provide proper notification may require the Department's Electrical Maintenance Contractor to be called to investigate complaints of inadequate traffic signal timing. All costs associated with these expenses will be paid for by the Contractor at no additional expense to the Department according to Section 109 of the "Standard Specifications."

Installation.

Each loop lead-in shall be placed in a separate conduit from edge of pavement to handhole. Loop detectors shall be installed according to the requirements of the "District 1 Standard Traffic Signal Design Details". Saw-cuts (homerun 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 plans. Spacing between the lead-ins (holes drilled in the pavement) shall not be less than one (1) foot (300 mm) and shall be located one (1) foot (300 mm) from the edge of pavement. Loop lead-in wires should be twisted to provide a minimum of five (5) turns per foot (fifteen [15] turns per meter) from the loop to the splice.

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

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. The lead-in wire, including all necessary connections for proper operation, from the edge of pavement to the handhole shall be included in the price of the detector loop.

The detector loop cable insulation shall be labeled with the cable specifications.

Resistance to ground shall be a minimum of 100 megohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be greater than 5.

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 or the curb shall be cut with a 1/4" (6.3 mm) x 4" (100 mm) long sawcut to mark the location of each loop lead-in.
- Loop sealant shall be a two-component thixotropic chemically cured polyurethane from an approved vendor. The sealant shall be installed 1/8" (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.
- The corners of all loops shall be core drilled with a two (2) inch (50 mm) bit. All joints and cracks in the pavement that the loop crosses must be core drilled.

Preformed:

This work shall consist of furnishing and installing a rubberized heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:

- 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.
- Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coilable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.
- Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16" (17.2 mm) outside diameter (minimum), 3/8" (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 similar 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 or interconnects 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. Six foot (1.8 m) round loop(s) may be substituted for six foot (1.8 m) by six foot (1.8 m) square loop(s) and shall be paid for as 24 feet (7.2 m) of detector loop.

Method of Measurement.

This work will be measured for payment in feet (meters) in place. Type I detector loop will be measured along the sawed slot in the pavement containing the loop and lead-in, rather than the actual length of the wire. Preformed detector loops will be measured along the detector loop and lead-in embedded in the pavement, rather than the actual length of the wire. Detector loop measurements shall include the sawcut and the length of the loop lead-in leading to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be incidental to include in the price of the detector loop. Unit duct, trench and backfill, cable splicing and drilling of pavement or handholes shall be incidental to detector loop quantities included in this item.

Basis of Payment. This work will be paid for at the contract unit price per FOOT (METER) of DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP, as specified in the plans, which price shall be payment in full and for furnishing, installing and testing the Detector Loop and all related connections for proper operation.

**SPECIAL PROVISION
FOR
PEDESTRIAN PUSH-BUTTON**

The installation of a Pedestrian Pushbutton shall meet Section 888 and 1074.02 of the Specifications except as revised with this Special Provision.

This item shall consist of furnishing and installing a latching (single call) or non-latching (dual call) push-button assembly which shall be ADA compliant, highly vandal resistant, be pressure activated with minimal movement and can not be stuck in a closed or constant call position. A mounting bracket and/or extension shall be used to assure proper orientation when two pedestrian push buttons are required for one post. The price of the bracket and/or extension shall be included in the cost of the pedestrian push button. The contractor is not allowed to install a push-button assembly with the sign below the push-button in order to meet mounting requirements.

The pedestrian push-button housing shall be constructed of aluminum alloy according to ASTM B 308 6061-T6 and powder coated yellow, unless otherwise noted on the plans. The housing shall be furnished with suitable mounting hardware.

Stations shall be designed to be mounted directly to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch (75mm) round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9 x 15 inch sign with arrow(s) for a count-down pedestrian signal. The pedestrian station size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9 x 12 inch sign with arrow(s).

Stations shall be designed to be mounted to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch (75mm) round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9" x 15" sign with arrow(s) for a count-down pedestrian signal. The pedestrian station size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9" x 12" sign with arrow(s). Pedestrian signs shall be retroreflective.

Pedestrian push buttons and stations shall be mounted to mast arm poles, posts or wood poles as shown on the plans and shall be fully ADA accessible from a paved or concrete surface. See the District's Detail sheets for orientation and mounting details.

Pedestrian pushbutton extension may be needed for the accessibility and correct alignment of pedestrian pushbutton. The extension shall be included in cost of the pay item "Pedestrian Push-Button".

Basis of Payment. This work shall be paid for at the contract unit price EACH for PEDESTRIAN PUSH-BUTTON, which price shall be payment in full for furnishing and installing the pushbutton assembly complete.

**SPECIAL PROVISION
FOR
CONDUIT**

The installation of a conduit shall meet the requirements of Sections 810, 811 of the Standard Specifications, except as revised with this Special Provision.

Pavement, driveways, and curbs shall not be removed to install electrical conduits.

All conduit installed underground shall have a minimum depth of two feet six inches (2'-6" [760 mm]) except under railroad tracks where the conduit shall be a minimum of five feet (5' [1.52 m]) as measured to the outside diameter of the conduit on the top side.

"All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans." 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. All conduit splices shall be solid threaded couplings. Conduit terminating in junction and pull boxes shall be terminated with hubs, integral box hubs, or integral box bosses.

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

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

All conduit attached to a structure shall have a minimum of one (1) expansion joint placed within the length of the attached conduit. At each end of the structure the Contractor shall install a weatherproof galvanized cast iron box with a minimum size of 8" (200 mm) x 8" (200 mm) x 6" (150 mm) deep. The installation of these two (2) boxes and any required expansion joints shall be considered incidental to the unit price for conduit attached to structure.

Basis of Payment. This work will be paid for at the contract unit price per FOOT (METER) for UNDERGROUND CONDUIT or CONDUIT ATTACHED TO STRUCTURE, of the type and size specified, which price shall be payment in full for furnishing and installing the conduit and fittings complete. Trench and Backfill will not be paid for separately.

**SPECIAL PROVISION
FOR
COILABLE NON-METALLIC CONDUIT**

This work shall consist of furnishing and installing empty Coilable Non-Metallic Conduit (CNC) in trench of the type and size specified. The installation of CNC shall meet all applicable requirements of the Standard Specifications of Section 810, 811 and 1088.01 (c). Polyethylene duct shall be used for all detector loop raceways to handholes. All duct shall be placed a minimum depth of 30 inches (750 mm) or as shown on the contract plans or standard details.

The conduit shall be a polyethylene duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The conduit and its manufacture shall conform to the standards of NEMA Publication TC7, ASTM Standard Specifications D3485 and NEC Article 353.

On temporary traffic signal installations with detector loops, CNC shall be used for detector loop raceways from the saw-cut to 10 feet (3 m) up the wood pole, unless otherwise shown on the plans.

As specified in NEMA TC7, the conduit shall be clearly and durably marked at least every 10 feet (3 meters) with the material designation (HDPE for high density polyethylene), nominal size of the conduit and the name and/or trademark of the manufacturer.

Basis of Payment. All installations of CNC for loop detection shall be included in pay item of DETECTOR LOOP, as specified and not paid for separately.

**SPECIAL PROVISION
FOR
ELECTRIC CABLE**

The installation of an electric cable shall meet the requirements of Section 873, 1088.01 and 1076.04 of the Standard Specifications and District One Standard Traffic Signal Design Details with the addition as the following:

The jacket for electric cable in this contract shall be of the polyvinyl chloride type meeting the requirements of IMSA 19-1. (Traffic signal cable shall be solid copper No. 14 unless otherwise specified in the plans or these Special Provisions). No other type of jacket will be allowed, except as follows:

The service cable may have a XLP jacket. Service cable may be single or multiple conductor cable.

Communications and lead-in cable shall have a gray or chrome jacket.

Electric cable sized No. 12 AWG and smaller shall be solid.

The length of cable slack shall be in accordance with District One Standard Traffic Signal Design Details.

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or to the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

Heat shrink splices shall be used according to "District 1 Standard Traffic Signal Design Details".

Basis of Payment. This work will be paid for at the contract unit price per FOOT (METER) for ELECTRIC CABLE of the type, size and number of conductors as specified., which price shall be payment in full for furnishing the material and making all electrical connections and installing the cable complete, measured as specified.

**SPECIAL PROVISION
FOR
GROUNDING OF TRAFFIC SIGNAL SYSTEMS AND GROUNDING CABLE**

All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the National Electrical Code and meet the requirements of Section 806 of the Standard Specifications. See IDOT District 1 traffic signal detail plan sheets for additional information.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable foundation or service installation pay item and will not be paid for separately. All steel ground rods shall be copper clad, a minimum of 10' (3.0 m), and 3/4" (20mm) in diameter.

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

- a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment grounding conductor shall be green color coded. The following is in addition to Section 801.04 of the Standard Specifications.
 - 1) Equipment grounding conductors shall be XLP insulated 600V No.6 gauge copper, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 - 2) Equipment grounding conductors shall be bonded, using a UL Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations including spare or empty conduits. Bonding to existing handhole frames and covers shall be paid for separately.
 - 3) All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.
 - 4) Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full heat shrink shall be provided over individual conductor heat shrinks.
- c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, UL listed clamps.

Grounding Cable:

The cable shall meet the requirements of Article 817.02(b) of the "Standard Specifications". Unless otherwise noted on the plans, Traffic Signal Grounding Conductor shall be one conductor, #6 gauge copper, with a green color coded XLP jacket.

Basis of Payment. This work will be paid for at the contract unit price per FOOT (METER) for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR NO. 6, 1C, which price shall be payment in full for furnishing labor and material including grounding clamps, cable, splicing, exothermic welds, grounding connectors conduit grounding bushings, and hardware. All ground rods shall be incidental to the cost of associated items for Concrete Foundations and Service Installation.

**SPECIAL PROVISION
FOR
REBUILD EXISTING HANDHOLE
REBUILD EXISTING HEAVY DUTY HANDHOLE
REBUILD EXISTING DOUBLE HANDHOLE**

This item shall consist of rebuilding a handhole, heavy duty handhole and/or double handhole at location(s) as shown on the plans or as directed by the Engineer. The work shall consist of removing the frame and cover and the walls of the handhole to a depth of fifteen (15) inches (380 mm) below finished grade.

Upon completion of the above work, for handhole and heavy duty handhole four (4) holes, for the double handhole six (6) holes, four (4) inches (100 mm) in depth and one half (1/2) inch (15 mm) in diameter, shall be drilled into the remaining concrete, for handhole and heavy duty handhole one (1) hole centered on each wall and for the double handhole one (1) hole centered on each side wall and two (2) holes evenly spaced on the front and back walls. Number 3 steel dowels eight (8) inches (200 mm) in length shall be furnished and installed in the drilled holes with masonry epoxy.

All concrete debris shall be removed from the right-of-way to a location approved by the Engineer.

The area adjacent to each wall of the handhole shall be excavated to allow forming. All steel hooks (galvanized), frame and cover and concrete shall be provided to construct a rebuilt handhole, heavy duty handhole or double handhole according to applicable portions of Section 814 of the Standard Specifications. If the Contractor damages the existing frame and cover, the Contractor shall be responsible for replacing the frame and cover at no cost to the County.

Any pavement or asphalt surface removal required to install the new concrete shall have straight and neat edges using a method approved by the Engineer. Care shall be taken to protect the existing traffic signal cable. Any cable damage shall be reported immediately and repaired as directed by the Area Traffic Signal Engineer.

Rebuild Existing Handhole to Heavy-Duty Handhole;

All steel hooks, handhole frame, cover, and concrete shall be provided to construct a rebuilt heavy duty handhole according IDOT Standard.

Basis of Payment. This work will be paid for at the contract unit price EACH for REBUILD EXISTING HANDHOLE, REBUILD EXISTING HEAVY DUTY HANDHOLE, REBUILD EXISTING DOUBLE HANDHOLE, REBUILD EXISTING HANDHOLE TO HEAVY DUTY HANDHOLE which price shall be payment in full for all labor, all materials, and equipment necessary to complete the work described above and as indicated in the Plans.

**SPECIAL PROVISION
FOR
CONCRETE FOUNDATION**

The installation of a concrete foundation shall meet the requirements of Section 106.01, 878 and 1006.09 of the Standard Specifications, the Standard Drawing for Concrete Foundations and District One Standard Traffic Signal Design Details with the addition as the following:

All anchor bolts shall be according to Section 1006.09, except all anchor bolts shall be hot dipped galvanized a minimum of 12 in. (300 mm) from the threaded end.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

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 approval as to the depth of the foundation.

Basis of Payment: This work will be paid for at the contract unit price per FOOT (METER) of depth for

- CONCRETE FOUNDATION, TYPE A
- CONCRETE FOUNDATION, TYPE C
- CONCRETE FOUNDATION, TYPE D
- CONCRETE FOUNDATION, TYPE E - 30" (750 mm) Dia.
- CONCRETE FOUNDATION, TYPE E - 36" (900 mm) Dia.
- CONCRETE FOUNDATION, TYPE E - 42" (900 mm) Dia.

which price shall be payment in full for all necessary excavating or drilling, back filling, disposal of unsuitable material, form work, ground rods and furnishing all materials within the limits of the foundation.

**SPECIAL PROVISION
FOR
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT**

The removal of existing traffic signal equipment shall meet the requirements of Section 895.05 of the Standard Specifications, except as follows:

This work shall consist of removing the existing traffic signal equipment at an intersection as listed and as shown on the plans.

All equipment to be returned to an Agency shall be delivered by the Contractor to the Agency's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the Agency's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the Agency, including model and serial numbers, where applicable. A list of equipment shall be signed by the Agency's Electrical Maintenance Contractor and mail to the County Engineer. The Contractor shall also provide a copy of the contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the Agency's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until the acceptance of a receipt drawn by the Agency's Electrical Maintenance Contractor indicating the items have been returned in good condition.

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

All equipment is to be disassembled so as to make for easy loading and storage into Agency stock as per the Engineers instructions.

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

Basis of Payment. This work will be paid for at the contract unit price EACH for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT per intersection which price shall be payment in full for removing the equipment, and storing and/or disposing of it as required. The salvage value of the equipment retained by the Contractor shall be reflected in this contract unit price.

**SPECIAL PROVISION
FOR
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION**

This item shall consist of maintaining the existing traffic signal installation at an intersection as shown on the plans and as described herein. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the contract or any portion thereof. If Contract work is started prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The energy charges for the operation of the traffic signal installation shall be paid for by others. The maintenance of an existing traffic signal installation shall meet the requirements of Section 801.11 and 850 of the Standard Specifications except as follows:

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries), telephone service installations, communications cables, flashing beacons, PTZ cameras, vehicle detection, handholes, lighted signs and conduit to adjacent intersections, and other traffic signal equipment, but shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment, not owned by the State and County. This equipment is operated and maintained by the local municipality and should be de-activated while on contractor maintenance.

Regional transit, County, State 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, radios and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

Seven days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the Cook County Design Engineer at (312) 603-1730 for an inspection of the installation(s). The Design Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the State, the County, or the Municipalities Electrical Maintenance Contractor prior to the Contractor taking over the maintenance of the installation(s). The Resident Engineer, the Design Engineer, and the State, County, or Municipality Maintenance Contractor and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this contract.

Maintenance Procedures The Contractor shall perform the following maintenance procedures for each existing installation designated to remain in operation during construction:

- Have on staff electricians with IMSA Level II certification to provide signal maintenance. A copy of the certification shall be immediately available upon request of the Engineer.
- Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, light detectors, lamp failures, and general operation of the traffic signal.
- Check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as

routine maintenance, all portions of emergency vehicle pre-emption equipment. Prior to the traffic signal maintenance transfer, the contractor shall supply a detailed maintenance schedule that includes dates, locations, names of electricians providing the required checks and inspections along with any other information requested by the Engineer.

- Provide immediate corrective action to replace burned out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
- Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.
- Provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. A near right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all his vehicles assigned to the maintenance of traffic signal installations with a sufficient number of Stop Signs as specified herein. The Contractor shall maintain sufficient number of spare Stop Signs in stock at all times to replace Stop Signs which may be damaged or stolen.
- Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
- The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period that the original control equipment is being overhauled
- Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each day of the year for emergency calls by the Engineer.
- Respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's or the County's Electrical Maintenance Contractor perform the maintenance work required. The State's or County's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall be responsible for all of the Electrical Maintenance Contractor's cost and liquidated damages of \$1000 per day per occurrence. The contractor

shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

- Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.
- 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.
- Equipment included in this item that is 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 outside the controller cabinet shall not be allowed.
- 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.
- The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display.
- 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 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.
- 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.

Basis of Payment. This work will be paid for at the contract unit price EACH for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, which price shall be payment in full for all materials, equipment, and labor necessary to maintain the existing traffic signals. Each intersection shall be paid for separately. Maintenance of a standalone and or not connected flashing beacon shall be paid for at the contract unit price EACH for MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION. Each flashing beacon will be paid for separately. Following the completion of the traffic signal maintenance transfer to the Contractor, 30 percent of the bid price will be paid. Following the traffic signal maintenance transfer to County, state and/or local agency, 30 percent of the bid price will be paid. The remaining 40 percent will be paid when all items on the punch list are done to the satisfaction of the engineer.

**SPECIAL PROVISION
FOR
ILLUMINATED STREET NAME SIGN**

Description.

This work shall consist of furnishing and installing a LED internally illuminated street name sign.

Installation

The sign can be mounted on most steel mast arm poles. Mounting on aluminum mast arm pole requires supporting structural calculations. Some older or special designed steel mast arm poles may require structural evaluation to assure that construction of the mast arm pole is adequate for the proposed additional loading. Structural calculations and other supporting documentation as determined by the Engineer shall be provided by the contractor for review by the Department.

The sign shall be located on a steel traffic signal mast arm no further than 8-feet from the center of the pole to the center of the sign at a height of between 16 to 18-feet above traveled pavement.

Signs shall be installed such that they are not energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptible power supply (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

The sign shall be located on a steel traffic signal mast arm no further than 8-feet from the center of the pole to the center of the sign at a height of between 16 to 18-feet above traveled pavement. Mounting hardware shall be from an approved vendor, utilizing stainless steel components.

Materials

The illuminate street name sign shall be as follows.

(a) Description.

The LEDs shall be white in color. The two face LED internally illuminated street name sign shall display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized. White translucent Type ZZ reflective sheeting sign faces with the street name applied in transparent green shall be installed on the street sign acrylic panels which shall be affixed to the interior of the sign enclosure. Sheeting material shall be of one continuous piece. Paneling shall not be allowed. Hinged door(s) shall be provided for easy access to perform general cleaning and maintenance operations. Illumination shall occur with LED Light Engine as specified.

(b) Environmental Requirements.

The LED lamp shall be rated for use in the ambient operating temperature range of -40 to +50°C (-40 to +122°F) for storage in the ambient temperature range of -40 to +75°C (-40 to +167°F).

(c) General Construction.

1. The LED Light Engine shall be a single, self-contained device, for installation in an existing street sign housing. The power supply must be designed to fit and mounted on the inside wall at one end of the street sign housing. The LED Light Engine shall be mounted within the inner top portion of the housing and no components of the light source shall sit between the sign faces.

2. The assembly and manufacturing processes of the LED Light Engine shall be designed to ensure that all LED and electronic components are adequately supported to withstand mechanical shocks and vibrations in compliance with the specifications of the ANSI, C136.31-2001 standards.

(d) Mechanical Construction.

1. The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum top with a minimum thickness of .140". The extruded aluminum bottom is .094" thick. The ends of the housing shall be cast aluminum with a minimum thickness of .250". The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum with the maximum sign dimensions of 22" in height, 96" in length, 10.75" in depth (including the drip edge) and shall not weight more than 110 pounds. All housing corners are continuous TIG (Tungsten Inert Gas) welded to provide a weatherproof seal.
2. The door shall be constructed of extruded aluminum. Two corners are continuous TIG welded with the other two screwed together to make one side of the door removable for installation of the sign face. The door is fastened to the housing on the bottom by a full length, stainless steel hinge. The door shall be held secure onto a 1" wide by 5/32" thick neoprene gasket by appropriate numbers of quarter-turn fasteners to form a watertight seal between the door and the housing. The sign shall also be fabricated in a way to ensure that no components fall out while a technician is opening or working inside the sign enclosure.
3. The sign face shall be constructed of .125" white translucent polycarbonate or acrylic. Sign legend shall be according to D1 Mast Arm Mounted Street Name Sign detail and MUTCD. The sign face legend background shall consist of translucent Type ZZ white reflective sheeting and transparent green film applied to the front of the sign face. The legend shall be framed by a white border. A logo symbol and/or name of the community may be included with approval of the Engineer. A logo symbol and/or name of the community may be included with approval of the Engineer.
4. All fasteners and hardware shall be corrosion resistant stainless steel. No special tools are required for routine maintenance.
5. All wiring shall be secured by insulated wire compression nuts or barrier type terminal blocks.
6. A wire entrance junction box shall be supplied with the sign assembly. The box may be supplied mounted to the exterior or interior of the sign and provide a weather tight seal.
7. A photoelectric switch shall be mounted in the control cabinet to control lighting functions for day and night display. Each sign shall be individually fused.
8. Brackets and Mounting: LED internally-illuminated street name signs will be factory drilled to accommodate mast arm two-point support assembly mounting brackets. A 72" stainless safety cable is to be included with each mounting bracket.
9. Refer to the illuminated street name sign mounting detail standard for wiring methods and material.
10. The illuminated street name sign controls shall consist of a photocell, breakers, contactor, terminal blocks, fuses, fuse holder and mounting panel.

(e) Electrical.

1. Photocell shall be rated 105-305V, turn on at 1.5 fcs. with a 3-5 second delay. A manufacturer's warranty of six (6) years shall be provided. Power consumption shall be no greater than 1 watt at 120V.
2. The LED Light Engine shall operate from a 60 +- 3 cycle AC line power over a voltage range of 80 to 135 Vac rms. Fluctuations in line voltage over the range of 80 to 135 Vac shall not affect luminous intensity by more than +- 10%.
3. Total harmonic distortion induced into the AC power line by the LED Light Engine, operated at a nominal operating voltage, and at a temperature of +25°C (+77°F), shall not exceed 20%.
4. The LED Light Engine shall be cycled ON and OFF with a photocell as shown on the detail sheet and shall not exceed 145 watts.

The signs shall not be energized when traffic signals are powered by an alternate energy source such as a generator or Uninterruptable Power Supply (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

(f) Photometric Requirements.

1. The entire surface of the sign panel shall be evenly illuminated. The average maintained luminous intensity measured across the letters, operating under the conditions defined in Environmental Requirements and Wattage Sections shall be of a minimum value of 100 cd/m².
2. The manufacturer shall make available independent laboratory test results to verify compliance to Voltage Range and Luminous Intensity Distribution Sections.
3. LED shall have a color temperature of 5200k nominal, CRI of 80 with a life expectancy of 75,000 hrs.

(g) Quality Assurance.

The LED Light Engine shall be manufactured in accordance with a vendor quality assurance (QA) program. The production QA shall include statistically controlled routine tests to ensure minimum performance levels of the LED Light Engine build to meet this specification. QA process and test result documentations shall be kept on file for a minimum period of seven (7) years. The LED Light Engine that does not satisfy the production QA testing performance requirements shall not be labeled, advertised, or sold as conforming to these specifications. Each LED Light Engine shall be identified by a manufacturer's serial number for warranty purposes. LED Light Engines shall be replaced or repaired if they fail to function as intended due to workmanship or material defects within the first sixty (60) months from the date of acceptance. LED Light Engines that exhibit luminous intensities less than the minimum value specified in Photometric Section within the first thirty-six (36) months from the date of acceptance shall be replaced or repaired.

Basis of Payment

This work will be paid for at the contract unit price EACH for LED INTERNALLY ILLUMINATED STREET NAME SIGN, which shall be payment in full for furnishing and installing the LED internally illuminated street

sign, complete with circuitry and mounting hardware including photo cell, circuit breaker, fusing, relay, connections and cabling as shown on the plans for proper operation and installation.

**SPECIAL PROVISION
FOR
CABLE, SPECIAL**

Description. This work shall consist of furnishing and installing electrical cable, street name sign, no. 14 3C, type SOOW for internally illuminated street name signs installed at existing and/or proposed traffic signal installations. The work includes installation of the electrical cables in existing conduit and/or new conduit. The electric cable shall have three (3) stranded conductors colored black, white, and green with synthetic rubber insulation (EPDM) that is oil and water resistant. The cable shall meet the requirements of the manufacturer of the internally illuminated street name sign.

Basis of Payment. The Illuminated street name sign cable will be paid for at the contract unit price per Foot for CABLE, SPECIAL, which price shall be payment in full for furnishing and installing the cable and making all electrical connections. The length of measurement shall be the distance horizontally measured between changes in direction, including cable in mast arms and slack cables. All vertical cables will not be measured for payment. Slack cables will be paid for as lead-in cables in conduit.

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)

Effective: August 1, 2012

Revised: February 1, 2014

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

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under 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 TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this 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 \$15.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 1. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs 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 Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

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

SPECIAL PROVISION
FOR
INSURANCE

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

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

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

Village of Elk Grove Village

Cook County

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

PERMIT NUMBER	18-07-8186-C	ISSUE DATE	
BOND NUMBER		EXPIRATION DATE	

This Permit will not be issued until receipt of all applicable fees is confirmed by the Department of Revenue.

This permit includes and is subject to the “General Conditions and CCDOTH Construction Notes for Permit Work” attached hereto and incorporated into this Permit.

9. Note (Additional Rules and Special Conditions as Follows):

1. The Owner(s) assumes all responsibility and acknowledges the County of Cook is free from any liability as a result of the permit work.
2. All proposed curb ramps shall be inspected after construction. IDOT form D1 PD0031 shall be filled out for each location. If there are any deficiencies the deficiencies shall be fixed and the form refilled out for the location until the curb ramp is compliant. A copy of the final form shall be submitted to the CCDOTH Permits office at hwy.permits@cookcountyl.gov for the permit file. CCDOTH Permits office will forward the completed forms to the Cook County ADA Coordinator for the Cook County ADA file.
3. New sidewalk or existing sidewalk to be removed and replaced walk shall be 8" thick within driveway limits.
4. Cook County Right-of-Way to be restored with 4" topsoil, fertilizer and sod.
5. The Village of Elk Grove Village hereby accepts full responsibility for the future maintenance, replacement, relocation and liability of the sidewalk construction mentioned herein.
6. The general contractor, before starting the job, will deposit with the Cook County Transportation and Highways Department, Permit Office, insurance as required on Form "A".
7. Upon awarding a contract for the above mentioned installations, the applicant must direct its contractor to appear in the Cook County Transportation and Highways Department Permit Office, 24th Floor County Building, 69 W. Washington Street, Chicago, to deposit a Performance and Right Of Way Restoration Bond in the amount of \$20,000.00, with said Permit Office prior to the start of work within the County Right Of Way.
8. The Traffic Signal Installation shall be installed by an Electrical Contractor approved by the Cook County Highway Department.
9. All traffic signal equipment shall be of the type and brand that is acceptable to the Cook County Highway Department. One (1) copy of all approved catalog cuts to be furnished to the County prior to installation.
10. Furnish the County MicroStation CAD files before the final inspection is scheduled.
11. The contractor shall inform the CCDOTH Design Engineer at (312) 603-1730 prior to the start of any work on the contract. A minimum of five (5) working days advanced notice is required.
12. Cable plan title sheet shall be “Landmeier Road and Lively Boulevard” on sheet no. 79.
13. The traffic signal plans and County special provisions for Devon Ave. and Landmeier Rd. are to be included in this permit as information for the Contractor.
14. Care is to be taken as not to damage any of the existing traffic signal conduits, fiber cables and equipment. If any of the traffic signal conduits, cables and/or equipment is damaged, the Contractor shall repair and/or replace the conduits, cables and/or equipment at no cost to the County.
15. The County is not part of JULIE for location of traffic signal equipment, contact the Mechanical, Electrical, Architectural and Landscaping Division at 312-603-1730.
16. For the location of underground county maintained facilities, see County Special Provision “Traffic Signal Work General”.

PERMIT NUMBER	18-07-8186-C	ISSUE DATE	
BOND NUMBER		EXPIRATION DATE	

17. If this contract requires the services of an electrical contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT and CCDOTH facilities prior to performing any work. If this contract does not require the services of electrical contractor, the Contractor may request one free locate for existing IDOT and CCDOTH electrical facilities from the Electrical Maintenance Contractor(s) 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.

PERMIT NUMBER	18-07-8186-C	ISSUE DATE	
BOND NUMBER		EXPIRATION DATE	

The work authorized by this Permit shall be completed by the expiration date as shown on page 1 or above; otherwise this Permit becomes null and void.

 Owner's Signature Date
(Village of Elk Grove Village)

 Owner's Name (printed) Owner's Title

Applicable Fee(s) Received. Application approved and Permit granted:

_____ Superintendent of Cook County Department of Transportation and Highways	_____ Approved Date
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A COPY OF THIS PERMIT MUST BE KEPT ON THE JOB SITE DURING CONSTRUCTION

This Permit is not effective unless and until the Cook County Superintendent of Transportation and Highways has signed this Permit. If, per the Cook County Transportation and Highways Department, municipal acceptance is required, then this Permit is not effective unless and until the municipality has signed this Permit.

COUNTY OF COOK

TRANSPORTATION AND HIGHWAYS DEPARTMENT

General Conditions and CCDOTH Construction Notes for Permit Work

General Conditions

1. Definition of "Owner": The "Owner" is the Name/s listed on the Cook County Transportation and Highways Department (CCDOTH) Permit as "Owner/s". The "Owner" is the "Grantee" listed in the Public Way Regulatory Ordinance (the "Ordinance"), Chapter 66.
2. Capitalized terms used in this Permit and not otherwise defined herein shall have the meanings ascribed to them in the Public Way Regulatory Ordinance (the "Ordinance"), Chapter 66, Article III, and Sections 50 et seq. of the Cook County Code. Requirements set forth in these General Conditions are in addition to and not in limitation of the requirements of the Ordinance.
3. The CCDOTH Permit is only applicable for the work shown on the final approved submitted plans on Cook County Right of Way (ROW). The permit does not release the Owner from fulfilling the requirements of any other laws or other required permitting relating to the permitted work. It is the responsibility of the Owner to acquire all approvals for work not on Cook County ROW. The Owner is responsible to acquire all approvals for any work on Cook County ROW that is connecting to infrastructure owned by another entity.
4. Fulfillment by Owner of all requirements set forth in the permit application and its instructions, including without limitation, permit fees, insurance and bonding are a condition of this Permit. Issuance of this Permit, without the fulfillment of all requirements by Owner shall not act as a waiver of Owner's obligation to comply with such requirements, unless approval in writing of such change is given by the Cook County Superintendent of Transportation and Highways.
5. The Permit can be revoked pursuant to the terms of the Ordinance or at the discretion of the Cook County Superintendent of Transportation and Highways.
6. At least two (2) days advance notice prior to the start of work shall be given to the CCDOTH Permit Office, (312) 603-1670 or email hwypermits@cookcountyil.gov.
7. No changes, alterations, or revisions to the Permitted Work are allowed unless approved in writing by the Cook County Superintendent of Transportation and Highways or his designee.
8. If Owner discovers during the progress of the Permitted Work that subterranean conditions prohibit the construction of said improvement in and along the alignment as outlined in the plans, it is expressly understood that all Permitted Work shall cease until a proposed revised alignment has been approved by the CCDOTH and the Permit has been modified.
9. The Owner shall furnish all material to do all work required, and pay all costs which may be incurred in connection with such work, and shall prosecute the same diligently and without delay to completion. See Ordinance for additional requirements as to work in the Public Way.
10. All construction methods and construction materials shall be in accordance with the latest version of the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction, IDOT Supplemental Specifications and Recurring Special Provisions, IDOT Standards, Cook County Special Provisions and Cook County Standards.
11. Upon completion of the Permitted Work, Owner shall in a timely manner, (but in no event more than 30 days unless another time frame is directed by the CCDOTH Permits Division) restore the Public Way substantially to the same condition in which it was before the Permitted Work started. The work includes but is not limited to removing all debris, rubbish, materials, apparatus, tools, and equipment, as well as all excess excavated materials, from the Public Way.

12. Should future construction and operation of the highways by Cook County require alteration or relocation of the Owner's Facilities, such change shall be made by the Owner, its successor or assigns upon the written request of the Cook County Superintendent of Transportation and Highways without expense to said County or State. Requirements for any such requested alteration or relocation are further detailed in the Ordinance.
13. The Owner, its successor and assigns, assume all risk and liability for accidents and damages that may accrue to persons and property, during the prosecution of the work or any time thereafter, by reason of the location, construction, installation, operation, maintenance, repair and work referred to herein, and the Owner, by acceptance of the Permit, agrees to indemnify and save harmless Cook County from any such claims for damages and from all costs and expenses incurred on account thereof and in connection therewith.
14. In accordance with the Ordinance, and agreement by the Owner, the Owner acknowledges and agrees that the Permit is null and void if the Owner is delinquent in the payment of any tax or fee administered by the Cook County.
15. Furnish the CCDOTH Permits Division one as-built PDF in 24"x36" format.
16. Notify CCDOTH Permits office in writing for final inspection. The letter can be email to hwy.permits@cookcountyil.gov

CCDOTH Construction Notes

Drainage

1. The drainage systems shall be kept clean and free of debris at all times.
2. The Owner shall be responsible for providing positive drainage.
3. CCDOTH reserves the right to make connections to the proposed storm sewer for the purpose of draining the highway.
4. As a condition of granting this permit, which includes the point discharge of storm water onto the Cook County Transportation and Highways Right Of Way, the Owner hereby grants permission to the Cook County Transportation and Highways Department to enter onto private property to inspect the detention control structure.

Erosion Control and Landscaping

5. The parkway shall be kept clean and free of debris at all times.
6. Any disturbed areas within Cook County ROW require erosion control blanket prior to final landscaping per current Illinois Environmental Protection Agency (IEPA) standards.
7. Cook County Right-of-Way to be restored with 4" topsoil, fertilizer and sod. This note supersedes any note in the plans.

Excavation and Backfill

8. The Owner shall manage the excavation, transport and disposal of all excavated materials (i.e. soil, debris, etc.) in accordance with local, state and federal regulations.
9. As a condition of this permit, the Owner shall request CCDOTH to identify sites in the Right-of-Way where a Highway Authority Agreement governs access to soil that exceeds the Tier 1 residential remediation objectives of 35 Ill. Adm. Code 742. The Owner shall take all measures necessary to protect human health (including worker safety) and the environment during and after any access to such soil.
10. That all excavation work within three (3) feet of the pavement edge will be done manually.

11. All trenches within Cook County ROW shall be trench backfilled with FA-6 sand in accordance with Method 1 in accordance with Article 550.07 of the (IDOT) Standard Specifications for Road and Bridge Construction.

Median, and Curb and Gutter (PCC)

12. In the removal of medians and curb and gutter the use of any type of concrete breaker that will damage the underground structures will not be permitted.
13. Saw cut the full depth of median, and curb and gutter at the limits of removal.

Pavement, All

14. In the removal of pavement, the use of any type of concrete breaker that will damage the underground structures will not be permitted.
15. The pavement shall be kept clean and free of debris at all times.
16. Unless specified in the Permit, no equipment other than pneumatic-tired equipment used during the installation shall be permitted to stop or operate on the pavement nor shall any excavated materials be stored temporarily or otherwise on the CCDOTH pavement.
17. Saw cut the full depth of pavement, median, sidewalk and curb and gutter at the limits of removal.
18. All pavement patch openings that are open to traffic shall be immediately surfaced with a temporary bituminous patch at least three inches in thickness. This patch then must be inspected daily and additional bituminous patch material must be placed, daily if necessary, to maintain the patched area at the same elevation as the adjacent undisturbed pavement for a period of not less than 30 days. After 30 days, permanent replacement in kind shall be made to the base course and pavement surface.

Pavement, Entrance (Driveways, Side Streets)

19. For entrance installations, the Owner shall remove earth to its full depth, starting at the edge of the pavement, for the full dimensions of the proposed entrance, and replace with materials to be used in the construction of the entrance.
20. The entrance radius meeting the edge of shoulder or the back of curb must terminate 3' from the property line extended to the edge of shoulder or the back of curb. If this criteria cannot be met, a letter from the neighboring property authorizing the encroachment must be submitted.
21. The CCDOTH reserves the right to restrict access to permitted entrances on future roadway improvements.
22. The Owner acknowledges that if or when the County of Cook improves the highway the pavement composition at the above mentioned entrance(s) may be substituted.

Pavement, Hot Mix Asphalt (HMA) pavement, patching, and resurfacing

23. HMA Full Depth Pavement thickness shall be 12-inch on a 12-inch thick sub base granular material consisting of 3 inch top lift of CA 06 and 9 inch bottom lift of Porous Granular Embankment (PGE). HMA Pavement shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 407. The PGE sub base shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 207 and 1004.05.
24. HMA Mill and Resurface Pavement thickness shall be per the approved permit plans. HMA Resurfacing shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 406.

25. HMA Patching shall match the existing pavement thickness. The patch length shall be a minimum of 6 feet. The patch width shall be either 6 feet (from edge to center of lane or, from center of lane to centerline) or 12 feet (full lane width). The pavement opening shall be saw-cut to the full depth of the pavement at the limits of removal and must extend 1 foot beyond each side of the trench excavation. HMA Pavement Patch shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 407.
26. The top lift for all above HMA pavements shall be Hot-Mix Asphalt Surface Course, Mix "D", N70 at a thickness of 2 inch.
27. Below the top lift for all above HMA types shall be Hot Mix Asphalt Binder Course, IL-19.0, N70 at a minimum thickness of 2-1/4 inch (Resurfacing if used) to 10 inch (Full Depth, Patching) and a max lift thickness is 4 inch.

Pavement, Portland Cement Concrete (PCC) pavement and pavement patching

28. Saw cut the full depth of pavement.
29. PCC Pavement thickness shall be 10 inch on a 12-inch thick sub base granular material consisting of 3 inch top lift of CA 06 and 9 inch bottom lift of Porous Granular Embankment (PGE). PCC Pavement shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 420. The PGE sub base shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 207 and 1004.05.
30. PCC Patching shall match the existing pavement thickness. The patch length shall be a minimum of 6 feet. The pavement opening shall be saw-cut to the full depth of the pavement at the limits of removal and must extend 1 foot beyond each side of the trench excavation. The patch shall extend the full width of the existing lane(s). PCC Patching shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 442 and IDOT standard 442101.
31. Pavement patches greater than or equal to 15SY shall use pavement fabric in accordance with IDOT standard 420701 and provide 3 ½ inches of clearance between the pavement surface and the top of the fabric.
32. Where the proposed pavement or median abuts the existing pavement, median or curb and gutter longitudinally, provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) deformed tie bars at 24 inch centers.
33. Where the proposed pavement or median abuts the existing PCC pavement or median transversally, provide a transverse joint in accordance with IDOT standard 442101, using 18" long #12 (1-1/2" Dia.) smooth epoxy dowel bars at 12 inch centers.
34. Provide transverse sawed contraction joints every 15 feet in accordance with IDOT standard 420001, using 18" long #12 (1-1/2" Dia.) smooth epoxy dowel bars at 12 inch centers and align proposed joints with existing joints. If a proposed joint is located less than 6 feet from an existing joint, then the existing pavement or median shall be removed and replaced up to the existing joint.
35. Construct curb and gutter in accordance with IDOT standard 606001. Provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) deformed tie bars at 24 inch centers.
36. Construct medians in accordance with IDOT standard 606301. Provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) deformed tie bars at 24 inch centers.

37. Where a median opening is provided, the pavement shall be crowned at the centerline using a one percent cross slope.

Sidewalk and Bus Shelters

38. In the removal of sidewalk the use of any type of concrete breaker that will damage the underground structures will not be permitted.
39. All proposed bus shelter and bus shelter pads must meet the current IDOT Bureau of Design and Environment (BDE) Manual and IDOT Bureau of Local Roads (BLR) Manual, Public Rights-of-Way Accessibility Guidelines (PROWAG) and Americans with Disabilities Act (ADA) requirements.
40. All proposed sidewalk (cross-walk) shall be ramped in compliance with the current IDOT BDE Manual, IDOT BLR Manual, PROWAG and ADA requirements.
41. All proposed curb ramps shall be inspected after construction. IDOT form D1 PD0031 shall be filled out for each location. If there are any deficiencies the deficiencies shall be fixed and the form refilled out for the location until the curb ramp is compliant. A copy of the final form shall be submitted to the CCDOTH Permits office at hwy.permits@cookcountyil.gov for the permit file. CCDOTH Permits office will forward the completed forms to the Cook County ADA Coordinator for the Cook County ADA file.
42. All proposed sidewalk shall be 8" thick within driveway limits.

Traffic Control

43. Owner shall provide and maintain at its own expense, such temporary roads and approaches, as may be necessary to provide access to driveways, houses, buildings or other property abutting the site of the Permitted Work. Access shall not be blocked.
44. No lane closures or traffic detours relating to Permitted Work will be allowed between the hours of 6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m., (other than as allowed for emergency maintenance per the Ordinance). All traffic control devices must conform to IDOT Highway Standards and the latest edition of the State of Illinois Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways. All lane closures shall be in accordance with IDOT Highway Standards.
45. The Owner shall conduct its operations in a manner so as to insure the minimum hindrance to traffic, using the pavement and at no time shall its operations obstruct more than one half (1/2) of the available pavement width.
46. When existing traffic control signs such as stop signs, stop ahead signs, and crossroad signs are removed in the progress of the Permitted Work, said signs shall be immediately reset as close as possible to their original location. After the completion of the Permitted Work has been approved, said traffic control signs shall be restored to their original position and condition or as directed by the CCDOTH Permit Engineer.
47. The use of flagmen and the number, type, color, size and placement of all traffic control devices shall conform to IDOT Highway Standards and the latest edition of the State of Illinois MUTCD for Streets and Highways.

Utilities, All

48. It shall be the responsibility of the Owner to co-ordinate with the all utility companies sharing the Cook County ROW and relocate the existing power poles, fire hydrants, guardrail and appurtenances as needed for the proposed permit work. There shall be no cost to the county.
49. As a requirement of this permit all utility owners (private and government) shall maintain a membership with J.U.L.I.E. locating service until the utility is completely removed from Cook County ROW.

Utilities, Aerial

50. All aerial lines crossings or parallel must have a minimum clearance of 18'3".
51. Pole owner permission is required for all cable, conduit and other appurtenance connection to a pole.
52. Proposed aerial cable shall not block the existing traffic signal heads.
53. Proposed aerial cable shall not touch existing traffic signal equipment.

Utilities Underground

54. All auger pits and excavations shall be a minimum of 10 feet from the edge of pavement or back of curb, and wood or steel sheeting shall be used. Auger pits left open overnight shall be protected with concrete barrier walls. The ends of the concrete barrier walls shall be protected with crash attenuators. The barrier wall and crash attenuators design shall meet IDOT BDE Manual and IDOT BLR Manual Design requirements.
55. All external casing voids shall be pressure grouted or filled with trench backfill using pumping or jetting outside of the casing. The inside of the casing shall be sealed or filled using the external void procedures.
56. That a minimum depth of 42 inches will be maintained from the ground surface to the top of the conduit, cable, or pipe and a minimum depth of 36 inches from the true flow line of the drainage ditch to the top of the conduit, cable or pipe.
57. Proposed underground utilities running parallel to existing water main or sanitary sewer shall adjust the alignment if the utility is within 5 feet of the outer wall of the water main or sanitary sewer. The proposed utility shall maintain a distance of 5 feet or greater while running parallel to the existing water main or sanitary sewer. The distance between parallel or crossing sanitary or storm sewer with water main shall meet IEPA requirements.



Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663 Revised in accordance with 35 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: Lively Boulevard Improvements Project Office Phone Number, if available: 847-734-8800

Physical Site Location (address, including number and street):
Lively Boulevard from Landmeier Road to 200 feet south of Devon Avenue

City: Elk Grove Village State: IL Zip Code: 60007

County: Cook Township: Elk Grove

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.00388 Longitude: -87.97029
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

ISGS Public Land Survey System. Lat/long above refer to the approximate center of the Project Area

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name	<u>Village of Elk Grove</u>	Name:	<u>Village of Elk Grove</u>
Street Address	<u>600 Landmeier Road</u>	Street Address:	<u>600 Landmeier Road</u>
PO Box:	_____	PO Box:	_____
City:	<u>Elk Grove Village</u> State: <u>IL</u>	City:	<u>Elk Grove Village</u> State: <u>IL</u>
Zip Code:	<u>60007</u> Phone: <u>847-734-8800</u>	Zip Code:	<u>60007</u> Phone: <u>847-734-8800</u>
Contact:	<u>Brian Lovering, P.E.</u>	Contact:	<u>Brian Lovering, P.E.</u>
Email, if available:	<u>BLovering@elkgrove.org</u>	Email, if available:	<u>BLovering@elkgrove.org</u>

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

Project Name: Lively Boulevard Improvements Project

Latitude: 42.00388 Longitude: -87.97029

Uncontaminated Site Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

A database review was completed in a 2018 H&H PESA for the Project Area, which consists of commercial properties. Twenty-five (25) potentially impacted properties (PIPs) were identified in connection with the Project Area through the database review, historical review, and site visit. Refer to the attachments for additional information.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

Twenty-four soil borings were advanced within the Project Area on Aug. 8th and 9th, 2018 and two borings were advanced Oct. 20, 2018. Soil samples were analyzed for one or more of the following: VOCs, BTEX, SVOCs, PNAs, total RCRA metals, pesticides/herbicides, and pH. The results achieved the CCDD requirements. Refer to the attachments for additional info.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Eric D. Stein, P.E. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Huff & Huff, Inc

Street Address: 915 Harger Rd Suite 330

City: Oak Brook State: IL Zip Code: 60523

Phone: (630) 684-9100

Eric D. Stein, P.E.

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature

11/9/18

Date



P.E. or L.P.G. Seal



To: Mr. David J. Kreeger, P.E. – Civiltech Engineering, Inc.

From: Jeremy J. Reynolds, P.G.- Huff & Huff, Inc. / GZA Inc.

Date: November 9, 2018

Re: CCDD LPC-663 Lively Boulevard Improvements Project

Huff & Huff, Inc. (H&H) provided services in support of a Form LPC-663 for the Lively Boulevard Improvements Project. Twenty-five (25) potentially impacted properties (PIPs) were determined to exist near the Project Area, which consists of Lively Boulevard from Landmeier Road to 200 feet south of Devon Avenue in Elk Grove Village, Cook County, Illinois. Therefore, the LPC-663 form was utilized, and on August 8th to 9th and October 20th, 2018, twenty-six (26) soil borings (SB-1 to SB-26) were advanced within the Project Area in proximity to the PIPs.

Soils were screened in the field using a photoionization detector (PID). Twenty-seven (27) representative soil samples were submitted for the analysis of one or more of the following contaminants of concern (COCs) associated with the identified PIPs: volatile organic compounds (VOCs); benzene, toluene, ethyl benzene, total xylenes (BTEX), a sub-set of the volatile organic list; semi-volatile organic compounds (SVOCs); polynuclear aromatic compounds (PNAs), a sub-set of the semi-volatile organic list; total RCRA metals; pesticides/herbicides; and soil pH.

The RCRA metals results from SB-17 (1-3') and SB-25 (1-3') indicated a detection of chromium (21.3 mg/kg and 23.1 mg/kg respectively, via total analysis method) that exceeded the MAC value (21 mg/kg). Subsequently, the samples from SB-17 (1-3') and SB-25 (1-3') were also analyzed via the Toxicity Characteristic Leaching Procedure (TCLP) method to determine compliance with the MAC values, and the results were below the detection limit, achieving the MAC value for chromium. The remaining RCRA metals results achieved their respective Tier 1 ROs and MACs for CCDD disposal. The soil pH results ranged from 8.01 to 8.92, within the required range for CCDD disposal (6.25 to 9.0).

The soil samples achieved applicable ROs and MAC values for determining suitability for off-site final disposition at a clean construction or demolition debris (CCDD) facility using the attached LPC-663 form. Refer to the attached narrative for a full description of the Project Area, identified sites, and the analytical testing.

Should conditions within the Project Area 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 Area. If you have any questions regarding this matter, please contact us at 630-684-9100.

Jeremy J. Reynolds, P.G.
Associate Principal



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

Owner: Elk Grove Village, IL

Project Name: Lively Boulevard Improvements Project

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 soils excavated from the Lively Boulevard Improvements Project. The Project Area consists of Lively Boulevard from Landmeier Road to approximately 200 feet south of Devon Avenue. The Project Area is approximately 7,200 linear feet in Elk Grove Village, IL, with present-day land use consisting of commercial and light industrial properties. The planned improvements include sidewalk and curb replacement and the installation of light poles and associated improvements at the southern end of the Project Corridor. At this time, the maximum depth of excavation for the proposed improvements is assumed to be approximately 2 to 15 ft bgs. A map depicting the Project Area location, identified sites, and sample locations is included in **Attachment A**, and a photo log of site reconnaissance is included in **Attachment B**.

The following information presents a summary of the records review, the identified PIPs, and other nearby sites. Excerpts from the 2018 PESA are included in **Attachment C**. The analyses conducted and results are summarized at the end of this narrative. The laboratory analytical reports and updated analytical tables are included in **Attachment D**.

Historic Aerials

Per the 2018 PESA, Aerial photographs of the Project Corridor were provided by Environmental Risk Information Services (ERIS). The earliest photograph available is dated 1938. Photographs from 1952, 1955, 1962, 1972, 1978, 1981, 1987, 1994, 2004, 2005, 2006, 2007, 2009, 2010, 2011, 2012, 2014, 2015, and 2017 were also reviewed. A general discussion of the aerials is provided below. The aerial photographs are attached in Appendix C.

1938 The Project Corridor is undeveloped with agricultural land. Landmeier Road and East Devon Avenue are depicted at the north and south ends of the Project Corridor respectively. Busse Road is depicted approximately 0.50 miles to the east and Tonne Road is depicted approximately 0.45 miles to the west of the Project Corridor. The surrounding area is sparsely populated with residential buildings (farm houses).

1952 The subsequent 1952 aerial photograph shows minor residential development to the north, south, and west along Landmeier Road, East Devon Avenue, and Tonne Road respectively. There are no other significant changes to the immediate Project Corridor or to the surrounding area.

1955 The subsequent 1955 aerial photograph shows minor residential development to the west along Tonne Road. There are no other significant changes to the immediate Project Corridor or to the surrounding area.

1962 The subsequent 1962 aerial photograph shows significant residential development approximately 0.50 miles to the west of the Project Corridor on the west side of Tonne Road. A large warehouse building is shown approximately 700 feet to the west of the Project Corridor with an access road that crosses the Project Corridor at the north end. Land



disturbance near the newly constructed building is shown along the north end of the Project Corridor. Minor residential development is depicted south of Devon Avenue. The surrounding area remains undeveloped with agricultural land.

1972 The subsequent 1972 aerial photograph shows significant commercial and industrial development throughout the Project Corridor. The present-day intersections with the Project Corridor are depicted as being constructed in addition to the accompanying rail spurs throughout the corridor. Most of the lots are developed with warehouse sized buildings.

1978 The subsequent 1978 aerial photograph shows further commercial and industrial development throughout the Project Corridor where several newly constructed buildings are occupying previously vacant parcels. There are no other significant changes to the immediate Project Corridor or to the surrounding area.

1981 The subsequent 1981 aerial photograph is similar to the 1978 aerial photograph. Minor commercial and industrial development can be seen throughout the surrounding area. There are no other significant changes to the immediate Project Corridor or to the surrounding area.

1987 The subsequent 1987 aerial photograph is similar to the 1981 aerial photograph. Minor commercial and industrial development can be seen throughout the surrounding area. There are no other significant changes to the immediate Project Corridor or to the surrounding area.

1994-2017 The subsequent 1994 through 2017 aerial photographs are similar to the 1981 aerial photograph. There are no significant changes to the immediate Project Corridor or to the surrounding area and the conditions resemble present day conditions.

Records Search

Per the 2018 PESA, the following site descriptions and table summarizes the identified PIPs that are adjacent to the Project Area.

Site ID	Site Name	Address	Reason(s)
7	Constant Electric Supply	985 Lively Blvd.	Multiple Listings: LUST/RCRA SQG/SPILLS/UST
8	Vacant Building	1000 Chase Ave.	Machine and tool storage yard visible in aerials and site recon, potential storage of hazardous material
9	Ralph Wilson Plastic/Wilsonart	1100 Chase Ave.	Multiple Listings: LUST/SPILLS/UST
11	Equitable Real Estate Invest	925-1065 Chase Ave.	Multiple Listings: UST/LUST
12	Olympic Steel	1111 Chase Ave.	Multiple Listings: RCRA SQG/UST/LUST/SPILLS
14	Railroad Spurs	Intersecting Lively Blvd.	Historic rail use, potential spills and contamination
16	Century Life of America/J&A Metal Finishing	1100 W Touhy Ave.	Multiple Listings: RCRA SQG/UST/SRP
20	Delta Precision Circuits/Iroquois Popcorn Company	1350 Lively Blvd.	Multiple Listings: RCRA SQG/UST
25	International Processing CO	1485 Lively Blvd.	Multiple Listings: RCRA CORRACTS/RCRA LQG
26	Bruce Offset Co	1099 Greenleaf Ave.	Multiple Listings: RCRA SQG
27	FPM Heat Treating/Praxair Inc	1501 S. Lively Blvd.	Multiple Listings: SPILLS/ENG/INST/RCRA NON GEN/SRP
33	Dexter Magnetic Materials	1050 Morse Ave.	Multiple Listings: RCRA CESQG



Site ID	Site Name	Address	Reason(s)
34	Pederson/Hartz Mountain Corp	1775 Lively Blvd.	Multiple Listings: LUST/RCRA SQG/SPILLS/UST
35	Weber Valentine Co	1099 E. Morse Ave.	Multiple Listings: RCRA NON GEN/UST/SPILLS
36	Illinois Cable Co	1111 Morse Ave.	Multiple Listings: RCRA NON GEN
44	JD Graphic	1101 Arthur Ave.	Multiple Listings: RCRA SQG
46	Triangle Decorating Co	2206 S. Lively Blvd.	Multiple Listings: RCRA NON GEN
49	ARDAGH Metal Beverage USA	2250 Lively Blvd.	Multiple Listings: RCRA NON GEN
51	TRW Recon Services/Day after Day Service	2350 Lively Blvd.	Multiple Listings: RCRA SQG/SPILLS/SPILLS2
52	Unknown	2301 Lively Blvd.	Multiple Listings: SPILLS/SPILLS2
H	Certified Tool and Mfg	1201 Estes Ave.	Multiple Listings: LUST/RCRA NON GEN/SPILLS/UST
K	Chem-Plate Industries/EQ Environmental/#3/Api Industries Inc	1250 Morse Ave.	Multiple Listings: RCRA LQG/SPILLS/UST
O	Inland Lithograph	1201 Pratt Blvd.	Multiple Listings: LUST/RCRA LQG/SPILLS/UST
Q	Nelson Westerberg of IL/W. Smith Carthage	1201 Arthur Ave.	Multiple Listings: LUST/RCRA SQG/SPILLS/UST
S	Federal Express Corp	1200 Devon Ave.	Multiple Listings: LUST/RCRA CESQG/SPILLS/UST

Constant Electric Supply (Site ID 7)

This site is listed under the operator name of “Constant Electric Supply” located at 985 Lively Blvd, adjacent to the Project Corridor. The site is listed in the LUST, RCRA SQG, SPILLS, and UST databases. The LUST database lists a release of used oil from an underground storage tank in 1994. The RCRA database lists the site as a small quantity generator of ignitable waste but does not list any violations associated with the site. The SPILLS database lists a leak of an unknown volume of waste oil from an underground storage tank on September 16, 1994. The UST database associates the following tanks with the property:

- One 10,000-gallon gasoline tank removed on September 16, 1994.
- One 550-gallon tank with unlisted contents removed on September 16, 1994.

Based on the available information, the last incident, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Vacant Building (Site ID 8)

This site was identified during site reconnaissance at 1000 Chase Avenue, adjacent to the Project Corridor. It was not listed on any database; however, through aerial photographs and site reconnaissance, an equipment storage yard was identified on the property that potentially stores/uses hazardous chemicals that could affect the Project Corridor. According to the historical aerial photographs, the site was occupied by a commercial building with a layout resembling the current structure. Based on the available information, site reconnaissance, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Ralph Wilson Plastic/Wilsonart (Site ID 9)

This site is listed under the operator name of “Ralph Wilson Plastic” and “Wilsonart” located at 1100 Chase Avenue, adjacent to the Project Corridor. The site is identified in the LUST, SPILLS, and UST databases. The LUST and SPILLS



database associate a release of diesel fuel from an underground storage tank due to corrosion holes in the tank and an unknown amount and duration of the release. The UST database associates the following tank with the property:

- One 6,000-gallon diesel fuel tank exempt from registration, removed on June 1, 1987.

Based on the available information, the unknown amount of release due to the LUST and SPILLS incidents, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Equitable Real Estate Investing (Site ID 11)

The site is listed under the operator name of “Equitable Real Estate Investing” and is located at 1065 Chase Avenue, adjacent to the Project Corridor. The site is identified in the UST and LUST databases. The LUST database identifies a release of fuel oil from an underground storage tank on September 24, 1992 with an unknown volume and duration of the release. The UST database associates the following tank with the property:

- One 10,000-gallon heating oil tank removed on September 24, 1992.

Based on the available information, the unknown amount of release due to the LUST and SPILLS incidents, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Olympic Steel (Site ID 12)

This site is listed under the operator name of “Olympic Steel” located at 1111 Chase Avenue, adjacent to the Project Corridor. The site is listed in the LUST, RCRA SQG, SPILLS, and UST databases. The LUST database lists a release of diesel fuel from an underground storage tank in 1993 and associates a No Further Remediation (NFR) letter with the incident recorded on December 10, 2001. The RCRA database lists the site as a small quantity generator of halogenated solvents. The SPILLS database lists a leak of an unknown volume of diesel fuel from an underground storage tank on December 16, 1993 due to overfilling. The UST database associates the following tank with the property:

- One 2,000-gallon diesel tank removed on December 16, 1993.

Based on the available information, the release of diesel fuel on the property, the use of halogenated solvents, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Rail Spurs (Site ID 14)

Rail spurs from the surrounding properties currently intersect the Project Corridor at seven (7) locations throughout the length of the Project Corridor. Based on historical aerials, an additional two (2) former rail spur locations are also visible. Railroad lines are historically known for spills, transporting a wide array of chemicals, and use of herbicides and pesticides for maintenance on railroad tracks. This includes many hazardous materials that could potentially affect the Project Corridor. According to the historic aerial photographs and topographic maps, the railroad spurs have been in existence since at least 1972.

Based on the available information, site reconnaissance, and their location intersecting the Project Corridor, **this site is considered a PIP.**

Century Life of America/J&A Metal Finishing (Site ID 16)

This site is listed under the operator names of “Century Life of America” and “J&A Metal Finishing” located at 1100 W. Touhy Avenue, adjacent to the Project Corridor. The site is identified in the RCRA, UST, and SRP databases. The RCRA



database lists the site as a small quantity generator of ignitable waste. The site is listed in the SRP database but the site has not obtained an NFR and no additional information is available. The UST database associates the following tank with the property:

- One hazardous substance tank of an unlisted size, exempt from registration, removed on August 12, 1987.

Based on the available information, the use and storage of hazardous substances on the site, the SRP listing, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Delta Precision Circuits/Iroquois Popcorn Company (Site ID 20)

This site is listed under the operator names of “Delta Precision Circuits” and “Iroquois Popcorn Company” located at 1350 Lively Boulevard, adjacent to the Project Corridor. The site is identified in the RCRA and UST database. The RCRA database lists the site as a small quantity generator of ignitable waste, corrosive waste, wastewater treatment sludges. The RCRA database lists multiple violations for the property. The UST database associates the following tank with the property:

- One 3,000-gallon heating oil tank, removed on October 9, 1990.

Based on the available information, RCRA violations, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

International Processing Co. (Site ID 25)

This site is listed under the operator name of “International Processing Co” located at 1485 Lively Boulevard, adjacent to the Project Corridor. The site is identified in the RCRA CORRACTS and RCRA LQG databases. The RCRA database lists the site as a large quantity generator for corrosive waste, lead, chromium, and ignitable waste associated with electroplating, polishing, and anodizing processes. The RCRA databases list multiple violations associated with the property. Based on the available information, RCRA violations, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Bruce Offset Co (Site ID 26)

This site is listed under the operator name of “Bruce Offset Co” located at 1099 Greenleaf Avenue, adjacent to the Project Corridor. The site is identified in the RCRA database as a generator for ignitable waste and reactive waste associated with printing processes. The RCRA database list the site as also having several violations with the handling of material onsite.

Based on the available information, RCRA violations, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

FRM Heat Treating/Praxair Inc (Site ID 27)

This site is listed under the operator names of “FPM Heat Treating” and “Praxair Inc.” located at 1501 S. Lively Boulevard, adjacent to the Project Corridor. The site is identified in the SPILLS, RCRA, SRP, ENG, and INST databases. The SPILLS database associates a release of 200-300 gallons of quench oil from a hole in a pipe occurring on May 8, 1991 in addition to a release of 3 quarts of hydraulic fluid from a tractor trailer on the premises on May 3, 1996. The RCRA database lists the site as being a large quantity generator for ignitable waste and halogenated solvents and associates numerous



violations with the site. The site is listed in the SRP database as having an NFR recorded on October 7, 2008. The ENG and INST databases list the control requirements of concrete building slab and asphalt for the property.

Based on the available information, RCRA violations, the use of halogenated solvents, the SRP listing requiring engineered barriers, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Dexter Magnetic Materials (Site ID 33)

This site is listed under the operator name of “Dexter Magnetic Materials” located at 1050 Morse Avenue, adjacent to the Project Corridor. The site is identified in the RCRA database, which associates the site as being a generator for corrosive waste, spent halogenated solvents, ignitable waste, and nonhalogenated solvents.

Due to the use and storage of spent halogenated solvents and other hazardous materials, in addition to its location adjacent to the Project Corridor, **this site is considered a PIP.**

Pederson/Hartz Mountain Corp (Site ID 34)

This site is listed under the operator names of “Pederson” and “Hartz Mountain Corp”, located at 1775 Lively Boulevard, adjacent to the Project Corridor. The site is listed in the LUST, RCRA SQG, SPILLS, and UST databases. The LUST database lists a release of gasoline from an underground storage tank on October 30, 1990 and associates an NFR with an incident recorded on May 20, 2000. The RCRA database lists the site as a small quantity generator of ignitable waste.

The SPILLS database lists a leak of an unknown quantity of gasoline from an underground storage tank on October 30, 1990 due to holes in the tank. The UST database associates the following tank with the property:

- One 8,000-gallon gasoline tank removed on October 30, 1990.

Based on the available information, the unknown quantity and duration of the LUST and SPILLS listings, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Illinois Cable Co. (Site ID 36)

This site is listed under the operator name of “Illinois Cable Co.” located at 1111 Morse Avenue, adjacent to the Project Corridor. The site is identified in the RCRA database as being a large quantity generator for spent halogenated solvents as early as 1987.

Based on the available information, the long use of halogenated solvents, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Weber Valentine Co. (Site ID 35)

This site is listed under the operator name of “Weber Valentine Co.” located at 1099 Morse Avenue, adjacent to the Project Corridor. The site is identified in the RCRA, UST, and SPILLS databases. The RCRA database lists the site as being a small



quantity generator of ignitable waste and spent nonhalogenated solvents. The SPILLS database associates a amount of a flammable chemical during a fire on April 3, 1996. UST database associates the following tank with the property:

- One 6,000-gallon hazardous substance tank removed on June 4, 1996.

Based on the available information, the use and storage of hazardous material on the property, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

JD Graphic (Site ID 44)

This site is listed under the operator name of “JD Graphic” located at 1101 Arthur Avenue, adjacent to the Project Corridor. The site is identified in the RCRA database as being a small quantity generator for ignitable waste, tetrachloroethylene, lead, and benzene since as early as 1992.

Based on the available information, solvent usage, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

JD Graphic (Site ID 44)

This site is listed under the operator name of “JD Graphic” located at 1101 Arthur Avenue, adjacent to the Project Corridor. The site is identified in the RCRA database as being a small quantity generator for ignitable waste, tetrachloroethylene, lead, and benzene since as early as 1992.

Based on the available information, solvent usage, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Triangle Decorating Co (Site ID 46)

This site is listed under the operator name of “Triangle Decorating Co” located at 2206 S. Lively Boulevard, adjacent to the Project Corridor. The site is identified in the RCRA database as being a small quantity generator for reactive waste, ignitable waste, and spent nonhalogenated solvents since 1997.

Based on the available information, RCRA listings, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

ARDAGH Metal Beverage USA (Site ID 49)

This site is listed under the operator name of “ARDAGH Metal Beverage USA” located at 2250 S. Lively Boulevard, adjacent to the Project Corridor. The site is identified in the RCRA database as being a small quantity generator for ignitable waste, reactive waste, corrosive waste, mercury, silver, and spent nonhalogenated solvents. The database lists numerous RCRA violations associated with the property.

Based on the available information, the RCRA violations, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

TRW Recon Services/Day After Day Service (Site ID 51)

This site is listed under the operator names of “TRW Recon Services” and “Day after Day Service” located at 2350 S. Lively Boulevard, adjacent to the Project Corridor. The site is identified in the RCRA, SPILLS, and SPILLS2 databases. The RCRA database lists the site as being a small quantity generator for chromium, ignitable waste, lead, and spent nonhalogenated



solvents. The SPILLS and SPILLS2 database lists an incident occurring on November 17, 2009 when approximately 70 gallons of diesel fuel was released from a punctured saddle tank.

Based on the available information, the storage and use of hazardous materials on the property, the spill from a saddle tank, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

2301 S. Lively Boulevard (Site ID 52)

This site is listed with the operator name being unknown, located at 2301 S. Lively Boulevard, adjacent to the Project Corridor. The site is identified in the SPILLS and SPILLS2 databases. The SPILLS and SPILLS2 database lists an incident occurring on November 17, 2009 when approximately 70 gallons of diesel fuel was released from a tank ruptured from road debris. Although the date and description for this site is identical to the site located at 2350 S. Lively Boulevard (Site ID 51), both listings have different incident numbers.

Based on the available information, and its location adjacent to the Project Corridor, **this site is considered a PIP.**

Certified Tool and Mfg. (Site ID A)

This site is listed under the operator name of “Certified Tool and Mfg” located at 1201 Estes Avenue, approximately 320 feet east of the Project Corridor. The site is listed in the LUST, RCRA, SPILLS, and UST databases. The LUST database lists a release of petroleum product from an underground storage tank on October 16, 1998 and associates an NFR with the incident recorded on June 9, 1999. The RCRA database lists the site as generator of spent halogenated solvents. The SPILLS database lists a leak of an unknown volume of heating oil from an underground storage tank on October 16, 1998. The UST database associates the following tank with the property:

- One 2,000-gallon heating oil tank removed on October 16, 1998.

Based on the available information, the use and storage of halogenated solvents, the unknown volume and duration of the release, and its proximity to the Project Corridor, **this site is considered a PIP.**

Chem-Plate Industries/EQ Environmental/#3/API Industries Inc. (Site ID B)

This site is listed under the operator names of “Chem-Plate Industries”, “EQ Environmental”, “#3”, and “API Industries Inc.”, located at 1250 Morse Avenue, approximately 300 feet east of the Project Corridor. The site is listed in the RCRA, SPILLS, and UST databases. The RCRA database lists the site as a large quantity generator of chromium, corrosive waste, ignitable waste, wastewater treatment sludges, spent stripping and bath solutions, and barium. The RCRA database also lists numerous violations associated with the site. The SPILLS database lists a spill of an unknown volume of hazardous waste sludge from a spilled container covering approximately 300 square feet on May 1, 2013. The SPILLS database also lists the release of 90 gallons of Ferrous Chloride solution from a truck leak on September 5, 2000. The UST database associates the following tank with the property:

- One 8,000-gallon diesel fuel tank removed on July 9, 1998.

Based on the available information, the unknown volume and duration of the release, the RCRA violations, and its proximity to the Project Corridor, **this site is considered a PIP.**

Inland Lithograph (Site ID D)

This site is listed under the operator name of “Inland Lithograph” located at 1201 Pratt Blvd, approximately 260 feet east of the Project Corridor. The site is listed in the LUST, RCRA, SPILLS, and UST databases. The LUST database lists a release



of petroleum product from an underground storage tank on September 26, 1990 and associates an NFR with the incident recorded on December 6, 1993. The RCRA database lists the site as a large quantity generator of ignitable waste, lead, corrosive waste, and spent halogenated solvents. The RCRA database also lists several RCRA violations associated with the site. The SPILLS database lists a leak of an unknown volume of alcohol and wash solvent from an underground storage tank on September 26, 1990 due to corrosion holes in the tank. The UST database associates the following tanks with the property:

- Three 700-gallon gasoline tanks removed on September 1, 1990.

Based on the available information, the unknown volume and duration of the release, the RCRA violations, and its proximity to the Project Corridor, **this site is considered a PIP.**

Nelson Westerberg of IL/W. Smith Carthage (Site ID E)

This site is listed under the operator names of “Nelson Westerberg of IL” and “W. Smith Carthage”, located at 1201 Arthur Avenue, approximately 275 feet east of the Project Corridor. The site is listed in the LUST, RCRA, SPILLS, and UST databases. The LUST database lists a release of diesel from an underground storage tank on May 9, 2000 and associates an NFR with the incident recorded on August 14, 2000. The RCRA database lists the site as a small quantity generator of ignitable waste. The SPILLS database lists a leak of an unknown volume of gasoline and diesel fuel from an underground storage tank on May 9, 2000 due to spills and overfilling the tank. The SPILLS database also lists a spill of 5 gallons of gasoline from a truck. The UST database associates the following tanks with the property:

- One 4,000-gallon gasoline tank removed on May 3, 1987.
- One 4,000-gallon diesel tank removed on May 3, 1987.
- One 4,000-gallon gasoline tank removed on May 9, 2000.
- One 4,000-gallon diesel tank removed on May 9, 2000.

Based on the available information, the unknown volume and duration of the release, and its proximity to the Project Corridor, **this site is considered a PIP.**

Federal Express Corporation (Site ID F)

This site is listed under the operator name of “Federal Express Corp” located at 1200 Devon Avenue, approximately 460 feet east of the Project Corridor. The site is listed in the LUST, RCRA, SPILLS, and UST databases. The LUST database lists a release of gasoline and diesel from underground storage tanks on February 2, 2014 and associates an NFR with the incident recorded on July 29, 2014. The RCRA database lists the site as generator of ignitable waste. The SPILLS database lists a leak of an unknown volume of gasoline and diesel from two 10,000-gallon storage tanks on February 2, 2014 due to spills and overfilling. The SPILLS database also lists a release of 25 gallons of oil from a truck due to a cylinder breaking on May 25, 1993. The UST database associates the following tanks with the property:

- One 10,000-gallon gasoline tank removed on February 2, 2014.
- One 10,000-gallon diesel tank removed on February 2, 2014.

Based on the available information, the unknown volume and duration of the release, and its proximity to the Project Corridor, **this site is considered a PIP.**

Analytical Summary

In order to assess impacts to Project Area soils from the identified PIPs, and to determine CCDD suitability of soils for pH, twenty-six (26) soil borings (SB-1 to SB-26) were advanced within the Project Area to depths of 4 to 16 feet bgs. Soils were



screened continuously using a PID meter and representative soil samples were collected. The PID readings are summarized in the following table.

PID Screening Summary

Soil Boring	Depth, ft	PID Reading, ppm	Soil Boring	Depth, ft	PID Reading, ppm	Soil Boring	Depth, ft	PID Reading, ppm
SB-1	0-1'	0.0	SB-10	0-1'	0.0	SB-19	0-1'	0.0
	1-3'	0.1		1-3'	0.1		1-3'	0.0
	3-4'	0.0		3-4'	0.1		3-4'	0.0
SB-2	0-1'	0.0	SB-11	0-1'	0.0	SB-20	0-1'	0.0
	1-3'	0.0		1-3'	0.0		1-3'	0.0
	3-4'	0.0		3-4'	0.0		3-4'	0.0
SB-3	0-1'	0.0	SB-12	0-1'	0.0	SB-21	0-1'	0.0
	1-3'	0.1		1-3'	0.0		1-3'	0.2
	3-4'	0.0		3-4'	0.0		3-4'	0.1
SB-4	0-1'	0.0	SB-13	0-1'	0.1	SB-22	0-1'	0.0
	1-3'	0.0		1-3'	0.1		1-3'	0.0
	3-4'	0.0		3-4'	0.0		3-4'	0.0
SB-5	0-1'	0.0	SB-14	0-1'	0.0	SB-23	0-1'	0.0
	1-3'	0.2		1-3'	0.0		1-3'	0.0
	3-4'	0.2		3-4'	0.0		3-4'	0.0
SB-6	0-1'	0.0	SB-15	0-1'	0.0	SB-24	0-1'	0.0
	1-3'	0.4		1-3'	0.0		1-3'	0.0
	3-4'	0.3		3-4'	0.0		3-5'	0.0
SB-7	0-1'	0.0	SB-16	0-1'	0.0	SB-24	5-7'	0.0
	1-3'	0.0		1-3'	0.0		7-10'	0.0
	3-4'	0.0		3-4'	0.0		10-12'	0.0
SB-8	0-1'	0.0	SB-17	0-1'	0.0	SB-24	12-14'	0.0
	1-3'	0.0		1-3'	0.0		14-16'	0.0
	3-4'	0.0		3-4'	0.0		0-1'	0.0
SB-9	0-1'	0.0	SB-18	0-1'	0.1	SB-25	1-3'	0.0
	1-3'	0.0		1-3'	0.1		3-4'	0.0
	3-4'	0.0		3-4'	0.0		0-1'	0.0
						SB-26	1-3'	0.0
							3-4'	0.0

Bold indicates sample submitted for analytical testing.

VOCs (and subset BTEX)

Twenty-one soil samples were analyzed for VOCs or benzene, toluene, ethylbenzene, and xylenes (BTEX), a subset of VOCs. Table 3-3, included in **Attachment D**, presents the soil VOC (and subset BTEX) results compared to the MACs for assessment of disposal options.

Four samples [SB-5 (1-3), SB-15 (1-3), SB-17 (1-3), and SB-22 (1-3)] were submitted for VOC analysis. Seventeen additional samples [SB-2 (1-3), SB-3 (1-3), SB-4 (1-3), SB-6 (1-3), SB-7 (1-3), SB-8 (1-3), SB-9 (1-3), SB-10 (1-3), SB-12 (1-3), SB-13 (1-



3), SB-16 (1-3), SB-19 (1-3), SB-23 (1-3), SB-24 (5-7), SB-24 (10-12), SB-25 (1-3), and SB-26 (1-3)] were analyzed for BTEX. The VOC (and subset BTEX) results are below detection limits for the samples analyzed, achieving the MACs.

SVOCs (and subset PNAs)

Fourteen soil samples were analyzed for SVOCs or PNAs, a subset of SVOCs. Tables 3-5 and 3-7, included in **Attachment D**, presents the soil sample SVOC and PNA analytical results compared to the MACs.

Four samples [SB-5 (1-3), SB-15 (1-3), SB-17 (1-3), and SB-22 (1-3)] were submitted for SVOC analysis. Twelve additional samples [SB-2 (1-3), SB-4 (1-3), SB-6 (1-3), SB-7 (1-3), SB-10 (1-3), SB-16 (1-3), SB-19 (1-3), SB-23 (1-3), SB-24 (5-7), SB-24 (10-12), SB-25 (1-3), and SB-26 (1-3)] were analyzed for PNAs.

The PNA results from samples SB-26 (1-3') indicated low level detections for benzo(a)anthracene and benzo(k)fluoranthene below the MAC values. The remaining SVOC and PNA constituents were also below detection limits for the samples analyzed, achieving the MACs.

Total RCRA Metals

Seventeen soil samples were analyzed for total RCRA metals. Table 3-9, included in **Attachment D**, presents the soil sample total RCRA metal and lead analytical results compared to the MACs.

The following four samples had detectable concentrations of one or more total RCRA metals: SB-2 (1-3), SB-3 (1-3), SB-5 (1-3), SB-7 (1-3), SB-8 (1-3), SB-9 (1-3), SB-10 (1-3), SB-11 (1-3), SB-12 (1-3), SB-16 (1-3), SB-17 (1-3), SB-23 (1-3), SB-24 (5-7), SB-24 (10-12) SB-25 (1-3), and SB-26 (1-3).

The RCRA metals result from SB-17 (1-3') and SB-25 (1-3') indicated a detection of chromium (21.3 mg/kg and 23.1 mg/kg respectively, via total analysis method) that exceeded the MAC value (21 mg/kg). Subsequently, the samples from SB-17 (1-3') and SB-25 (1-3') were analyzed via the Toxicity Characteristic Leaching Procedure (TCLP) method to determine compliance with the MAC values, and the result was below the detection limit, achieving the MAC value. The remaining RCRA metals results from soil samples achieved the MACs for CCDD disposal.

Pesticides/Herbicides

Seven soil sample was analyzed for pesticides and herbicides. Table 3-11, included in **Attachment D**, presents the Pesticide/Herbicide soil sample analytical results compared to the MACs.

The pesticide and herbicide results are below detection limits for the samples analyzed, achieving the MACs.

Soil pH

Twenty-six samples were submitted for soil pH analysis and are considered representative of the Project Corridor. The pH results ranged from 8.01 to 8.92 and are within the acceptable 6.25 to 9.00 range. Therefore, soils from this Project Corridor achieve the CCDD soil pH criteria.

CCDD Determination

Based on the due diligence and analytical testing conducted, soils generated form the Project Corridor meet the requirements for CCDD or Uncontaminated Soil Fill Operation (USFO) facilities located within the following areas:



- Within a Metropolitan Statistical Area (MSA)¹;
- Within a populated area² in a MSA, excluding Chicago;
- Within City of Chicago Corporate Limits;
- Within a populated area in a non-MSA county; and
- Outside of populated areas

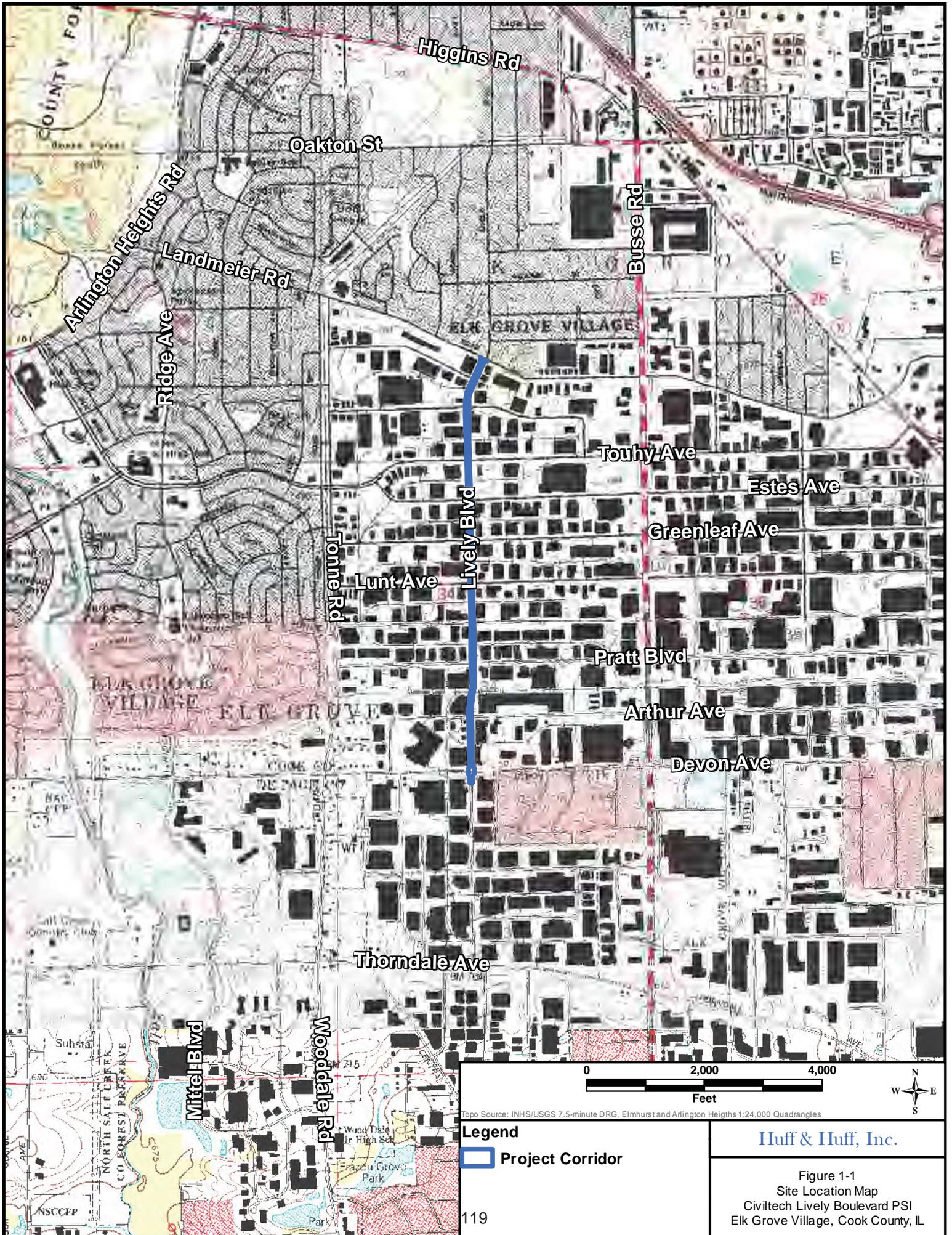
Should conditions within the Project Area changes, such as unusual staining, odors, or if loads become rejected, additional analytical assessment may be required for final disposition of spoils from this Project Area. If you have any questions regarding this matter, please contact us at 630-684-9100.

¹ Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Menard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

² “Populated Area” means: an area within the boundaries of a municipality that has a population of 10,000 or greater based on the year 2000 or most recent census; or an area less than three miles from the boundary of a municipality that has a population of 10,000 or greater based on the year 2000 or most recent census.



ATTACHMENT A

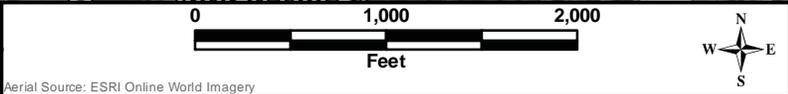
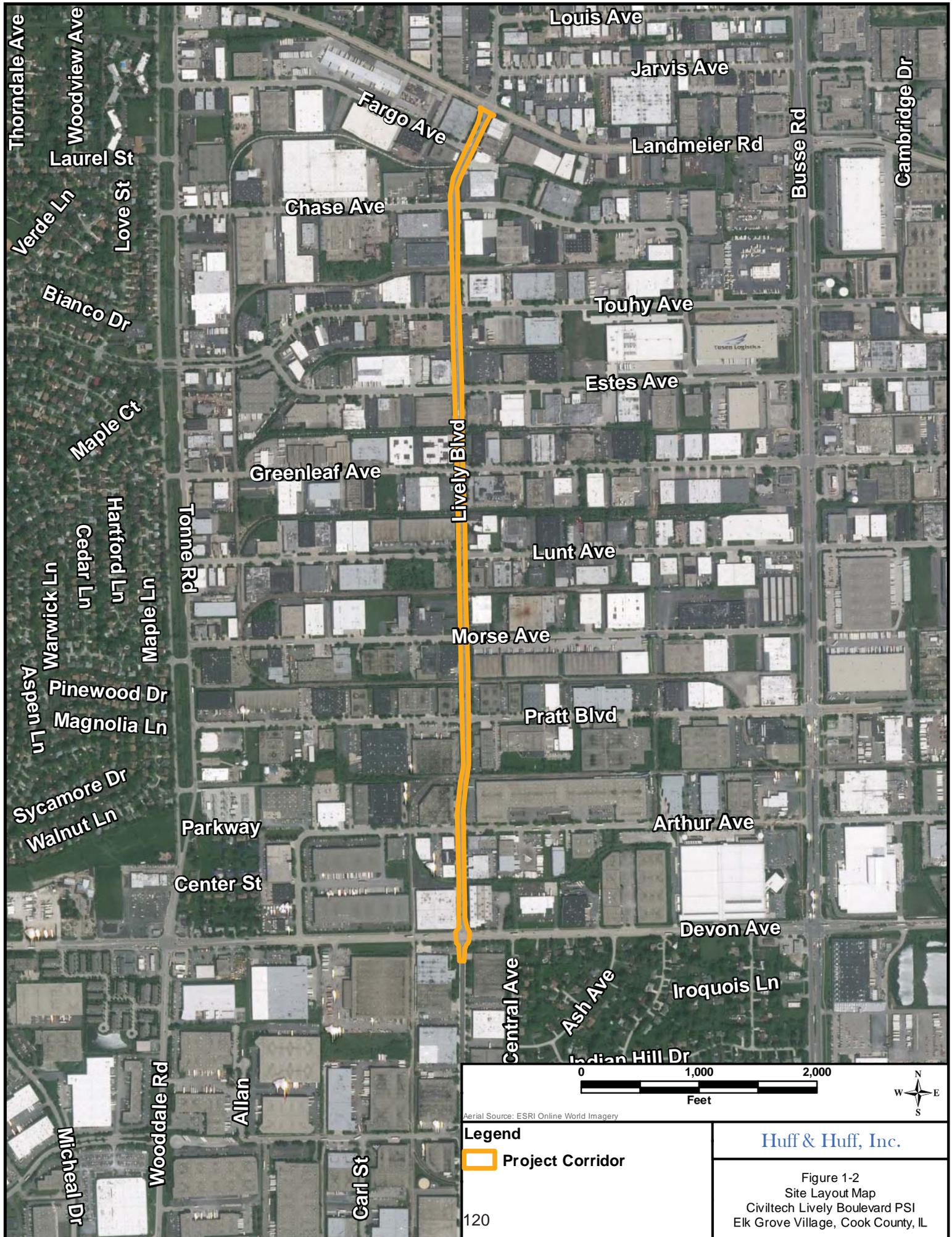


Legend

 **Project Corridor**

Huff & Huff, Inc.

Figure 1-1
 Site Location Map
 Civiltech Lively Boulevard PSI
 Elk Grove Village, Cook County, IL

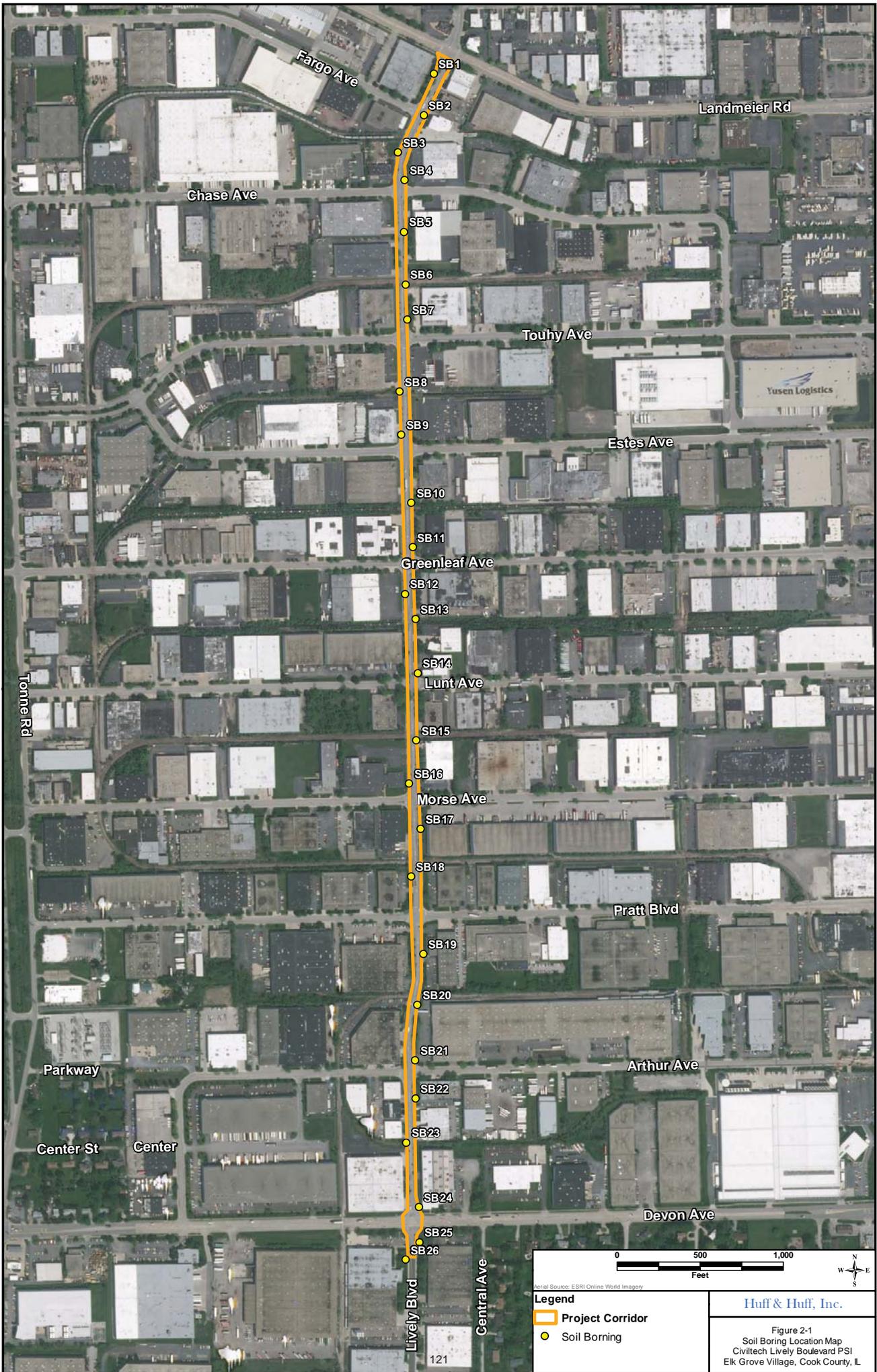


Aerial Source: ESRI Online World Imagery

Legend	
	Project Corridor
120	

Huff & Huff, Inc.

Figure 1-2
 Site Layout Map
 Civiltech Lively Boulevard PSI
 Elk Grove Village, Cook County, IL



Aerial Source: ESRI Online, World Imagery

Legend

- Project Corridor
- Soil Boring

Huff & Huff, Inc.

Figure 2-1
Soil Boring Location Map
Civitech Lively Boulevard PSI
Elk Grove Village, Cook County, IL



Site ID	Address	Status
7	985 Lively Blvd.	PIP
8	1000 Chase Ave.	PIP
9	1100 Chase Ave.	PIP
11	925-1065 Chase Ave.	PIP
12	1111 Chase Ave.	PIP
14	Intersecting Lively Blvd.	PIP
16	1100 W Touhy Ave.	PIP
20	1350 Lively Blvd.	PIP
25	1485 Lively Blvd.	PIP
26	1099 Greenleaf Ave.	PIP
27	1501 S. Lively Blvd.	PIP
33	1050 Morse Ave.	PIP
34	1775 Lively Blvd.	PIP
35	1099 E. Morse Ave.	PIP
36	1111 Morse Ave.	PIP
44	1101 Arthur Ave.	PIP
46	2206 S. Lively Blvd.	PIP
49	2250 Lively Blvd.	PIP
51	2350 Lively Blvd.	PIP
52	2301 Lively Blvd.	PIP
H	1201 Estes Ave.	PIP
K	1250 Morse Ave.	PIP
O	1201 Pratt Blvd.	PIP
Q	1201 Arthur Ave.	PIP
S	1200 Devon Ave.	PIP

0 500 1,000
Feet

Aerial Source: ESRI Online, World Imagery

Legend
 Project Corridor
 PIP

Huff & Huff, Inc.

Figure 6-1
 Potentially Impacted Properties Map
 Civitech Lively Boulevard PSI
 Elk Grove Village, Cook County, IL



ATTACHMENT D

TABLE 3-2
SOIL SAMPLE VOC (& BTEX) RESULTS COMPARED TO TIER 1 REMEDIAL OBJECTIVES

Soil Boring Depth, ft	Ingestion Exposure Route		Inhalation Exposure Route		Construction Worker ^M		Residential ^M		Industrial/ Commercial ^M		Construction Worker ^M		Industrial/ Commercial ^M		Soil Component of Groundwater Ingestion (Class I)																		
	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	Residential ^M	Commercial ^M	
Constituent	70,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	
Acetone	12	100	0.8	1.6	0.03	0.03	2.2	3,000	3,000	3,000	2.2	3,000	3,000	3,000	0.03	0.03	2.2	3,000	3,000	3,000	2.2	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	
Benzene	10	92	3,000	3,000	0.6	0.6	3,000	3,000	3,000	0.6	3,000	3,000	3,000	3,000	0.6	0.6	3,000	3,000	3,000	3,000	0.6	0.6	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Bromodichloromethane	81	720	53	100	0.8	0.8	1,400	1,000	1,000	0.8	1,400	1,000	1,000	1,000	0.8	0.8	1,400	1,000	1,000	1,000	0.8	0.8	1,400	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Bromoform	110	1,000	10	15	0.2	0.2	3.9	1,000	15	15	3.9	1,000	15	15	0.2	0.2	3.9	1,000	15	15	0.2	0.2	3.9	1,000	15	15	15	15	15	15	15	15	
Bromomethane	7,800	200,000	720	720	32	32	9	20,000	720	720	9	20,000	720	720	32	32	9	20,000	720	720	32	32	9	20,000	720	720	720	720	720	720	720	720	720
Carbon disulfide	5	44	0.3	0.64	0.07	0.07	0.9	410	0.64	0.64	0.9	410	0.64	0.64	0.07	0.07	0.9	410	0.64	0.64	0.07	0.07	0.9	410	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	
Carbon tetrachloride	1,600	41,000	1,300	210	1.3	1.3	1.3	4,100	210	210	1.3	4,100	210	210	1.3	1.3	1.3	4,100	210	210	1.3	1.3	1.3	4,100	210	210	210	210	210	210	210	210	210
Chlorobenzene	1,600	41,000	1,300	210	1.3	1.3	1.3	4,100	210	210	1.3	4,100	210	210	1.3	1.3	1.3	4,100	210	210	1.3	1.3	1.3	4,100	210	210	210	210	210	210	210	210	210
Chlorodibromomethane	100	940	0.3	0.54	0.6	0.6	0.76	2,000	0.54	0.54	0.76	2,000	0.54	0.54	0.6	0.6	0.76	2,000	0.54	0.54	0.6	0.6	0.76	2,000	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	
Chloroform	7,800	200,000	1,300	1,700	1.30	1.30	1.30	2,000	1,700	1,700	1.30	2,000	1,700	1,700	1.30	1.30	1.30	2,000	1,700	1,700	1.30	1.30	1.30	2,000	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
1,1-Dichloroethane	7	68	0.4	0.7	0.02	0.02	0.09	1,400	0.7	0.7	0.09	1,400	0.7	0.7	0.02	0.02	0.09	1,400	0.7	0.7	0.02	0.02	0.09	1,400	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
1,2-Dichloroethane	3,900	100,000	290	470	0.06	0.06	3	10,000	470	470	3	10,000	470	470	0.06	0.06	3	10,000	470	470	0.06	0.06	3	10,000	470	470	470	470	470	470	470	470	470
cis-1,2-Dichloroethene	780	20,000	1,200	1,200	0.4	0.4	1,200	20,000	1,200	1,200	1,200	20,000	1,200	1,200	0.4	0.4	1,200	20,000	1,200	1,200	0.4	0.4	1,200	20,000	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
trans-1,2-Dichloroethene	1,600	41,000	1,300	3,100	0.7	0.7	3,100	41,000	3,100	3,100	3,100	41,000	3,100	3,100	0.7	0.7	3,100	41,000	3,100	3,100	0.7	0.7	3,100	41,000	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100
1,2-Dichloropropane	9	84	1.5	2.3	0.5	0.5	0.5	1,800	2.3	2.3	0.5	1,800	2.3	2.3	0.5	0.5	0.5	1,800	2.3	2.3	0.5	0.5	0.5	1,800	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
cis-1,3-Dichloropropene	6.4	57	1.200	2.1	0.04	0.04	0.39	1,200	2.1	2.1	0.39	1,200	2.1	2.1	0.04	0.04	0.39	1,200	2.1	2.1	0.04	0.04	0.39	1,200	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
trans-1,3-Dichloropropene	6.4	57	1.1	2.1	0.04	0.04	0.39	1,200	2.1	2.1	0.39	1,200	2.1	2.1	0.04	0.04	0.39	1,200	2.1	2.1	0.04	0.04	0.39	1,200	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
Ethylbenzene	7,800	200,000	400	400	13	13	58	20,000	400	400	58	20,000	400	400	13	13	58	20,000	400	400	13	13	58	20,000	400	400	400	400	400	400	400	400	400
2-Hexanone	780	20,000	8,800	8,800	0.32	0.32	1.40	2,000	8,800	8,800	1.40	2,000	8,800	8,800	0.32	0.32	1.40	2,000	8,800	8,800	0.32	0.32	1.40	2,000	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	
Methyl-tert-butylether (MTBE)	780	20,000	1.3	24	0.02	0.02	34	12,000	24	24	34	12,000	24	24	0.02	0.02	34	12,000	24	24	0.02	0.02	34	12,000	24	24	24	24	24	24	24	24	
4-Methyl-2-pentanone (MIBK)	85	760	1,500	1,500	4	4	4.30	41,000	1,500	1,500	4.30	41,000	1,500	1,500	4	4	4.30	41,000	1,500	1,500	4	4	4.30	41,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
Methylene chloride	16,000	410,000	1,500	1,500	4	4	4.30	41,000	1,500	1,500	4.30	41,000	1,500	1,500	4	4	4.30	41,000	1,500	1,500	4	4	4.30	41,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Styrene	12	110	11	20	0.06	0.06	28	2,400	20	20	28	2,400	20	20	0.06	0.06	28	2,400	20	20	0.06	0.06	28	2,400	20	20	20	20	20	20	20	20	20
1,1,2,2-Tetrachloroethane	16,000	410,000	650	650	42	42	42	410,000	650	650	42	410,000	650	650	42	42	42	410,000	650	650	42	42	42	410,000	650	650	650	650	650	650	650	650	650
Toluene	310	8,200	1,200	1,200	2	2	1,200	8,200	1,200	1,200	1,200	8,200	1,200	1,200	2	2	1,200	8,200	1,200	1,200	2	2	1,200	8,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
1,1,1-Trichloroethane	58	520	5	8.9	0.06	0.06	12	1,200	8.9	8.9	12	1,200	8.9	8.9	0.06	0.06	12	1,200	8.9	8.9	0.06	0.06	12	1,200	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	
1,1,2-Trichloroethane	78,000	1,000,000	1,000	1,000	170	170	1.1	200,000	1,000	1,000	1.1	200,000	1,000	1,000	170	170	1.1	200,000	1,000	1,000	170	170	1.1	200,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
Trichloroethene	0.46	7.9	0.28	1.1	0.01	0.01	1.1	41,000	1.1	1.1	1.1	41,000	1.1	1.1	0.01	0.01	1.1	41,000	1.1	1.1	0.01	0.01	1.1	41,000	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Vinyl acetate	16,000	410,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	320	320	320	320	320	320	
Vinyl chloride	16,000	410,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	320	320	320	320	320	320	320
Xylenes, Total	16,000	410,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	5.6	5.6	5.6	41,000	320	320	320	320	320	320	320	320	

^MRefers to Remediation Objective from Table B, Appendix B, Part 742, TACO
^NConstituent for which sample was not analyzed or for which no Remedial Objective exists.

TABLE 3-3
SOIL SAMPLE VOC (& BTEX) RESULTS COMPARED TO THE MACs FOR CCDD DISPOSAL

Soil Boring Depth, ft	Maximum Allowable Concentration ^{a/}	mg/kg																								
		SB-2 1-3	SB-3 1-3	SB-4 1-3	SB-5 1-3	SB-6 1-3	SB-7 1-3	SB-8 1-3	SB-9 1-3	SB-10 1-3	SB-12 1-3	SB-13 1-3	SB-15 1-3	SB-16 1-3	SB-17 1-3	SB-19 1-3	SB-22 1-3	SB-23 1-3	SB-24 5-7	SB-24 10-12	SB-25 1-3	SB-26 1-3				
Acetone	25	--	--	--	<0.2	--	--	--	--	--	--	<0.2	--	--	<0.2	--	--	--	--	--	--	--	--	--		
Benzene	0.03	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Bromodichloromethane	0.6	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Bromoform	0.8	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Bromomethane	0.2	--	--	--	<0.01	--	--	--	--	--	--	<0.01	--	--	<0.01	--	--	--	--	--	--	--	--	--	--	
2-Butanone (MEK)	17	--	--	--	<0.1	--	--	--	--	--	--	<0.1	--	--	<0.1	--	--	--	--	--	--	--	--	--	--	
Carbon disulfide	9	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Carbon tetrachloride	0.07	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Chlorobenzene	1	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Chlorodibromomethane	0.4	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
Chloroform	0.3	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
1,1-Dichloroethane	23	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
1,2-Dichloroethane	0.02	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
1,1-Dichloroethene	0.06	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
cis-1,2-Dichloroethene	0.4	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
trans-1,2-Dichloroethene	0.7	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
1,2-Dichloropropane	0.03	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	
cis-1,3-Dichloropropene	0.005	--	--	--	<0.004	--	--	--	--	--	--	<0.004	--	--	<0.004	--	--	--	--	--	--	--	--	--	--	
trans-1,3-Dichloropropene	0.005	--	--	--	<0.004	--	--	--	--	--	--	<0.004	--	--	<0.004	--	--	--	--	--	--	--	--	--	--	
Ethylbenzene	13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Methyl-tert-butylether (MTBE)	0.32	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	0.02	--	--	--	<0.02	--	--	--	--	--	--	<0.02	--	--	<0.02	--	--	--	--	--	--	--	--	--	--	--
Styrene	4	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	0.06	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
Toluene	12	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
1,1,1-Trichloroethane	2	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.02	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	0.06	--	--	--	<0.005	--	--	--	--	--	--	<0.005	--	--	<0.005	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	10	--	--	--	<0.01	--	--	--	--	--	--	<0.01	--	--	<0.01	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	0.01	--	--	--	<0.01	--	--	--	--	--	--	<0.01	--	--	<0.01	--	--	--	--	--	--	--	--	--	--	--
Xylene, Total	5.6	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	

^{a/} Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (G5 IAC 1100, Subpart F)

-- Constituent for which sample was not analyzed, or for which no Remedial Objective exists.

**TABLE 3-4
SOIL SAMPLE SVOC RESULTS COMPARED TO TIER 1 REMEDIAL OBJECTIVES**

Soil Boring	Ingestion Exposure Route ¹			Inhalation Exposure Route ¹			Soil Component of Groundwater Ingestion (Class I) ¹	SB-5	SB-15	SB-17	SB-22
	Residential	Industrial / Commercial	Construction Worker	Residential	Industrial / Commercial	Construction Worker		1-3	1-3	1-3	1-3
Depth, ft	-----mg/kg-----										
Constituent	-----mg/kg-----										
Acenaphthene	4,700	120,000	120,000	--	--	--	570	<0.33	<0.33	<0.33	<0.33
Acenaphthylene	2,300 ³	61,000 ³	61,000 ³	--	--	--	85 ³	<0.33	<0.33	<0.33	<0.33
Anthracene	23,000	610,000	610,000	--	--	--	12000	<0.33	<0.33	<0.33	<0.33
Benzidine	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Benzo(a)anthracene	1.8 ²	8	170	--	--	--	2	<0.33	<0.33	<0.33	<0.33
Benzo(a)pyrene	2.1 ²	2.1 ²	17	--	--	--	8	<0.09	<0.09	<0.09	<0.09
Benzo(b)fluoranthene	2.1 ²	8	170	--	--	--	5	<0.33	<0.33	<0.33	<0.33
Benzo(k)fluoranthene	1.7	78	1,700	--	--	--	49	<0.33	<0.33	<0.33	<0.33
Benzo(ghi)perylene	2,300 ³	61,000 ³	61,000 ³	--	--	--	27,000 ³	<0.33	<0.33	<0.33	<0.33
Benzoic acid	310,000	1,000,000	820,000	--	--	--	400	<0.33	<0.33	<0.33	<0.33
Benzyl alcohol	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
bis(2-Chloroethoxy)methane	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
bis(2-Chloroethyl)ether	0.60	5	75	0.2	0.47	0.66	0.0004	<0.33	<0.33	<0.33	<0.33
bis(2-Chloroisopropyl)ether	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
bis(2-Ethylhexyl)phthalate	46	410	4,100	31000	31000	31000	3600	<0.33	<0.33	<0.33	<0.33
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Butyl benzyl phthalate	16,000	410,000	410,000	930	930	930	930	<0.33	<0.33	<0.33	<0.33
Carbazole	32	290	6,200	--	--	--	0.6	<0.33	<0.33	<0.33	<0.33
4-Chloroaniline	310	8,200	820	--	--	--	0.7	<0.33	<0.33	<0.33	<0.33
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
2-Chloronaphthalene	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
2-Chlorophenol	390	10,000	10,000	53000	53000	53000	4	<0.33	<0.33	<0.33	<0.33
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Chrysene	88	780	17,000	--	--	--	160	<0.33	<0.33	<0.33	<0.33
Dibenzo(a,h)anthracene	0.42 ²	0.8	17	--	--	--	2	<0.09	<0.09	<0.09	<0.09
Dibenzofuran	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
1,2-Dichlorobenzene	7,000	180,000	18,000	560	560	310	17	<0.33	<0.33	<0.33	<0.33
1,3-Dichlorobenzene	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
1,4-Dichlorobenzene	--	--	--	11000	17000	340	2	<0.33	<0.33	<0.33	<0.33
3,3'-Dichlorobenzidine	1.0	13	280	--	--	--	0.007	<0.66	<0.66	<0.66	<0.66
2,4-Dichlorophenol	230	6,100	610	--	--	--	1	<0.33	<0.33	<0.33	<0.33
Diethyl phthalate	63,000	1,000,000	1,000,000	2000	2000	2000	470	<0.33	<0.33	<0.33	<0.33
2,4-Dimethylphenol	1,600	41,000	41,000	--	--	--	9	<0.33	<0.33	<0.33	<0.33
Dimethyl phthalate	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Di-n-butyl phthalate	7,800	200,000	200,000	2300	2300	2300	2300	<0.33	<0.33	<0.33	<0.33
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
2,4-Dinitrophenol	160	4,100	410	--	--	--	0.2	<1.6	<1.6	<1.6	<1.6
2,4-Dinitrotoluene	0.90	8.4	180	--	--	--	0.0008	<0.25	<0.25	<0.25	<0.25
2,6-Dinitrotoluene	0.90	8.4	180	--	--	--	0.0007	<0.26	<0.26	<0.26	<0.26
Di-n-octylphthalate	1,600	41,000	4,100	10000	10000	10000	10000	<0.33	<0.33	<0.33	<0.33
Fluoranthene	3,100	82,000	82,000	--	--	--	4300	<0.33	<0.33	<0.33	<0.33
Fluorene	3,100	82,000	82,000	--	--	--	560	<0.33	<0.33	<0.33	<0.33
Hexachlorobenzene	0.4	4	78	1.0	1.8	2.6	2	<0.33	<0.33	<0.33	<0.33
Hexachlorobutadiene	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Hexachlorocyclopentadiene	550	14,000	14,000	10	16	1.1	400	<0.33	<0.33	<0.33	<0.33
Hexachloroethane	78	2,000	2,000	--	--	--	0.5	<0.33	<0.33	<0.33	<0.33
Indeno(1,2,3-cd)pyrene	1.6 ²	8	170	--	--	--	14	<0.33	<0.33	<0.33	<0.33
Isophorone	15,600	410,000	410,000	4600	4600	46000	8	<0.33	<0.33	<0.33	<0.33
2-Methylnaphthalene	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
2-Methylphenol	3,900	100,000	100,000	--	--	--	15	<0.33	<0.33	<0.33	<0.33
3 & 4-Methylphenol	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Naphthalene	1,600	41,000	4,100	170	270	1.8	12	<0.33	<0.33	<0.33	<0.33
2-Nitroaniline	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
3-Nitroaniline	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
4-Nitroaniline	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
Nitrobenzene	39	1,000	1,000	92	140	9.4	0.1	<0.26	<0.26	<0.26	<0.26
2-Nitrophenol	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
4-Nitrophenol	--	--	--	--	--	--	--	<1.6	<1.6	<1.6	<1.6
n-Nitrosodi-n-propylamine	0	1	18	--	--	--	0.00005	<0.09	<0.09	<0.09	<0.09
n-Nitrosodimethylamine	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
n-Nitrosodiphenylamine	130	1,200	25,000	--	--	--	1.0	<0.33	<0.33	<0.33	<0.33
Pentachlorophenol	3.0	24	520	--	--	--	0.03	<0.33	<0.33	<0.33	<0.33
Phenanthrene	2,300 ³	61,000 ³	61,000 ³	--	--	--	210 ³	<0.33	<0.33	<0.33	<0.33
Phenol	23,000	610,000	61,000	--	--	--	100	<0.33	<0.33	<0.33	<0.33
Pyrene	2300	61000	61000	--	--	--	4200	<0.33	<0.33	<0.33	<0.33
Pyridine	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
1,2,4-Trichlorobenzene	780	20000	2000	3200	3200	920	5	<0.33	<0.33	<0.33	<0.33
2,4,5-Trichlorophenol	7800	200000	200000	--	--	--	270	<0.33	<0.33	<0.33	<0.33
2,4,6-Trichlorophenol	58	520	11000	200	390	540	0.2	<0.33	<0.33	<0.33	<0.33

¹Refers to Remedial Objective (RO) from Tables A and B, Appendix B, Part 742 - TACO

²Refers to background concentration from 35 IAC 742, Appendix A, Table H within a populated area in an MSA (excluding Chicago)

³Value listed on rescinded non-TACO Table established by Illinois EPA (revision date: 10/30/12) and formerly located at <http://www.epa.illinois.gov/topics/cleanup-programs/taco/other-chemicals/index>. Value is provided as a tool for comparison and is not a TACO Tier 1 RO.

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable RO

--- Constituent for which RO has not been established

Note: Table only includes samples analyzed for PNAs

Note: Tier 1 ROs have not been established for acenaphthylene, benzo(g,h,i)perylene, or phenanthrene; background concentrations within a populated area in an MSA (excluding Chicago) established as 0.07 mg/kg, 1.7 mg/kg, and 2.5 mg/kg, respectively

**TABLE 3-5
SOIL SAMPLE SVOC RESULTS COMPARED TO THE MACs FOR CCDD DISPOSAL**

Soil Boring	Maximum Allowable Concentration ¹				SB-5	SB-15	SB-17	SB-22
	Within Chicago Corporate Limits	Within a Populated Area in a MSA Excluding Chicago	Within a Populated Area in a non-MSA County	Outside a Populated Area				
Depth, ft					1-3	1-3	1-3	1-3
Constituent	-----mg/kg-----							
Acenaphthene	570	570	570	570	<0.33	<0.33	<0.33	<0.33
Acenaphthylene	85	85	85	85	<0.33	<0.33	<0.33	<0.33
Anthracene	12000	12000	12000	12000	<0.33	<0.33	<0.33	<0.33
Benzo(a)anthracene	1.1 ²	1.8 ²	0.9	0.9	<0.33	<0.33	<0.33	<0.33
Benzo(a)pyrene	1.3 ²	2.1 ²	0.98 ²	0.09	<0.09	<0.09	<0.09	<0.09
Benzo(b)fluoranthene	1.5 ²	2.1 ²	0.9	0.9	<0.33	<0.33	<0.33	<0.33
Benzo(k)fluoranthene	9	9	9	9	<0.33	<0.33	<0.33	<0.33
Benzo(ghi)perylene	2300	2300	2300	2300	<0.33	<0.33	<0.33	<0.33
Benzoic acid	400	400	400	400	<0.33	<0.33	<0.33	<0.33
bis(2-Chloroethyl)ether	0.66	0.66	0.66	0.66	<0.33	<0.33	<0.33	<0.33
bis(2-Ethylhexyl)phthalate	46	46	46	46	<0.33	<0.33	<0.33	<0.33
Butyl benzyl phthalate	930	930	930	930	<0.33	<0.33	<0.33	<0.33
Carbazole	0.6	0.6	0.6	0.6	<0.33	<0.33	<0.33	<0.33
4-Chloroaniline	0.7	0.7	0.7	0.7	<0.33	<0.33	<0.33	<0.33
2-Chlorophenol	1.5	1.5	1.5	1.5	<0.33	<0.33	<0.33	<0.33
Chrysene	88	88	88	88	<0.33	<0.33	<0.33	<0.33
Dibenzo(a,h)anthracene	0.20 ²	0.42 ²	0.15 ²	0.09	<0.09	<0.09	<0.09	<0.09
1,2-Dichlorobenzene	17	17	17	17	<0.33	<0.33	<0.33	<0.33
1,4-Dichlorobenzene	2	2	2	2	<0.33	<0.33	<0.33	<0.33
3,3'-Dichlorobenzidine	1.3	1.3	1.3	1.3	<0.66	<0.66	<0.66	<0.66
2,4-Dichlorophenol	0.48	0.48	0.48	0.48	<0.33	<0.33	<0.33	<0.33
Diethyl phthalate	470	470	470	470	<0.33	<0.33	<0.33	<0.33
2,4-Dimethylphenol	9	9	9	9	<0.33	<0.33	<0.33	<0.33
Di-n-butyl phthalate	2300	2300	2300	2300	<0.33	<0.33	<0.33	<0.33
2,4-Dinitrophenol	3.3	3.3	3.3	3.3	<1.6	<1.6	<1.6	<1.6
2,4-Dinitrotoluene	0.25	0.25	0.25	0.25	<0.25	<0.25	<0.25	<0.25
2,6-Dinitrotoluene	0.26	0.26	0.26	0.26	<0.26	<0.26	<0.26	<0.26
Di-n-octylphthalate	1600	1600	1600	1600	<0.33	<0.33	<0.33	<0.33
Fluoranthene	3100	3100	3100	3100	<0.33	<0.33	<0.33	<0.33
Fluorene	560	560	560	560	<0.33	<0.33	<0.33	<0.33
Hexachlorobenzene	0.4	0.4	0.4	0.4	<0.33	<0.33	<0.33	<0.33
Hexachlorocyclopentadiene	1.1	1.1	1.1	1.1	<0.33	<0.33	<0.33	<0.33
Hexachloroethane	0.5	0.5	0.5	0.5	<0.33	<0.33	<0.33	<0.33
Indeno(1,2,3-cd)pyrene	0.9	1.6 ²	0.9	0.9	<0.33	<0.33	<0.33	<0.33
Isophorone	8	8	8	8	<0.33	<0.33	<0.33	<0.33
2-Methylphenol	15	15	15	15	<0.33	<0.33	<0.33	<0.33
Naphthalene	1.8	1.8	1.8	2	<0.33	<0.33	<0.33	<0.33
Nitrobenzene	0.26	0.26	0.26	0.26	<0.26	<0.26	<0.26	<0.26
n-Nitrosodi-n-propylamine	0.0018	0.0018	0.0018	0.0018	<0.09	<0.09	<0.09	<0.09
n-Nitrosodiphenylamine	1	1	1	1	<0.33	<0.33	<0.33	<0.33
Pentachlorophenol	0.02	0.02	0.02	0.02	<0.33	<0.33	<0.33	<0.33
Phenanthrene	210	210	210	210	<0.33	<0.33	<0.33	<0.33
Phenol	100	100	100	100	<0.33	<0.33	<0.33	<0.33
Pyrene	2300	2300	2300	2300	<0.33	<0.33	<0.33	<0.33
1,2,4-Trichlorobenzene	5	5	5	5	<0.33	<0.33	<0.33	<0.33
2,4,5-Trichlorophenol	26	26	26	26	<0.33	<0.33	<0.33	<0.33
2,4,6-Trichlorophenol	0.66	0.66	0.66	0.66	<0.33	<0.33	<0.33	<0.33

¹Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (35 IAC 1100.Subpart F)

²Refers to background concentration from 35 IAC 742, Appendix A, Table H

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable MAC

Note: Table only includes samples analyzed for PNAs

TABLE 3-6
SOIL SAMPLE PNA RESULTS COMPARED TO TIER 1 REMEDIAL OBJECTIVES

Sample ID	Ingestion Exposure Route ¹		Inhalation Exposure Route ¹		Migration to Class 1 Groundwater Exposure Route ¹	SB-2	SB-4	SB-6	SB-7	SB-10	SB-16	SB-19	SB-23	SB-24	SB-24	SB-25	SB-26	
	Residential	Industrial/ Commercial	Residential	Industrial/ Commercial														1-3
Constituents																		
Acenaphthene	4,700	120,000	120,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	2,300 ³	61,000 ³	61,000 ³	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Anthracene	23,000	610,000	610,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(a)anthracene	1.8 ²	8	170	---	---	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	0.012	
Benzo(a)pyrene	2.1 ²	2.1 ²	17	---	---	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	
Benzo(b)fluoranthene	2.1 ²	8	170	---	---	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	
Benzo(k)fluoranthene	9	78	1,700	---	---	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.013	
Benzo(ghi)perylene	2,300 ³	61,000 ³	61,000 ³	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chrysene	88	780	17,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dibenz(a,h)anthracene	0.42 ²	0.8	17	---	---	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Fluoranthene	3,100	82,000	82,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Fluorene	3,100	82,000	82,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Indeno(1,2,3-cd)pyrene	1.6 ²	8	170	---	---	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	
Naphthalene	1,600	41,000	4,100	170	1.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Phenanthrene	2,300 ³	61,000 ³	61,000 ³	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Pyrene	2,300	61,000	61,000	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

¹Refers to Remedial Objective (RO) from Tables A and B, Appendix B, Part 742 - TACO

²Refers to background concentration from 35 IAC 742, Appendix A, Table H within a populated area in an MSA (excluding Chicago)

³Value listed on rescinded non-TACO Table established by Illinois EPA (revision date: 10/30/12) and formerly located at <http://www.epa.illinois.gov/topics/cleanup-programs/faco/other-chemicals/index>. Value is provided as a tool for comparison and is not a TACO Tier 1 RO.

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable RO

--- Constituent for which RO has not been established

Note: Table only includes samples analyzed for PNAs

Note: Tier 1 ROs have not been established for acenaphthylene, benzo(g,h,i)perylene, or phenanthrene; background concentrations within a populated area in an MSA (excluding Chicago) established as 0.07 mg/kg, 1.7 mg/kg, and 2.5 mg/kg, respectively

TABLE 3-7
SOIL SAMPLE PNA RESULTS COMPARED TO THE MACs FOR CCDD DISPOSAL

Sample ID	Maximum Allowable Concentration ¹				mg/kg	SB-2	SB-4	SB-6	SB-7	SB-10	SB-16	SB-19	SB-23	SB-24	SB-24	SB-25	SB-26
	Within Chicago Corporate Limits	Within a MSA Excluding Chicago	Within a Populated Area in a non-MSA County	Outside a Populated Area													
Constituents																	
Acenaphthene	570	570	570	570	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	85	85	85	85	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	12,000	12,000	12,000	12,000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	1.1 ²	1.8 ²	0.9	0.9	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	<0.0087	0.012
Benzo(a)pyrene	1.3 ²	2.1 ²	0.98 ²	0.9	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(b)fluoranthene	1.5 ²	2.1 ²	0.9	0.9	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
Benzo(k)fluoranthene	9	9	9	9	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.013
Benzo(g,h,i)perylene	2,300	2,300	2,300	2,300	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	88	88	88	88	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.20 ²	0.42 ²	0.15 ²	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	3,100	3,100	3,100	3,100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	560	560	560	560	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.9	1.6 ²	0.9	0.9	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029
Naphthalene	1.8	1.8	1.8	1.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Phenanthrene	210	210	210	210	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	2,300	2,300	2,300	2,300	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

¹Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (95 IAC 1100.Subpart F)

²Refers to background concentration from 35 IAC 742, Appendix A, Table H

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable MAC

Note: Table only includes samples analyzed for PNAs

TABLE 3-9
SOIL SAMPLE RCRA METALS RESULTS COMPARED TO THE MACs FOR CCDD DISPOSAL

Soil Boring Depth, ft	SB-2		SB-3		SB-5		SB-7		SB-8		SB-9		SB-10		SB-11		SB-12		SB-15		SB-16		SB-17		SB-23		SB-24		SB-24		SB-25		SB-26				
	Maximum Allowable Concentration ^{a/}	1-3	6.7	5	6.4	6.4	6.4	6.4	6.4	6.6	6.6	11.6	11.6	11.6	6.2	6.4	6.4	11.6	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3			
Arsenic	13	6.7	6.4	5	6.4	6.4	6.4	6.4	6.6	6.6	11.6	11.6	11.6	6.2	6.4	6.4	11.6	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3		
Barium	1,500	60.5	40.9	134	66.7	66.7	66.7	46.7	46.7	46.7	22.7	22.7	22.7	55	63.1	63.1	22.7	64.4	64.4	64.4	64.4	39.7	39.7	39.7	69.7	69.7	69.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2		
Cadmium	5.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	21	18.5	15.8	20.9	18.6	18.6	18.6	17.2	17.2	17.2	13.1	13.1	13.1	15.7	18	18	13.7	18.5	18.5	18.5	14.5	14.5	14.5	21.3	21.3	21.3	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Lead	107	12.7	12.9	11.8	10.9	10.9	10.9	11.8	11.8	11.8	12.5	12.5	12.5	11.4	13.2	13.2	13.7	16.8	16.8	16.8	12.2	12.2	12.2	12.1	12.1	12.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Mercury	0.89	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Selenium	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Silver	4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

^{a/} Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (35 IAC 1100.Subpart F)

^{b/} Refers to MAC value within a populated area in a MSA excluding Chicago

-- Constituent for which sample was not analyzed, or for which no Remedial Objective exists.

**TABLE 3-10
SOIL SAMPLE PESTICIDE/HERBICIDE RESULTS COMPARED TO TIER I REMEDIAL OBJECTIVES**

Sample ID	Ingestion Exposure Route ¹		Inhalation Exposure Route ¹		Migration to Class I Groundwater Exposure Route ¹		SB-6	SB-8	SB-10	SB-13	SB-15	SB-18	SB-20
	Residential	Industrial/ Commercial	Residential	Industrial/ Commercial	Construction Worker	Construction Worker							
Constituent													
alpha-BHC	0.04	0.3	3	6.6	9.3	0.5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
beta-BHC	0.1	0.9	0.8	1.5	2.1	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
delta-BHC	61	---	---	---	---	0.1	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
gamma-BHC (Lindane)	1,000	---	---	---	---	---	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
alpha-Chlordane	1,000	4	---	---	---	---	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
gamma-Chlordane	1.8	16	72	140	22	10	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
4,4'-DDD	1.8	16	72	140	22	10	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
4,4'-DDE	3	24	---	---	---	16	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
4,4'-DDT	2	17	---	---	---	54	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Dieldrin	2	17	---	---	---	32	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endosulfan I	0.04	0.4	1	2.2	3.1	0.004	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endosulfan II	470	12,000	---	---	---	18	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Endosulfan sulfate	---	---	---	---	---	---	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endrin	23	610	---	---	---	---	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endrin aldehyde	---	---	---	---	---	---	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endrin ketone	---	---	---	---	---	---	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Heptachlor	0.1	1	---	---	---	---	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Heptachlor epoxide	0.07	0.6	0.1	11	16	23	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Methoxychlor	390	10,000	5	9.2	13	0.7	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Toxaphene	0.6	5.2	89	170	240	31	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
2,4-Dichlorophenoxyacetic acid (2,4-D)	780	20,000	---	---	---	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Silvex (2,4,5-TP)	630	16,000	---	---	---	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

¹Refers to Remedial Objective (RO) from Tables A and B, Appendix B, Part 742 - TACO

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable RO

--- = Constituent for which sample was not analyzed, or for which RO has not been established

Note: Table only includes samples analyzed for pesticides/herbicides

**TABLE 3-11
SOIL SAMPLE PESTICIDE/HERBICIDE RESULTS COMPARED TO THE MACs FOR CCDD DISPOSAL**

Sample ID	Maximum Allowable Concentration ¹	--mg/kg--							
		SB-6 1-3'	SB-8 1-3'	SB-10 1-3'	SB-13 1-3'	SB-15 1-3'	SB-18 1-3'	SB-20 1-3'	
Constituent									
Aldrin	0.94	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
alpha-BHC	0.007	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
gamma-BHC (Lindane)	0.009	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
alpha-Chlordane	1.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
gamma-Chlordane	1.8	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
4,4'-DDD	3	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
4,4'-DDE	2	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
4,4'-DDT	2	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Dieldrin	0.603	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endosulfan I	18	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Endosulfan II	18	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endosulfan sulfate	18	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Endrin	1	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Heptachlor	0.871	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Heptachlor epoxide	1.005	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Methoxychlor	160	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Toxaphene	0.6	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.85	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Silvex (2,4,5-TP)	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

¹Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (35 IAC 1100.Subpart F)

Bold = Constituent detected above its reporting limit

Bold/Shaded = Constituent detected above its applicable MAC

-- Constituent for which sample was not analyzed

Note: Table only includes samples analyzed for pesticides/herbicides

Note: Table only includes constituents for which a MAC is established

TABLE 3-12
SOIL SAMPLE TCLP CHROMIUM RESULTS COMPARED TO
THE MACs FOR CCDD DISPOSAL

Soil Boring	<i>Maximum Allowable</i>	SB-17	SB-25
Depth, ft	<i>Concentration</i> ^{a/}	1-3'	1-3'
Constituent	-----mg/L-----		
Chromium	<i>0.1</i>	<0.005	<0.005

^{a/} Refers to Maximum Allowable Concentration (MAC) of Chemical Constituents in Uncontaminated Soil Used As Fill Material At Regulated Fill Operations (35 IAC 1100.Subpart F)

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006

Revised: August 1, 2017

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).
SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

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COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the Contractor’s yard or another job and the cost to re-mobilize, whichever is less.

Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13.”

Revise Article 108.04(b) of the Standard Specifications to read:

“(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item.”

Revise Article 109.09(f) of the Standard Specifications to read:

- “(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

“109.13 Payment for Contract Delay. Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
 - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid. For working day contracts the payment will be made according to Article 109.04. For completion date contracts, an adjustment will be determined as follows.

Extended Traffic Control occurs between April 1 and November 30:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times (\% / 100 \times \text{CUP} / \text{OCT})$$

Extended Traffic Control occurs between December 1 and March 31:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times 1.5 (\% / 100 \times \text{CUP} / \text{OCT})$$

Where: TE = Duration of approved time extension in calendar days.

% = Percent maintenance for the traffic control, % (see table below).

CUP = Contract unit price for the traffic control pay item in place during the delay.

OCT = Original contract time in calendar days.

Original Contract Amount	Percent Maintenance
Up to \$2,000,000	65%
\$2,000,000 to \$10,000,000	75%
\$10,000,000 to \$20,000,000	85%
Over \$20,000,000	90%

When an ETCP adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected.

Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

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DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: January 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 that 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 that 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 that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 20.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents that 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 required prior to the award of the contract and failure of the low bidder to comply will render the bid not responsive.

- (a) The low 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, within five calendar days after the date of the letting. To meet the five-day requirement, the bidder must submit the required forms as a single .pdf file using the Department's "Vendor Portal".

The Department will not accept the 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. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the low bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that 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. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that 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 that 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 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 prime 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 subsection (c)(6) of 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 that the apparent successful 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 that it is otherwise eligible for award. If the

Department determines that 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 shall include a statement of reasons for the 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 in order to cure the deficiency.

- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217) 785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. 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 forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order 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 prime 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 submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (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, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that 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 DBE subcontracts to IDOT 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) That 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) That the DBE is aware that 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) That 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 prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime 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) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice 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 prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime 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 shall 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 thirty 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 that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

- (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

80029

DISPOSAL FEES (BDE)

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
 - b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - c. Quantities of materials, prices and extensions.
 - d. Transportation of materials.
 - e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.
- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

80402

EQUIPMENT PARKING AND STORAGE (BDE)

Effective: November 1, 2017

Replace the first paragraph of Article 701.11 of the Standard Specifications with the following.

“701.11 Equipment Parking and Storage. During working hours, all vehicles and/or nonoperating equipment which are parked, two hours or less, shall be parked at least 8 ft (2.5 m) from the open traffic lane. For other periods of time during working and for all nonworking hours, all vehicles, materials, and equipment shall be parked or stored as follows.

- (a) When the project has adequate right-of-way, vehicles, materials, and equipment shall be located a minimum of 30 ft (9 m) from the pavement.
- (b) When adequate right-of-way does not exist, vehicles, materials, and equipment shall be located a minimum of 15 ft (4.5 m) from the edge of any pavement open to traffic.
- (c) Behind temporary concrete barrier, vehicles, materials, and equipment shall be located a minimum of 24 in. (600 mm) behind free standing barrier or a minimum of 6 in. (150 mm) behind barrier that is either pinned or restrained according to Article 704.04. The 24 in. or 6 in. measurement shall be from the base of the non-traffic side of the barrier.
- (d) Behind other man-made or natural barriers meeting the approval of the Engineer.”

80388

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: August 1, 2018

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

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

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

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

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

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

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

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%”
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80246

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: August 1, 2018

Revised: January 1, 2019

Add the following to Article 406.02 of the Standard Specifications.

“(d) Longitudinal Joint Sealant (LJS)1032”

Add the following to Article 406.03 of the Standard Specifications.

“(k) Longitudinal Joint Sealant (LJS) Pressure Distributor (Note 2)

(l) Longitudinal Joint Sealant (LJS) Melter Kettle (Note 3)

Note 2. When a pressure distributor is used to apply the LJS, the distributor shall be equipped with a heating and recirculating system along with a functioning auger agitating system or vertical shaft mixer in the hauling tank to prevent localized overheating. The distributor shall be equipped with a guide or laser system to aid in proper placement of the LJS application.

Note 3. When a melter kettle is used to transport and apply the LJS, the melter kettle shall be an oil jacketed double-boiler with agitating and recirculating systems. Material from the kettle may be dispensed through a pressure feed wand with an applicator shoe or through a pressure feed wand into a hand-operated thermal push cart.”

Revise Article 406.06(g)(2) of the Standard Specifications to read:

“(2) Longitudinal Joints. Unless prohibited by stage construction, any HMA lift shall be complete before construction of the subsequent lift. The longitudinal joint in all lifts shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

When stage construction prohibits the total completion of a particular lift, the longitudinal joint in one lift shall be offset from the longitudinal joint in the preceding lift by not less than 3 in. (75 mm). The longitudinal joint in the surface course shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

A notched wedge longitudinal joint shall be used between successive passes of HMA binder course that has a difference in elevation of greater than 2 in. (50 mm) between lanes on pavement that is open to traffic.

The notched wedge longitudinal joint shall consist of a 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the lane line, a 9 to 12 in. (230 to 300 mm) wide uniform taper sloped toward and extending into the open lane, and a second 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the outside edge.

The notched wedge longitudinal joint shall be formed by the strike off device on the paver. The wedge shall then be compacted by the joint roller.

Tack coat shall be applied to the entire surface of the notched wedge joint immediately prior to placing the adjacent lift of binder. The material shall be uniformly applied at a rate of 0.05 to 0.1 gal/sq yd (0.2 to 0.5 L/sq m).

When the use of LJS is specified, it shall be applied for the lift(s) of paving as shown on the plans. The surface to which the LJS is applied shall be dry and cleaned of all dust, debris, and any substances that will prevent the LJS from adhering. Cleaning shall be accomplished by means of a sweeper/vacuum truck, power broom, air compressor or by hand. The LJS may be placed before or after the tack or prime coat. When placed after the tack or prime coat, the tack or prime shall be fully cured prior to placement of the LJS.

The LJS shall be centered ± 2 in. (± 50 mm) under the joint of the next HMA lift to be constructed.

The width and minimum application rate of LJS shall be according to the following table.

LJS Application Table		
Overlay Thickness in. (mm)	LJS Width in. (mm)	Application Rate ^{1/} lb/ft (kg/m)
HMA Mixtures		
3/4 (19)	18 (450)	0.88 (1.31)
1 (25)	18 (450)	1.15 (1.71)
1 1/4 (32)	18 (450)	1.31 (1.95)
1 1/2 (38)	18 (450)	1.47 (2.19)
1 3/4 (44)	18 (450)	1.63 (2.43)
2 (50)	18 (450)	1.80 (2.68)
2 1/4 (60)	18 (450)	1.96 (2.92)
2 1/2 (63)	18 (450)	2.12 (3.16)
2 3/4 (70)	18 (450)	2.29 (3.41)
3 (75)	18 (450)	2.45 (3.65)
3 1/4 (83)	18 (450)	2.61 (3.89)
3 1/2 (90)	18 (450)	2.78 (4.14)
3 3/4 (95)	18 (450)	2.94 (4.38)
4 (100)	18 (450)	3.10 (4.62)
SMA Mixtures		
1 1/2 (38)	18 (450)	1.26 (1.88)
1 3/4 (44)	18 (450)	1.38 (2.06)

2 (50)	18 (450)	1.51 (2.25)
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- 1/ The application rate has a surface demand for liquid included within it. The thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application, provided the correct width and application rate are maintained.

The Contractor shall furnish to the Engineer a bill of lading for each tanker supplying material to the project. The application rate of LJS shall be verified within the first 1000 ft (300 m) of the day's scheduled application length and every 12,000 ft (3600 m) the remainder of the day. For projects less than 3000 ft (900 m), the rate shall be verified once. A suitable paper or pan shall be placed at a random location in the path of the LJS. After application of the LJS, the paper or pan shall be picked up, weighed, and the application rate calculated. The tolerance between the application rate shown in the LJS Application Table and the calculated rate shall be ± 15 percent. The Contractor shall replace the LJS in the area where the sample was taken.

A 1 qt (1 L) sample shall be taken from the pressure distributor or melting kettle at the jobsite once for each contract and sent to the Central Bureau of Materials.

The LJS shall be applied in a single pass with a pressure distributor, melter kettle, or hand applied from a roll for HMA lifts up to 2 in. (50 mm) in thickness. The LJS shall be applied in two passes for HMA lifts between 2 and 4 in. (50 and 100 mm) in thickness. At the time of installation, the pavement surface temperature and the ambient temperature shall be a minimum of 40 °F (4 °C) and rising.

The LJS shall be applied at a width of not less than or greater than 1 1/2 in. (38 mm) of the width specified. If the LJS flows more than 2 in. (50 mm) from the initial placement width, LJS placement shall stop and remedial action shall be taken.

When starting another run of LJS placement, suitable release paper shall be placed over the previous application of LJS to prevent doubling up of thickness of LJS.

The LJS shall be suitable for construction traffic to drive on without pickup or tracking of the LJS within 30 minutes of placement. If pickup or tracking occurs, LJS placement shall stop and damaged areas shall be repaired.

Prior to paving, the Contractor shall ensure the paver end plate and grade control device is adequately raised above the finished height of the LJS.

The LJS shall not flush to the final surface of the HMA pavement."

Add the following paragraph after the second paragraph of Article 406.13(b) of the Standard Specifications.

“Application of longitudinal joint sealant (LJS) will be measured for payment in place in feet (meters).”

Add the following paragraph after the first paragraph of Article 406.14 of the Standard Specifications.

“Longitudinal joint sealant will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT.”

Add the following to Section 1032 of the Standard Specifications.

“1032.12 Longitudinal Joint Sealant (LJS). Longitudinal joint sealant (LJS) will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, “Performance Graded Asphalt Binder Acceptance Procedure” with the following exceptions: Article 3.1.9 and 3.4.1.4 of the policy memorandum will be excluded. The bituminous material used for the LJS shall be according to the following table. Elastomers shall be added to a base asphalt and shall be either a styrene-butadiene diblock or triblock copolymer without oil extension, or a styrene-butadiene rubber. Air blown asphalt, acid modification, or other modifiers will not be allowed. LJS in the form of pre-formed rollout banding may also be used.

Test	Test Requirement	Test Method
Dynamic shear @ 88°C (unaged), G*/sin δ, kPa	1.00 min.	AASHTO T 315
Creep stiffness @ -18°C (unaged), Stiffness (S), MPa m-value	300 max. 0.300 min.	AASHTO T 313
Ash, %	1.0 – 4.0	AASHTO T 111
Elastic Recovery, 100 mm elongation, cut immediately, 25°C, %	70 min.	ASTM D 6084 (Procedure A)
Separation of Polymer, Difference in °C of the softening point (ring and ball)	3 max.	ITP Separation of Polymer from Asphalt Binder”

80398

HOT-MIX ASPHALT – OSCILLATORY ROLLER (BDE)

Effective: August 1, 2018
 Revised: November 1, 2018

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller 1101.01”

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

“TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Level Binder: (When the density requirements of Article 406.05(c) do not apply.)	P ^{3/}	--	V _S , P ^{3/} , T _B , T _F , 3W, O _T	To the satisfaction of the Engineer.
Binder and Surface ^{1/} Level Binder ^{1/} : (When the density requirements of Article 406.05(c) apply.)	V _D , P ^{3/} , T _B , 3W, O _T , O _B	P ^{3/} , O _T , O _B	V _S , T _B , T _F , O _T	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
IL-4.75 and SMA ^{4/5/}	T _B , 3W, O _T	--	T _F , 3W, O _T	
Bridge Decks ^{2/}	T _B	--	T _F	As specified in Articles 582.05 and 582.06.

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

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

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

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

Add the following to Article 1101.01 of the Standard Specifications:

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

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm)48 in. (1200 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm)66 in. (1650 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN).”; and
- (5) Self-adjusting eccentrics, and reversible eccentrics on non-driven drum(s).”

80399

HOT-MIX ASPHALT – TACK COAT (BDE)

Effective: November 1, 2016

Revise Article 1032.06(a) of the Standard Specifications to read:

“(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts shall be according to AASHTO M 140. SS-1h emulsions used as a tack coat shall have the cement mixing test waived.”

80376

LIGHTS ON BARRICADES (BDE)

Effective: January 1, 2018

Revise Article 701.16 of the Standard Specifications to read:

“701.16 Lights. Lights shall be used on devices as required in the plans, the traffic control plan, and the following table.

Circumstance	Lights Required
Daylight operations	None
First two warning signs on each approach to the work involving a nighttime lane closure and “ROUGH GROOVED SURFACE” (W8-I107) signs	Flashing mono-directional lights
Devices delineating isolated obstacles, excavations, or hazards at night (Does not apply to patching)	Flashing bi-directional lights
Devices delineating obstacles, excavations, or hazards exceeding 100 ft (30 m) in length at night (Does not apply to widening)	Steady burn bi-directional lights
Channelizing devices for nighttime lane closures on two-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads separating opposing directions of traffic	None
Channelizing devices for nighttime along lane shifts on multilane roads	Steady burn mono-directional lights
Channelizing devices for night time along lane shifts on two lane roads	Steady burn bi-directional lights
Devices in nighttime lane closure tapers on Standards 701316 and 701321	Steady burn bi-directional lights
Devices in nighttime lane closure tapers	Steady burn mono-directional lights
Devices delineating a widening trench	None
Devices delineating patches at night on roadways with an ADT less than 25,000	None
Devices delineating patches at night on roadways with an ADT of 25,000 or more	None

Batteries for the lights shall be replaced on a group basis at such times as may be specified by the Engineer.”

Delete the fourth sentence of the first paragraph of Article 701.17(c)(2) of the Standard Specifications.

Revise the first paragraph of Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and Class SI concrete has been placed, the work shall be protected by a barricade for at least 72 hours.”

80392

PAVEMENT MARKING REMOVAL (BDE)

Effective: July 1, 2016

Revise Article 783.02 of the Standard Specifications to read:

“783.02 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Grinders (Note 1)	
(b) Water Blaster with Vacuum Recovery	1101.12

Note 1. Grinding equipment shall be approved by the Engineer.”

Revise the first paragraph of Article 783.03 of the Standard Specifications to read:

“783.03 Removal of Conflicting Markings. Existing pavement markings that conflict with revised traffic patterns shall be removed. If darkness or inclement weather prohibits the removal operations, such operations shall be resumed the next morning or when weather permits. In the event of removal equipment failure, such equipment shall be repaired, replaced, or leased so removal operations can be resumed within 24 hours.”

Revise the first and second sentences of the first paragraph of Article 783.03(a) of the Standard Specifications to read:

“The existing pavement markings shall be removed by the method specified and in a manner that does not materially damage the surface or texture of the pavement or surfacing. Small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage.”

Revise the first paragraph of Article 783.04 of the Standard Specifications to read:

“783.04 Cleaning. The roadway surface shall be cleaned of debris or any other deleterious material by the use of compressed air or water blast.”

Revise the first paragraph of Article 783.06 of the Standard Specifications to read:

“783.06 Basis of Payment. This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, or at the contract unit price per square foot (square meter) for PAVEMENT MARKING REMOVAL – GRINDING and/or PAVEMENT MARKING REMOVAL – WATER BLASTING.”

Delete Article 1101.13 from the Standard Specifications.

80371

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: November 2, 2017

Add the following to the end of the fourth paragraph of Article 109.11 of the Standard Specifications:

“If reasonable cause is asserted, written notice shall be provided to the applicable subcontractor and/or material supplier and the Engineer within five days of the Contractor receiving payment. The written notice shall identify the contract number, the subcontract or material purchase agreement, a detailed reason for refusal, the value of payment being withheld, and the specific remedial actions required of the subcontractor and/or material supplier so that payment can be made.”

80390

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2017

Revise the Air Content % of Class PP Concrete in Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA		
Class of Conc.	Use	Air Content %
PP	Pavement Patching Bridge Deck Patching (10)	
	PP-1	4.0 - 8.0"
	PP-2	
	PP-3	
	PP-4	
	PP-5	

Revise Note (4) at the end of Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

“(4) For all classes of concrete, the maximum slump may be increased to 7 in (175 mm) when a high range water-reducing admixture is used. For Class SC, the maximum slump may be increased to 8 in. (200 mm). For Class PS, the maximum slump may be increased to 8 1/2 in. (215 mm) if the high range water-reducing admixture is the polycarboxylate type.”

80389

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

“(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

RAILROAD PROTECTIVE LIABILITY INSURANCE (BDE)

Effective: December 1, 1986

Revised: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications. A separate policy is required for each railroad unless otherwise noted.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Progressive Rail Incorporated 21778 Highview Avenue Lakeville, MN 55428	0	2 at 5 MPH

DOT/AAR No.: See below
RR Division:

RR Mile Post: See below
RR Sub-Division:

For Freight/Passenger Information Contact: Tim Fuhrer
For Insurance Information Contact: Nik Shepard

Phone: 847-856-9537
Phone: 715-379-4686

DOT/AAR No.:	RR Mile Post:
174080B	8.98
174067M	9.05
174069B	9.07
174071C	9.09
174073R	9.11
174075E	8.93
147077T	8.95

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

3426I

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revise Section 669 of the Standard Specifications to read:

“SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and groundwater. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-construction Submittals. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a Regulated Substance Pre-Construction Plan (RSPCP) to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the qualifications of Contractor(s) or firm(s) performing the following work shall be listed.

- (a) On-Site Monitoring. Qualification for on-site monitoring of regulated substance work and on-site monitoring of UST removal requires either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and special waste operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements.

Qualification for each individual performing on-site monitoring requires a minimum of one-year of experience in similar activities as those required for the project.

(b) Underground Storage Tank. Qualification for underground storage tank (UST) work requires licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 30 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 30 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field.

CONSTRUCTION REQUIREMENTS

669.04 Contaminated Soil and/or Groundwater Monitoring. Prior to beginning excavation, the Contractor shall mark the limits of removal for approval by the Engineer. Once excavation begins, the work and work area involving regulated substances shall be monitored by qualified personnel. The qualified personnel shall be on-site continuously during excavation and loading of material containing regulated substances. The qualified personnel shall be equipped with either a photoionization detector (PID) (minimum 10.6eV lamp), or a flame ionization detector (FID), and other equipment, as appropriate, to monitor for potential contaminants associated with volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs). The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily, and as field and weather conditions change. Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

The qualified personnel shall document field activities using form BDE 2732 (Regulated Substances Monitoring Daily Record) including the name(s) of personnel conducting the monitoring, weather conditions, PID or FID calibration records, a list of equipment used on-site, a narrative of activities completed, photo log sheets, manifests and landfill tickets, monitoring results, how regulated substances were managed and other pertinent information.

Samples will be collected in accordance with the RSPCP. Samples shall be analyzed for the contaminants of concern (COCs), including pH, based on the property's land use history, the encountered abnormality and/or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605. The analytical results shall serve to document the level of contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, collection location and depth, and any other relevant observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846; "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039; and "Methods for the Determination of Organic Compounds in Drinking Water, Supplement III", EPA 600/R-95/131, August 1995. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective.

669.05 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
 - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an USFO within an MSA County excluding Chicago or within

- the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as “uncontaminated soil” at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the construction limits or managed and disposed off-site as “uncontaminated soil” according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.
- (1) The pH of the soil is less than 6.25 or greater than 9.0.
 - (2) The soil exhibited PID or FID readings in excess of background levels.
- (c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 IAC 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way or managed and disposed off-site as “uncontaminated soil” according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.
- (d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste. The groundwater shall be containerized and trucked to an off-site treatment facility or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sewer.

All groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is

prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall be responsible for transporting and disposing all material classified as a non-special waste, special waste, or hazardous waste from the job site to an appropriately permitted landfill facility. The transporter and the vehicles used for transportation shall comply with all federal, state, and local rules and regulations governing the transportation of non-special waste, special waste, or hazardous waste.

All equipment used by the Contractor to haul contaminated material to the landfill facility shall be lined with a 6 mil (150 micron) polyethylene liner and securely covered during transportation. The Contractor shall obtain all documentation including any permits and/or licenses required to transport the contaminated material to the disposal facility.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Engineer shall coordinate with the Contractor on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate for waste disposal approval with the disposal facility. After the Contractor completes these activities and upon receipt of authorization from the Engineer, the Contractor shall initiate the disposal process.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). The Engineer shall maintain the file for all such documentation. For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation the Contractor (or subcontractor, if a subcontractor is used for transportation) is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

The Contractor shall schedule and arrange the transport and disposal of each load of contaminated material produced. The Contractor shall make all transport and disposal arrangements so no contaminated material remains within the project area at the close of business each day. Exceptions to this specification require prior approval from the Engineer within 24 hours of close of business. The Contractor shall be responsible for all other pre-disposal/transport preparations necessary daily to accomplish management activities.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill mandated by definition of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by definition of the contaminant and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The Contractor shall be responsible for coordinating permits with the IEPA. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 IAC 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 IAC 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;

- (6) a material subject to the waste analysis and recordkeeping requirements of 35 IAC 728.107 under land disposal restrictions of 35 IAC 728;
 - (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
 - (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.
- (b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:
- (1) the means by which the generator has determined the waste is not a hazardous waste;
 - (2) the means by which the generator has determined the waste is not a liquid;
 - (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
 - (4) if the waste does not undergo testing, an explanation as to why no testing is needed;
 - (5) a description of the process generating the waste; and
 - (6) relevant material safety data sheets.

669.07 Temporary Staging. The Contractor shall excavate and dispose of all waste material as mandated by the contaminants without temporary staging. If circumstances require temporary staging, he/she shall request in writing, approval from the Engineer.

When approved, the Contractor shall prepare a secure location within the project area capable of housing containerized waste materials. The Contractor shall contain all waste material in leak-proof storage containers such as lined roll-off boxes or 55 gal (208 L) drums, or stored in bulk fashion on storage pads. The design and construction of such storage pad(s) for bulk materials shall be subject to approval by the Engineer. The Contractor shall place the staged storage containers on an all-weather gravel-packed, asphalt, or concrete surface. The Contractor shall maintain a clearance both above and beside the storage units to provide maneuverability during loading and unloading. The Contractor shall provide any assistance or equipment requested by the Engineer for authorized personnel to inspect and/or sample contents of each storage container. All containers and their contents shall remain intact and undisturbed by unauthorized persons until the manner of disposal is determined. The Contractor shall keep the storage containers covered, except when access is requested by authorized personnel of the Department. The Engineer shall authorize any additional material added to the contents of any storage container before being filled.

The Contractor shall ensure the staging area is enclosed (by a fence or other structure) to ensure direct access to the area is restricted, and he/she shall procure and place all required regulatory identification signs applicable to an area containing the waste material. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall clearly mark all containers in permanent marker or paint with the date of waste generation, location and/or area of waste generation, and type of waste (e.g., decontamination water, contaminated clothing, etc.). The Contractor shall place these identifying markings on an exterior side surface of the container. The Contractor shall separately containerize each contaminated medium, i.e. contaminated clothing is placed in a separate container from decontamination water. Containers used to store liquids shall not be filled in excess of 80 percent of the rated capacity. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could classify the material as a hazardous waste in the container.

The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining all permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Adm. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport,

and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Adm. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the DESU. Upon confirmation of a release of contaminants from the UST and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the UST is located and the DESU Manager);

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements).

The UST excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. The material shall be approved prior to placement. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substance Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a Regulated Substance Final Construction Report (RSFCR) to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

On-site monitoring of regulated substances, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof, for ON-SITE MONITORING OF REGULATED SUBSTANCES.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of removing a UST, soil excavation, soil and content sampling, and the excavated soil, UST content, and UST disposal will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging, if required, will be paid for according to Article 109.04.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

The sampling and testing associated with this work will be paid for as follows.

- (a) BETX Soil/Groundwater Analysis. When the contaminants of concern are gasoline only, soil or groundwater samples shall be analyzed for benzene, ethylbenzene, toluene, and xylenes (BETX). The analysis will be paid for at the contract unit price per each for BETX SOIL ANALYSIS and/or BETX GROUNDWATER ANALYSIS using EPA Method 8021B.
- (b) BETX-PNAS Soil/Groundwater Analysis. When the contaminants of concern are middle distillate and heavy ends, soil or groundwater samples shall be analyzed for BETX and polynuclear aromatics (PNAS). The analysis will be paid for at the contract unit price per each for BETX-PNAS SOIL ANALYSIS and/or BETX-PNAS GROUNDWATER ANALYSIS using EPA Method 8021B for BETX and EPA Method 8310 for PNAS.
- (c) Priority Pollutants Soil Analysis. When the contaminants of concern are used oils, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and using an ICP instrument and EPA Methods 6010B and 7471A for metals.
- (d) Priority Pollutant Groundwater Analysis. When the contaminants of concern are used oils, non-petroleum material, or unknowns, groundwater samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS GROUNDWATER ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and EPA Methods 6010B and 7470A for metals.
- (e) Target Compound List (TCL) Soil Analysis. When the contaminants of concern are unknowns or non-petroleum material, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, priority pollutants metals, pesticides, and Resource Conservation and Recovery Act (RCRA) metals by the toxicity characteristic leaching procedure (TCLP). The analysis will be paid for at the contract unit price per each for TCL SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs,

EPA Method 8081 for pesticides, and ICP instrument and EPA Methods 6010B, 7471A, 1311 (extraction), 6010B, and 7470A for metals.

- (f) Soil Disposal Analysis. When the waste material for disposal requires sampling for disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT.”

80407

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: August 1, 2017

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling) Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness Other piling	23 lb/ft (34 kg/m) 32 lb/ft (48 kg/m) 37 lb/ft (55 kg/m) See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail Steel Plate Beam Guardrail, Type A w/steel posts Steel Plate Beam Guardrail, Type B w/steel posts Steel Plate Beam Guardrail, Types A and B w/wood posts Steel Plate Beam Guardrail, Type 2 Steel Plate Beam Guardrail, Type 6 Traffic Barrier Terminal, Type 1 Special (Tangent) Traffic Barrier Terminal, Type 1 Special (Flared)	20 lb/ft (30 kg/m) 30 lb/ft (45 kg/m) 8 lb/ft (12 kg/m) 305 lb (140 kg) each 1260 lb (570 kg) each 730 lb (330 kg) each 410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms Traffic Signal Post Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m) Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m) Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m) Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m) Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m) Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m) Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	11 lb/ft (16 kg/m) 14 lb/ft (21 kg/m) 21 lb/ft (31 kg/m) 13 lb/ft (19 kg/m) 19 lb/ft (28 kg/m) 31 lb/ft (46 kg/m) 65 lb/ft (97 kg/m) 80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence) Steel Railing, Type SM Steel Railing, Type S-1 Steel Railing, Type T-1 Steel Bridge Rail	64 lb/ft (95 kg/m) 39 lb/ft (58 kg/m) 53 lb/ft (79 kg/m) 52 lb/ft (77 kg/m)
Frames and Grates Frame Lids and Grates	250 lb (115 kg) 150 lb (70 kg)

80127

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

80397

SUBCONTRACTOR MOBILILATION PAYMENTS (BDE)

Effective: November 2, 2017

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%

80391

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 1 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor’s needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor’s records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).
WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

| Revised: April 2, 2015

| The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

| The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor

performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection

for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#).

The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a

separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice

performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.