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Proactive by Design.
Our Company Commitment.

FINAL PRELIMINARY SITE INVESTIGATION REPORT

US ROUTE 20 & IL ROUTE 59
BARTLETT AND STREAMWOOD
COOK COUNTY, IL

IDOT Job No.: D-91-103-16
Project Job No.: P-91-385-10
District: 1
County: Cook
Municipality: Bartlett, Streamwood
Route: FAP 345
Marked: US Route 20
Street: Lake Street
From To/At: @ IL Route 59

PTB: 178-008 / HH-1
Work Order No.: 002A
BDE Sequence No.: 16955B
Requesting Agency: DOH
Contract No.: 60V57
Section No.: 7K-1(12)
ISGS PESA No.: 2531V
Letting Date: 9/22/17
Final PSI Completion: 8/18/17

Date: August 25, 2017
File No. 81.0220509.04

Huff & Huff, A Subsidiary of GZA
915 Harger Road | Oak Brook, IL 60523
630-648-9100

GZA has 28 Offices Nationwide
www.huffnhuff.com www.gza.com

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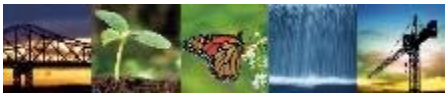

August 25, 2017 Via IDOT Extranet

Mr. Issam Rayyan
Illinois Department of Transportation, District One
Bureau of Design and Environment
201 West Center Court
Schaumburg, Illinois 60196-1096

Re: Final Preliminary Site Investigation Report

IDOT Job No.: D-91-103-16
Project Job No.: P-91-385-10
District: 1
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Route: FAP 345
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ISGS PESA No.: 2531V
Letting Date: 9/22/17
Final PSI Completion: 8/18/17

Dear Mr. Rayyan,

Huff & Huff, Inc., a subsidiary of GZA GeoEnvironmental, Inc. (H&H) is pleased to submit this *Final Preliminary Site Investigation* (PSI) Report for the above referenced Project.

The scope and depth of this study are consistent with those proposed in the Work Plan, dated July 19, 2017, and accepted by the Illinois Department of Transportation, District One on July 19, 2017. The field observations and results reported herein are considered sufficient in detail and scope to form an informed and professional opinion as to the obvious potential environmental hazards along the Project Area.

If you have any questions or comments, please do not hesitate to contact us at 630-684-9100.

Very truly yours,

HUFF & HUFF, INC.

Jill Connolly
Assistant Project Manager

Shane Cuplin, P.G.
Consultant Reviewer

Jeremy Reynolds, P.G.
Associate Principal

Attachments: PTB 178-008 WO-002 PSI Report

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APPENDICES

GLOSSARY OF ACRONYMS

bgs	below ground surface
BDE	Bureau of Design and Environment
CCDD	Clean Construction & Demolition Debris
COC	Contaminants of Concern
ft	feet
H&H	Huff & Huff, Inc., a Subsidiary of GZA GeoEnvironmental, Inc.
IAC	Illinois Administrative Code
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
ISGS	Illinois State Geological Survey
m	meters
MAC	Maximum Allowable Concentration
PESA	Preliminary Environmental Site Assessment
PID	Photoionization Detector
PNA	Polynuclear Aromatic Hydrocarbons
PSI	Preliminary Site Investigation
QAP	Quality Assurance Plan
QAQC	quality assurance / quality control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
ROW	Right of Way
SOP	standard operating procedure
SPLP	synthetic precipitation leaching procedure
SRO	Soil Remediation Objective
s.u.	standard units (soil pH)
SVOC	semi-volatile organic compound
TACO	Tiered Approach to Corrective Action Objectives
TCLP	toxicity characteristic leaching procedure
USEPA	United States Environmental Protection Agency
USFO	Uncontaminated Soil Fill Operation
VOC	volatile organic compound

1.0 INTRODUCTION

This Preliminary Site Investigation (PSI) report was prepared for Illinois Department of Transportation (IDOT) District One pursuant to Work Order 002A, which was issued to Huff & Huff, Inc., a Subsidiary of GZA GeoEnvironmental, Inc. (H&H) under the IDOT Work Order Agreement for Consultant Services, Contract Job No. PTB 178-008, Statewide Hazardous Waste Investigations. The Project Area is comprised of Illinois Route 59 (Sutton Road) at the intersection of US Route 20 (Lake Street) and includes on- and off-ramps at the intersection, located in the Villages of Bartlett and Streamwood, Cook County, Illinois. The project location is depicted on Figure 1-1. All referenced figures and tables are presented at the end of each respective Section within this report.

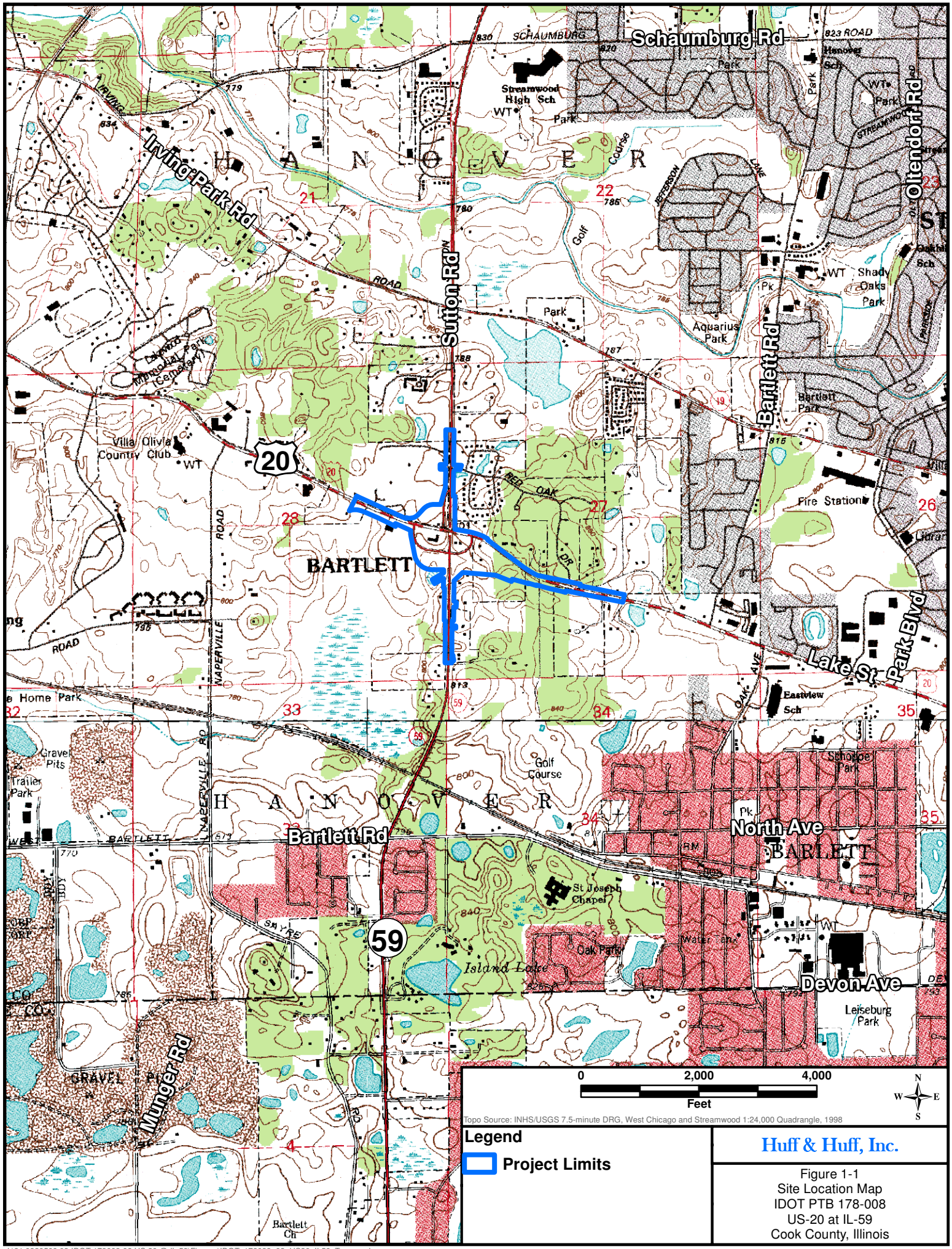
The purpose of the PSI is to:

- Determine, to the degree possible pursuant to this scope of work, the nature and extent of subsurface contamination within the soil of the Project Area. This determination specifically includes those areas in which subsurface excavation activities will be completed in support of construction activities.
- Develop an approach, including approximate volume estimates and associated cost estimates, for the proper handling and/or disposal of contaminated soil that is likely to be encountered during the proposed construction activities within the existing and/or proposed IDOT ROW.
- Assess the potential for further or continued contamination of existing IDOT property caused by the migration of contaminants from adjacent properties to the Project Area.
- Assess the potential for the release of contaminants resulting from the proposed construction activities within the Project Area.
- Generate the data necessary to evaluate the potential for construction workers on-site to be exposed to contaminants.
- Prepare a preliminary site investigation report presenting the findings of the investigation, conclusions, and recommendations addressing all the above-referenced objectives.

A *Preliminary Environmental Site Assessment* (PESA) for the Project Area was conducted by ISGS in February 2017 to evaluate the Project Area for RECs, including evaluation of fifty-eight (58) sites. Excerpts from this document are included in Appendix A for reference. The PESA findings identified twenty-seven (27) sites along the Project Area with Recognized Environmental Conditions (RECs). The Work Order request document from IDOT, also included in Appendix A, lists the areas and depths of planned excavation activities along the Project Area in relation to the identified RECs, five (5) of which have the potential of impacting the proposed construction activities. Based on standard IDOT practices, all District One roadway projects require characterization of all soil that is planned for excavation during the Project. This includes soil associated with properties that were determined to contain de minimis conditions only or determined not to contain RECs or de minimis conditions. Therefore, an additional thirteen (13) sites that have the potential of impacting the proposed construction activities were further investigated, for a total of eighteen (18) sites that are documented within this report.

Fieldwork for the investigation was conducted by H&H and GSG Consultants, Inc., and traffic control services were provided by Traffic Services, Inc. Boring logs are included in Appendix B. Laboratory analysis services were provided by STAT Analysis Corporation. The laboratory analytical report is included in Appendix C.

This report utilizes the Tiered Approach to Corrective Action Objectives (TACO) from 35 Illinois Administrative Code (IAC) Part 742, as well as the Maximum Allowable Concentrations (MAC) list for Clean Construction & Demolition Debris (CCDD) facility disposal for the comparison of analytical results to determine areas of soil management, including estimated costs and quantities. The results were also used to generate Form LPC 663 for CCDD disposal of soils which achieve the MAC list objectives, included in Appendix D of this document.



Topo Source: INHS/USGS 7.5-minute DRG, West Chicago and Streamwood 1:24,000 Quadrangle, 1998

Legend

Project Limits

Huff & Huff, Inc.

Figure 1-1
Site Location Map
IDOT PTB 178-008
US-20 at IL-59
Cook County, Illinois

J:\81.0220509.03 IDOT 178008-02 US 20 @ IL 59\Figures\IDOT_178088_02_US20_IL59_Topo.mxd

2.0 BACKGROUND INFORMATION

The IDOT provided relevant background data and information, which was used to develop and carry out the PSI scope of work, as detailed in the Work Plan for this project. This includes information describing proposed IDOT construction activities and key findings of previous investigations. A brief project description, as well as a description of the site geological and hydrogeological conditions encountered, are provided below. Additional background information is included in Appendix A.

2.1 PROJECT DESCRIPTION

ISGS PESA Report No. 2531V evaluated the Project Area for RECs, including evaluation of fifty-eight (58) sites. Of these, the ISGS PESA identified twenty-seven (27) sites to have RECs along the existing and proposed ROW for this IDOT project. Based on IDOT District One engineering and construction plans, five (5) of the identified RECs have the potential of impacting the proposed construction activities. Based on standard IDOT practices, all District One roadway projects require characterization of all soil that is planned for excavation during the Project. This includes soil associated with properties that were determined to have de minimis conditions or no de minimis conditions and no RECs. The following eighteen (18) properties were identified where excess soil will be generated as a result of the proposed modifications to the existing roadway:

- ISGS Site No.2531V-13 at residences – Excavation for pavement, drainage, retaining wall, and landscaping to a maximum depth of nine (9) feet (ft) below ground surface (bgs)
- ISGS Site No.2531V-14 at residential buildings - Excavation for pavement, drainage, and landscaping to a maximum depth of nine (9) ft bgs
- ISGS Site No.2531V-15 at Sutton Lake Dental Care - Excavation for pavement, drainage, and landscaping to a maximum depth of nine (9) ft bgs
- ISGS Site No.2531V-16 at Walnut Corner Park - Excavation for drainage work to a maximum depth of nine (9) ft bgs
- ISGS Site No.2531V-17 at a pond - Excavation for retaining wall and landscaping to a maximum depth of nine (9) ft bgs
- ISGS Site No.2531V-18 at residences and vacant land - Excavation for retaining wall, lighting, and landscaping to a maximum depth of ten (10) ft bgs
- ISGS Site No.2531V-21 at residences - Excavation for lighting to a maximum depth of ten (10) ft bgs
- ISGS Site No.2531V-23 at residences and vacant land - Excavation for pavement and lighting to a maximum depth of ten (10) ft bgs
- ISGS Site No.2531V-32 at a pond - Excavation for pavement and lighting to a maximum depth of ten (10) ft bgs
- ISGS Site No.2531V-33 at residences - Excavation for pavement, lighting, drainage, and landscaping to a maximum depth of fourteen (14) ft bgs
- ISGS Site No.2531V-34 at vacant land - Excavation for pavement, lighting, drainage, and landscaping to a maximum depth of fourteen (14) ft bgs

- ISGS Site No.2531V-35 at Scholl's 4 Season's Motor Sports Inc. - Excavation for driveway, pavement, lighting, drainage, and landscaping to a maximum depth of fourteen (14) ft bgs

- ISGS Site No.2531V-36 at a residence - Excavation for driveway, pavement, lighting, drainage, and landscaping to a maximum depth of ten (10) ft bgs

- ISGS Site No.2531V-37 at residential buildings - Excavation for driveway, pavement, lighting, drainage, and landscaping to a maximum depth of three and one-half (3.5) ft bgs

- ISGS Site No.2531V-41 at vacant land - Excavation for lighting, drainage, and landscaping to a maximum depth of fourteen (14) ft bgs

- ISGS Site No.2531V-43 at ROW - Excavation for pavement, lighting, drainage, and landscaping to a maximum depth of fourteen (14) ft bgs

- ISGS Site No.2531V-55 at a pond - Excavation for pavement to a maximum depth of one (1) ft bgs

- ISGS Site No.2531V-56 at residential buildings - Excavation for noise wall, drainage, landscaping, and lighting to a maximum depth of eighteen (18) ft bgs

Based on a review of IDOT construction plans and specifications provided by District One, ROW acquisition will be will be required at the following properties to accommodate pavement, lighting, drainage, and landscaping: 2531V-14, 2531V-15, 2531V-33, 2531V-34, and 2531V-56.

Descriptions of the subject properties with RECs, (based on ISGS Report No. 2531V) are presented in the IDOT-approved Work Plan, dated July 19, 2017. Excerpts from the ISGS PESA Report are included in Appendix A for reference.

2.2 SITE GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS

The uppermost bedrock unit in the Project Area has been mapped as undifferentiated Silurian bedrock consisting primarily of limestone and dolomite lithology. The total thickness of surficial deposits in the area has been mapped as approximately 30-60 meters (m) (100-200 ft). The topmost surficial unit has been mapped as approximately 6-15 m (20-50 ft) of silty and clayey glacial deposits of the Wedron Group.

The Project Area consists of silt loams, silty clay loams, and mucks from the Beecher, Ozaukee, Zurich, Peotone, Muskego, and Houghton Formations. The Peotone, Muskego, and Houghton silty clay loams and mucks are classified as containing 33 % to 100% hydric components. None of the other soils in the project area have been classified as containing 33% hydric components. The Beecher, Ozaukee, and Zurich silt loams and the Peotone silty clay loam, undrained, are classified as non-prime farmland.

Due to the shallow depth of excavation, public water supplies, groundwater recharge, groundwater protection areas, the potential for contamination of shallow aquifers, and well log information was not included in the scope of the PESA. Surface drainage in the Project Area is irregular. In the northern portion of the Project Area, surficial drainage slopes generally toward the northeast, toward Poplar Creek. In the southern portion of the Project Area, surficial drainage slopes generally toward the southwest, toward an unnamed tributary to a group of lakes southwest of the project. However, the Project Area is relatively urban with storm drains and sewers, so most surficial runoff will be controlled by the storm sewer system. Most storm sewer systems are designed to follow natural drainage patterns. The near-surface and shallow

unconfined groundwater flow direction were not specifically determined for the Project Area, but are expected to mimic local topography.

3.0 FIELD INVESTIGATION PROCEDURES

The PSI field activities for this Project included the collection of soil samples adjacent to the eighteen (18) subject properties that are part of this Project where excess soil will be generated as a result of the proposed modifications to the existing roadway. The work conducted for this investigation was completed in accordance with standard operating procedures (SOPs) for field investigations included in the IDOT-approved work plan for Work Order 002. GSG Consultants, Inc. was contracted to provide drilling services for this project under the direct supervision of a H&H field geologist. STAT Analysis Corporation in Chicago, Illinois performed sample analyses. Section 3.1 summarizes the procedures for the soil sampling activities.

3.1 SOIL SAMPLING METHODOLOGY

A total of eighty (80) borings were advanced within the existing ROW adjacent to the eighteen (18) subject properties. Below is a list of borings completed for each subject property:

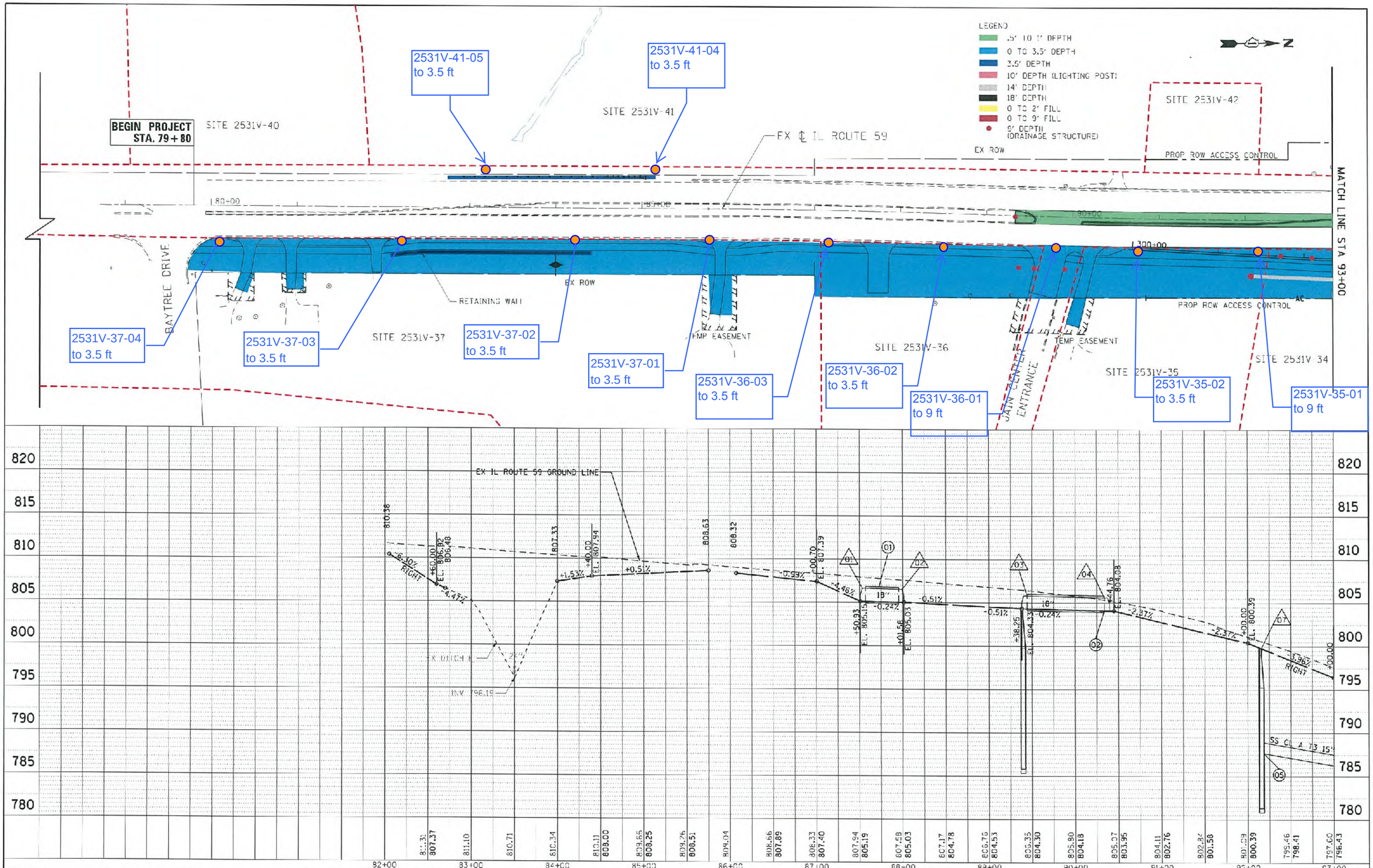
- The following borings were completed for ISGS Site No. 2531V-13: 2531V-13-01, 2531V-13-02, 2531V-13-03, and 2531V-13-04
- The following borings were completed for ISGS Site No.2531V-14: 2531V-14-01, 2531V-14-02, and 2531V-14-03
- The following borings were completed for ISGS Site No.2531V-15: 2531V-15-01 and 2531V-15-02
- The following borings were completed for ISGS Site No.2531V-16: 2531V-16-01 and 2531V-16-02
- The following borings were completed for ISGS Site No.2531V-17: 2531V-17-01
- The following borings were completed for ISGS Site No.2531V-18: 2531V-18-01, 2531V-18-02, 2531V-18-03, 2531V-18-04, 2531V-18-05, 2531V-18-06, 2531V-18-07, and 2531V-18-08
- The following borings were completed for ISGS Site No.2531V-21 and 2531V-23: 2531V-23-01, 2531V-23-02, 2531V-23-03, and 2531V-23-04
- The following borings were completed for ISGS Site No.2531V-32: 2531V-32-01, 2531V-32-02, and 2531V-32-03
- The following borings were completed for ISGS Site No.2531V-33: 2531V-33-01, 2531V-33-02, 2531V-33-03, 2531V-33-04, 2531V-33-05, and 2531V-33-06
- The following borings were completed for ISGS Site No.2531V-34: 2531V-34-01, 2531V-34-02, 2531V-34-03, 2531V-34-04, 2531V-34-05, 2531V-34-06, 2531V-34-07, 2531V-34-08, and 2531V-34-09
- The following borings were completed for ISGS Site No.2531V-35: 2531V-35-01 and 2531V-35-02
- The following borings were completed for ISGS Site No.2531V-36: 2531V-36-01, 2531V-36-02, and 2531V-36-03
- The following borings were completed for ISGS Site No.2531V-37: 2531V-37-01, 2531V-37-02, 2531V-37-03, and 2531V-37-04
- The following borings were completed for ISGS Site No.2531V-41: 2531V-41-01, 2531V-41-02, 2531V-41-03, 2531V-41-04, and 2531V-41-05
- The following borings were completed for ISGS Site No.2531V-43: 2531V-43-01, 2531V-43-02, 2531V-43-03, 2531V-43-04, 2531V-43-05, 2531V-43-06, 2531V-43-07, 2531V-43-08, 2531V-43-09, 2531V-43-10, and 2531V-43-11
- The following borings were completed for ISGS Site No.2531V-55: 2531V-55-01 and 2531V-55-02

- The following borings were completed for ISGS Site No.2531V-56: 2531V-56-01, 2531V-56-02, 2531V-56-03, 2531V-56-04, 2531V-56-05, 2531V-56-06, 2531V-56-07, 2531V-56-08, 2531V-56-09, 2531V-56-10, and 2531V-56-11

Soil boring locations are depicted on Figures 3-1.1 to 3-1.10. Soil boring logs are included in Appendix B. Drilling was performed using a GeoProbe track rig equipped with a 2-inch inside diameter sampler with a disposable plastic liner. The rationale used to determine the sampling frequency and the sample intervals was in accordance with the IDOT approved scope of work outlined in the work plan dated July 19, 2017 and approved in July 2017. Field investigation procedures (i.e., drilling procedures, soil sampling procedures, subsurface characterization, and field screening protocols) were performed in accordance with the approved SOPs.

Soil borings were continuously sampled using appropriately decontaminated stainless-steel samplers. Disposable plastic liners were used at each location. Each soil core recovered was field screened with a photo-ionization detector (PID) equipped with a 11.7 eV lamp using headspace-screening procedures. Soil samples were collected from soil borings for analysis based on IDOT guidelines as described in the approved PSI Work Plan. The depth intervals selected for sample analysis and borehole spacing were based on the anticipated maximum depth of excavation and the proposed construction activity at the subject properties. Based on current and historic land use identified at each property, as well as standard IDOT procedures, soil samples were analyzed for the following constituents: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total metals, toxicity characteristic leaching procedure (TCLP) and synthetic precipitation leaching procedure (SPLP) metals (8 RCRA plus Be, Co, Cu, Fe, Mn, Ni, and Zn), and soil pH.

A total of fourteen (14) quality assurance / quality control (QA/QC) field duplicate soil samples were collected and analyzed for the same parameters as their respective investigative samples. Soil samples were maintained under chain of custody and appropriately preserved until delivery to STAT Analysis Corporation for analysis. Refer to Table 3-1 for the soil sampling plan which includes a list of borings completed for each subject property, the soil samples collected (including the identification of field duplicates), the ISGS findings associated with each of the identified sites, road and approximate stationing information, and the laboratory analytical testing conducted. Groundwater was not encountered during the investigation activities.



FILE NAME - sFILEn	USER NAME = default	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 59 (SUTTON ROAD) PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59
sMODELNAMEs		DRAWN - CJ	REVISED -		SCALE: 1"=50' SHEET 1 OF 14 SHEETS STA. TO STA. 93+00
	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -		F.A.P. RTE. 345 SECTION 7K-1(12) COUNTY COOK TOTAL SHEETS 13 SHEET NO. 1
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -		CONTRACT NO. 60V57 ILLINOIS FED. AID PROJECT

FIGURE 3-1.2 PROPOSED SOIL BORING LOCATION MAP

2531V-41-03 to 14 ft
2531V-34-01 to 9 ft
2531V-34-02 to 14 ft
2531V-34-09 to 14 ft
2531V-34-03 to 3.5 ft
2531V-43-11 to 9 ft
2531V-43-07 to 9 ft
2531V-43-06 to 9 ft
2531V-43-05 to 9 ft
2531V-18-07 to 18 ft
2531V-18-06 to 9 ft
2531V-18-05 to 9 ft
2531V-18-04 to 9 ft
2531V-18-03 to 9 ft
2531V-56-07 to 18 ft
2531V-56-08 to 18 ft

MATCH LINE STA 152+00 SEE SHEET NO. 13
MATCH LINE STA 115+00 SEE SHEET NO. 12
MATCH LINE STA 93+00
MATCH LINE STA 62+00 SEE SHEET NO. 11
MATCH LINE STA 2+00 SEE SHEET NO. 10
MATCH LINE STA 108+00

EX ℄ US RTE 20
EX ℄ IL ROUTE 59
PROP ℄ RAMP E
PROP ROW ACCESS CONTROL
TEMP EASEMENT
NOISE WALL
EX ROW
RETAINING WALL
9' DEPTH
AC

SITE 2531V-41
SITE 2531V-43
SITE 2531V-34
SITE 2531V-18
SITE 2531V-56

(LEGEND)
.5' TO 1' DEPTH
0 TO 3.5' DEPTH
3.5' DEPTH
10' DEPTH (LIGHTING POST)
14' DEPTH
18' DEPTH
0 TO 2' FILL
0 TO 9' FILL
9' DEPTH (DRAINAGE STRUCTURE)

PROP PCL PROFILE IL ROUTE 59
EX IL ROUTE 59 GROUND LINE
EX LEFT DITCH
36" EXIST. CULVERT
BOX CULV 5'X3'
BOX CULV 8'X4'
SS CL A T3 15"
-4.53% RIGHT
+5.00%
+0.44% RIGHT
+3.67% RIGHT
+2.07%
+1.02%
+0.57% RIGHT

EL. 796.43
EL. 794.46
EL. 791.90
EL. 792.07
EL. 794.10
EL. 795.12
795.69
780.67
779.90
771.69
778.50
778.84

93+00	94+00	95+00	96+00	97+00	98+00	99+00	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00
797.60	795.64	793.73	791.72	789.73	789.18	786.65	785.51	784.95	784.30	783.92	783.71	783.77	784.71	784.85	784.41
796.43	794.17	791.90										783.32	783.37	783.64	784.14
785.13	786.10	787.26	788.55	790.17	791.54	792.77	793.67	794.83	795.51	796.14	797.21	797.20	796.83	796.73	
784.86	785.84	787.03	788.46	789.96	791.43	792.73	793.85	794.79	795.55	796.12	796.51	796.71	796.73	798.66	

TILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -	**STATE OF ILLINOIS**
&FILE&		DRAWN - CJ	REVISED -	**DEPARTMENT OF TRANSPORTATION**
&PROJECT NAME&	PLOT SCALE = &SCALE&	CHECKED - ODM	REVISED -	
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -	

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59

SCALE: 1" = 50' | SHEET 2 OF 14 SHEETS | STA. 93+00 TO STA. 108+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	2

CONTRACT NO. 60V57
ILLINOIS FED. AID PROJECT

2531V-56-09 to 18 ft
2531V-56-10 to 18 ft
2531V-56-11 to 18 ft
2531V-15-02 to 18 ft
2531V-15-01 to 18 ft
2531V-14-03 to 18 ft
2531V-14-02 to 18 ft
2531V-14-01 to 9 ft
2531V-18-02 to 9 ft
2531V-18-01 to 9 ft
2531V-17-01 to 9 ft
2531V-16-02 to 9 ft
2531V-16-01 to 9 ft
2531V-13-04 to 9 ft
2531V-13-03 to 9 ft
2531V-13-02 to 9 ft
2531V-13-01 to 9 ft

NOISE WALL
SITE 2531V-56
SITE 2531V-15
SITE 2531V-14
SITE 2531V-18
SITE 2531V-17
SITE 2531V-16
SITE 2531V-13
SOUTHWICKE DRIVE
LAUREL OAKS DRIVE
RED OAK DRIVE
HIGH POINT LANE
PROP ROW
EX ROW
RETAINING WALL
EX ℄ IL ROUTE 59
MATCH LINE STA 108+00
END PROJECT STA. 119+29

LEGEND
.5' TO 1' DEPTH
0 TO 3.5' DEPTH
3.5' DEPTH
10' DEPTH (LIGHTING POST)
14' DEPTH
18' DEPTH
0 TO 2' FILL
0 TO 9' FILL
9' DEPTH (DRAINAGE STRUCTURE)

PROP PGL PROFILE IL ROUTE 59
EX IL ROUTE 59 GROUND LINE
LEFT 0.54%
LEFT 3.61%
+00.00 EL. 792.12
794.03

796.73	796.60	796.60	796.47	796.58	796.52	796.64	796.72	796.79	796.96	796.93	797.19	797.00	797.42	797.10	797.64	797.17	797.74	797.26	797.69	797.30	797.52	797.41	797.44	797.49	797.52	797.61	797.70	797.71	797.87	797.79	798.05	797.87	798.15	797.95	798.11	797.72	797.92	797.51	797.60	797.20	797.20	796.77	796.81	796.40	796.41	796.35	795.80	795.46
108+00			109+00			110+00					111+00				112+00				113+00				114+00				115+00				116+00				117+00				118+00				119+00				120+00		

FILE NAME = #FILE1#	USER NAME = default	DESIGNED - CJ	REVISED -
#MODELNAME#		DRAWN - CJ	REVISED
	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

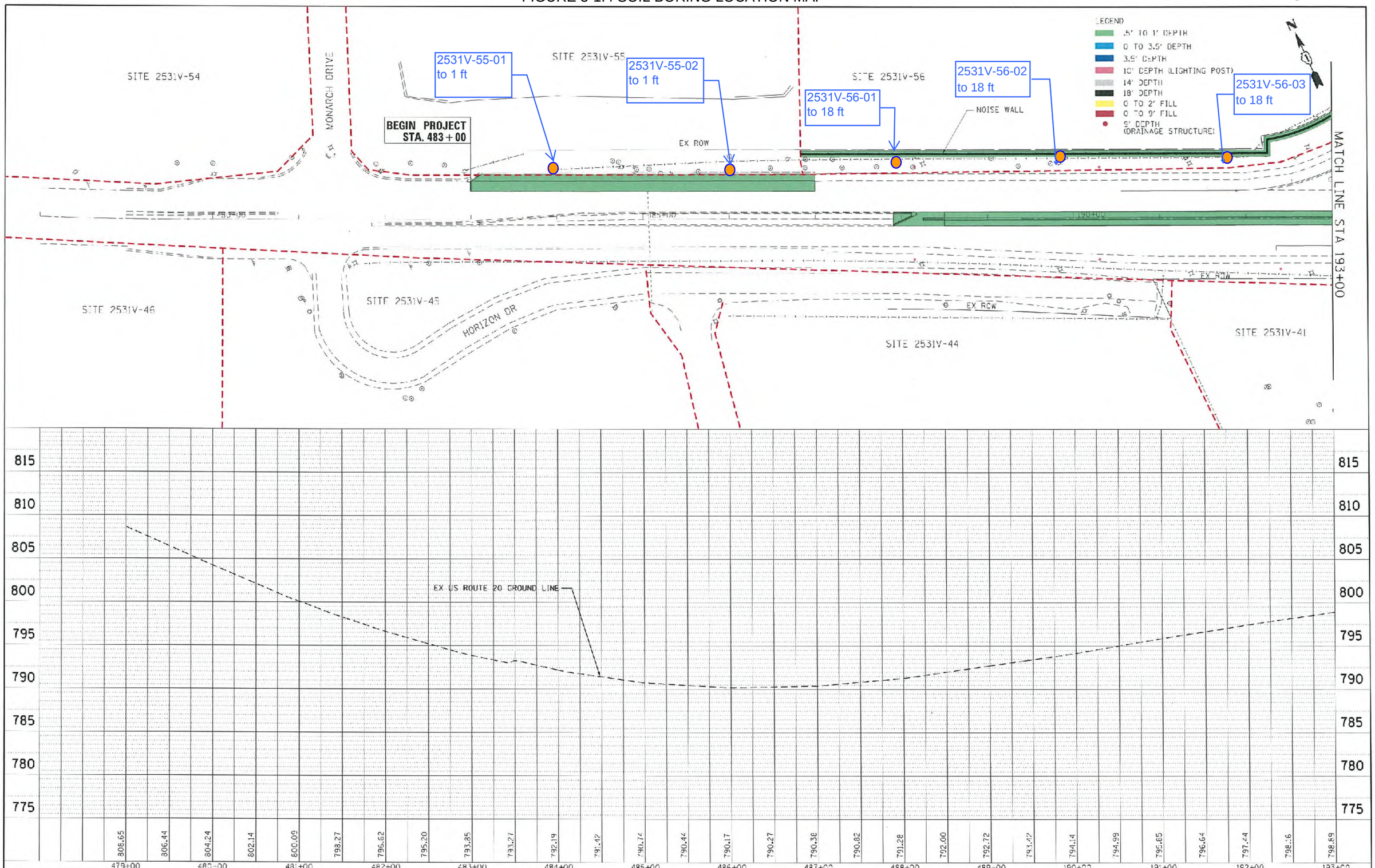
IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59

SCALE: 1" = 50' | SHEET 3 OF 14 SHEETS | STA. 108+00 TO STA. 120+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	3

CONTRACT NO. 60V57
ILLINOIS FED. AID PROJECT

FIGURE 3-1.4 SOIL BORING LOCATION MAP



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$FILE$		DRAWN - CJ	REVISED -
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

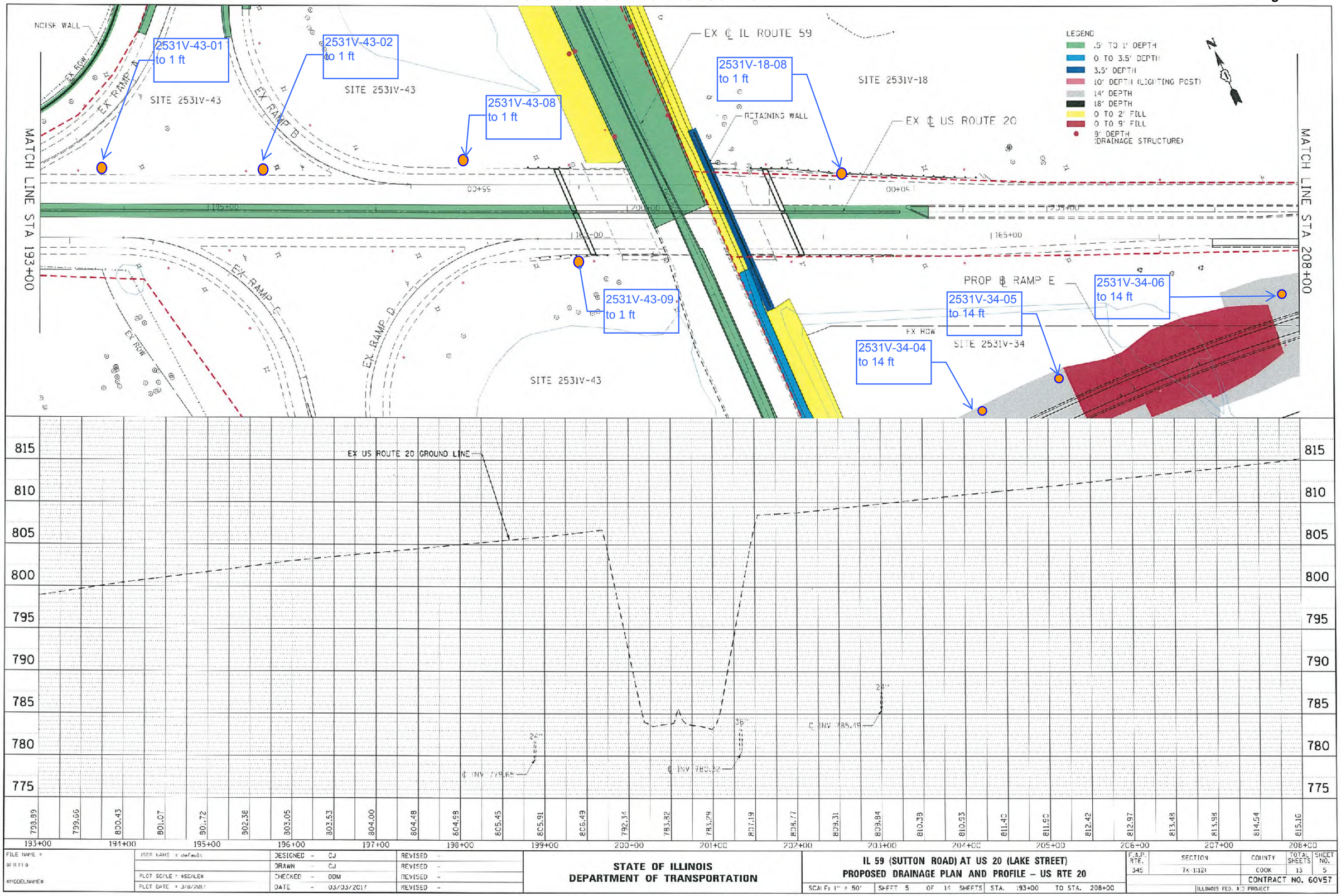
IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 4 OF 14 SHEETS | STA. | TO STA. 193+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	4

CONTRACT NO. 60V57

ILLINOIS FED. AID PROJECT



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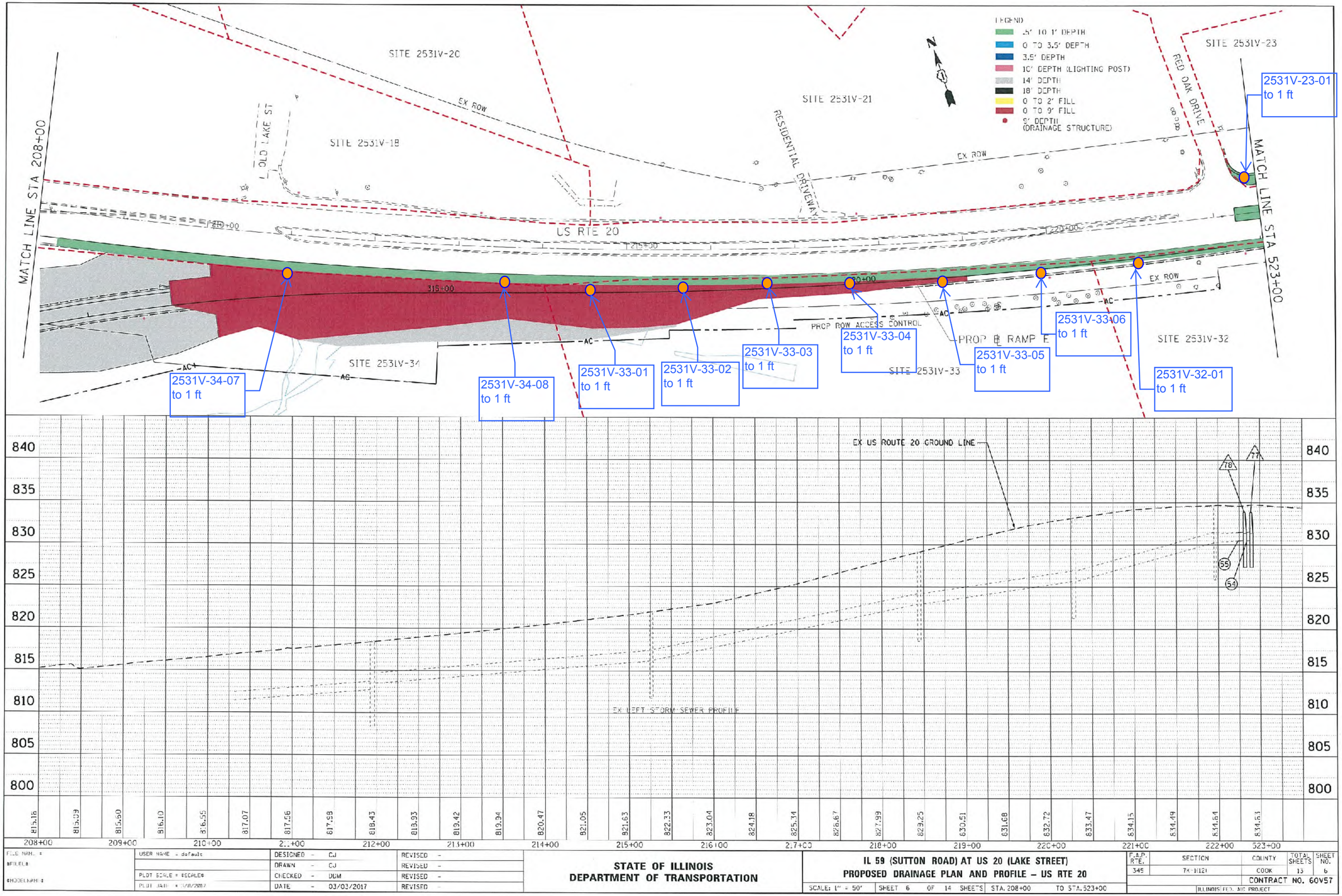
		DRAWN - CJ	REVISED -
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - ODM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 5 OF 14 SHEETS | STA. 193+00 TO STA. 208+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7A-1(12)	COOK	13	5
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			



FILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -	**STATE OF ILLINOIS**
@FILE1@		DRAWN - CJ	REVISED -	**DEPARTMENT OF TRANSPORTATION**
@MODELNAME@	PLOT SCALE = @SCALE@	CHECKED - DDM	REVISED -	
	PLOT DATE = @DATE@	DATE - 03/03/2017	REVISED -	

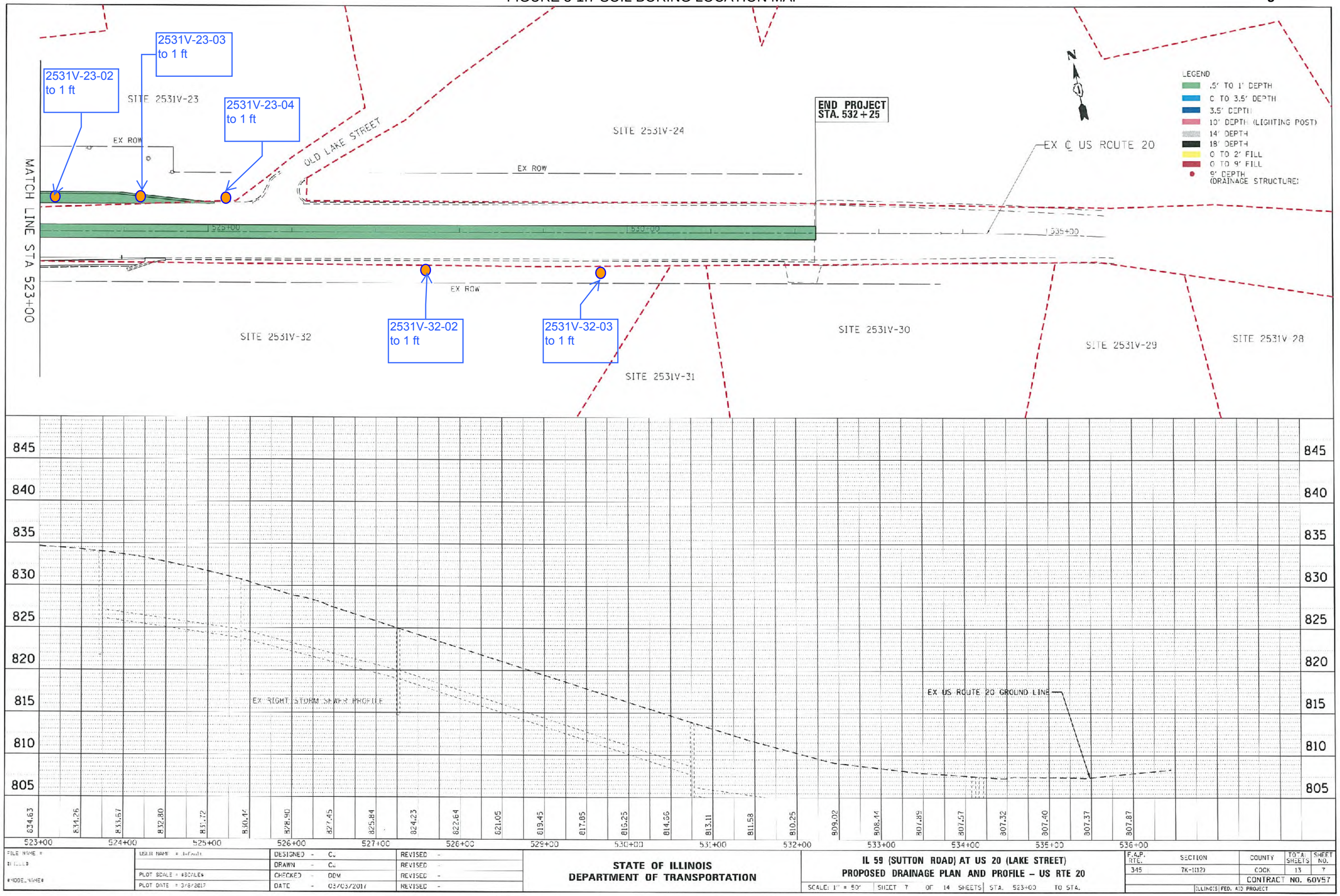
IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 6 OF 14 SHEETS | STA. 208+00 TO STA. 523+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	6

CONTRACT NO. 60V57

ILLINOIS FED. AID PROJECT



FILE NAME =	USER NAME = default	DESIGNED - CL	REVISED -
		DRAWN - CL	REVISED -
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	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

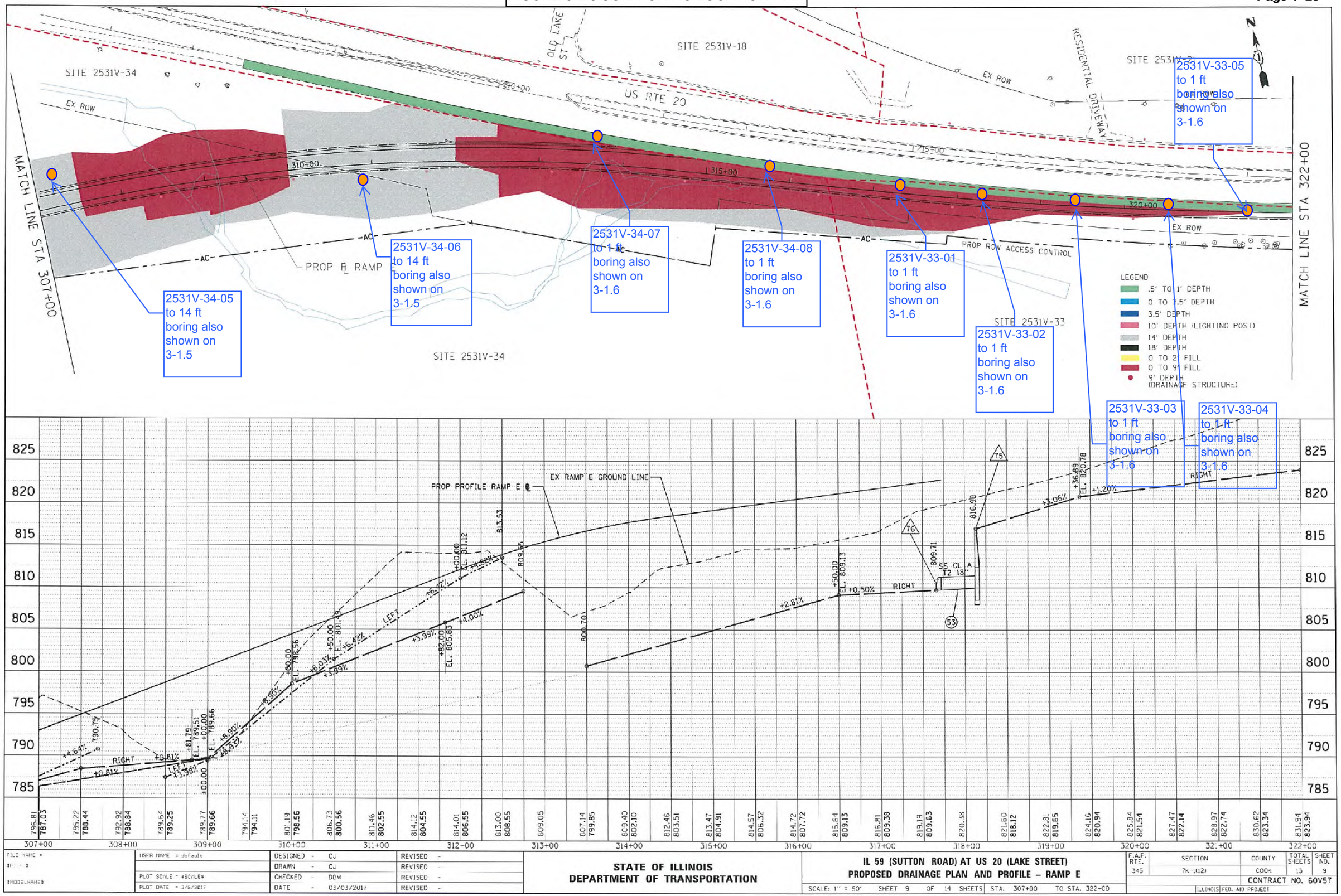
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 7 OF 14 SHEETS | STA. 523+00 TO ST4.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1012	COOK	13	7
		CONTRACT NO. 60V57		
		ILLINOIS FED. AID PROJECT		

FIGURE 3-1.8 SOIL BORING LOCATION MAP



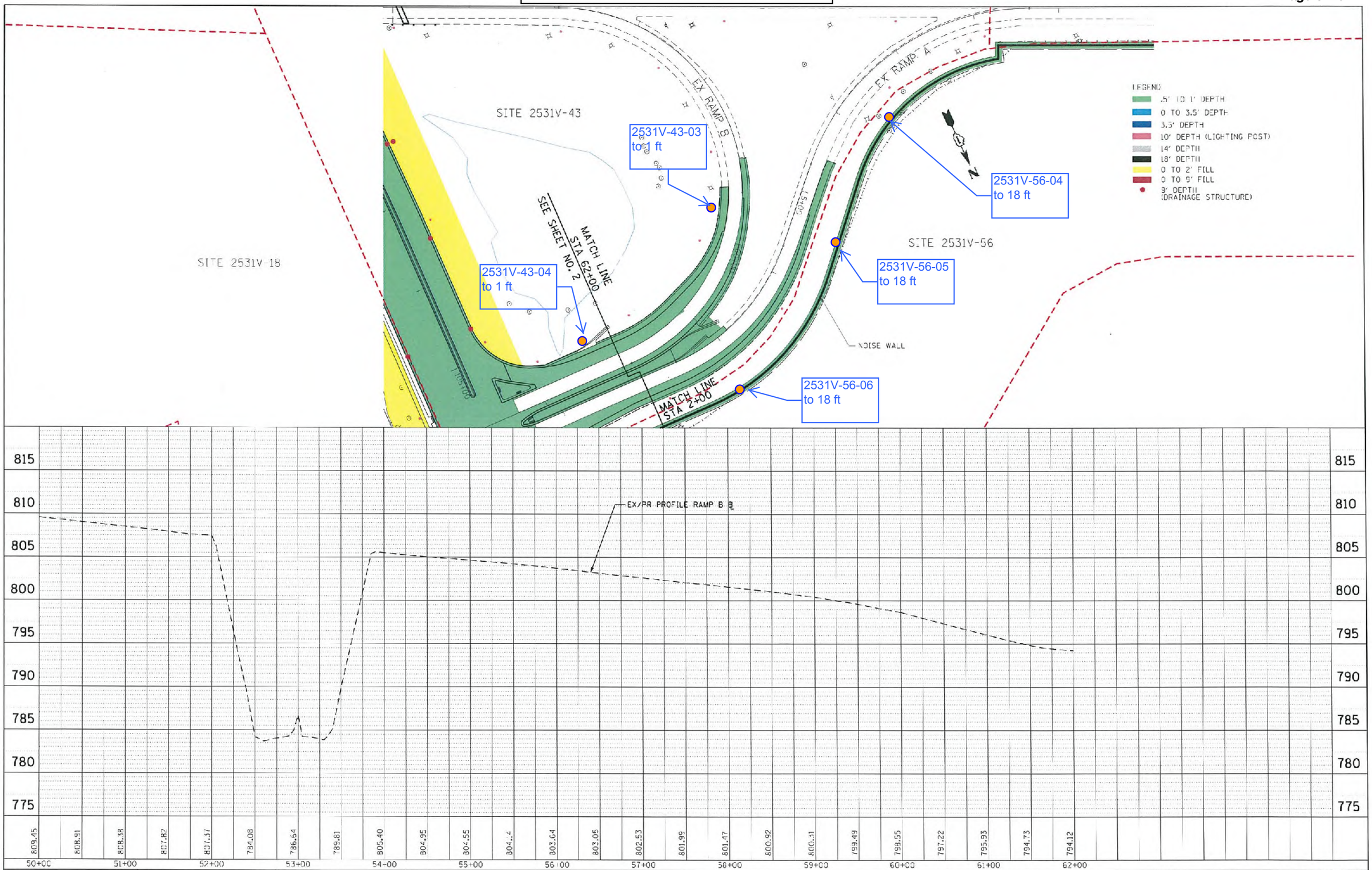
FILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -
		DRAWN - CJ	REVISED -
#MODEL_NAME#	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -
	PLOT DATE = 3/6/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – RAMP E

SCALE: 1" = 50' SHEET 9 OF 14 SHEETS STA. 307+00 TO STA. 322+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-3(2)2	COOK	13	9
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			



FILE NAME = $FILEID	USER NAME = default	DESIGNED - CJ	REVISED -
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	PLOT SCALE - $SCALE$	CHECKED - DDM	REVISED -
$MODELNAME$	PLOT DATE - 3/8/2017	DATE - 03/03/2017	REVISED -

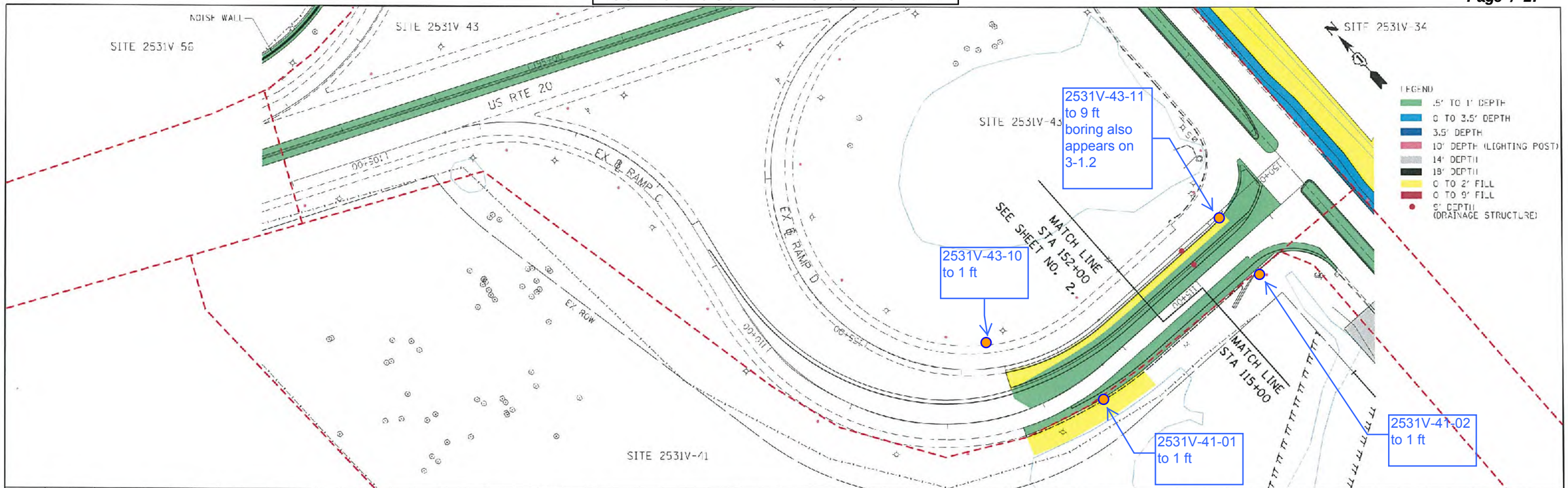
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – RAMP B

SCALE: 1" = 50' | SHEET 12 OF 14 SHEETS | STA. 50+00 TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	7X-1(12)	COOK	13	11
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 3-1.10 SOIL BORING LOCATION MAP



FILE NAME = #FILE1# #MODELNAME#	USER NAME = default	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - CJ	REVISED -	
	PLOT SCALE = #SCALE1#	CHECKED - DDM	REVISED -	
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -	

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – RAMP C

SCALE: 1" = 50' | SHEET 13 OF 14 SHEETS | STA. 104+00 TO STA. XXX+XX

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7R-1121	COOK	13	12

CONTRACT NO. 60V57

ILLINOIS FED. AID PROJECT

TABLE 3-1 Proposed Soil Sampling Plan
IL Route 59 & US Route 20
BDE Sequence No.: 16955B, Contract No.: 60V57
PTB: 178-008/HH-1, Work Order No.: 002

Boring ID	Max. Depth (ft)	Soil Sample Interval (ft)	Number of Soil Samples Per Boring	Excavation Area (ISGS Site No.)	ISGS REC Yes / No - Basis	Proximal to Other nearby Excavations (ISGS Site No.)	Road / Approx. Stationing and Offset	Groundwater Sample[b/]	SOIL ANALYSES[a/]				
									Soil pH	22 Total Metals	TCLP and SPLP Metals (8 RCRA Metals plus Be, Co, Cu, Fe, Mn, Ni, and Zn)	VOCs	SVOCs
2531V-13-01	9	(0-5), (5-9)	2	2531V-13	No	2531V-14; 2531V-16	IL-59 Sta. 118 + 45, 48' Right		X	X	X	X	X
2531V-13-02	9	(0-5), (5-9)	2				IL-59 Sta. 117 + 35, 48' Right		X	X	X	X	X
2531V-13-03	9	(0-5), (5-9)	2				IL-59 Sta. 116 + 30, 49' Right		X	X	X	X	X
2531V-13-04	9	(0-5), (5-9)	2				IL-59 Sta. 115 + 15, 51' Right		X	X	X	X	X
2531V-14-01	9	(0-5), (5-9)	2	2531V-14	No	2531V-13; 2531V-15	IL-59 Sta. 118 + 45, 56' Left		X	X	X	X	X
2531V-14-02	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 117 + 15, 57 'Left		X	X	X	X	X
2531V-14-03	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 115 + 80, 61' Left		X	X	X	X	X
2531V-15-01	18	(0-6), (6-12), (12-18)	3	2631V-15	No	2531V-14; 2531V-16; 2531V-56	IL-59 Sta. 114 + 55, 62' Left		X	X	X	X	X
2531V-15-02	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 113 + 40, 59' Left		X	X	X	X	X
2531V-16-01	9	(0-5), (5-9)	2	2531V-16	No	2531V-13; 2531V-15; 2531V-17	IL-59 Sta. 114 + 20, 50' Right		X	X	X	X	X
2531V-16-02	9	(0-5), (5-9)	2				IL-59 Sta. 113 + 40, 50' Right		X	X	X	X	X
2531V-17-01	9	(0-5), (5-9)	2	2531V-17	No	2531V-16; 2531V-18	IL-59 Sta. 112 + 25, 44' Right		X	X	X	X	X
2531V-18-01	9	(0-5), (5-9)	2	2531V-18	No	2531V-17; 2531V-21; 2531V-34; 2531V-43	IL-59 Sta. 110 + 35, 39' Right		X	X	X	X	X
2531V-18-02	9	(0-5), (5-9)	2				IL-59 Sta. 108 + 30, 39' Right		X	X	X	X	X
2531V-18-03	9	(0-5), (5-9)	2				IL-59 Sta. 107 + 40, 35' Right		X	X	X	X	X
2531V-18-04	9	(0-5), (5-9)	2				IL-59 Sta. 106 + 15, 41' Right		X	X	X	X	X
2531V-18-05	9	(0-5), (5-9)	2				IL-59 Sta. 104 + 70, 38' Right		X	X	X	X	X
2531V-18-06	9	(0-5), (5-9)	2				IL-59 Sta. 102 + 55, 43' Right		X	X	X	X	X
2531V-18-07	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 100 + 65, 42' Right		X	X	X	X	X
2531V-18-08	1	(0-1)	1				US-20 Sta. 202 + 55, 59' Left		X	X	X	X	X
2531V-23-01	1	(0-1)	1	2531V-21 and 2531V-23	No	2531V-21; 2531V-32	US-20 Sta. 222 + 65, 44' Left		X	X	X	X	X
2531V-23-02	1	(0-1)	1				US-20 Sta. 523 + 20, 43' Left		X	X	X	X	X
2531V-23-03	1	(0-1)	1				US-20 Sta. 524 + 20, 37' Left		X	X	X	X	X
2531V-23-04	1	(0-1)	1				US-20 Sta. 525 + 20, 69' Left		X	X	X	X	X
2531V-32-01	1	(0-1)	1	2531V-32	Yes - Spill	2531V-21; 2531V-23; 2531V-33	US-20 Sta. 323 + 35, 39' Right	1	X	X	X	X	X
2531V-32-02	1	(0-1)	1				US-20 Sta. 527 + 60, 35' Right		X	X	X	X	X
2531V-32-03	1	(0-1)	1				US-20 Sta. 529 + 70, 34' Right		X	X	X	X	X
2531V-33-01	1	(0-1)	1	2531V-33	No	2631V-16; 2531V-21; 2531V-23; 2531V-32; 2531V-34	Ramp E Sta. 316 + 90, 5' Right		X	X	X	X	X
2531V-33-02	1	(0-1)	1				Ramp E Sta. 317 + 95, 5' Right		X	X	X	X	X
2531V-33-03	1	(0-1)	1				Ramp E Sta. 318 + 90, 5' Right		X	X	X	X	X
2531V-33-04	1	(0-1)	1				Ramp E Sta. 320 + 00, 1' Right		X	X	X	X	X
2531V-33-05	1	(0-1)	1				Ramp E Sta. 320 + 05, 5' Left		X	X	X	X	X
2531V-33-06	1	(0-1)	1				Ramp E Sta. 322 + 20, 5' Left		X	X	X	X	X

TABLE 3-1 Proposed Soil Sampling Plan
IL Route 59 & US Route 20
BDE Sequence No.: 16955B, Contract No.: 60V57
PTB: 178-008/HH-1, Work Order No.: 002

Boring ID	Max. Depth (ft)	Soil Sample Interval (ft)	Number of Soil Samples Per Boring	Excavation Area (ISGS Site No.)	ISGS REC Yes / No - Basis	Proximal to Other nearby Excavations (ISGS Site No.)	Road / Approx. Stationing and Offset	Groundwater Sample[b/]	SOIL ANALYSES[a/]				
									Soil pH	22 Total Metals	TCLP and SPLP Metals (8 RCRA Metals plus Be, Co, Cu, Fe, Mn, Ni, and Zn)	VOCs	SVOCs
2531V-34-01	9	(0-5), (5-9)	2	2531V-34	No	2531V-18; 2531V-33; 2531V-35; 2531V-41; 2531V-43	Ramp E Sta. 302 + 40, 10' Left		X	X	X	X	X
2531V-34-02	14	(0-7), (7-14)	2				Ramp E Sta. 304 + 10, 15' Left		X	X	X	X	X
2531V-34-03	3.5	(0-3.5)	1				IL-59 Sta. 97 + 20, 36 Right		X	X	X	X	X
2531V-34-04	14	(0-7), (7-14)	2				Ramp E Sta. 306 + 50, 50' Left		X	X	X	X	X
2531V-34-05	14	(0-7), (7-14)	2				Ramp E Sta. 307 + 45, 54' Left		X	X	X	X	X
2531V-34-06	14	(0-7), (7-14)	2				Ramp E Sta. 310 + 20, 45' Left		X	X	X	X	X
2531V-34-07	1	(0-1)	1				Ramp E Sta. 313 + 40, 25 Left		X	X	X	X	X
2531V-34-08	1	(0-1)	1				Ramp E Sta. 315 + 95, 10' Left		X	X	X	X	X
2531V-34-09	14	(0-7), (7-14)	2				Ramp E Sta. 305 + 50, 20' Right		X	X	X	X	X
2531V-35-01	9	(0-5), (5-9)	2	2531V-35	Yes - Potential UST(s); evidence of chemical use; drums; solid waste; potential ACM and lead paint	2531V-34; 2531V-36; 2531V-41	IL-59 Sta. 92 + 25, 40 Right	1	X	X	X	X	X
2531V-35-02	3.5	(0-3.5)	1				IL-59 Sta. 90 + 75, 40 Right		X	X	X	X	X
2531V-36-01	9	(0-5), (5-9)	2	2531V-36	Yes - Potential former chemical use; transformers; potential ACM and lead paint	2531V-35; 2531V-37; 2531V-41	IL-59 Sta. 89 + 55, 47' Right	1	X	X	X	X	X
2531V-36-02	3.5	(0-3.5)	1				IL-59 Sta. 88 + 50, 50' Right		X	X	X	X	X
2531V-36-03	3.5	(0-3.5)	1				IL-59 Sta. 87 + 15, 52' Right		X	X	X	X	X
2531V-37-01	3.5	(0-3.5)	1	2531V-37	No	2531V-36; 2531V-41	IL-59 Sta. 85 + 75, 55' Right		X	X	X	X	X
2531V-37-02	3.5	(0-3.5)	1				IL-59 Sta. 84 + 20, 42' Right		X	X	X	X	X
2531V-37-03	3.5	(0-3.5)	1				IL-59 Sta. 82 + 20, 45' Right		X	X	X	X	X
2531V-37-04	3.5	(0-3.5)	1				IL-59 Sta. 80 + 10, 50' Right		X	X	X	X	X
2531V-41-01	1	(0-1)	1	2531V-41	Yes - Potential dumping; likely past pesticide and/or herbicide use	2531V-18; 2531V-34; 2531V-35; 2531V-36; 2531V-41; 2531V-43; 2531V-56	Ramp C Sta. 113 + 55, 30' Right	1	X	X	X	X	X
2531V-41-02	1	(0-1)	1				Ramp C Sta. 115 + 50, 40' Right		X	X	X	X	X
2531V-41-03	14	(0-7), (7-14)	2				IL-59 Sta. 94 + 45, 35' Left		X	X	X	X	X
2531V-41-04	3.5	(0-3.5)	1				IL-59 Sta. 85 + 15, 45' Left		X	X	X	X	X
2531V-41-05	3.5	(0-3.5)	1				IL-59 Sta. 83 + 20, 40' Left		X	X	X	X	X
2531V-43-01	1	(0-1)	1	2531V-43	Yes - Fill; spill; transformer		US-20 Sta. 193 + 45, 50' Left	1	X	X	X	X	X
2531V-43-02	1	(0-1)	1				US-20 Sta. 195 + 65, 50' Left		X	X	X	X	X
2531V-43-03	1	(0-1)	1				Ramp B Sta. 59 + 60, 35' Right		X	X	X	X	X
2531V-43-04	1	(0-1)	1				Ramp B Sta. 62 + 30, 50' Right		X	X	X	X	X
2531V-43-05	9	(0-5), (5-9)	2				IL-59 Sta. 104 +90, 40' Left		X	X	X	X	X
2531V-43-06	9	(0-5), (5-9)	2				IL-59 Sta. 102 + 80, 38' Left		X	X	X	X	X
2531V-43-07	9	(0-5), (5-9)	2				IL-59 Sta. 100 + 70, 35' Left		X	X	X	X	X
2531V-43-08	1	(0-1)	1				US-20 Sta. 198 + 05, 65' Left		X	X	X	X	X
2531V-43-09	1	(0-1)	1				US-20 Sta. 199 + 45, 60 Right		X	X	X	X	X
2531V-43-10	1	(0-1)	1				Ramp D Sta. 153 + 75, 30' Right		X	X	X	X	X
2531V-43-11	9	(0-5), (5-9)	2				Ramp D Sta. 150 + 75, 20' Right		X	X	X	X	X
2531V-55-01	1	(0-1)	1	2531V-55	No		US-20 Sta. 483 + 95, 60' Left		X	X	X	X	X
2531V-55-02	1	(0-1)	1				US-20 Sta. 486 + 00, 50' Left		X	X	X	X	X

TABLE 3-1 Proposed Soil Sampling Plan
IL Route 59 & US Route 20
BDE Sequence No.: 16955B, Contract No.: 60V57
PTB: 178-008/HH-1, Work Order No.: 002

Boring ID	Max. Depth (ft)	Soil Sample Interval (ft)	Number of Soil Samples Per Boring	Excavation Area (ISGS Site No.)	ISGS REC Yes / No - Basis	Proximal to Other nearby Excavations (ISGS Site No.)	Road / Approx. Stationing and Offset	Groundwater Sample[b/]	SOIL ANALYSES[a/]				
									Soil pH	22 Total Metals	TCLP and SPLP Metals (8 RCRA Metals plus Be, Co, Cu, Fe, Mn, Ni, and Zn)	VOCs	SVOCs
2531V-56-01	18	(0-6), (6-12), (12-18)	3				US-20 Sta. 487 + 90, 57' Left		X	X	X	X	X
2531V-56-02	18	(0-6), (6-12), (12-18)	3				US-20 Sta. 489 + 80, 60' Left		X	X	X	X	X
2531V-56-03	18	(0-6), (6-12), (12-18)	3				US-20 Sta. 191 + 77, 65' Left		X	X	X	X	X
2531V-56-04	18	(0-6), (6-12), (12-18)	3				Ramp A Sta. 6 + 35, 35 Right		X	X	X	X	X
2531V-56-05	18	(0-6), (6-12), (12-18)	3				Ramp A Sta. 4 + 50, 50' Right		X	X	X	X	X
2531V-56-06	18	(0-6), (6-12), (12-18)	3	2531V-56	No		Ramp ASta. 2 + 85, 60' Right		X	X	X	X	X
2531V-56-07	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 106 + 80, 110' Left		X	X	X	X	X
2531V-56-08	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 107 + 75, 100' Left		X	X	X	X	X
2531V-56-09	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 109 + 45, 62' Left		X	X	X	X	X
2531V-56-10	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 111 + 20, 63 Left		X	X	X	X	X
2531V-56-11	18	(0-6), (6-12), (12-18)	3				IL-59 Sta. 112 + 40, 63 Left		X	X	X	X	X
Total linear feet	947.5												

Total # of Soil Borings	80	
Total Samples	139	5
Duplicate Samples[c/]	14	1
Trip Blanks[d/]		8
TOTAL SAMPLES	153	14

[a/] Where sample is analyzed for total metals, if result exceeds the MAC, sample will be analyzed by SPLP method for same metals. If SPLP also fails, sample will be analyzed by TCLP method. Similarly, where both total and TCLP results are initially run, should both results fail the MACs, sample will be analyzed via SPLP method.

[b/] Groundwater samples will be collected adjacent to REC sites only. When groundwater is encountered, one temporary well will be installed per REC site. Groundwater samples will be analyzed for TAL Metals, VOCs, and SVOCs.

[c/] Duplicate samples will be collected at a minimum one-per-ten sample frequency.

[d/] Trip blanks will be submitted one per day of field work.

4.0 INVESTIGATION RESULTS

This section presents a discussion of the investigation results obtained from the PSI completed in support of the construction project along Illinois Route 59 (Sutton Road) at the intersection of US Route 20 (Lake Street), including on- and off-ramps at the intersection, located in the Villages of Bartlett and Streamwood, Cook County, Illinois. The maximum depth of excavation ranges from one (1) to eighteen (18) ft below ground surface.

Section 4.1 presents the screening criteria used to evaluate the data. Field observations, including headspace-screening PID results, sample collection rationale, and geological and hydrogeological information are summarized in Section 4.2 This information is detailed on Table 4-1 and on the soil boring logs presented in Appendix B.

The discussion for each property begins in Section 4.3 and summarizes the soil sampling analytical results. Analytical results were reviewed and validated in accordance with applicable United State Environmental Protection Agency (USEPA) procedures. STAT Analysis Corporation provided an analytical quality control summary package with the analytical report, included in Appendix C, and H&H performed data validation in accordance with the Consultant Quality Assurance Plan (QAP) and the IDOT-approved Work Plan for the Project. Appendix D contains the Illinois Environmental Protection Agency (IEPA) Form LPC-663, Uncontaminated Soil Certifications for each subject property where soil may be managed to a Clean Construction or Demolition Debris (CCDD) or Uncontaminated Soil Fill Operation (USFO). The PESA Response Form with excavation volumes for the identified ISGS Sites associated with the Project Area is included in Appendix A for reference. This Final PSI Report incorporates the volumes provided by IDOT for the Project. All quantities presented are rounded up to the next whole number (in cubic yards).

4.1 REFERENCE CONCENTRATIONS

4.1.1 Soil Reference Concentrations – Construction Areas

An evaluation of the nature and extent of the contaminants of concern (COC), based on the results of this PSI, is also contained in the discussion. This includes a description and comparison of detected constituents to applicable environmental standards, used herein as reference concentrations, Soil analytical results were compared to the concentrations presented in the table titled *Summary of Maximum Allowable Concentrations (MACs) of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations*, dated August 27, 2012. This table, referred to as the MAC table, is incorporated under Title 35 of the Illinois Administrative Code (IAC), Part 1100, Subpart F.

Soil analytical results from TCLP and SPLP analyses were compared to the Soil Component of the Groundwater Ingestion Exposure Route Values for Class I Groundwater, presented in Title 35, IAC, Part 742: Tiered Approach to Corrective Action Objectives (TACO), Appendix B, Table A: Tier 1 Soil Remediation Objectives (SROs) for Residential Properties.

A constituent in soil is considered to be a COC if it exceeds the most stringent value listed in the MAC table. However, the constituent may be further evaluated by comparing soil sample extraction results (TCLP/SPLP), as indicated on the MAC Table. The constituent is considered a COC if the total concentration exceeds the most-stringent MAC Table value and both the TCLP and SPLP concentrations exceed the TACO SRO for the Soil Component of the Groundwater Ingestion Exposure Route. Additionally, if only the TCLP and SPLP concentrations exceed the TACO SRO for the Soil Component of the Groundwater Exposure Route for a given constituent, the contaminant is considered a COC.

Furthermore, based on guidance from IDOT, soil is not considered suitable for management to a CCDD/USFO if headspace readings in the soil boring are above background levels. Background levels for headspace readings are considered to be

less than 1.0 PID units, which are given in parts per million (ppm) for the PID unit utilized for this Project (MiniRae 3000 with an 11.7 eV lamp).

4.1.2 Soil Reference Concentrations – Acquisition Areas

Soil located within proposed acquisition areas will be evaluated by comparing soil analytical results to the lowest applicable Tier 1 SROs for residential properties presented in Appendix C, Table A of TACO. The following outlines the approach to identifying COCs:

- Constituents with concentrations exceeding the Tier 1 SROs for the inhalation and/or ingestion exposure pathways will be considered COCs.

- A polynuclear aromatic hydrocarbon (PNA) constituent which has a background value listed in Appendix A, Table H of TACO, which is greater than the most stringent SRO in Appendix B, Table A of TACO, is considered a COC if the background value for the applicable area is exceeded.

- Inorganic and ionizing organic constituent concentrations will be compared against the pH-specific SROs for Class I groundwater presented in Appendix B, Table C of TACO, as applicable. A constituent that has a pH-specific SRO will be considered a COC if its total concentration exceeds the pH-specific SRO, and both the TCLP and SPLP concentrations exceed the TACO SRO for the Soil Component of the Groundwater Ingestion Exposure Route.

- If an inorganic constituent does not have a pH-specific SRO (i.e., total chromium), or if the sample pH is outside of the range of pH values provided (4.5 to 9.0 standard units), the SPLP and TCLP concentrations will be used to evaluate the Soil Component of the Groundwater Ingestion Exposure Route. Inorganic constituents will be considered COCs if both SPLP and TCLP concentrations exceed the SRO, and the total concentration exceeds the appropriate background value listed in Appendix A, Table G of TACO.

For the purposes of this report, only detected constituent results are presented in the embedded tables within the document narrative. Refer to Appendix C for comprehensive analytical summary Tables C-1 and C-2, which compare the results for all analytical results to applicable reference concentrations for inorganic and organic constituents, respectively.

Tables 4-2 and 4-3 present the soil analytical data for organic and inorganic constituents, respectively, and compare the detected constituents to reference concentrations. Figures 4-1.1 to 4-1.10 depict the boring locations and the extent of potentially impacted soil that may impact proposed construction activities during this Project. As the MAC Table includes provisions to evaluate select constituents against background values, Figures 4-1.1 to 4-1.10 identify soil that is considered to be non-special waste and soil that may be managed by a CCDD/USFO.

4.1.3 Hazardous Waste Reference Concentrations

The TCLP metals analytical results for soil are screened against the values listed in 35 IAC, Part 721, Identification of Listing of Hazardous Waste, Section 721.124, Toxicity Characteristic. Soil in the vicinity of a boring with one or more TCLP metals with concentrations exceeding the Toxicity Characteristic reference concentrations will be considered a characteristic hazardous waste. None of the TCLP metals were found to exceed the hazardous waste reference criteria.

4.2 FIELD OBSERVATIONS

Headspace measurements using a PID were collected from each sample interval. Table 4-1 presents the soil PID screening results for each soil boring, along with the construction excavation depths and sample collection depth. Headspace

screening data are also presented on the soil boring logs presented in Appendix B. All headspace readings measured for this Project indicated background levels (<1.0 ppm).

Detailed field observations and geological descriptions were recorded by a H&H field geologist during the PSI and are included on the boring logs provided in Appendix B. Subsurface material encountered in the borings advanced adjacent to the subject properties generally includes silty clay soil types with varying quantities of trace sand and gravel. Saturated conditions were not encountered at any of the properties investigated.

4.3 ILLINOIS ROUTE 59 (SUTTON ROAD) AT THE INTERSECTION OF US ROUTE 20

The investigative soil samples collected from the project area were associated with the following eighteen (18) properties: 2531V-13, 2531V-14, 2531V-15, 2531V-16, 2531V-17, 2531V-18, 2531V-21, 2531V-23, 2531V-32, 2531V-33, 2531V-34, 2531V-35, 2531V-36, 2531V-37, 2531V-41, 2531V-43, 2531V-55, and 2531V-56.

A total of eighty (80) borings were completed for the subject properties, with a total of 153 soil samples (including duplicate samples) collected from the borings. Multiple investigative soil samples were collected from varying depths at each boring within the maximum proposed depth of excavation ranging from one (1) to eighteen (18) feet bgs. Saturated conditions were not encountered at any of the properties investigated; therefore, a groundwater evaluation was not able to be conducted.

4.3.1 Analytical Results

Soil Analytical Results

Eighty (80) borings were advanced along the Project Area and were analyzed for VOCs, SVOCs, total metals, TCLP and SPLP metals (8 RCRA plus Be, Co, Cu, Fe, Mn, Ni, and Zn), and soil pH. In addition, 14 field duplicates (Dup 1 through Dup 14) were collected at various sample locations. The field duplicates are also discussed in this section. Analytical data summary tables presenting detected constituents analyzed and their corresponding results are presented in Tables 4-2 and 4-3. Constituents detected in the soil borings advanced adjacent to these properties include VOCs, SVOCs and metals, as listed below:

- A total of one (1) VOC was detected in the soil samples collected adjacent to the subject properties.
- A total of sixteen (16) SVOCs were detected in the soil samples collected adjacent to the subject properties.
- A total of twenty (20) metals were detected (via total analysis method) in the soil samples collected adjacent to the subject properties.
- A total of nine (9) metals were detected (via TCLP method analysis) in the soil samples collected adjacent to the subject properties.
- A total of ten (10) metals were detected (via SPLP method analysis) in the soil samples collected adjacent to the subject properties.
- The pH values measured ranged from 6.45 to 10.21 standard units (s.u.) in the soil samples collected adjacent to the subject properties.

Groundwater Analytical Results

Saturated conditions were not encountered during the investigation and a groundwater evaluation was not conducted.

4.3.2 Nature and Extent of COCs

H&H evaluated the soil analytical data to determine whether any reference concentrations were exceeded adjacent to these properties. Soil with constituents exceeding applicable environmental regulations was classified as being potentially impacted. Depending upon the contaminants of concern, management of potentially impacted soil on-site, off-site to a CCDD/USFO, or off-site as a non-special waste is considered for soil that will be generated during construction activities. Costs for off-site CCDD/USFO management and non-special waste management and disposal have been included as appropriate. A discussion of the criteria used in this analysis is contained in the following subsections.

4.3.2.1 Soil

An evaluation of the analytical results from the soil samples collected adjacent to the subject properties indicates the presence of organic and inorganic constituents. As summarized on Tables 4-2 and 4-3, the following constituents were detected at concentrations exceeding their respective reference concentrations:

- Soil pH was detected at levels outside the required pH range of 6.25 to 9.0 in twenty-four (24) soil samples.
- Benzo(a)anthracene was detected at a concentration exceeding its reference concentration in one (1) soil sample, benzo(a)pyrene and benzo(b)fluoranthene were detected at concentrations exceeding their reference concentrations in two (2) soil samples, and dibenzo(a,h)anthracene was detected at a concentration exceeding its reference concentration in four (4) soil samples.
- Total arsenic was detected at a concentration exceeding its reference concentration in forty-one (41) soil samples.
- Total chromium was detected at a concentration exceeding its reference concentration in fifty-six (56) soil samples.
- Total cobalt was detected at a concentration exceeding its reference concentration in four (4) soil samples.
- Total iron was detected at concentrations exceeding its reference concentrations in one hundred twenty-seven (127) soil samples.
- Total lead was detected at a concentration exceeding its reference concentration in two (2) soil samples.
- Total manganese was detected at a concentration exceeding its reference concentration in fifty-four (54) soil samples.

In order for a metal to be considered a COC, the total, TCLP, and SPLP results, or the TCLP and SPLP results (with the exception of arsenic, magnesium, and vanadium) must be found to exceed their reference concentrations in a given sample. These COC conditions were met for total arsenic and for total, TCLP and/or SPLP iron, lead, and manganese at various borings along the project area. The remaining metals data indicate that only one or two of the detected parameters (of the total, TCLP, and/or SPLP results) in a given sample resulted in an exceedance; therefore, chromium and cobalt are not considered COCs.

IDOT Construction Activities Within Impacted Soil Areas

Proposed IDOT construction activities for the Project Area include excavation for pavement and driveway reconstruction, retaining wall installation, drainage improvements, and landscaping. As indicated above, soil excavated from within the vicinity of borings 2531V-13-03, 14-02, 14-03, 16-01, 18-05, 18-06, 32-01, 37-02, 37-03, 37-04, 41-03, 41-05, 43-03, 43-07, 56-01, 56-04, 56-05, 56-07, and 56-10, as depicted with **orange** hatching on Figure 4-1 is considered impacted, exceeding soil reference concentrations. Soil in the vicinity of these soil borings may be managed off-site as non-special waste (a (5)).

Soil excavated in the vicinity of 17-01, 18-01, 23-03, 23-04, 32-02, 33-01, 33-02, 33-03, 33-05, 43-02, 43-04, 43-08, 55-01, 55-02, and 56-06 as depicted with **yellow** hatching on Figure 4-1, exceeded a reference concentration, > most stringent MAC value, but < background. The material may be managed on-site or managed off-site as non-special waste (a(1)).

Soil excavated in the vicinity of 2531V-14-01, 18-03, 18-04, 18-07, 23-01, 34-08, 35-02, 36-01, 36-03, and 56-02, as depicted with **purple** hatching on Figure 4-1, has a soil pH outside the allowable range for CCDD disposal (6.25 to 9.0). Soil in the vicinity of these soil borings may be managed on-site as fill material or managed and disposed off-site as "uncontaminated soil". This excavated soil cannot be taken to a CCDD/USFO facility due to soil pH readings outside of the allowable range (b(1)).

Soil excavated in the vicinity of 2531V-15-01, 18-08, 33-06, 34-01, 36-02, 43-05, 43-11, 56-03, and 56-09, as depicted with **blue** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value, but achieved the MAC for MSA Counties. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County (a (2)).

Soil excavated in the vicinity of 2531V-32-03, as depicted with **green** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value, but achieved the MAC for an MSA County excluding Chicago and the MAC within the Chicago corporate limits. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County or Chicago (a (3)).

Soil excavated in the vicinity of 2531V-43-01, as depicted with **pink** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value and the MAC within Chicago corporate limits, but achieved the MAC for an MSA County excluding Chicago. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County excluding Chicago (a (4)).

Soils in the vicinity of the remaining borings in this area achieve the MACs and is considered unrestricted and may be managed on-site or off-site, including disposal at a CCDD/USFO facility.

Based on the information provided by the IDOT PESA Response Form, a total of approximately 60,473 cubic yards of soil will be excavated during construction activities along the Project Area.

The total estimated volume of soil requiring management as non-special waste in the Project Area is approximately 7,795 cubic yards, approximately 6,826 cubic yards of which is anticipated to be generated within the existing IDOT ROW. Special Waste Plans and Reports will be required, and additional analytical testing will be necessary to characterize the material for landfill disposal as non-special waste. The total cost estimate for the management of soils in this area is approximately $553,229, as detailed in Table 4-4.

Soils in the vicinity of the remaining borings in the project area achieve the MACs and may be disposed of at a CCDD/USFO using the attached LPC-663 form in Appendix D. As such, no specific cost estimates are presented for these borings.

Potential IDOT Property Acquisition – Soil Remediation Cost

Proposed IDOT construction plans indicate that additional ROW will be acquired adjacent to 2531V-14, 2531V-15, 2531V-33, 2531V-34, and 2531V-56. Reference concentrations were exceeded in samples collected from the following borings in these acquisition areas: 2531V-14-02, 14-03, 33-01, 33-02, 33-03, 33-05, 34-01, 56-01, 56-03, 56-04, 56-05, 56-07, 56-09, 56-10.

Based on this data, an estimated cost to remediate soil was determined. The proposed IDOT ROW encompasses the acquisition areas located between the existing ROW and the proposed ROW adjacent to the above-mentioned areas.

Based on the information provided by the IDOT PESA Response Form, a total of approximately 46,450 cubic yards of soil will be excavated during construction activities from areas where additional ROW will be acquired.

The total estimated volume of soil requiring management as non-special waste in the Project Area is approximately 7,795 cubic yards, approximately 970 cubic yards of which is anticipated to be generated from within acquisition areas. The total volume of non-special waste generated within the area of acquisition is estimated to be approximately 50% of the total volume soil to be managed as non-special waste from these areas. Special Waste Plans and Reports will be required, and additional analytical testing will be necessary to characterize the material for landfill disposal as non-special waste. The total cost for the management of soils within acquisition areas is approximately $79,708, as detailed in Table 4-4.

Comparison of Soil Concentrations with Construction Worker Reference Concentrations

Tables 4-2 and 4-3 contain a comparison of detected constituents to the most conservative of the TACO Tier 1 Construction Worker ingestion or inhalation values. No constituents were detected in the Project Area at levels exceeding the TACO Tier 1 remediation objectives for the Construction Worker exposure route.

Management of Excavated Soil

Based on concentrations of arsenic, manganese, lead, and iron within the maximum excavation depth, the soil/waste in the vicinity of the borings mentions above as depicted with **orange** hatching must be managed off-site as non-special waste, providing that a “non-special waste certification” is submitted by the generator according to the conditions in 415 ILCS 5/22.48 and 415 ILCS 4/3.475. The property history and available analytical data indicates a “non-special waste certification” can be applied to soil anticipated to be excavated adjacent to and within these properties during construction activities.

The soil in the vicinity of borings 17-01, 18-01, 23-03, 23-04, 32-02, 33-01, 33-02, 33-03, 33-05, 43-02, 43-04, 43-08, 55-01, 55-02, and 56-06 may be managed on-site as fill material, or managed off-site as non-special waste.

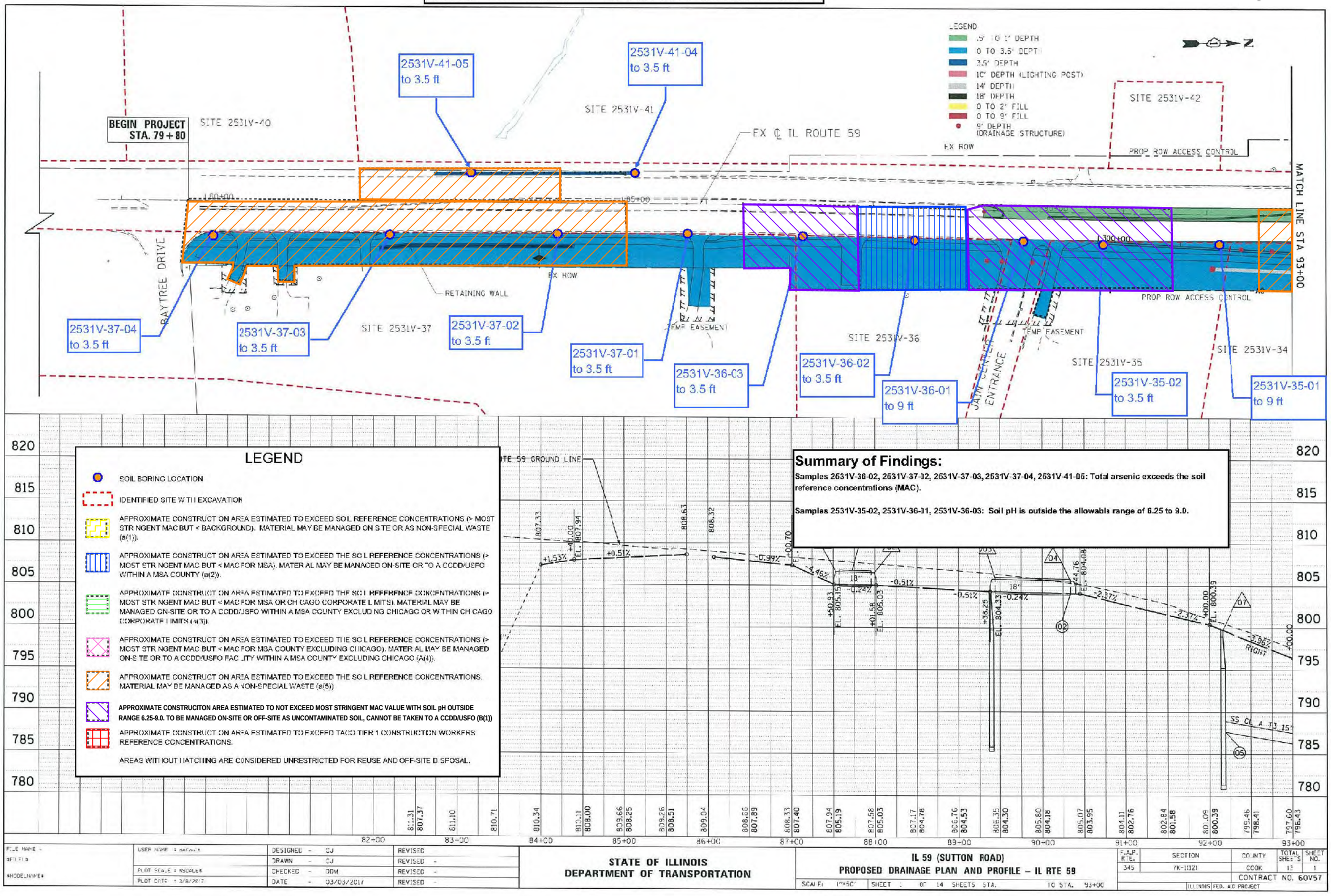
The soil in the vicinity of borings 14-01, 18-03, 18-04, 18-07, 23-01, 34-08, 35-02, 36-01, 36-03, and 56-02 may be managed on-site as fill material or managed and disposed off-site as “uncontaminated soil”.

Soils in the vicinity of the remaining borings in this area achieve the MACs and may be managed on-site or off-site, including disposal at a CCDD/USFO facility using the attached LPC-663 forms in Appendix D.

4.3.2.2 Groundwater

Saturated conditions were not encountered in the soil borings advanced adjacent to the subject properties. Therefore, groundwater is not anticipated to be encountered during construction activities and an evaluation of analytical results was not completed adjacent to these properties.

FIGURE 4-1.1 EXTENT OF POTENTIALLY IMPACTED SOIL



FILE NAME =	USER NAME =	DESIGNED - CJ	REVISED
		DRAWN - CJ	REVISED -
	PLOT SCALE =	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD)
PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59

SCALE: 1"=50' | SHEET 1 OF 14 SHEETS STA. TO STA. 93+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	(K-1012)	COOK	13	1
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.1 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-35-01	2531V-35-01 (Dup 1)	2531V-35-01	2531V-35-02	2531V-36-01	2531V-36-01	2531V-36-02	2531V-36-03	2531V-37-01	2531V-37-02	2531V-37-03	2531V-37-04	2531V-41-04	2531V-41-05	2531V-41-05 (Dup 2)	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	0-5	5-9	0-3.5	0-5	5-9	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5		
Sample Date	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-35	2531V-35	2531V-35	2531V-35	2531V-36	2531V-36	2531V-36	2531V-36	2531V-37	2531V-37	2531V-37	2531V-37	2531V-41	2531V-41	2531V-41		
Parameter																	
Laboratory soil pH (s.u.)	8.89	8.73	8.59	9.31	9.13	8.99	9	9.16	8.64	8.72	8.05	8.62	8.71	8.09	7.94	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES																
SVOCs, mg/kg																	
benzo(a)anthracene	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.037	< 0.040	< 0.041	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.037	< 0.040	< 0.041	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.037	< 0.040	< 0.041	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.037	< 0.040	< 0.041	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																	
Arsenic	6.1	8.3	6.7	5.3	6.1	4.5	**13**	8.7	10	**18**	**29**	**14**	6.4	**17**	**21**	11.3 / 13	61
Chromium	6.7	5.1	6.4	7.6	6.2	7.2	7.7	20	20	29	31	23	9.2	23	23	21	690
Cobalt	4.5	3.6	3.4	6.5	4.5	5.4	4.5	10	10	16	20	13	5.3	15	16	20	12,000
Iron	13000	9800	11000	16000	13000	13000	17000	24000	24000	39000	62000	32000	12000	36000	41000	15,000 / 15,900	---
Lead	7.7	21	5.3	6.0	6.9	5.5	7.1	15	14	31	44	21	17	33	38	107	700
Manganese	420	300	270	400	380	380	320	560	480	1100	1600	610	410	920	510	630 / 636	4,100
TCLP Metals, mg/L																Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.31	< 0.25	< 0.25	< 0.25	< 0.25	0.72	< 0.25	< 0.25	< 0.25	0.51	5	5
Lead	**0.0076**	< 0.0050	**0.014**	**0.0083**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.95**	**0.79**	**1.3**	**1.3**	**1.3**	**5.2**	**1.2**	**4.9**	**6.6**	**0.39**	0.020	**5.4**	**0.56**	**15**	**10**	0.15	0.15
Nickel	0.012	< 0.010	0.021	0.017	0.018	0.085	0.017	0.055	**0.11**	< 0.010	< 0.010	0.065	< 0.010	0.024	0.021	0.1	0.1
Zinc	0.13	0.19	0.13	0.12	0.12	0.17	0.10	0.16	0.19	0.20	0.27	0.17	0.17	0.22	0.22	5	5
SPLP Metals, mg/L																	
Iron	**9.7**	4.4	3.2	2.9	1.9	2.3	**14**	**5.2**	**5.7**	**7.2**	**19**	**8.9**	**9.9**	**5.8**	**6.7**	5	5
Lead	0.0048	0.0030	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0056	0.0021	0.0023	0.0072	0.0067	0.0035	0.0044	0.0056	0.0031	0.0075	0.0075
Manganese	0.066	0.034	0.019	0.026	0.013	0.018	0.10	0.028	0.037	0.041	**0.16**	0.040	0.076	0.059	0.042	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Grc

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.2 EXTENT OF POTENTIALLY IMPACTED SOIL

2531V-41-03 to 14 ft

2531V-34-01 to 9 ft

2531V-34-02 to 14 ft

2531V-34-09 to 14 ft

2531V-34-03 to 3.5 ft

2531V-43-11 to 9 ft

2531V-43-07 to 9 ft

2531V-43-06 to 9 ft

2531V-43-05 to 9 ft

2531V-18-07 to 18 ft

2531V-18-06 to 9 ft

2531V-18-05 to 9 ft

2531V-56-07 to 18 ft

2531V-56-08 to 18 ft

2531V-18-04 to 9 ft

2531V-18-03 to 9 ft

MATCH LINE STA 152+00 SEE SHEET NO. 13

MATCH LINE STA 115+00 SEE SHEET NO. 12

MATCH LINE STA 93+00

MATCH LINE STA 62+00 SEE SHEET NO. 11

MATCH LINE STA 2+00 SEE SHEET NO. 10

MATCH LINE STA 108+00

EX ℄ US RTE 20

EX ℄ IL ROUTE 59

SITE 2531V-43

SITE 2531V-41

SITE 2531V-34

SITE 2531V-18

SITE 2531V-56

PROP ROW ACCESS CONTROL

TEMP EASEMENT

RETAINING WALL

NOISE WALL

EX ROW

PROP ℄ RAMP E

9' DEPTH

LEGEND

- .5' TO 1' DEPTH
- 0 TO 3.5' DEPTH
- 3.5' DEPTH
- 10' DEPTH (LIGHTING POST)
- 14' DEPTH
- 18' DEPTH
- 0 TO 2' FILL
- 0 TO 9' FILL
- 9' DEPTH (DRAINAGE STRUCTURE)

LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (A(1))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS A NON-SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS.

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

Summary of Findings:

Samples 2531V-18-03, 2531V-18-04; 2531V-18-07: Soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-18-05: Total arsenic exceeds the reference concentration (MAC); total, TCLP, and SPLP manganese exceed the reference concentrations

Sample 2531V-18-06: Total arsenic exceeds the reference concentration (MAC); Total, TCLP, and SPLP manganese exceeds the reference concentrations; benzo(a)pyrene and benzo(b)fluoranthene exceed the reference concentrations (>most stringent MAC but <MAC for MSA or Chicago corporate limits); benzo(a) anthracene and dibenz(a,h)anthracene exceed the reference concentrations (>most stringent MAC but <MAC for MSA counties); and soil pH is outside the allowable range of 6.25 to 9.0.

Samples 2531V-34-01, 2531V-41-03: Total arsenic exceeds the soil reference concentrations (MAC)

Sample 2531V-43-05: TCLP and SPLP iron and manganese exceed the reference concentrations (MAC)

Sample 2531V-43-07: Total arsenic exceeds the reference concentration (MAC)

Sample 2531V-43-11: TCLP and SPLP manganese exceed the reference concentration (MAC)

Sample 2531V-56-07: Total arsenic exceeds the reference concentration (MAC)

EX IL ROUTE 59 GROUND LINE

36" EXIST. CULVERT

780.67

43.67' RIGHT

PROF IL = SURVEYED / PLOTTED / CHECKED / DRAWN / NOTE BOOK / NO. / STRUCTURE

DATE / BY / NO. / DESCRIPTION

FILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -
		DRAWN - CJ	REVISED -
	PLOT SCALE = 1.0000 '/ In	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59

SCALE: 1" = 50' | SHEET 2 OF 14 SHEETS | STA. 93+00 | O STA. 108+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	15	2

CONTRACT NO. 60V57

ILLINOIS FED. AID PROJECT

FIGURE 4-1.2 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-18-03	2531V-18-03	2531V-18-04	2531V-18-04	2531V-18-05	2531V-18-05	2531V-18-06	2531V-18-06	2531V-18-07	2531V-18-07	2531V-18-07	2531V-34-01	2531V-34-01	2531V-34-02	2531V-34-02	2531V-34-03	2531V-34-09	2531V-34-09	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-5	5-9	0-7	7-14	0-3.5	0-7	7-14		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34		
Parameter																				
Laboratory soil pH (s.u.)	9.07	9.36	9.33	9.06	8.02	8.2	9.18	7.96	8.77	8.17	9.13	8.52	8.41	8.36	7.86	8.86	7.66	7.83	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES																			
SVOCs, mg/kg																				
benzo(a)anthracene	< 0.036	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.4**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.039	< 0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.036	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.0**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.039	< 0.039	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.036	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.0**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.039	< 0.039	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.036	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**0.33**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.039	< 0.039	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																				
Arsenic	5.4	4.3	6.0	5.0	**13**	6.5	**12**	**14**	8.0	8.1	5.7	11	**13**	6.8	3.7	9.8	7.9	7.7	11.3 / 13	61
Chromium	8.5	7.3	11	8.5	28	9.6	22	27	14	22	11	18	20	18	16	20	23	17	21	690
Cobalt	5.6	4.6	6.7	5.5	18	5.4	15	17	9.1	11	5.0	15	15	8.6	13	9.9	11	11	20	12,000
Iron	13000	12000	15000	14000	36000	15000	29000	38000	18000	21000	12000	25000	29000	20000	26000	24000	25000	21000	15,000 / 15,900	---
Lead	6.7	11	8.6	6.4	32	25	28	24	32	12	5.9	17	21	25	17	64	19	17	107	700
Manganese	420	490	500	550	860	420	690	950	510	360	280	650	940	440	670	560	630	490	630 / 636	4,100
TCLP Metals, mg/L																			Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.4	< 0.25	< 0.25	< 0.25	< 0.25	0.27	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.3**	**1.5**	**1.3**	**1.3**	**10**	**1.2**	**11**	**8.9**	**5.6**	**3.9**	**3.4**	**4.6**	**0.68**	**0.24**	**7.5**	**0.78**	**9.5**	**10**	0.15	0.15
Nickel	0.053	0.020	0.012	0.015	0.035	0.012	0.031	0.040	0.037	0.037	0.028	0.040	< 0.010	< 0.010	0.023	< 0.010	0.034	0.028	0.1	0.1
Zinc	0.084	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12	< 0.050	< 0.050	0.20	0.13	0.053	0.18	0.14	< 0.050	< 0.050	5	5
SPLP Metals, mg/L																				
Iron	**12**	0.56	**12**	**6.1**	**25**	1.3	**14**	2.2	**10**	**19**	**16**	**25**	3.8	1.5	< 0.10	**14**	0.72	1.4	5	5
Lead	0.0054	< 0.0020	0.0050	0.0027	**0.015**	< 0.0020	**0.0084**	< 0.0020	**0.014**	**0.0079**	0.0046	**0.0099**	< 0.0020	0.0036	< 0.0020	**0.011**	< 0.0020	< 0.0020	0.0075	0.0075
Manganese	0.11	0.0086	0.089	0.046	**0.16**	0.0098	**0.16**	0.015	0.087	0.094	0.083	0.14	0.031	0.015	< 0.0040	0.12	0.031	0.020	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Gr

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.2 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE (Cont.)
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-41-03	2531V-41-03	2531V-43-05	2531V-43-05	2531V-43-06	2531V-43-06 (Dup 5)	2531V-43-06	2531V-43-07	2531V-43-07	2531V-43-11	2531V-43-11	2531V-56-07	2531V-56-07	2531V-56-07	2531V-56-08	2531V-56-08	2531V-56-08	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-7	7-14	0-5	5-9	0-5	0-5	5-9	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-6	6-12	12-18		
Sample Date	7/27/17	7/27/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-41	2531V-41	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter																			
Laboratory soil pH (s.u.)	8.61	7.45	8.38	8.41	8.22	8.2	8.25	9.05	8.99	8.04	7.53	7.96	8.66	7.42	7.55	8.06	8.05	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES																		
SVOCs, mg/kg																			
benzo(a)anthracene	< 0.039	< 0.041	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	< 0.037	< 0.040	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.039	< 0.041	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	< 0.037	< 0.040	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.039	< 0.041	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	< 0.037	< 0.040	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.039	< 0.041	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	< 0.037	< 0.040	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																			
Arsenic	**18**	6.8	8.5	4.7	4.7	6.5	7.8	**23**	5.5	8.7	9.0	**16**	3.2	2.0	8.2	6.0	4.4	11.3 / 13	61
Chromium	23	17	21	12	12	17	18	23	11	17	17	31	15	11	22	8.8	7.6	21	690
Cobalt	14	8.6	13	7.0	6.5	9.4	9.6	11	4.6	11	9.1	18	7.6	6.4	15	6.2	4.6	20	12,000
Iron	33000	21000	28000	14000	14000	20000	21000	36000	13000	22000	21000	43000	18000	14000	25000	13000	11000	15,000 / 15,900	---
Lead	93	70	58	7.1	7.0	11	15	19	7.8	31	12	24	8.6	8.5	17	6.4	6.2	107	700
Manganese	840	590	600	390	430	540	530	450	770	620	540	380	410	490	690	490	310	630 / 636	4,100
TCLP Metals, mg/L																		Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	2.8	< 0.25	0.44	< 0.25	< 0.25	< 0.25	0.33	< 0.25	< 0.25	< 0.25	2.7	3.7	5	5
Lead	**0.015**	**0.057**	**0.0091**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0052	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.58**	**5.1**	**6.6**	**3.9**	**0.78**	**4.1**	**1.5**	**0.29**	**1.3**	**11**	**9.7**	**5.7**	**4.7**	**3.1**	**0.31**	**4.1**	**4.3**	0.15	0.15
Nickel	< 0.010	0.029	0.022	0.048	< 0.010	0.049	0.014	< 0.010	0.012	0.019	0.036	0.035	0.054	0.035	< 0.010	0.063	0.067	0.1	0.1
Zinc	0.18	0.33	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L																			
Iron	4.8	1.9	**16**	**8.7**	**6.1**	**5.2**	**6.1**	**11**	**8.9**	**16**	**5.9**	**14**	**8.2**	0.11	**9.6**	0.50	2.0	5	5
Lead	0.0049	0.0022	**0.017**	0.0030	< 0.0020	< 0.0020	0.0025	0.0039	0.0030	**0.014**	0.0029	0.0070	0.0048	< 0.0020	0.0041	< 0.0020	< 0.0020	0.0075	0.0075
Manganese	0.029	0.0085	**0.18**	0.076	0.031	0.035	0.048	0.092	0.060	**0.20**	0.094	0.14	0.052	0.071	0.10	< 0.0040	0.0094	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

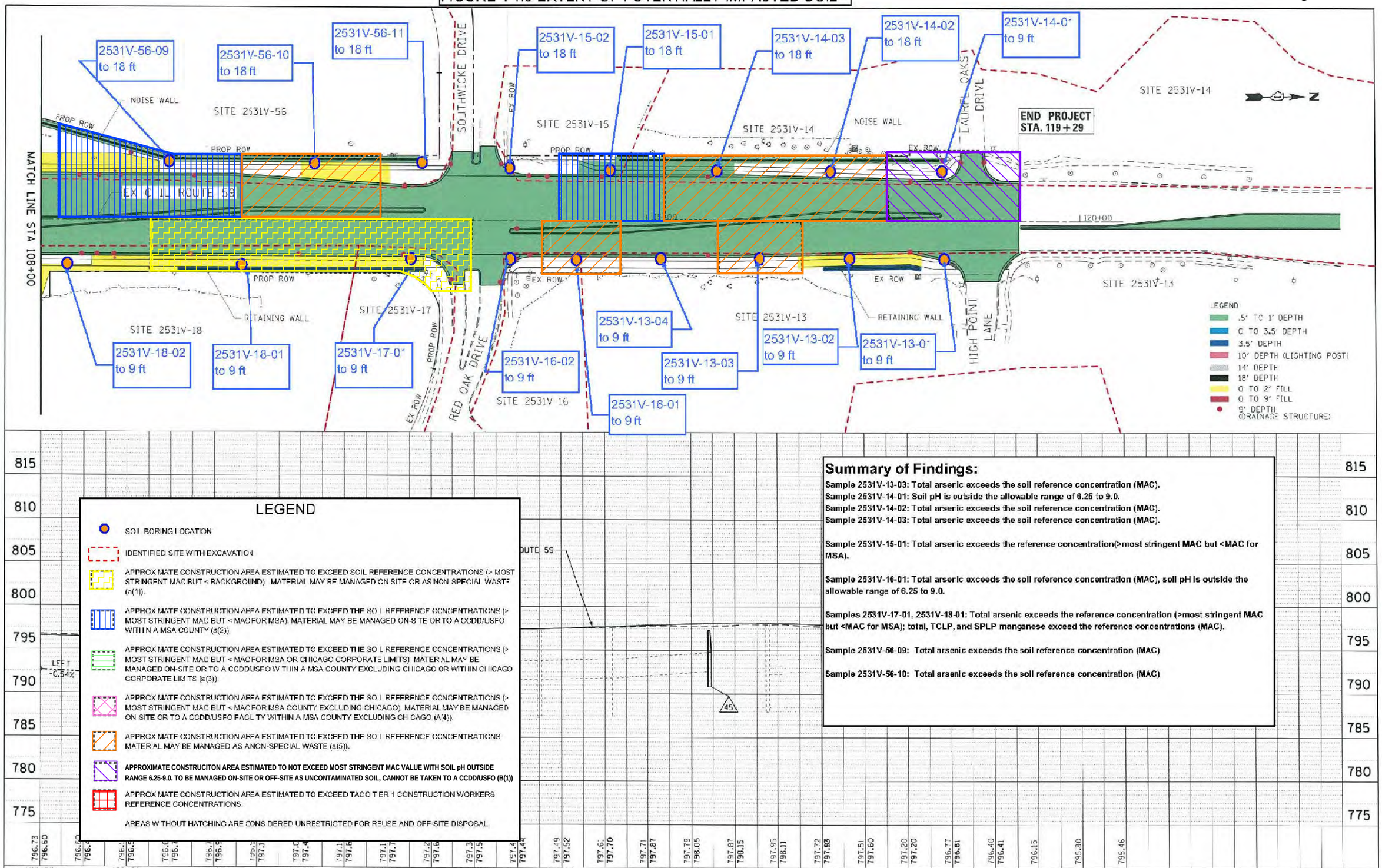
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.3 EXTENT OF POTENTIALLY IMPACTED SOIL



LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON SPECIAL WASTE (a(1)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (A(4)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS ANON-SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS.

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

Summary of Findings:

Sample 2531V-13-03: Total arsenic exceeds the soil reference concentration (MAC).
Sample 2531V-14-01: Soil pH is outside the allowable range of 6.25 to 9.0.
Sample 2531V-14-02: Total arsenic exceeds the soil reference concentration (MAC).
Sample 2531V-14-03: Total arsenic exceeds the soil reference concentration (MAC).

Sample 2531V-15-01: Total arsenic exceeds the reference concentration(>most stringent MAC but <MAC for MSA).

Sample 2531V-16-01: Total arsenic exceeds the soil reference concentration (MAC), soil pH is outside the allowable range of 6.25 to 9.0.

Samples 2531V-17-01, 2531V-18-01: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA); total, TCLP, and SPLP manganese exceed the reference concentrations (MAC).

Sample 2531V-56-09: Total arsenic exceeds the soil reference concentration (MAC)

Sample 2531V-56-10: Total arsenic exceeds the soil reference concentration (MAC)

FILE NAME = $FILE$	USER NAME = default	DESIGNED - CJ	REVISED -
		DRAWN - CJ	REVISED -
$MODEL_NAME$	PLOT SCALE = $SCALE$	CHECKED - DJM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/05/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – IL RTE 59

SCALE: 1" = 50' | SHEET 3 OF 14 SHEETS | STA. 108+00 TO STA. 120+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	3
		CONTRACT NO. 60V57		
		ILLINOIS FED. AID PROJECT		

FIGURE 4-1.3 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-13-01	2531V-13-01	2531V-13-02	2531V-13-02	2531V-13-03	2531V-13-03	2531V-13-03 (Dup 7)	2531V-13-04	2531V-13-04	2531V-14-01	2531V-14-01	2531V-14-02	2531V-14-02	2531V-14-02	2531V-14-03	2531V-14-03	2531V-14-03	2531V-14-03 (Dup 3)	2531V-15-01	2531V-15-01	2531V-15-01	2531V-15-02	2531V-15-02	2531V-15-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	5-9	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-6	6-12	12-18	12-18	0-6	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15		
Parameter																										
Laboratory soil pH (s.u.)	8.54	8.08	7.57	6.45	7.64	7.72	8.53	7.56	7.71	9.04	8.23	8.96	8.35	8.05	8.58	8.97	7.25	7.62	8.08	7.98	7.8	8.59	8.11	7.45	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES												NO EXCEEDANCES													
SVOCs, mg/kg																										
benzo(a)anthracene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																										
Arsenic	11	7.9	6.2	3.7	**12**	**14**	7.6	8.3	9.5	7.2	6.4	9.0	**14**	7.8	**13**	8.5	7.6	5.2	8.0	**12**	7.4	7.5	11	5.4	11.3 / 13	61
Chromium	17	20	20	27	30	32	21	23	24	14	15	16	7.2	12	20	16	14	21	17	20	16	16	18	17	21	690
Cobalt	15	10	11	6.8	11	15	12	11	11	7.9	9.4	11	9.2	9.4	13	9.0	9.0	12	7.7	10	11	9.8	14	10	20	12,000
Iron	30000	25000	19000	22000	35000	35000	24000	25000	25000	18000	19000	21000	21000	17000	26000	19000	18000	25000	20000	33000	22000	19000	17000	22000	15,000 / 15,900	---
Lead	15	20	20	14	19	19	110	30	65	15	12	24	12	11	17	12	12	17	15	16	13	18	15	13	107	700
Manganese	1600	630	390	120	610	860	510	520	990	630	400	730	660	450	950	370	600	660	530	710	610	630	280	570	630 / 636	4,100
TCLP Metals, mg/L																									Class I Groundwater [c/]	
Cadmium	< 0.0050	**0.0062**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.0051**	< 0.0050	**0.0065**	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	0.33	0.26	< 0.25	< 0.25	1.6	0.96	0.35	< 0.25	< 0.25	< 0.25	< 0.25	0.73	< 0.25	< 0.25	0.26	**110**	< 0.25	< 0.25	**160**	< 0.25	1.0	0.57	5	5
Lead	< 0.0050	< 0.0050	**0.0083**	**0.0096**	< 0.0050	< 0.0050	< 0.0050	0.0074	**0.028**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.024**	< 0.0050	< 0.0050	**0.028**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.75**	**6.2**	**10**	**0.68**	**0.97**	**0.45**	**2.3**	**14**	**13**	**0.31**	**0.74**	**0.66**	**2.2**	**5.4**	**0.27**	**0.21**	**4.9**	**8.1**	**3.9**	**0.22**	**13**	**0.26**	**3.3**	**5.2**	0.15	0.15
Nickel	< 0.010	0.057	0.035	0.021	0.059	0.013	< 0.010	0.042	**0.11**	< 0.010	0.011	< 0.010	0.018	0.084	0.013	< 0.010	**0.20**	**0.20**	0.059	< 0.010	**0.29**	< 0.010	0.053	**0.18**	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	0.14	< 0.050	< 0.050	< 0.050	0.053	0.17	< 0.050	< 0.050	< 0.050	< 0.050	0.066	< 0.050	< 0.050	0.21	0.77	< 0.050	< 0.050	0.76	< 0.050	0.076	0.20	5	5
SPLP Metals, mg/L																										
Iron	**8.1**	**8.4**	**9.4**	2.9	**22**	**13**	0.84	4.3	2.4	**8.4**	2.4	**5.1**	3.5	0.47	**5.5**	**7.2**	1.3	0.21	**5.9**	2.2	0.77	4.5	**8.9**	0.14	5	5
Lead	0.0046	0.0042	0.0071	< 0.0020	0.0073	0.0048	0.0050	0.0033	0.0036	0.0037	< 0.0020	0.0022	< 0.0020	< 0.0020	< 0.0020	0.0031	< 0.0020	< 0.0020	0.0031	< 0.0020	< 0.0020	0.0020	0.0057	< 0.0020	0.0075	0.0075
Manganese	0.094	0.047	0.082	0.011	0.14	0.074	0.025	0.050	0.033	0.091	0.0071	0.034	0.016	0.0095	0.043	0.030	0.031	0.11	0.029	0.0065	0.016	0.027	0.044	0.081	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.3 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE (Cont.)
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-16-01	2531V-16-01	2531V-16-02	2531V-16-02	2531V-17-01	2531V-17-01	2531V-18-01	2531V-18-01 (Dup 6)	2531V-18-01	2531V-18-02	2531V-18-02	2531V-56-09	2531V-56-09	2531V-56-09	2531V-56-10	2531V-56-10	2531V-56-10 (Dup 4)	2531V-56-10	2531V-56-11	2531V-56-11	2531V-56-11	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	0-5	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-6	6-12	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-16	2531V-16	2531V-16	2531V-16	2531V-17	2531V-17	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter																							
Laboratory soil pH (s.u.)	9.41	8.54	8.37	8.32	7.8	7.72	8.95	8	8.58	8.04	8.97	8.59	8.48	8.34	8.29	8.75	8.36	8.83	8.28	8.39	7.76	<6.25, >9.0	---
VOCs (mg/kg)																							
SVOCs, mg/kg																							
benzo(a)anthracene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.037	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.037	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.037	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.037	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																							
Arsenic	**13**	**14**	6.0	9.3	**12**	11	**12**	9.4	10	10	6.0	**13**	2.7	1.7	9.6	4.9	**14**	4.1	9.3	6.3	8.4	11.3 / 13	61
Chromium	26	25	27	20	30	26	28	18	26	25	9.4	17	14	6.9	18	7.7	23	8.1	19	18	17	21	690
Cobalt	13	16	14	10	15	9.7	17	9.0	13	16	5.8	12	4.0	4.1	11	4.7	13	3.9	10	12	11	20	12,000
Iron	30000	33000	27000	23000	35000	29000	35000	22000	29000	27000	15000	21000	16000	12000	22000	13000	30000	10000	23000	19000	21000	15,000 / 15,900	---
Lead	16	18	20	15	50	13	71	12	87	65	6.8	33	7.4	5.9	14	6.4	33	4.4	23	14	14	107	700
Manganese	720	1000	910	660	980	490	930	420	560	1000	410	910	180	370	620	320	860	240	650	340	710	630 / 636	4,100
TCLP Metals, mg/L																						Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	0.37	< 0.25	0.27	< 0.25	< 0.25	2.2	0.36	< 0.25	< 0.25	< 0.25	< 0.25	2.7	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.2	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.016**	< 0.0050	**0.026**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.18**	**1.1**	0.015	**0.82**	**0.52**	**0.40**	**6.6**	**3.8**	**17**	0.076	**1.3**	**0.69**	**0.70**	**5.4**	**1.6**	**1.0**	**0.21**	**1.7**	**0.19**	**1.1**	**4.8**	0.15	0.15
Nickel	< 0.010	0.012	< 0.010	0.015	< 0.010	0.011	0.017	0.054	0.022	< 0.010	0.016	< 0.010	0.020	0.067	0.017	0.015	< 0.010	0.022	< 0.010	0.016	**0.21**	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.054	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.20	5	5
SPLP Metals, mg/L																							
Iron	**17**	**15**	**38**	**25**	**30**	**17**	**28**	**8.7**	**25**	2.2	2.4	**11**	**15**	**6.3**	**10**	**30**	**16**	**41**	**5.5**	**12**	0.95	5	5
Lead	0.0068	0.0059	**0.010**	**0.0099**	**0.0098**	0.0057	**0.11**	0.0031	**0.075**	0.0032	< 0.0020	0.0073	0.0054	0.0028	0.0047	**0.0094**	**0.0081**	**0.012**	0.0022	0.0061	< 0.0020	0.0075	0.0075
Manganese	0.089	0.081	0.13	0.12	**0.19**	0.078	**0.34**	0.053	**0.34**	0.020	0.016	0.086	0.072	0.036	0.074	0.14	0.13	**0.17**	0.030	0.053	0.042	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

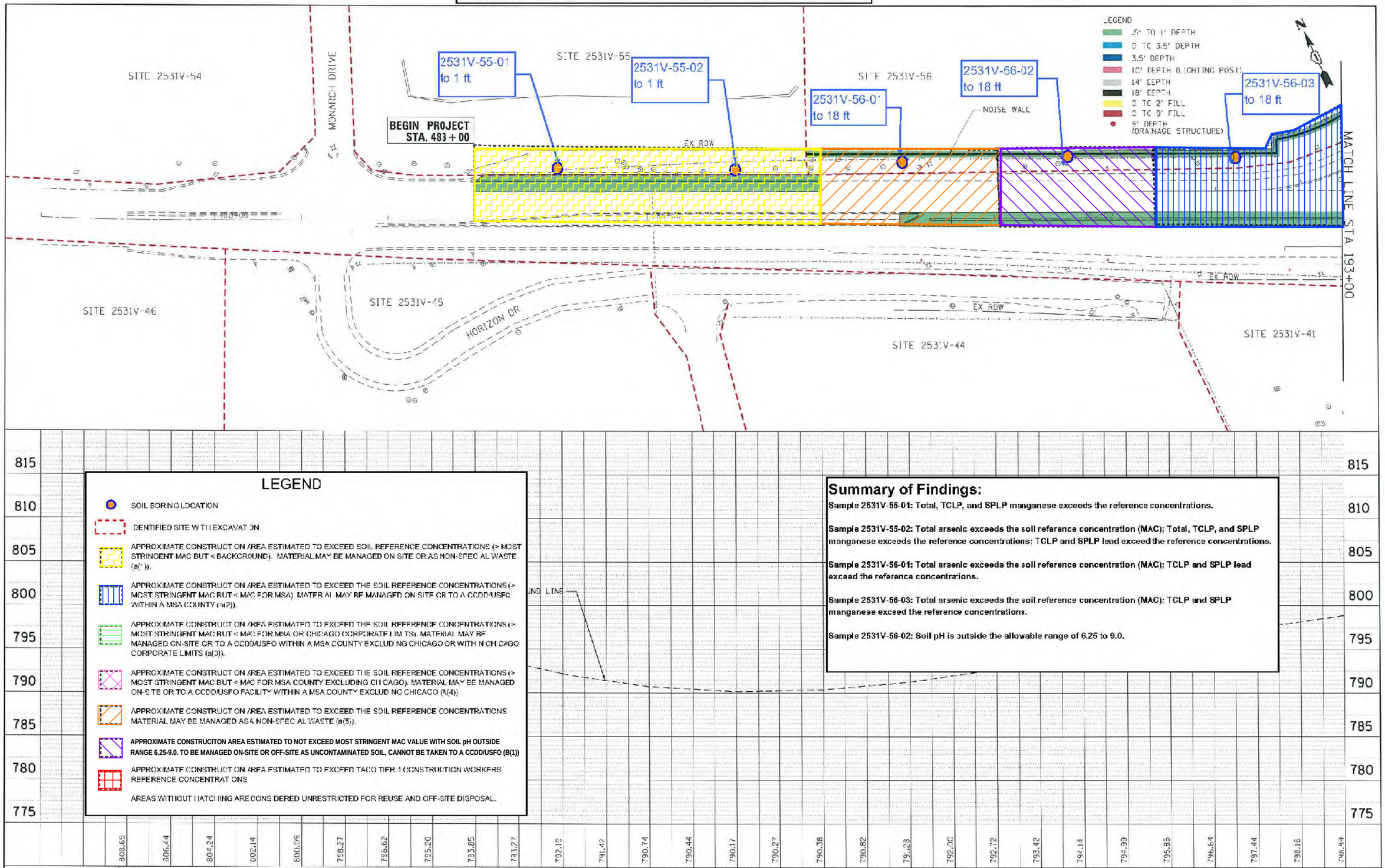
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.4 EXTENT OF POTENTIALLY IMPACTED SOIL



LEGEND

- SOIL BORING LOCATION
- DENTIFIED SITE W TH EXCAVAT ON
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPEC AL WASTE (a( )).
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATER AL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIM TS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUD NG CHICAGO OR WITH N CH CAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED TI IE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CI I CAGO). MATERIAL MAY BE MANAGED ON-S TE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUD NG CHICAGO (A(4));
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS MATERIAL MAY BE MANAGED AS A NON-SPEC AL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCT ON AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRAT ONS

AREAS WITHOUT HATCHING ARE CONS DERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

Summary of Findings:

Sample 2531V-55-01: Total, TCLP, and SPLP manganese exceeds the reference concentrations.

Sample 2531V-55-02: Total arsenic exceeds the soil reference concentration (MAC); Total, TCLP, and SPLP manganese exceeds the reference concentrations; TCLP and SPLP lead exceed the reference concentrations.

Sample 2531V-56-01: Total arsenic exceeds the soil reference concentration (MAC); TCLP and SPLP lead exceed the reference concentrations.

Sample 2531V-56-03: Total arsenic exceeds the soil reference concentration (MAC); TCLP and SPLP manganese exceed the reference concentrations.

Sample 2531V-56-02: Soil pH is outside the allowable range of 6.25 to 9.0.

FILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -
		DRAWN - CJ	REVISED -
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 4 OF 14 SHEETS | STA. TO STA. 193+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	4
		CONTRACT NO. 60V57		
		ILLINOIS FED. AID PROJECT		

FIGURE 4-1.4 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-55-01	2531V-55-02	2531V-56-01	2531V-56-01 (Dup 14)	2531V-56-01	2531V-56-01	2531V-56-02	2531V-56-02	2531V-56-02	2531V-56-02 (Dup 13)	2531V-56-03	2531V-56-03	2531V-56-03	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-6	0-6	6-12	12-18	0-6	6-12	12-18	12-18	0-6	6-12	12-18		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s)	2531V-55	2531V-55	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
[ISGS Site No.(s)]															
Parameter															
Laboratory soil pH (s.u.)	8.73	8.87	8.05	8.22	7.61	7.96	9.28	8.5	8.38	8.21	8.74	8.76	8.77	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES														
SVOCs, mg/kg															
benzo(a)anthracene	0.092	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg															
Arsenic	7.5	**13**	10	**14**	6.3	7.5	5.0	6.0	4.0	9.4	5.3	**13**	4.7	11.3 / 13	61
Chromium	20	27	15	30	22	17	18	19	7.2	14	11	5.6	6.0	21	690
Cobalt	14	16	11	19	9.2	11	10	9.4	5.1	7.8	6.7	3.9	3.2	20	12,000
Iron	21000	33000	24000	36000	21000	28000	18000	18000	11000	20000	14000	19000	10000	15,000 / 15,900	---
Lead	34	46	24	210	14	16	10	9.8	5.2	12	7.9	7.4	4.2	107	700
Manganese	1200	710	690	830	550	480	470	470	480	550	440	360	370	630 / 636	4,100
TCLP Metals, mg/L														Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	0.68	0.37	0.89	0.32	0.54	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	**0.016**	< 0.0050	**0.017**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.19**	**9.3**	**8.8**	**6.9**	**2.5**	**3.1**	**4.9**	**4.7**	**0.94**	**1.1**	**4.5**	**2.2**	**1.7**	0.15	0.15
Nickel	< 0.010	0.070	0.020	0.027	0.061	0.046	0.045	0.025	0.015	0.011	0.047	0.041	0.025	0.1	0.1
Zinc	0.13	**23**	< 0.050	0.058	< 0.050	< 0.10	0.056	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	5	5
SPLP Metals, mg/L															
Iron	**19**	**37**	**6.8**	**13**	**12**	3.7	**19**	**9.2**	0.14	2.2	**17**	< 0.10	< 0.10	5	5
Lead	**0.015**	**0.038**	0.0034	**0.045**	0.0041	0.0023	**0.0085**	0.0049	< 0.0020	< 0.0020	**0.0080**	< 0.0020	< 0.0020	0.0075	0.0075
Manganese	**0.17**	**0.21**	0.052	0.11	0.044	0.020	0.14	0.071	< 0.0040	0.010	**0.19**	< 0.0040	< 0.0040	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

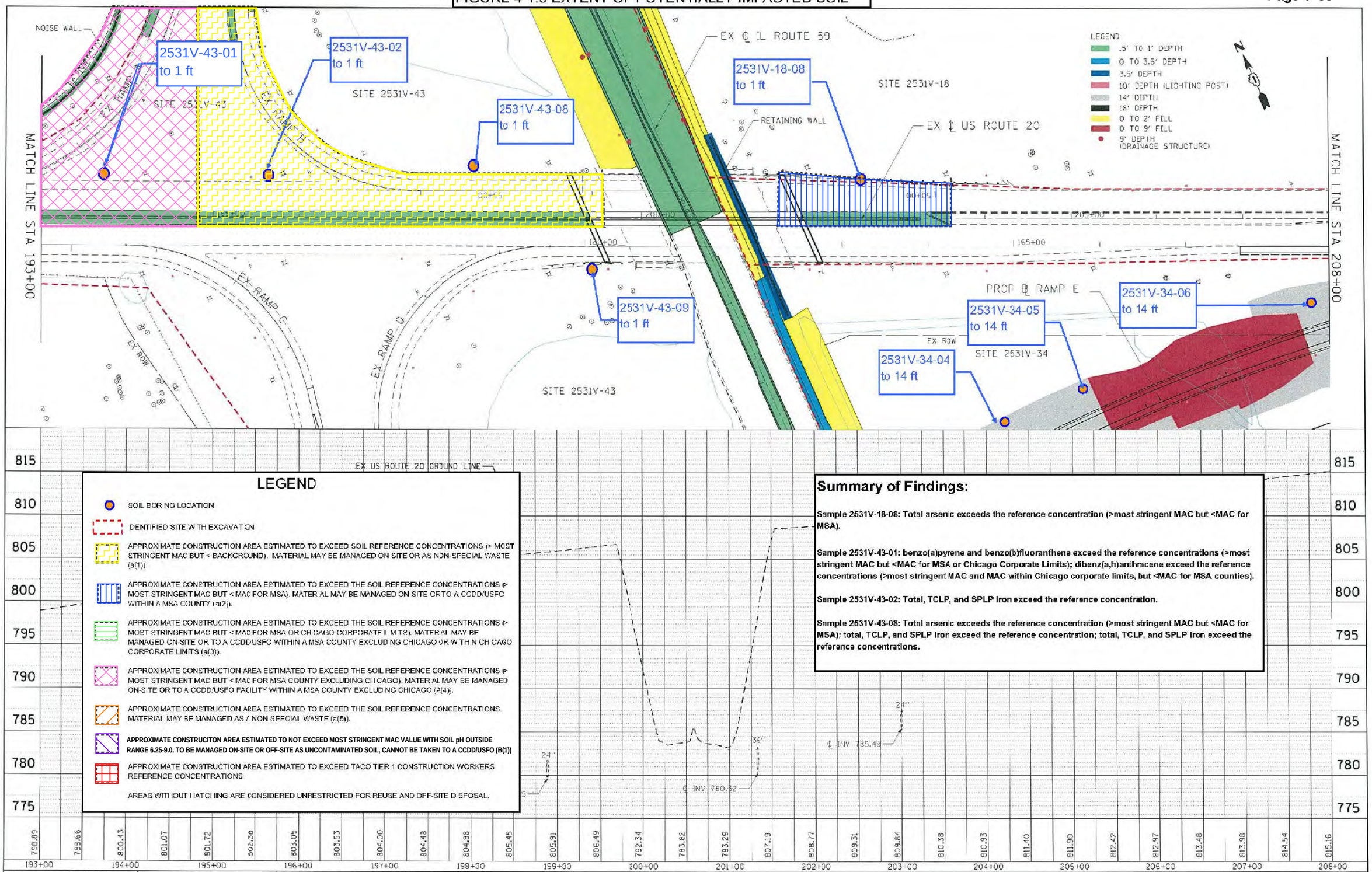
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.5 EXTENT OF POTENTIALLY IMPACTED SOIL



LEGEND

- SOIL BOR NG LOCATION
- DENTIFIED SITE W TH EXCAVAT ON
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATER AL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CH CAGO (CORPORATE L M TS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUD NG CHICAGO OR W TH N CH CAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CH CAGO). MATER AL MAY BE MANAGED ON-S TE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUD NG CHICAGO (A(4)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS A NON SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS

AREAS WITH OUT HATCH ING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE D SPOSAL.

Summary of Findings:

Sample 2531V-18-08: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA).

Sample 2531V-43-01: benzo(a)pyrene and benzo(b)fluoranthene exceed the reference concentrations (>most stringent MAC but <MAC for MSA or Chicago Corporate Limits); dibenz(a,h)anthracene exceed the reference concentrations (>most stringent MAC and MAC within Chicago corporate limits, but <MAC for MSA counties).

Sample 2531V-43-02: Total, TCLP, and SPLP Iron exceed the reference concentration.

Sample 2531V-43-08: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA); total, TCLP, and SPLP Iron exceed the reference concentration; total, TCLP, and SPLP Iron exceed the reference concentrations.

FILE NAME = #FILE_N#	USER NAME = default	DESIGNED - CJ	REVISED -
		DRAWN - CJ	REVISED -
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20

SCALE: 1" = 50' | SHEET 5 OF 14 SHEETS | STA. 193+00 TO STA. 208+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1021	COOK	15	5

CONTRACT NO. 60V57
ILLINOIS FED. AID PROJECT

FIGURE 4-1.5 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-18-08	2531V-34-04	2531V-34-04	2531V-34-05	2531V-34-05	2531V-34-05 (Dup 8)	2531V-34-06	2531V-34-06	2531V-43-01	2531V-43-02	2531V-43-08	2531V-43-09	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-7	7-14	0-7	7-14	7-14	0-7	7-14	0-1	0-1	0-1	0-1		
Sample Date	8/9/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/9/17	8/9/17	8/9/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-18	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-43	2531V-43	2531V-43	2531V-43		
Parameter														
Laboratory soil pH (s.u.)	7.91	8.29	7.99	7.8	8.04	7.83	8.6	7.61	8.21	8.82	8.52	8.73	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES													
SVOCs, mg/kg														
benzo(a)anthracene	< 0.038	< 0.040	< 0.039	< 0.037	0.044	< 0.039	< 0.039	< 0.040	0.81	< 0.037	< 0.038	0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	**0.96**	< 0.037	< 0.038	0.038	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	**0.98**	< 0.037	< 0.038	< 0.038	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.038	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	**0.41**	< 0.037	< 0.038	< 0.038	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg														
Arsenic	**12**	9.0	7.1	6.6	6.7	8.0	9.3	10	4.2	9.9	**12**	8.2	11.3 / 13	61
Chromium	22	25	21	21	25	20	20	26	75	20	20	18	21	690
Cobalt	15	14	9.1	8.7	9.0	11	15	14	5.7	13	11	9.5	20	12,000
Iron	30000	28000	23000	19000	20000	22000	24000	26000	24000	27000	29000	21000	15,000 / 15,900	---
Lead	23	25	15	17	21	17	27	21	41	20	18	24	107	700
Manganese	550	760	430	490	350	600	630	860	590	600	530	430	630 / 636	4,100
TCLP Metals, mg/L													Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	0.67	1.4	0.65	0.92	1.4	< 0.25	1.2	1.2	0.85	**6.4**	**14**	< 0.25	5	5
Lead	0.0057	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0065	< 0.0050	< 0.0050	< 0.0050	**0.017**	**0.0077**	< 0.0050	0.0075	0.0075
Manganese	**7.1**	**12**	**9.0**	**7.3**	**7.1**	**9.4**	**11**	**14**	**4.3**	**12**	0.14	0.14	0.15	0.15
Nickel	0.015	0.054	0.068	0.024	0.024	0.030	0.019	0.028	0.018	0.047	0.018	< 0.010	0.1	0.1
Zinc	< 0.10	0.088	< 0.050	0.082	0.075	< 0.050	0.066	0.080	< 0.10	0.077	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Iron	0.62	0.56	1.0	0.41	**6.6**	2.8	1.0	0.74	2.8	**6.6**	**38**	1.1	5	5
Lead	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0040	0.0069	0.0037	< 0.0020	0.0035	0.0061	**0.022**	0.0051	0.0075	0.0075
Manganese	**1.2**	0.0079	0.020	0.011	0.057	0.054	0.041	0.029	0.020	0.066	**0.41**	0.048	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

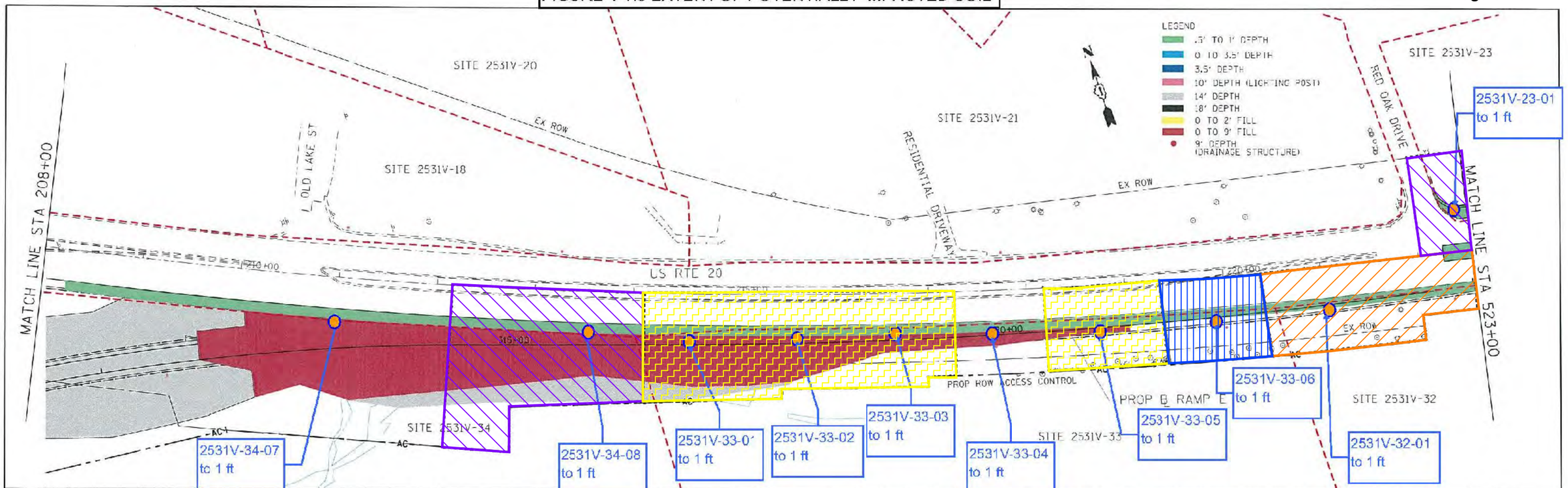
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.6 EXTENT OF POTENTIALLY MPACTED SOIL



LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (a(4)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS A NON-SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF SITE DISPOSAL.

Summary of Findings:

Samples 2531V-23-01, 2531V-34-08: Soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-33-01: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA); Total, TCLP, and SPLP manganese exceed the reference concentrations.

Sample 2531V-33-02: Total, TCLP, and SPLP manganese exceeds the reference concentrations; and soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-33-03: Total, TCLP, and SPLP manganese exceeds the reference concentrations; and dibenz (a,h)anthracene exceeds the reference concentration (>most stringent MAC but <MAC for MSA or Chicago corporate limits).

Samples 2531V-32-01, 2531V-33-05: Total arsenic exceeds the reference concentration (MAC); Total, TCLP, and SPLP manganese exceed the reference concentrations; and soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-33-06: Total arsenic exceeds the reference concentration(>most stringent MAC but <MAC for MSA).

FILE NAME =	USER NAME = defaults	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET) PROPOSED DRAINAGE PLAN AND PLOT – US RTE 20
		DRAWN - CJ	REVISED -		
	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -		SCALE: 1" = 50' SHEET 6 OF 14 SHEETS STA. 208+00 TO STA. 523+00
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	6
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.6 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-23-01	2531V-32-01	2531V-33-01	2531V-33-02	2531V-33-03	2531V-33-04	2531V-33-05	2531V-33-06	2531V-33-06 (Dup 9)	2531V-34-07	2531V-34-08	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-23; 2531V-21	2531V-32	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-34	2531V-34		
Parameter													
Laboratory soil pH (s.u.)	9.04	9.06	8.35	9.03	8.98	8.72	9.08	7.91	8.75	8.84	9.04	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES												
SVOCs, mg/kg													
benzo(a)anthracene	< 0.038	< 0.040	< 0.040	< 0.039	0.11	< 0.038	< 0.038	< 0.039	< 0.041	< 0.038	< 0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.040	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	< 0.041	< 0.038	< 0.039	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.040	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	< 0.041	< 0.038	< 0.039	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.038	< 0.040	< 0.040	< 0.039	**0.11**	< 0.038	< 0.038	< 0.039	0.090	< 0.038	< 0.039	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg													
Arsenic	9.7	**21**	**12**	8.9	11	7.8	**13**	**12**	9.3	9.0	8.6	11.3 / 13	61
Chromium	25	34	27	27	21	31	24	24	19	21	22	21	690
Cobalt	11	21	15	13	13	9.0	15	14	11	11	9.9	20	12,000
Iron	30000	49000	34000	28000	27000	20000	32000	30000	28000	24000	22000	15,000 / 15,900	---
Lead	17	32	20	33	33	26	39	33	35	20	40	107	700
Manganese	590	1100	790	640	780	580	820	730	550	600	540	630 / 636	4,100
TCLP Metals, mg/L												Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.47	< 0.25	< 0.25	< 0.25	1.5	1.1	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**3.7**	**0.35**	**1.2**	**0.34**	**0.27**	**0.52**	**0.27**	0.077	**3.1**	**1.5**	**0.21**	0.15	0.15
Nickel	0.027	0.014	0.014	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.018	0.017	< 0.010	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.059	0.078	5	5
SPLP Metals, mg/L													
Iron	**19**	**75**	**28**	**24**	**23**	**14**	**36**	3.0	**12**	2.8	0.86	5	5
Lead	**0.0077**	**0.029**	**0.012**	**0.014**	**0.025**	**0.013**	**0.026**	0.0023	**0.012**	0.0031	0.0034	0.0075	0.0075
Manganese	0.11	**0.65**	**0.17**	**0.17**	**0.24**	0.14	**0.23**	0.028	0.084	0.022	0.030	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable.

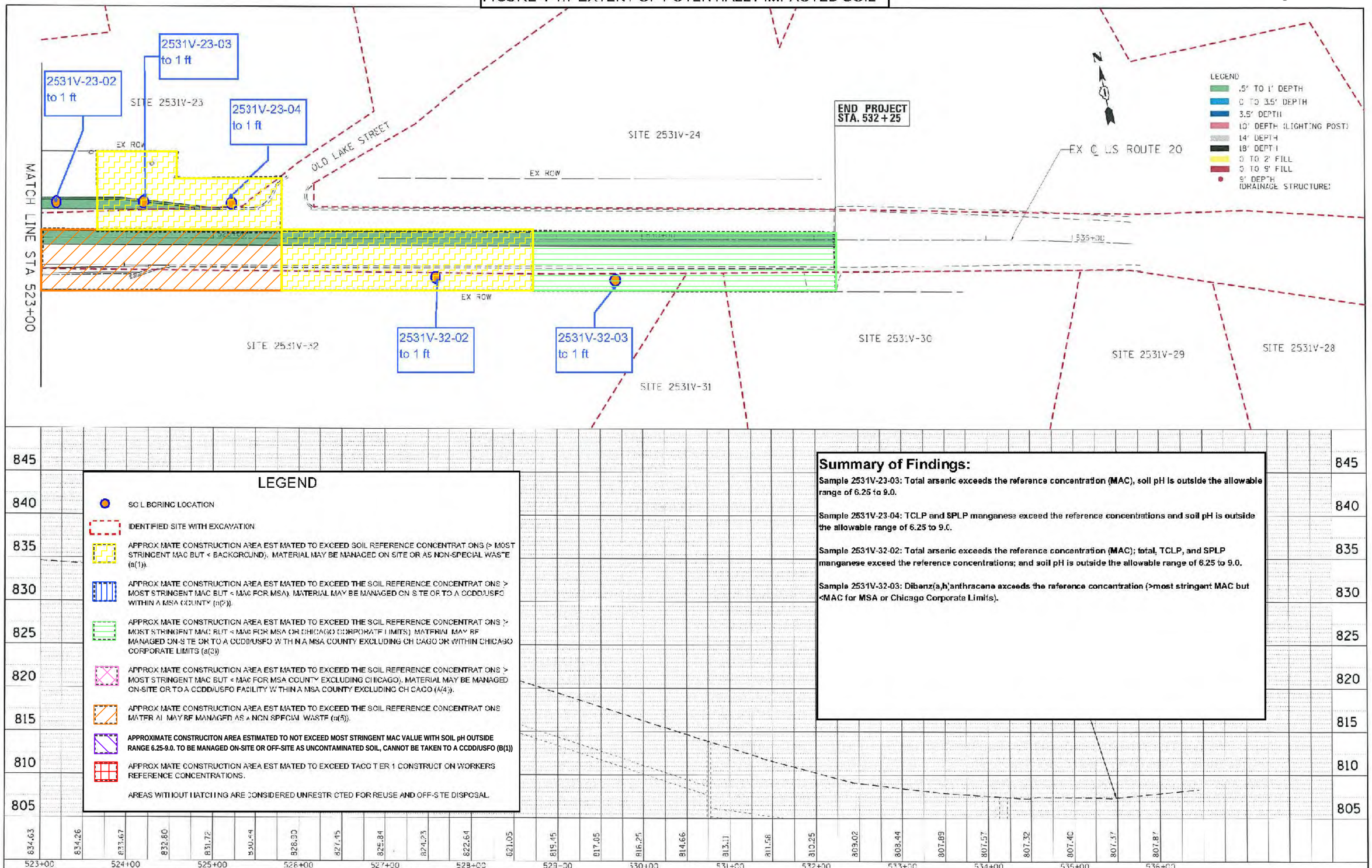
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.7 EXTENT OF POTENTIALLY IMPACTED SOIL



LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS > MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS > MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS > MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (A(4)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS MATERIAL MAY BE MANAGED AS A NON SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS.

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

Summary of Findings:

Sample 2531V-23-03: Total arsenic exceeds the reference concentration (MAC), soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-23-04: TCLP and SPLP manganese exceed the reference concentrations and soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-32-02: Total arsenic exceeds the reference concentration (MAC); total, TCLP, and SPLP manganese exceed the reference concentrations; and soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-32-03: Dibenz(a,h)anthracene exceeds the reference concentration (>most stringent MAC but <MAC for MSA or Chicago Corporate Limits).

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
#MODELNAME#	PLOT SCALE = #SCALE#	DRAWN - CJ	REVISED -	IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET) PROPOSED DRAINAGE PLAN AND PROFILE – US RTE 20
	PLOT DATE = #PLOTDATE#	CHECKED - DOM	REVISED -	SCALE: 1" = 50' SHEET 7 OF 14 SHEETS STA. 523+00 TO STA. 536+00
		DATE - 03/03/2017	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	7
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.7 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-23-02	2531V-23-03	2531V-23-04	2531V-32-02	2531V-32-03	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s)	2531V-23;	2531V-23;	2531V-23;	2531V-32	2531V-32		
[ISGS Site No.(s)]	2531V-21	2531V-21	2531V-21				
Parameter							
Laboratory soil pH (s.u.)	8.44	9.08	9.03	9.01	8.66	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES						
SVOCs, mg/kg							
benzo(a)anthracene	< 0.037	< 0.037	< 0.039	< 0.038	0.16	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.037	< 0.037	< 0.039	< 0.038	0.069	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.037	< 0.037	< 0.039	< 0.038	0.094	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.037	< 0.037	< 0.039	< 0.038	**0.13**	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg							
Arsenic	11	**13**	11	**13**	7.5	11.3 / 13	61
Chromium	24	21	21	25	36	21	690
Cobalt	16	16	17	14	11	20	12,000
Iron	29000	29000	30000	32000	23000	15,000 / 15,900	---
Lead	16	18	49	30	44	107	700
Manganese	490	770	1400	780	650	630 / 636	4,100
TCLP Metals, mg/L						Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.0**	**3.8**	**1.1**	**0.22**	**0.75**	0.15	0.15
Nickel	0.014	0.053	< 0.010	0.010	< 0.010	0.1	0.1
Zinc	0.44	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L							
Iron	**30**	**25**	**41**	**37**	**10**	5	5
Lead	**0.013**	**0.012**	**0.021**	**0.022**	0.0050	0.0075	0.0075
Manganese	0.13	0.13	**0.32**	**0.22**	0.053	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.8 EXTENT OF POTENTIALLY IMPACTED SOIL

SITE 2531V-34

SITE 2531V-18

SITE 2531V-21

SITE 2531V-33

SITE 2531V-34

OLD LAKE ST

US RTE 20

EX ROW

RESIDENTIAL DRIVEWAY

PROP ℄ RAMP E

PROP ROW ACCESS CONTROL

MATCH LINE STA 307+00

MATCH LINE STA 322+00

310+00

315+00

320+00

AC

2531V-34-05 to 14 ft boring also shown on 3-1.5

2531V-34-06 to 14 ft boring also shown on 3-1.5

2531V-34-07 to 1 ft boring also shown on 3-1.6

2531V-34-08 to 1 ft boring also shown on 3-1.6

2531V-33-01 to 1 ft boring also shown on 3-1.6

2531V-33-02 to 1 ft boring also shown on 3-1.6

2531V-33-03 to 1 ft boring also shown on 3-1.6

2531V-33-04 to 1 ft boring also shown on 3-1.6

2531V-33-05 to 1 ft boring also shown on 3-1.6

LEGEND

.5' TO 1' DEPTH

0 TO 3.5' DEPTH

3.5' DEPTH

10' DEPTH (LIGHTING POST)

14' DEPTH

18' DEPTH

0 TO 2' FILL

0 TO 9' FILL

9' DEPTH (DRAINAGE STRUCTURE)

LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (a(4)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS A NON-SPECIAL WASTE (a(5))
- APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

Summary of Findings:

Sample 2531V-34-08: Soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-33-01: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA); Total, TCLP, and SPLP manganese exceed the reference concentrations.

Sample 2531V-33-02: Total, TCLP, and SPLP manganese exceeds the reference concentrations; and soil pH is outside the allowable range of 6.25 to 9.0.

Sample 2531V-33-03: Total, TCLP, and SPLP manganese exceeds the reference concentrations; and dibenz (a,h)anthracene exceeds the reference concentration (>most stringent MAC but <MAC for MSA or Chicago corporate limits).

Sample 2531V-33-05: Total arsenic exceeds the reference concentration (MAC); Total, TCLP, and SPLP manganese exceed the reference concentrations; and soil pH is outside the allowable range of 6.25 to 9.0.

307+00	308+00	309+00	310+00	311+00	312+00	313+00	314+00	315+00	316+00	317+00	318+00	319+00	320+00	321+00	322+00
787.03	788.44	789.84	789.25	789.66	794.11	806.55	608.55	799.85	802.10	804.91	806.32	807.72	809.13	809.38	809.63	818.12	819.65	820.94	821.54	822.14	822.74	823.34	823.94

FILE NAME = #FILE#	USER NAME = default	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - CJ	REVISED -	
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -	
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -	

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – RAMP E

SCALE: 1" = 50' SHEET 9 OF 14 SHEETS STA. 307+00 TO STA. 322+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	74-1(12)	COOK	13	9
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.8 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-33-01	2531V-33-02	2531V-33-03	2531V-33-04	2531V-33-05	2531V-34-05	2531V-34-05	2531V-34-05 (Dup 8)	2531V-34-06	2531V-34-06	2531V-34-07	2531V-34-08	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-7	7-14	7-14	0-7	7-14	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34		
Parameter														
Laboratory soil pH (s.u.)	8.35	9.03	8.98	8.72	9.08	7.8	8.04	7.83	8.6	7.61	8.84	9.04	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES													
SVOCs, mg/kg														
benzo(a)anthracene	< 0.040	< 0.039	0.11	< 0.038	< 0.038	< 0.037	0.044	< 0.039	< 0.039	< 0.040	< 0.038	< 0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	< 0.038	< 0.039	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	< 0.038	< 0.039	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.040	< 0.039	**0.11**	< 0.038	< 0.038	< 0.037	< 0.038	< 0.039	< 0.039	< 0.040	< 0.038	< 0.039	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg														
Arsenic	**12**	8.9	11	7.8	**13**	6.6	6.7	8.0	9.3	10	9.0	8.6	11.3 / 13	61
Chromium	27	27	21	31	24	21	25	20	20	26	21	22	21	690
Cobalt	15	13	13	9.0	15	8.7	9.0	11	15	14	11	9.9	20	12,000
Iron	34000	28000	27000	20000	32000	19000	20000	22000	24000	26000	24000	22000	15,000 / 15,900	---
Lead	20	33	33	26	39	17	21	17	27	21	20	40	107	700
Manganese	790	640	780	580	820	490	350	600	630	860	600	540	630 / 636	4,100
TCLP Metals, mg/L													Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	0.47	< 0.25	0.92	1.4	< 0.25	1.2	1.2	1.5	1.1	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0065	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**1.2**	**0.34**	**0.27**	**0.52**	**0.27**	**7.3**	**7.1**	**9.4**	**11**	**14**	**1.5**	**0.21**	0.15	0.15
Nickel	0.014	< 0.010	< 0.010	< 0.010	< 0.010	0.024	0.024	0.030	0.019	0.028	0.017	< 0.010	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.082	0.075	< 0.050	0.066	0.080	0.059	0.078	5	5
SPLP Metals, mg/L														
Iron	**28**	**24**	**23**	**14**	**36**	0.41	**6.6**	2.8	1.0	0.74	2.8	0.86	5	5
Lead	**0.012**	**0.014**	**0.025**	**0.013**	**0.026**	< 0.0020	0.0040	0.0069	0.0037	< 0.0020	0.0031	0.0034	0.0075	0.0075
Manganese	**0.17**	**0.17**	**0.24**	0.14	**0.23**	0.011	0.057	0.054	0.041	0.029	0.022	0.030	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable.

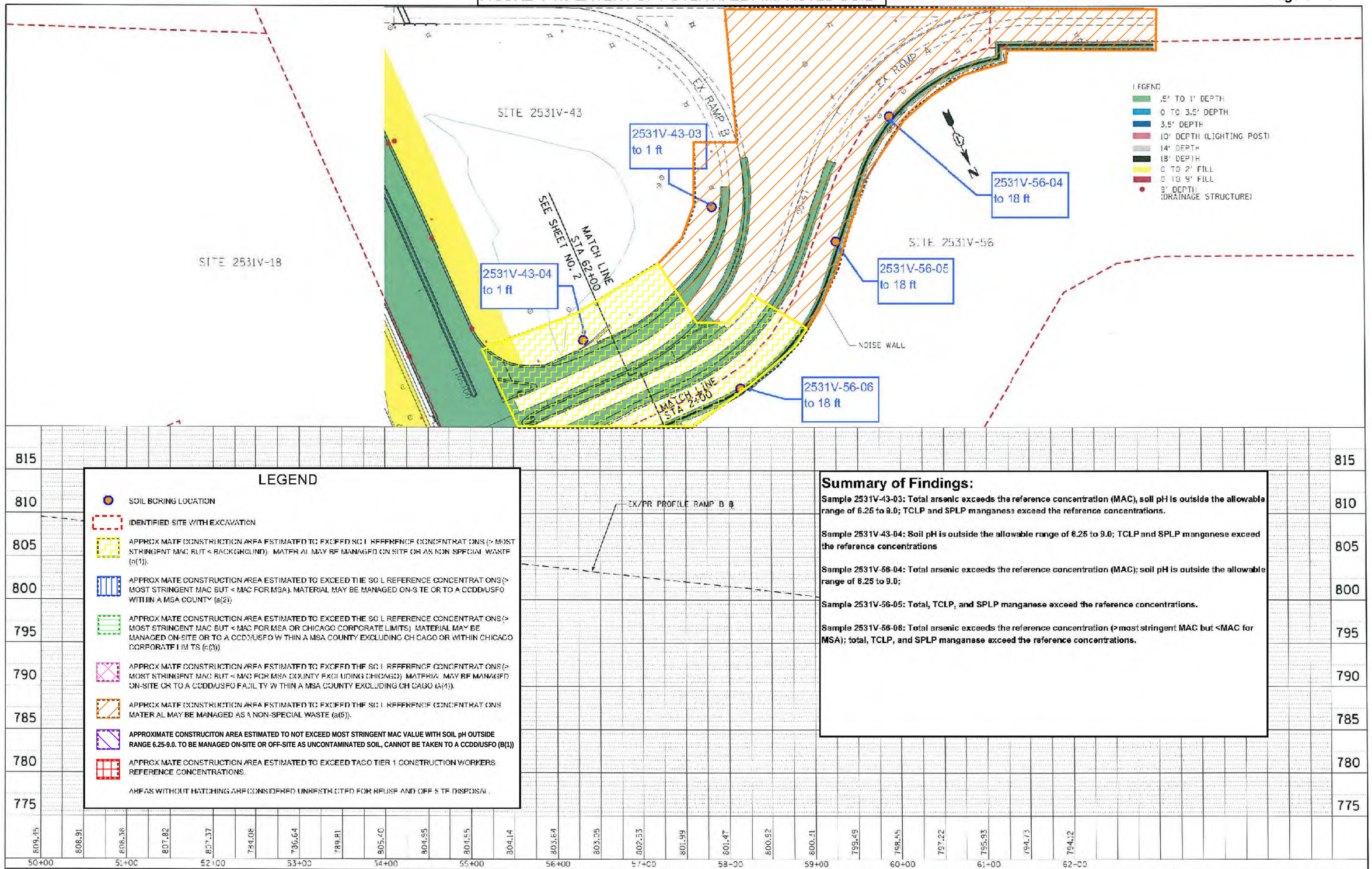
[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.9 EXTENT OF POTENTIALLY IMPACTED SOIL



LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND). MATERIAL MAY BE MANAGED ON SITE OR AS NON SPECIAL WASTE (a(1)).
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2))
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3))
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (a(4)).
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS. MATERIAL MAY BE MANAGED AS A NON-SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROX MATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS.

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF SITE DISPOSAL.

Summary of Findings:

Sample 2531V-43-03: Total arsenic exceeds the reference concentration (MAC), soil pH is outside the allowable range of 6.25 to 9.0; TCLP and SPLP manganese exceed the reference concentrations.

Sample 2531V-43-04: Soil pH is outside the allowable range of 6.25 to 9.0; TCLP and SPLP manganese exceed the reference concentrations

Sample 2531V-56-04: Total arsenic exceeds the reference concentration (MAC); soil pH is outside the allowable range of 6.25 to 9.0;

Sample 2531V-56-05: Total, TCLP, and SPLP manganese exceed the reference concentrations.

Sample 2531V-56-06: Total arsenic exceeds the reference concentration (>most stringent MAC but <MAC for MSA); total, TCLP, and SPLP manganese exceed the reference concentrations.

FILE NAME = #FILE1#	USER NAME = default	DESIGNED - CJ	REVISED -
#MODELNAME#		DRAWN - CJ	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - DDM	REVISED -
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET)
PROPOSED DRAINAGE PLAN AND PROFILE – RAMP B

SCALE: 1" = 50' | SHEET 12 OF 14 SHEETS | STA. 50+00 TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7X-(12)	COOK	13	11
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.9 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-43-03	2531V-43-03 (Dup 10)	2531V-43-04	2531V-56-04	2531V-56-04 (Dup 12)	2531V-56-04	2531V-56-04	2531V-56-05	2531V-56-05	2531V-56-05	2531V-56-06	2531V-56-06	2531V-56-06 (Dup 11)	2531V-56-06	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-6	0-6	6-12	12-18	0-6	6-12	12-18	0-6	6-12	6-12	12-18		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-43	2531V-43	2531V-43	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter																
Laboratory soil pH (s.u.)	8.1	9.3	9.04	8.54	10.21	8.07	8.48	8.87	7.48	7.8	8.36	7.81	8.18	8.17	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES															
SVOCs, mg/kg																
benzo(a)anthracene	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg																
Arsenic	**17**	7.3	7.6	8.3	9.3	**15**	**14**	7.5	6.3	8.3	**12**	**12**	**12**	4.0	11.3 / 13	61
Chromium	36	17	16	19	24	23	11	25	22	31	21	23	29	31	21	690
Cobalt	21	9.9	10	11	13	19	5.8	12	8.7	24	12	14	17	26	20	12,000
Iron	46000	21000	20000	24000	28000	38000	14000	26000	20000	39000	28000	30000	35000	27000	15,000 / 15,900	---
Lead	31	20	17	21	23	17	6.2	30	36	23	16	18	33	19	107	700
Manganese	390	480	460	540	410	890	350	560	440	**1700**	710	1100	800	1300	630 / 636	4,100
TCLP Metals, mg/L															Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	0.58	< 0.25	2.2	0.35	**9.7**	< 0.25	< 0.25	0.28	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.021**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**5.5**	**5.2**	**12**	**7.9**	**9.8**	**8.1**	**7.2**	**8.3**	**6.4**	**8.7**	**7.2**	**8.7**	**9.8**	**2.8**	0.15	0.15
Nickel	0.024	0.031	0.084	0.059	0.046	0.022	**0.17**	0.058	0.023	0.075	0.052	0.045	0.021	0.015	0.1	0.1
Zinc	< 0.10	< 0.050	< 0.050	< 0.10	0.061	< 0.10	< 0.050	< 0.050	< 0.050	0.080	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L																
Iron	**13**	**48**	**37**	**17**	**12**	**35**	**5.2**	**13**	2.1	**17**	**9.2**	**12**	**12**	**11**	5	5
Lead	**0.0088**	**0.039**	**0.025**	**0.013**	**0.010**	**0.016**	0.0034	0.0074	< 0.0020	0.0058	0.0041	0.0042	**0.0077**	0.0058	0.0075	0.0075
Manganese	0.14	**0.50**	**0.46**	**0.21**	**0.18**	**0.35**	0.053	0.13	0.016	**0.22**	0.084	**0.16**	0.098	0.13	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable.

[a/] Soil reference concentrations from MAC table. Background values for MSA

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

FIGURE 4-1.10 EXTENT OF POTENTIALLY IMPACTED SOIL

NOISE WALL
SITE 2531V 56
SITE 2531V-43
US RTE 20
EX ℄ RAMP C
EX ℄ RAMP D
EX ROW
SITE 2531V-41
SITE 2531V-34
SITE 2531V-43
2531V-43-11 to 9 ft boring also appears on 3-1.2
2531V-43-10 to 1 ft
2531V-41-01 to 1 ft
2531V-41-02 to 1 ft
SEE SHEET NO. 2.
MATCH LINE STA 152+00
MATCH LINE STA 115+00

LEGEND
- .5' TO 1' DEPTH
- 0 TO 3.5' DEPTH
- 3.5' DEPTH
- 10' DEPTH (LIGHTING POST)
- 14' DEPTH
- 16' DEPTH
- 0 TO 2' FILL
- 0 TO 9' FILL
- 9' DEPTH (DRAINAGE STRUCTURE)

LEGEND

- SOIL BORING LOCATION
- IDENTIFIED SITE WITH EXCAVATION
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < BACKGROUND) MATERIAL MAY BE MANAGED ON SITE OR AS NON-SPECIAL WASTE (a(1)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA). MATERIAL MAY BE MANAGED ON SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY (a(2)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA OR CHICAGO CORPORATE LIMITS) MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO WITHIN A MSA COUNTY EXCLUDING CHICAGO OR WITHIN CHICAGO CORPORATE LIMITS (a(3)).
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS (> MOST STRINGENT MAC BUT < MAC FOR MSA COUNTY EXCLUDING CHICAGO). MATERIAL MAY BE MANAGED ON-SITE OR TO A CCDD/USFO FACILITY WITHIN A MSA COUNTY EXCLUDING CHICAGO (A(4))
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED THE SOIL REFERENCE CONCENTRATIONS MATERIAL MAY BE MANAGED AS A NON-SPECIAL WASTE (a(5)).
- **APPROXIMATE CONSTRUCITON AREA ESTIMATED TO NOT EXCEED MOST STRINGENT MAC VALUE WITH SOIL pH OUTSIDE RANGE 6.25-9.0. TO BE MANAGED ON-SITE OR OFF-SITE AS UNCONTAMINATED SOIL, CANNOT BE TAKEN TO A CCDD/USFO (B(1))**
- APPROXIMATE CONSTRUCTION AREA ESTIMATED TO EXCEED TACO TIER 1 CONSTRUCTION WORKERS REFERENCE CONCENTRATIONS.

AREAS WITHOUT HATCHING ARE CONSIDERED UNRESTRICTED FOR REUSE AND OFF-SITE DISPOSAL.

END LINE
EX DITCH A
R 787.15
R 789.81

797.10	797.88	798.62	799.34	800.04	800.85	801.73	802.37	802.36	801.74	800.62	799.22	797.72	796.24	794.93	793.34	791.83	790.40	788.91	787.37	785.95	784.90	784.39
104+00		105+00		106+00		107+00		108+00		109+00		110+00		111+00		112+00		113+00		114+00		115+00

FILE NAME =	USER NAME = default	DESIGNED - CJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
STYLES=		DRAWN - CJ	REVISED -	IL 59 (SUTTON ROAD) AT US 20 (LAKE STREET) PROPOSED DRAINAGE PLAN AND PROFILE – RAMP C
MODELNAME	PLOT SCALE = 2.0'/1"	CHECKED - DDM	REVISED -	SCALE: 1" = 50' SHEET 13 OF 14 SHEETS STA. 104+00 TO 574.XXX+XX
	PLOT DATE = 3/8/2017	DATE - 03/03/2017	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	7K-1(12)	COOK	13	12
		CONTRACT NO. 60V57		
	ILLINOIS FED. AID PROJECT			

FIGURE 4-1.10 EXTENT OF POTENTIALLY IMPACTED SOIL -EXCEEDANCE TABLE
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-41-01	2531V-41-02	2531V-43-10	2531V-43-11	2531V-43-11	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-5	5-9		
Sample Date	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-41	2531V-41	2531V-43	2531V-43	2531V-43		
Parameter							
Laboratory soil pH (s.u.)	8.56	8.48	8.71	8.04	7.53	<6.25, >9.0	---
VOCs (mg/kg)	NO EXCEEDANCES						
SVOCs, mg/kg							
benzo(a)anthracene	< 0.038	< 0.039	< 0.039	< 0.037	< 0.040	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.039	< 0.039	< 0.037	< 0.040	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.039	< 0.039	< 0.037	< 0.040	0.9 / 1.5 / 2.1	170
Dibenz(a,h)anthracene	< 0.038	< 0.039	< 0.039	< 0.037	< 0.040	0.09 / 0.2 / 0.42	17
Total Metals, mg/kg							
Arsenic	9.1	5.2	7.9	8.7	9.0	11.3 / 13	61
Chromium	18	21	18	17	17	21	690
Cobalt	11	11	11	11	9.1	20	12,000
Iron	23000	22000	22000	22000	21000	15,000 / 15,900	---
Lead	16	49	23	31	12	107	700
Manganese	620	370	640	620	540	630 / 636	4,100
TCLP Metals, mg/L						Class I Groundwater [c/]	
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**8.2**	0.11	**0.72**	**11**	**9.7**	0.15	0.15
Nickel	0.064	0.014	< 0.010	0.019	0.036	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L							
Iron	**9.1**	**15**	**32**	**16**	**5.9**	5	5
Lead	0.0067	**0.015**	**0.019**	**0.014**	0.0029	0.0075	0.0075
Manganese	0.053	**0.17**	0.15	**0.20**	0.094	0.15	0.15

--- - Refers to not applicable or value not available

Note: only samples and parameters with exceedances impacting construction activities are presented on this Figure; see Tables C-1 and C-2 in Appendix C for comprehensive analytical report tables of all samples and constituents analyzed.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table.

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable.

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater.

Shaded values indicate concentration exceeds reference concentration

TABLE 4-1 PID Soil Screening Results
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	Excavation Depth (ft)	Sample Interval (ft)	PID Screening Result (ppm)
2531V-13-01	9	(0-5), (5-9)	0.0
2531V-13-02	9	(0-5), (5-9)	0.0
2531V-13-03	9	(0-5), (5-9)	0.0
2531V-13-04	9	(0-5), (5-9)	0.0
2531V-14-01	9	(0-5), (5-9)	0.0
2531V-14-02	18	(0-6), (6-12), (12-18)	0.0
2531V-14-03	18	(0-6), (6-12), (12-18)	0.0
2531V-15-01	18	(0-6), (6-12), (12-18)	0.0
2531V-15-02	18	(0-6), (6-12), (12-18)	0.0
2531V-16-01	9	(0-5), (5-9)	0.0
2531V-16-02	9	(0-5), (5-9)	0.0
2531V-17-01	9	(0-5), (5-9)	0.0
2531V-18-01	9	(0-5), (5-9)	0.0
2531V-18-02	9	(0-5), (5-9)	0.0
2531V-18-02	9	(0-5), (5-9)	0.0
2531V-18-04	9	(0-5), (5-9)	0.0
2531V-18-03	9	(0-5), (5-9)	0.0
2531V-18-04	9	(0-5), (5-9)	0.0
2531V-18-05	9	(0-5), (5-9)	0.0
2531V-18-07	18	(0-6), (6-12), (12-18)	0.0
2531V-18-08	1	(0-1)	0.0
2531V-23-01	1	(0-1)	0.0
2531V-23-02	1	(0-1)	0.0
2531V-23-03	1	(0-1)	0.0
2531V-23-04	1	(0-1)	0.0
2531V-32-01	1	(0-1)	0.0
2531V-32-02	1	(0-1)	0.0
2531V-32-03	1	(0-1)	0.0
2531V-32-02	1	(0-1)	0.0
2531V-33-01	1	(0-1)	0.0
2531V-33-02	1	(0-1)	0.0
2531V-33-03	1	(0-1)	0.0
2531V-33-04	1	(0-1)	0.0
2531V-33-05	1	(0-1)	0.0
2531V-33-06	1	(0-1)	0.0
2531V-34-01	9	(0-5), (5-9)	0.0
2531V-34-02	14	(0-7), (7-14)	0.0
2531V-34-03	3.5	(0-3.5)	0.0
2531V-34-04	14	(0-7), (7-14)	0.0
2531V-34-05	14	(0-7), (7-14)	0.0
2531V-34-06	14	(0-7), (7-14)	0.0
2531V-34-07	1	(0-1)	0.0
2531V-34-08	1	(0-1)	0.0
2531V-34-09	14	(0-7), (7-14)	0.0
2531V-35-01	9	(0-5), (5-9)	0.0
2531V-35-02	3.5	(0-3.5)	0.0
2531V-36-01	9	(0-5), (5-9)	0.0
2531V-36-02	3.5	(0-3.5)	0.0
2531V-36-03	3.5	(0-3.5)	0.0
2531V-37-01	3.5	(0-3.5)	0.0
2531V-37-02	3.5	(0-3.5)	0.0
2531V-37-03	3.5	(0-3.5)	0.0
2531V-37-04	3.5	(0-3.5)	0.0
2531V-41-01	1	(0-1)	0.0
2531V-41-02	1	(0-1)	0.0
2531V-41-03	14	(0-7), (7-14)	0.0
2531V-41-04	3.5	(0-3.5)	0.0
2531V-41-05	3.5	(0-3.5)	0.0
2531V-43-01	1	(0-1)	0.0
2531V-43-02	1	(0-1)	0.0
2531V-43-03	1	(0-1)	0.0
2531V-43-04	1	(0-1)	0.0
2531V-43-05	9	(0-5), (5-9)	0.0
2531V-43-06	9	(0-5), (5-9)	0.0
2531V-43-07	9	(0-5), (5-9)	0.0
2531V-43-08	1	(0-1)	0.0
2531V-43-09	1	(0-1)	0.0
2531V-43-10	1	(0-1)	0.0
2531V-43-11	9	(0-5), (5-9)	0.0
2531V-55-01	1	(0-1)	0.0
2531V-55-02	1	(0-1)	0.0
2531V-56-01	18	(0-6), (6-12), (12-18)	0.0
2531V-56-02	18	(0-6), (6-12), (12-18)	0.0
2531V-56-03	18	(0-6), (6-12), (12-18)	0.0
2531V-56-04	18	(0-6), (6-12), (12-18)	0.0
2531V-56-05	18	(0-6), (6-12), (12-18)	0.0
2531V-56-06	18	(0-6), (6-12), (12-18)	0.0
2531V-56-07	18	(0-6), (6-12), (12-18)	0.0
2531V-56-08	18	(0-6), (6-12), (12-18)	0.0
2531V-56-09	18	(0-6), (6-12), (12-18)	0.0
2531V-56-10	18	(0-6), (6-12), (12-18)	0.0
2531V-56-11	18	(0-6), (6-12), (12-18)	0.0

Bold refers to value above background (1.0 ppm) for PID field screening criteria

Table 4-2
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-13-01	2531V-13-01	2531V-13-02	2531V-13-02	2531V-13-03	2531V-13-03	2531V-13-03 (Dup 7)	2531V-13-04	2531V-13-04	2531V-14-01	2531V-14-01	2531V-14-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	5-9	0-5	5-9	0-5	5-9	0-6		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-14	2531V-14	2531V-14		
Parameter														
VOCs, mg/kg														
Acetone	< 0.073	< 0.069	< 0.079	< 0.080	< 0.077	< 0.070	< 0.070	< 0.071	< 0.083	< 0.10	< 0.062	< 0.066	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	570	120,000
Anthracene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	12,000	610,000
benzo(a)anthracene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	---	---
Benzo(k)fluoranthene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	9	1,700
Chrysene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	88	17,000
Dibenz(a,h)anthracene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	3,100	82,000
Fluorene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	---	---
Pyrene	< 0.039	< 0.039	< 0.040	< 0.042	< 0.041	< 0.039	< 0.038	< 0.040	< 0.040	< 0.038	< 0.037	< 0.040	2,300	61,000
Carbazole	< 0.20	< 0.20	< 0.21	< 0.21	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	0.6	6,200
Dibenzofuran	< 0.20	< 0.20	< 0.21	< 0.21	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-14-02	2531V-14-02	2531V-14-03	2531V-14-03	2531V-14-03	2531V-14-03 (Dup 3)	2531V-15-01	2531V-15-01	2531V-15-01	2531V-15-02	2531V-15-02	2531V-15-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	0-6	6-12	12-18	12-18	0-6	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15		
Parameter														
VOCs, mg/kg														
Acetone	< 0.068	< 0.062	< 0.075	< 0.085	< 0.080	< 0.072	0.099	< 0.078	< 0.078	< 0.072	< 0.081	< 0.11	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	570	120,000
Anthracene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	12,000	610,000
benzo(a)anthracene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	---	---
Benzo(k)fluoranthene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	9	1,700
Chrysene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	88	17,000
Dibenz(a,h)anthracene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	3,100	82,000
Fluorene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	---	---
Pyrene	< 0.038	< 0.037	< 0.042	< 0.041	< 0.041	< 0.038	< 0.039	< 0.041	< 0.041	< 0.039	< 0.040	< 0.040	2,300	61,000
Carbazole	< 0.20	< 0.19	< 0.22	< 0.21	< 0.21	< 0.20	< 0.20	< 0.21	< 0.21	< 0.20	< 0.21	< 0.21	0.6	6,200
Dibenzofuran	< 0.20	< 0.19	< 0.22	< 0.21	< 0.21	< 0.20	< 0.20	< 0.21	< 0.21	< 0.20	< 0.21	< 0.21	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-16-01	2531V-16-01	2531V-16-02	2531V-16-02	2531V-17-01	2531V-17-01	2531V-18-01	2531V-18-01 (Dup 6)	2531V-18-01	2531V-18-02	2531V-18-02	2531V-18-03	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	0-5	0-5	5-9	0-5	5-9	0-5		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s)	2531V-16	2531V-16	2531V-16	2531V-16	2531V-17	2531V-17	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18		
[ISGS Site No.(s)]														
Parameter														
VOCs, mg/kg														
Acetone	< 0.076	< 0.091	< 0.084	< 0.077	< 0.080	< 0.073	< 0.072	< 0.072	< 0.070	0.14	< 0.060	< 0.061	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	570	120,000
Anthracene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	12,000	610,000
benzo(a)anthracene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	---	---
Benzo(k)fluoranthene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	9	1,700
Chrysene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	88	17,000
Dibenz(a,h)anthracene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	3,100	82,000
Fluorene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	---	---
Pyrene	< 0.039	< 0.041	< 0.042	< 0.041	< 0.039	< 0.042	< 0.037	< 0.038	< 0.037	< 0.041	< 0.036	< 0.036	2,300	61,000
Carbazole	< 0.20	< 0.21	< 0.22	< 0.21	< 0.20	< 0.21	< 0.19	< 0.20	< 0.19	< 0.21	< 0.18	< 0.19	0.6	6,200
Dibenzofuran	< 0.20	< 0.21	< 0.22	< 0.21	< 0.20	< 0.21	< 0.19	< 0.20	< 0.19	< 0.21	< 0.18	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinoiss

Boring ID	2531V-18-03	2531V-18-04	2531V-18-04	2531V-18-05	2531V-18-05	2531V-18-06	2531V-18-06	2531V-18-07	2531V-18-07	2531V-18-07	2531V-18-08	2531V-23-01	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	5-9	0-5	5-9	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17	8/9/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-23; 2531V-21		
Parameter														
VOCs, mg/kg														
Acetone	< 0.066	< 0.069	< 0.059	< 0.068	< 0.066	< 0.079	< 0.072	< 0.066	< 0.062	< 0.062	< 0.067	< 0.067	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	0.41	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	570	120,000
Anthracene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	1.3	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	12,000	610,000
benzo(a)anthracene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.4**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.0**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**1.0**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	0.49	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	---	---
Benzo(k)fluoranthene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	0.71	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	9	1,700
Chrysene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	1.4	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	88	17,000
Dibenz(a,h)anthracene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	**0.33**	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	3.6	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	3,100	82,000
Fluorene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	0.66	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	0.49	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	4.2	0.057	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	---	---
Pyrene	< 0.035	< 0.036	< 0.036	< 0.038	< 0.036	2.7	< 0.040	< 0.037	< 0.038	< 0.036	< 0.038	< 0.038	2,300	61,000
Carbazole	< 0.18	< 0.19	< 0.18	< 0.20	< 0.19	0.26	< 0.21	< 0.19	< 0.20	< 0.19	< 0.20	< 0.20	0.6	6,200
Dibenzofuran	< 0.18	< 0.19	< 0.18	< 0.20	< 0.19	0.30	< 0.21	< 0.19	< 0.20	< 0.19	< 0.20	< 0.20	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-23-02	2531V-23-03	2531V-23-04	2531V-32-01	2531V-32-02	2531V-32-03	2531V-33-01	2531V-33-02	2531V-33-03	2531V-33-04	2531V-33-05	2531V-33-06	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-23; 2531V-21	2531V-23; 2531V-21	2531V-23; 2531V-21	2531V-32	2531V-32	2531V-32	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33		
Parameter														
VOCs, mg/kg														
Acetone	< 0.069	< 0.062	< 0.087	< 0.074	< 0.069	< 0.071	< 0.082	< 0.074	< 0.075	< 0.066	< 0.074	< 0.076	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	< 0.036	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	570	120,000
Anthracene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	< 0.036	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	12,000	610,000
benzo(a)anthracene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.16	< 0.040	< 0.039	0.11	< 0.038	< 0.038	< 0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.069	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.094	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.17	< 0.040	< 0.039	0.10	< 0.038	< 0.038	< 0.039	---	---
Benzo(k)fluoranthene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.063	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	9	1,700
Chrysene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.21	< 0.040	< 0.039	0.15	< 0.038	< 0.038	0.046	88	17,000
Dibenz(a,h)anthracene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	**0.13**	< 0.040	< 0.039	**0.11**	< 0.038	< 0.038	< 0.039	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.37	< 0.040	< 0.039	0.27	< 0.038	< 0.038	0.066	3,100	82,000
Fluorene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	< 0.036	< 0.040	< 0.039	< 0.038	< 0.038	< 0.038	< 0.039	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.14	< 0.040	< 0.039	0.089	< 0.038	< 0.038	< 0.039	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.14	< 0.040	< 0.039	0.12	< 0.038	< 0.038	< 0.039	---	---
Pyrene	< 0.037	< 0.037	< 0.039	< 0.040	< 0.038	0.32	< 0.040	< 0.039	0.23	< 0.038	< 0.038	0.059	2,300	61,000
Carbazole	< 0.19	< 0.19	< 0.20	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	0.6	6,200
Dibenzofuran	< 0.19	< 0.19	< 0.20	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-33-06 (Dup 9)	2531V-34-01	2531V-34-01	2531V-34-02	2531V-34-02	2531V-34-03	2531V-34-04	2531V-34-04	2531V-34-05	2531V-34-05	2531V-34-05 (Dup 8)	2531V-34-06	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-5	5-9	0-7	7-14	0-3.5	0-7	7-14	0-7	7-14	7-14	0-7		
Sample Date	8/8/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-33	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34		
Parameter														
VOCs, mg/kg														
Acetone	< 0.078	< 0.072	0.084	< 0.075	< 0.066	< 0.072	< 0.075	< 0.079	< 0.071	< 0.068	< 0.072	< 0.073	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	570	120,000
Anthracene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	12,000	610,000
benzo(a)anthracene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	0.044	< 0.039	< 0.039	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	0.047	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	---	---
Benzo(k)fluoranthene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	9	1,700
Chrysene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	0.052	< 0.039	< 0.039	88	17,000
Dibenz(a,h)anthracene	0.090	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.041	< 0.039	< 0.040	0.053	< 0.039	< 0.037	< 0.040	< 0.039	0.041	0.092	< 0.039	0.040	3,100	82,000
Fluorene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	< 0.038	< 0.039	< 0.039	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.041	< 0.039	< 0.040	< 0.037	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	0.041	< 0.039	< 0.039	---	---
Pyrene	< 0.041	< 0.039	< 0.040	0.041	< 0.039	< 0.037	< 0.040	< 0.039	< 0.037	0.074	< 0.039	0.048	2,300	61,000
Carbazole	< 0.21	< 0.20	< 0.20	< 0.19	< 0.20	< 0.19	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.20	0.6	6,200
Dibenzofuran	< 0.21	< 0.20	< 0.20	< 0.19	< 0.20	< 0.19	< 0.21	< 0.20	< 0.19	< 0.20	< 0.20	< 0.20	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago
Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-34-06	2531V-34-07	2531V-34-08	2531V-34-09	2531V-34-09	2531V-35-01	2531V-35-01 (Dup 1)	2531V-35-01	2531V-35-02	2531V-36-01	2531V-36-01	2531V-36-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	7-14	0-1	0-1	0-7	7-14	0-5	0-5	5-9	0-3.5	0-5	5-9	0-3.5		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-35	2531V-35	2531V-35	2531V-35	2531V-36	2531V-36	2531V-36		
Parameter														
VOCs, mg/kg														
Acetone	< 0.091	< 0.071	< 0.077	< 0.070	< 0.075	< 0.080	< 0.070	< 0.057	< 0.061	< 0.055	< 0.069	< 0.061	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	570	120,000
Anthracene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	12,000	610,000
benzo(a)anthracene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	---	---
Benzo(k)fluoranthene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	9	1,700
Chrysene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	88	17,000
Dibenz(a,h)anthracene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	3,100	82,000
Fluorene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	---	---
Pyrene	< 0.040	< 0.038	< 0.039	< 0.039	< 0.039	< 0.036	< 0.034	< 0.036	< 0.035	< 0.035	< 0.036	< 0.036	2,300	61,000
Carbazole	< 0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.19	0.6	6,200
Dibenzofuran	< 0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago
Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-36-03	2531V-37-01	2531V-37-02	2531V-37-03	2531V-37-04	2531V-41-01	2531V-41-02	2531V-41-03	2531V-41-03	2531V-41-04	2531V-41-05	2531V-41-05 (Dup 2)	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-1	0-1	0-7	7-14	0-3.5	0-3.5	0-3.5		
Sample Date	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	8/7/17	8/7/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-36	2531V-37	2531V-37	2531V-37	2531V-37	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41		
Parameter														
VOCs, mg/kg														
Acetone	< 0.082	< 0.064	< 0.084	0.13	< 0.072	< 0.070	< 0.075	< 0.067	< 0.082	< 0.079	< 0.074	< 0.084	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	570	120,000
Anthracene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	12,000	610,000
benzo(a)anthracene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	---	---
Benzo(k)fluoranthene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	9	1,700
Chrysene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	88	17,000
Dibenz(a,h)anthracene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	0.049	< 0.041	< 0.037	< 0.040	< 0.041	3,100	82,000
Fluorene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	< 0.039	< 0.041	< 0.037	< 0.040	< 0.041	---	---
Pyrene	< 0.037	< 0.037	< 0.045	< 0.042	< 0.038	< 0.038	< 0.039	0.042	< 0.041	< 0.037	< 0.040	< 0.041	2,300	61,000
Carbazole	< 0.19	< 0.19	< 0.23	< 0.22	< 0.20	< 0.20	< 0.20	< 0.20	< 0.21	< 0.19	< 0.21	< 0.21	0.6	6,200
Dibenzofuran	< 0.19	< 0.19	< 0.23	< 0.22	< 0.20	< 0.20	< 0.20	< 0.20	< 0.21	< 0.19	< 0.21	< 0.21	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-43-01	2531V-43-02	2531V-43-01	2531V-43-03 (Dup 10)	2531V-43-04	2531V-43-05	2531V-43-05	2531V-43-06	2531V-43-06 (Dup 5)	2531V-43-06	2531V-43-07	2531V-43-07	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-5	5-9	0-5	0-5	5-9	0-5	5-9		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43		
Parameter														
VOCs, mg/kg														
Acetone	< 0.079	< 0.071	< 0.080	< 0.077	< 0.071	< 0.071	< 0.064	< 0.066	< 0.082	< 0.070	< 0.064	< 0.057	25	100,000
SVOCs, mg/kg														
Acenaphthene	0.038	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	570	120,000
Anthracene	0.14	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	12,000	610,000
benzo(a)anthracene	0.81	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	**0.96**	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	**0.98**	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	1.1	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	---	---
Benzo(k)fluoranthene	1.2	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	9	1,700
Chrysene	1.1	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	88	17,000
Dibenz(a,h)anthracene	**0.41**	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	0.09 / 0.2 / 0.42	17
Fluoranthene	2.1	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	0.064	< 0.037	< 0.037	3,100	82,000
Fluorene	0.053	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	560	82,000
Indeno(1,2,3-cd)pyrene	0.86	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	< 0.038	< 0.037	< 0.037	0.9 / 0.9 / 1.6	170
Phenanthrene	0.95	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	0.057	< 0.037	< 0.037	---	---
Pyrene	1.6	< 0.037	< 0.040	< 0.34	< 0.037	< 0.038	< 0.038	< 0.038	< 0.037	0.051	< 0.037	< 0.037	2,300	61,000
Carbazole	< 0.19	< 0.19	< 0.21	< 1.8	< 0.19	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19	0.6	6,200
Dibenzofuran	< 0.19	< 0.19	< 0.21	< 1.8	< 0.19	< 0.20	< 0.20	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-43-08	2531V-43-09	2531V-43-10	2531V-43-11	2531V-43-11	2531V-55-01	2531V-55-02	2531V-56-01	2531V-56-01 (Dup 14)	2531V-56-01	2531V-56-01	2531V-56-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-5	5-9	0-1	0-1	0-6	0-6	6-12	12-18	0-6		
Sample Date	8/9/17	8/8/17	8/7/17	8/7/17	8/7/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-55	2531V-55	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
VOCs, mg/kg														
Acetone	< 0.085	< 0.071	< 0.069	< 0.066	< 0.071	< 0.094	< 0.053	< 0.065	< 0.076	< 0.089	< 0.078	< 0.069	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	570	120,000
Anthracene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	12,000	610,000
benzo(a)anthracene	< 0.038	0.039	< 0.039	< 0.037	< 0.040	0.092	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	0.12	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	---	---
Benzo(k)fluoranthene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	9	1,700
Chrysene	< 0.038	0.049	< 0.039	< 0.037	< 0.040	0.13	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	88	17,000
Dibenz(a,h)anthracene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.038	0.089	< 0.039	< 0.037	< 0.040	0.21	0.051	< 0.48	0.061	< 0.043	< 0.040	< 0.037	3,100	82,000
Fluorene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	< 0.037	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.038	< 0.038	< 0.039	< 0.037	< 0.040	0.089	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	0.9 / 0.9 / 1.6	170
Phenanthrene	0.069	0.048	< 0.039	< 0.037	< 0.040	0.094	< 0.041	< 0.48	< 0.038	< 0.043	< 0.040	< 0.037	---	---
Pyrene	< 0.038	0.068	< 0.039	< 0.037	< 0.040	0.18	0.045	< 0.48	0.054	< 0.043	< 0.040	< 0.037	2,300	61,000
Carbazole	< 0.20	< 0.20	< 0.20	< 0.19	< 0.21	< 0.19	< 0.21	< 2.5	< 0.20	< 0.22	< 0.20	< 0.19	0.6	6,200
Dibenzofuran	< 0.20	< 0.20	< 0.20	< 0.19	< 0.21	< 0.19	< 0.21	< 2.5	< 0.20	< 0.22	< 0.20	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-02	2531V-56-02	2531V-56-02 (Dup 13)	2531V-56-03	2531V-56-03	2531V-56-03	2531V-56-04	2531V-56-04 (Dup 12)	2531V-56-04	2531V-56-04	2531V-56-05	2531V-56-05	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	12-18	0-6	6-12	12-18	0-6	0-6	6-12	12-18	0-6	6-12		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
VOCs, mg/kg														
Acetone	< 0.060	< 0.074	< 0.075	< 0.062	< 0.085	< 0.083	< 0.070	< 0.071	< 0.075	< 0.083	< 0.10	< 0.065	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	570	120,000
Anthracene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	12,000	610,000
benzo(a)anthracene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	---	---
Benzo(k)fluoranthene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	9	1,700
Chrysene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	88	17,000
Dibenz(a,h)anthracene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	0.068	< 0.039	< 0.038	< 0.041	< 0.037	3,100	82,000
Fluorene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	< 0.038	< 0.039	< 0.038	< 0.041	< 0.037	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	0.040	< 0.039	< 0.038	< 0.041	< 0.037	---	---
Pyrene	< 0.038	< 0.035	< 0.039	< 0.036	< 0.037	< 0.034	< 0.038	0.056	< 0.039	< 0.038	< 0.041	< 0.037	2,300	61,000
Carbazole	< 0.20	< 0.18	< 0.20	< 0.19	< 0.19	< 0.18	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21	< 0.19	0.6	6,200
Dibenzofuran	< 0.20	< 0.18	< 0.20	< 0.19	< 0.19	< 0.18	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-05	2531V-56-06	2531V-56-06	2531V-56-06 (Dup 11)	2531V-56-06	2531V-56-07	2531V-56-07	2531V-56-07	2531V-56-08	2531V-56-08	2531V-56-08	2531V-56-09	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	12-18	0-6	6-12	6-12	12-18	0-6	6-12	12-18	0-6	6-12	12-18	0-6		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
VOCs, mg/kg														
Acetone	< 0.082	< 0.062	< 0.069	< 0.077	< 0.066	< 0.066	< 0.051	< 0.066	< 0.067	< 0.061	< 0.074	< 0.080	25	100,000
SVOCs, mg/kg														
Acenaphthene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	570	120,000
Anthracene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	12,000	610,000
benzo(a)anthracene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	---	---
Benzo(k)fluoranthene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	9	1,700
Chrysene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	88	17,000
Dibenz(a,h)anthracene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	3,100	82,000
Fluorene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	---	---
Pyrene	< 0.043	< 0.040	< 0.037	< 0.039	< 0.038	< 0.035	< 0.036	< 0.037	< 0.038	< 0.036	< 0.036	< 0.037	2,300	61,000
Carbazole	< 0.22	< 0.20	< 0.19	< 0.20	< 0.20	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.18	< 0.19	0.6	6,200
Dibenzofuran	< 0.22	< 0.20	< 0.19	< 0.20	< 0.20	< 0.18	< 0.19	< 0.19	< 0.19	< 0.19	< 0.18	< 0.19	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-2 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Organics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-09	2531V-56-09	2531V-56-10	2531V-56-10	2531V-56-10 (Dup 4)	2531V-56-10	2531V-56-11	2531V-56-11	2531V-56-11	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	0-6	6-12	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) / **[ISGS Site No.(s)]**	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter											
VOCs, mg/kg											
Acetone	0.081	< 0.068	< 0.074	< 0.074	< 0.073	< 0.060	< 0.081	< 0.081	< 0.076	25	100,000
SVOCs, mg/kg											
Acenaphthene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	570	120,000
Anthracene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	12,000	610,000
benzo(a)anthracene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.9 / 1.1 / 1.8	170
Benzo(a)pyrene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.09 / 1.3 / 2.1	17
Benzo(b)fluoranthene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.9 / 1.5 / 2.1	170
Benzo(g,h,i)perylene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	---	---
Benzo(k)fluoranthene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	9	1,700
Chrysene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	88	17,000
Dibenz(a,h)anthracene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.09 / 0.2 / 0.42	17
Fluoranthene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	3,100	82,000
Fluorene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	560	82,000
Indeno(1,2,3-cd)pyrene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	0.9 / 0.9 / 1.6	170
Phenanthrene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	---	---
Pyrene	< 0.038	< 0.038	< 0.040	< 0.038	< 0.040	< 0.036	< 0.042	< 0.040	< 0.041	2,300	61,000
Carbazole	< 0.19	< 0.20	< 0.21	< 0.20	< 0.21	< 0.19	< 0.22	< 0.21	< 0.21	0.6	6,200
Dibenzofuran	< 0.19	< 0.20	< 0.21	< 0.20	< 0.21	< 0.19	< 0.22	< 0.21	< 0.21	---	---

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Organic Soil Reference Concentrations (XX.XX / XX.XX / XX.XX) Include the Most Stringent Values from the MAC Table / The Chicago Corporate Limit / and The MSA County Excluding Chicago Values From the MAC Table

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

Shaded values indicate concentration exceeds reference concentration

Table 4-3
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-13-01	2531V-13-01	2531V-13-02	2531V-13-02	2531V-13-03	2531V-13-03	2531V-13-03 (Dup 7)	2531V-13-04	2531V-13-04	2531V-14-01	2531V-14-01	2531V-14-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	5-9	0-5	5-9	0-5	5-9	0-6		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-13	2531V-14	2531V-14	2531V-14		
Parameter														
Laboratory soil pH (s.u.)	8.54	8.08	7.57	6.45	7.64	7.72	8.53	7.56	7.71	9.04	8.23	8.96	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	9800	10000	14000	19000	20000	19000	11000	15000	13000	9000	8300	11000	---	---
Antimony	< 2.0	< 2.1	< 2.2	< 2.2	< 2.1	< 2.1	< 2.0	< 2.1	< 2.1	< 2.0	< 2.0	< 2.1	5	82
Arsenic	11	7.9	6.2	3.7	**12**	**14**	7.6	8.3	9.5	7.2	6.4	9.0	11.3 / 13	61
Barium	75	52	140	180	110	200	67	150	130	94	29	97	1,500	14,000
Beryllium	0.52	0.67	0.86	0.97	1.2	1.1	0.63	0.87	0.79	< 0.49	< 0.51	0.59	22	410
Cadmium	< 0.50	< 0.52	< 0.55	< 0.54	< 0.52	< 0.52	< 0.50	< 0.53	< 0.52	< 0.49	< 0.51	< 0.54	5.2	200
Calcium	95000	89000	3800	4800	13000	16000	29000	24000	52000	33000	86000	33000	---	---
Chromium	17	20	20	27	30	32	21	23	24	14	15	16	21	690
Cobalt	15	10	11	6.8	11	15	12	11	11	7.9	9.4	11	20	12,000
Copper	25	35	20	21	31	35	23	26	29	17	23	20	2,900	8,200
Iron	30000	25000	19000	22000	35000	35000	24000	25000	25000	18000	19000	21000	15,000 / 15,900	---
Lead	15	20	20	14	19	19	110	30	65	15	12	24	107	700
Magnesium	54000	47000	3700	5000	10000	13000	18000	14000	27000	19000	47000	20000	325,000	730,000
Manganese	1600	630	390	120	610	860	510	520	990	630	400	730	630 / 636	4,100
Mercury	0.024	0.023	0.035	0.050	0.040	0.025	< 0.021	0.026	< 0.023	< 0.018	< 0.020	0.029	0.89	0.1
Nickel	30	28	23	26	44	38	24	26	29	17	20	20	100	4,100
Potassium	1500	2000	1100	1200	2200	2600	1400	1500	2000	910	1800	1100	---	---
Sodium	1200	870	1500	950	1600	970	1300	810	410	890	290	1300	---	---
Vanadium	28	25	33	37	44	48	25	38	37	24	19	26	550	1,400
Zinc	67	75	67	83	91	92	66	81	88	57	54	59	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.53	0.38	0.48	0.25	0.41	1.3	0.18	1.4	1.4	0.59	0.29	0.44	2	2
Cadmium	< 0.0050	**0.0062**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	0.054	0.075	0.013	< 0.010	< 0.010	0.045	0.040	0.085	< 0.010	< 0.010	< 0.010	1	1
Iron	< 0.25	< 0.25	0.33	0.26	< 0.25	< 0.25	1.6	0.96	0.35	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	**0.0083**	**0.0096**	< 0.0050	< 0.0050	< 0.0050	0.0074	**0.028**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.75**	**6.2**	**10**	**0.68**	**0.97**	**0.45**	**2.3**	**14**	**13**	**0.31**	**0.74**	**0.66**	0.15	0.15
Nickel	< 0.010	0.057	0.035	0.021	0.059	0.013	< 0.010	0.042	**0.11**	< 0.010	0.011	< 0.010	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	0.14	< 0.050	< 0.050	< 0.050	0.053	0.17	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	0.0049	< 0.0040	0.0099	< 0.0040	0.0098	0.0069	< 0.0040	0.0061	< 0.0040	0.0053	< 0.0040	0.0077	---	0.05
Barium	< 0.020	0.024	0.036	< 0.020	0.065	0.040	< 0.020	0.024	0.032	0.027	< 0.020	0.032	2	2
Chromium	0.0072	0.0092	0.010	0.0057	0.020	0.013	< 0.0040	0.0049	0.0043	0.0076	< 0.0040	0.010	0.1	0.1
Cobalt	< 0.0040	< 0.0040	0.0045	< 0.0040	0.0048	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**8.1**	**8.4**	**9.4**	2.9	**22**	**13**	0.84	4.3	2.4	**8.4**	2.4	**5.1**	5	5
Lead	0.0046	0.0042	0.0071	< 0.0020	0.0073	0.0048	0.0050	0.0033	0.0036	0.0037	< 0.0020	0.0022	0.0075	0.0075
Manganese	0.094	0.047	0.082	0.011	0.14	0.074	0.025	0.050	0.033	0.091	0.0071	0.034	0.15	0.15
Nickel	0.0073	0.010	0.012	< 0.0040	0.025	0.0097	< 0.0040	0.0053	0.0059	0.0088	< 0.0040	0.0050	0.1	0.1
Zinc	0.031	0.033	0.026	< 0.020	0.060	0.038	< 0.020	< 0.020	< 0.020	0.028	< 0.020	0.054	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-14-02	2531V-14-02	2531V-14-03	2531V-14-03	2531V-14-03	2531V-14-03 (Dup 3)	2531V-15-01	2531V-15-01	2531V-15-01	2531V-15-02	2531V-15-02	2531V-15-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	0-6	6-12	12-18	12-18	0-6	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-14	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15	2531V-15		
Parameter														
Laboratory soil pH (s.u.)	8.35	8.05	8.58	8.97	7.25	7.62	8.08	7.98	7.8	8.59	8.11	7.45	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	2800	6300	12000	9200	7900	11000	10000	12000	8400	11000	9600	9000	---	---
Antimony	5.4	< 1.9	< 2.2	< 2.1	< 2.1	< 2.1	< 2.0	< 2.2	< 2.2	< 2.0	4.4	< 2.1	5	82
Arsenic	**14**	7.8	**13**	8.5	7.6	5.2	8.0	**12**	7.4	7.5	11	5.4	11.3 / 13	61
Barium	23	24	140	89	74	82	99	110	76	120	82	74	1,500	14,000
Beryllium	< 0.52	< 0.48	0.74	0.54	< 0.53	0.73	0.55	0.63	< 0.54	0.61	0.58	0.54	22	410
Cadmium	< 0.52	< 0.48	< 0.54	< 0.53	< 0.53	< 0.52	< 0.50	< 0.55	< 0.54	< 0.50	< 0.53	< 0.52	5.2	200
Calcium	95000	86000	44000	47000	58000	83000	36000	29000	53000	33000	52000	55000	---	---
Chromium	7.2	12	20	16	14	21	17	20	16	16	18	17	21	690
Cobalt	9.2	9.4	13	9.0	9.0	12	7.7	10	11	9.8	14	10	20	12,000
Copper	24	23	27	20	21	29	20	26	24	19	25	24	2,900	8,200
Iron	21000	17000	26000	19000	18000	25000	20000	33000	22000	19000	17000	22000	15,000 / 15,900	---
Lead	12	11	17	12	12	17	15	16	13	18	15	13	107	700
Magnesium	54000	44000	23000	23000	27000	46000	20000	16000	27000	18000	25000	28000	325,000	730,000
Manganese	660	450	950	370	600	660	530	710	610	630	280	570	630 / 636	4,100
Mercury	< 0.021	< 0.021	0.024	< 0.023	< 0.025	< 0.023	0.027	0.025	< 0.025	0.026	0.022	< 0.023	0.89	0.1
Nickel	21	21	37	17	23	32	20	32	28	22	22	27	100	4,100
Potassium	540	1500	1300	1300	1400	2300	1200	1400	1600	970	1700	1900	---	---
Sodium	410	180	930	800	880	860	130	130	120	670	1000	570	---	---
Vanadium	9.5	15	34	25	22	30	27	32	22	25	27	23	550	1,400
Zinc	79	47	68	57	56	81	65	77	67	57	69	66	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.40	0.28	0.82	0.79	0.83	0.63	0.57	0.63	0.83	0.77	0.83	0.83	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.0051**	< 0.0050	**0.0065**	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	0.059	< 0.010	< 0.010	0.084	0.099	0.039	< 0.010	0.13	< 0.010	0.035	0.068	1	1
Iron	< 0.25	0.73	< 0.25	< 0.25	0.26	**110**	< 0.25	< 0.25	**160**	< 0.25	1.0	0.57	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.024**	< 0.0050	< 0.0050	**0.028**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**2.2**	**5.4**	**0.27**	**0.21**	**4.9**	**8.1**	**3.9**	**0.22**	**13**	**0.26**	**3.3**	**5.2**	0.15	0.15
Nickel	0.018	0.084	0.013	< 0.010	**0.20**	**0.20**	0.059	< 0.010	**0.29**	< 0.010	0.053	**0.18**	0.1	0.1
Zinc	< 0.050	0.066	< 0.050	< 0.050	0.21	0.77	< 0.050	< 0.050	0.76	< 0.050	0.076	0.20	5	5
SPLP Metals, mg/L														
Arsenic	< 0.0040	< 0.0040	< 0.0040	0.0042	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0047	< 0.0040	---	0.05
Barium	< 0.020	< 0.020	0.021	0.029	0.030	0.037	0.024	< 0.020	0.026	0.020	0.034	0.037	2	2
Chromium	< 0.0040	< 0.0040	0.0076	0.0094	< 0.0040	< 0.0040	0.0083	< 0.0040	< 0.0040	0.0067	0.012	< 0.0040	0.1	0.1
Cobalt	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	3.5	0.47	**5.5**	**7.2**	1.3	0.21	**5.9**	2.2	0.77	4.5	**8.9**	0.14	5	5
Lead	< 0.0020	< 0.0020	< 0.0020	0.0031	< 0.0020	< 0.0020	0.0031	< 0.0020	< 0.0020	0.0020	0.0057	< 0.0020	0.0075	0.0075
Manganese	0.016	0.0095	0.043	0.030	0.031	0.11	0.029	0.0065	0.016	0.027	0.044	0.081	0.15	0.15
Nickel	< 0.0040	< 0.0040	0.0052	0.0045	< 0.0040	< 0.0040	0.0048	< 0.0040	0.0040	< 0.0040	0.0090	< 0.0040	0.1	0.1
Zinc	0.056	0.042	0.054	0.056	0.042	< 0.040	0.056	0.043	0.038	0.046	0.068	0.034	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-16-01	2531V-16-01	2531V-16-02	2531V-16-02	2531V-17-01	2531V-17-01	2531V-18-01	2531V-18-01 (Dup 6)	2531V-18-01	2531V-18-02	2531V-18-02	2531V-18-03	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-5	5-9	0-5	5-9	0-5	5-9	0-5	0-5	5-9	0-5	5-9	0-5		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-16	2531V-16	2531V-16	2531V-16	2531V-17	2531V-17	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18		
Parameter														
Laboratory soil pH (s.u.)	9.41	8.54	8.37	8.32	7.8	7.72	8.95	8	8.58	8.04	8.97	9.07	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	15000	14000	17000	11000	21000	15000	17000	10000	15000	15000	4800	3900	---	---
Antimony	< 2.2	< 2.2	< 2.2	< 2.1	< 2.0	< 2.3	< 2.0	< 2.0	< 2.0	< 2.1	< 1.9	< 1.8	5	82
Arsenic	**13**	**14**	6.0	9.3	**12**	11	**12**	9.4	10	10	6.0	5.4	11.3 / 13	61
Barium	150	150	140	110	130	140	81	81	110	120	20	18	1,500	14,000
Beryllium	0.80	0.83	1.0	0.64	0.91	0.81	1.1	0.57	0.83	0.98	< 0.48	< 0.46	22	410
Cadmium	< 0.54	< 0.55	< 0.55	< 0.53	< 0.51	< 0.58	< 0.49	< 0.50	< 0.49	0.64	< 0.48	< 0.46	5.2	200
Calcium	72000	60000	5200	47000	3300	36000	48000	39000	48000	18000	110000	160000	---	---
Chromium	26	25	27	20	30	26	28	18	26	25	9.4	8.5	21	690
Cobalt	13	16	14	10	15	9.7	17	9.0	13	16	5.8	5.6	20	12,000
Copper	25	31	29	25	30	29	32	21	27	47	13	12	2,900	8,200
Iron	30000	33000	27000	23000	35000	29000	35000	22000	29000	27000	15000	13000	15,000 / 15,900	---
Lead	16	18	20	15	50	13	71	12	87	65	6.8	6.7	107	700
Magnesium	30000	31000	6000	27000	4800	23000	28000	25000	26000	10000	62000	71000	325,000	730,000
Manganese	720	1000	910	660	980	490	930	420	560	1000	410	420	630 / 636	4,100
Mercury	< 0.023	0.026	0.035	0.024	0.042	0.029	0.033	0.022	0.027	0.044	< 0.019	< 0.020	0.89	0.1
Nickel	33	38	44	29	32	29	37	19	29	27	14	12	100	4,100
Potassium	1900	2200	1900	1800	1900	2000	2200	1600	1800	2200	1000	780	---	---
Sodium	1100	970	2000	1900	1600	1100	1800	600	1800	370	260	310	---	---
Vanadium	44	42	37	33	47	41	36	30	33	37	18	16	550	1,400
Zinc	76	81	79	68	83	79	90	61	79	140	34	64	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.60	1.1	0.42	0.88	0.26	1.0	0.70	0.62	0.90	0.44	0.21	0.19	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.014	< 0.010	0.028	< 0.010	< 0.010	0.044	1	1
Iron	< 0.25	< 0.25	0.37	< 0.25	0.27	< 0.25	< 0.25	2.2	0.36	< 0.25	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.016**	< 0.0050	**0.026**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.18**	**1.1**	0.015	**0.82**	**0.52**	**0.40**	**6.6**	**3.8**	**17**	0.076	**1.3**	**4.3**	0.15	0.15
Nickel	< 0.010	0.012	< 0.010	0.015	< 0.010	0.011	0.017	0.054	0.022	< 0.010	0.016	0.053	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.054	< 0.050	0.084	5	5
SPLP Metals, mg/L														
Arsenic	0.0090	0.0073	0.012	0.010	0.012	0.010	0.014	0.0047	0.013	< 0.0040	< 0.0040	0.0065	---	0.05
Barium	0.065	0.049	0.12	0.067	0.089	0.034	0.073	< 0.020	0.067	< 0.020	< 0.020	0.025	2	2
Chromium	0.015	0.013	0.038	0.019	0.027	0.012	0.024	0.0079	0.021	0.0041	< 0.0040	0.0089	0.1	0.1
Cobalt	0.0042	< 0.0040	0.0069	0.0045	0.0059	< 0.0040	0.012	< 0.0040	0.012	< 0.0040	< 0.0040	0.0043	1	1
Copper	< 0.040	< 0.040	0.045	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**17**	**15**	**38**	**25**	**30**	**17**	**28**	**8.7**	**25**	2.2	2.4	**12**	5	5
Lead	0.0068	0.0059	**0.010**	**0.0099**	**0.0098**	0.0057	**0.11**	0.0031	**0.075**	0.0032	< 0.0020	0.0054	0.0075	0.0075
Manganese	0.089	0.081	0.13	0.12	**0.19**	0.078	**0.34**	0.053	**0.34**	0.020	0.016	0.11	0.15	0.15
Nickel	0.013	0.011	0.033	0.017	0.026	0.013	0.032	0.0063	0.030	< 0.0040	< 0.0040	0.013	0.1	0.1
Zinc	0.046	0.044	0.11	0.071	0.072	0.046	0.089	0.030	0.073	< 0.020	< 0.020	0.081	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-18-03	2531V-18-04	2531V-18-04	2531V-18-05	2531V-18-05	2531V-18-06	2531V-18-06	2531V-18-07	2531V-18-07	2531V-18-07	2531V-18-08	2531V-23-01	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	5-9	0-5	5-9	0-5	5-9	0-5	5-9	0-6	6-12	12-18	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/7/17	8/7/17	8/7/17	8/9/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-18	2531V-23; 2531V-21		
Parameter														
Laboratory soil pH (s.u.)	9.36	9.33	9.06	8.02	8.2	9.18	7.96	8.77	8.17	9.13	7.91	9.04	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	3900	5200	3200	16000	4300	12000	15000	7300	8600	4500	12000	13000	---	---
Antimony	< 1.9	< 1.9	< 1.9	< 2.1	< 1.9	< 2.1	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	5	82
Arsenic	4.3	6.0	5.0	**13**	6.5	**12**	**14**	8.0	8.1	5.7	**12**	9.7	11.3 / 13	61
Barium	15	25	17	110	19	79	140	50	39	19	72	55	1,500	14,000
Beryllium	< 0.48	< 0.48	< 0.47	0.94	< 0.48	0.80	1.0	< 0.51	< 0.50	< 0.49	0.87	0.85	22	410
Cadmium	< 0.48	< 0.48	< 0.47	< 0.52	< 0.48	< 0.52	< 0.54	< 0.51	< 0.50	< 0.49	< 0.51	< 0.50	5.2	200
Calcium	170000	150000	150000	62000	120000	64000	65000	73000	77000	89000	65000	89000	---	---
Chromium	7.3	11	8.5	28	9.6	22	27	14	22	11	22	25	21	690
Cobalt	4.6	6.7	5.5	18	5.4	15	17	9.1	11	5.0	15	11	20	12,000
Copper	12	15	12	35	14	30	37	19	21	12	30	31	2,900	8,200
Iron	12000	15000	14000	36000	15000	29000	38000	18000	21000	12000	30000	30000	15,000 / 15,900	---
Lead	11	8.6	6.4	32	25	28	24	32	12	5.9	23	17	107	700
Magnesium	79000	72000	65000	33000	64000	37000	41000	40000	42000	48000	39000	46000	325,000	730,000
Manganese	490	500	550	860	420	690	950	510	360	280	550	590	630 / 636	4,100
Mercury	< 0.017	< 0.021	< 0.019	0.030	< 0.017	0.030	0.025	0.024	< 0.023	< 0.018	0.025	0.025	0.89	0.1
Nickel	11	15	12	41	13	35	44	21	25	13	36	34	100	4,100
Potassium	600	1100	710	2300	860	1900	2100	1200	1700	1100	2000	2800	---	---
Sodium	480	510	320	1100	380	1700	460	630	770	290	1400	1300	---	---
Vanadium	18	16	12	36	20	28	33	18	19	13	27	29	550	1,400
Zinc	28	36	30	91	35	76	89	52	55	33	75	78	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.18	0.28	0.19	0.70	0.17	0.73	1.1	0.44	0.21	0.16	0.75	0.19	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	< 0.010	< 0.010	0.040	< 0.010	0.036	0.040	0.030	0.070	0.034	0.016	0.020	1	1
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.4	0.67	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0057	< 0.0050	0.0075	0.0075
Manganese	**1.5**	**1.3**	**1.3**	**10**	**1.2**	**11**	**8.9**	**5.6**	**3.9**	**3.4**	**7.1**	**3.7**	0.15	0.15
Nickel	0.020	0.012	0.015	0.035	0.012	0.031	0.040	0.037	0.037	0.028	0.015	0.027	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12	< 0.050	< 0.050	< 0.10	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	< 0.0040	0.0055	< 0.0040	0.012	< 0.0040	0.0077	< 0.0040	0.0051	0.0069	0.0083	< 0.0040	0.0088	---	0.05
Barium	< 0.020	0.027	< 0.020	0.063	< 0.020	0.038	< 0.020	0.034	0.053	0.033	0.16	0.050	2	2
Chromium	< 0.0040	0.010	0.0058	0.023	< 0.0040	0.017	0.0041	0.011	0.021	0.016	< 0.0040	0.019	0.1	0.1
Cobalt	< 0.0040	0.0042	< 0.0040	0.0077	< 0.0040	0.0070	< 0.0040	< 0.0040	0.0056	0.0062	< 0.0040	0.0048	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	0.56	**12**	**6.1**	**25**	1.3	**14**	2.2	**10**	**19**	**16**	0.62	**19**	5	5
Lead	< 0.0020	0.0050	0.0027	**0.015**	< 0.0020	**0.0084**	< 0.0020	**0.014**	**0.0079**	0.0046	< 0.0020	**0.0077**	0.0075	0.0075
Manganese	0.0086	0.089	0.046	**0.16**	0.0098	**0.16**	0.015	0.087	0.094	0.083	**1.2**	0.11	0.15	0.15
Nickel	< 0.0040	0.012	0.0068	0.028	< 0.0040	0.018	< 0.0040	0.011	0.019	0.017	0.0040	0.023	0.1	0.1
Zinc	< 0.020	0.039	0.026	0.074	< 0.020	0.038	< 0.020	0.063	0.074	0.072	< 0.020	0.058	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-23-02	2531V-23-03	2531V-23-04	2531V-32-01	2531V-32-02	2531V-32-03	2531V-33-01	2531V-33-02	2531V-33-03	2531V-33-04	2531V-33-05	2531V-33-06	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s)	2531V-23; 2531V-21	2531V-23; 2531V-21	2531V-23; 2531V-21	2531V-32	2531V-32	2531V-32	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33	2531V-33		
[ISGS Site No.(s)]														
Parameter														
Laboratory soil pH (s.u.)	8.44	9.08	9.03	9.06	9.01	8.66	8.35	9.03	8.98	8.72	9.08	7.91	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	13000	12000	15000	25000	15000	9800	19000	18000	13000	10000	14000	15000	---	---
Antimony	< 1.9	< 2.0	< 2.0	< 2.2	< 2.0	< 2.0	< 2.0	< 2.1	< 1.9	< 1.9	< 2.0	< 2.1	5	82
Arsenic	11	**13**	11	**21**	**13**	7.5	**12**	8.9	11	7.8	**13**	**12**	11.3 / 13	61
Barium	54	63	140	130	93	100	100	170	98	72	97	100	1,500	14,000
Beryllium	0.84	0.82	0.92	1.6	0.90	0.59	1.5	1.3	0.73	0.69	1.0	1.1	22	410
Cadmium	< 0.48	< 0.50	< 0.49	< 0.55	< 0.49	0.56	< 0.51	< 0.52	< 0.49	< 0.48	< 0.50	< 0.52	5.2	200
Calcium	85000	110000	43000	14000	77000	80000	39000	18000	31000	97000	53000	49000	---	---
Chromium	24	21	21	34	25	36	27	27	21	31	24	24	21	690
Cobalt	16	16	17	21	14	11	15	13	13	9.0	15	14	20	12,000
Copper	26	30	27	47	32	38	34	31	28	19	33	31	2,900	8,200
Iron	29000	29000	30000	49000	32000	23000	34000	28000	27000	20000	32000	30000	15,000 / 15,900	---
Lead	16	18	49	32	30	44	20	33	33	26	39	33	107	700
Magnesium	41000	50000	25000	12000	44000	44000	25000	11000	18000	44000	31000	29000	325,000	730,000
Manganese	490	770	1400	1100	780	650	790	640	780	580	820	730	630 / 636	4,100
Mercury	0.031	0.025	0.033	0.037	0.028	0.024	0.040	0.036	0.038	0.036	0.032	0.022	0.89	0.1
Nickel	32	37	28	61	34	26	33	30	28	21	33	32	100	4,100
Potassium	2600	2100	1500	2400	2100	1700	1900	2000	1500	1300	1700	1700	---	---
Sodium	1100	1800	1700	4000	1800	880	1800	3200	1700	2100	1900	2000	---	---
Vanadium	28	27	34	46	31	24	38	37	30	25	31	31	550	1,400
Zinc	70	67	88	130	86	130	73	86	77	57	99	88	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.62	0.35	0.43	0.58	0.47	0.53	0.84	0.65	0.60	0.49	0.66	0.64	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.014	0.037	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	1	1
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.47	< 0.25	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.0**	**3.8**	**1.1**	**0.35**	**0.22**	**0.75**	**1.2**	**0.34**	**0.27**	**0.52**	**0.27**	0.077	0.15	0.15
Nickel	0.014	0.053	< 0.010	0.014	0.010	< 0.010	0.014	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Zinc	0.44	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	0.014	0.014	0.014	0.032	0.018	0.0062	0.013	0.011	0.0098	0.011	0.016	< 0.0040	---	0.05
Barium	0.069	0.063	0.11	0.18	0.090	0.029	0.088	0.091	0.081	0.043	0.087	< 0.020	2	2
Chromium	0.028	0.024	0.038	0.063	0.034	0.016	0.027	0.028	0.026	0.020	0.032	0.0051	0.1	0.1
Cobalt	0.0080	0.0085	0.0087	0.018	0.010	< 0.0040	0.0072	0.0063	0.0072	0.0046	0.010	< 0.0040	1	1
Copper	< 0.040	0.047	< 0.040	0.078	0.045	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.042	< 0.040	0.65	0.65
Iron	**30**	**25**	**41**	**75**	**37**	**10**	**28**	**24**	**23**	**14**	**36**	3.0	5	5
Lead	**0.013**	**0.012**	**0.021**	**0.029**	**0.022**	0.0050	**0.012**	**0.014**	**0.025**	**0.013**	**0.026**	0.0023	0.0075	0.0075
Manganese	0.13	0.13	**0.32**	**0.65**	**0.22**	0.053	**0.17**	**0.17**	**0.24**	0.14	**0.23**	0.028	0.15	0.15
Nickel	0.032	0.030	0.032	0.089	0.038	0.012	0.029	0.023	0.024	0.016	0.037	0.0047	0.1	0.1
Zinc	0.082	0.071	0.12	0.22	0.11	0.035	0.073	0.075	0.090	0.045	0.12	< 0.020	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-33-06 (Dup 9)	2531V-34-01	2531V-34-01	2531V-34-02	2531V-34-02	2531V-34-03	2531V-34-04	2531V-34-04	2531V-34-05	2531V-34-05	2531V-34-05 (Dup 8)	2531V-34-06	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-5	5-9	0-7	7-14	0-3.5	0-7	7-14	0-7	7-14	7-14	0-7		
Sample Date	8/8/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-33	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34		
Parameter														
Laboratory soil pH (s.u.)	8.75	8.52	8.41	8.36	7.86	8.86	8.29	7.99	7.8	8.04	7.83	8.6	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	9900	13000	14000	13000	9900	13000	15000	13000	7500	10000	12000	11000	---	---
Antimony	< 2.2	< 2.1	< 2.0	< 1.9	< 2.0	< 1.9	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.2	5	82
Arsenic	9.3	11	**13**	6.8	3.7	9.8	9.0	7.1	6.6	6.7	8.0	9.3	11.3 / 13	61
Barium	96	68	90	170	45	100	110	75	55	71	85	65	1,500	14,000
Beryllium	0.54	0.74	0.87	0.90	0.60	0.80	1.1	0.68	< 0.50	0.55	0.61	0.58	22	410
Cadmium	< 0.54	< 0.53	< 0.50	0.56	< 0.49	< 0.48	< 0.53	< 0.51	< 0.50	< 0.49	< 0.51	< 0.54	5.2	200
Calcium	58000	58000	64000	49000	93000	60000	68000	44000	80000	52000	42000	70000	---	---
Chromium	19	18	20	18	16	20	25	21	21	25	20	20	21	690
Cobalt	11	15	15	8.6	13	9.9	14	9.1	8.7	9.0	11	15	20	12,000
Copper	28	23	26	27	26	22	33	26	27	26	23	24	2,900	8,200
Iron	28000	25000	29000	20000	26000	24000	28000	23000	19000	20000	22000	24000	15,000 / 15,900	---
Lead	35	17	21	25	17	64	25	15	17	21	17	27	107	700
Magnesium	33000	32000	38000	25000	50000	31000	40000	26000	45000	30000	23000	37000	325,000	730,000
Manganese	550	650	940	440	670	560	760	430	490	350	600	630	630 / 636	4,100
Mercury	0.026	< 0.022	< 0.021	0.031	< 0.018	< 0.019	0.028	0.023	0.023	< 0.020	0.029	< 0.021	0.89	0.1
Nickel	28	31	33	27	34	25	34	30	22	20	28	30	100	4,100
Potassium	1400	2000	2000	1200	2000	1500	2200	2000	1300	1400	1500	1900	---	---
Sodium	1200	1100	1400	1300	780	2400	830	360	450	2300	460	1300	---	---
Vanadium	24	24	27	26	19	27	32	25	20	24	25	24	550	1,400
Zinc	66	64	76	85	79	89	95	62	83	71	57	140	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.60	0.63	0.67	0.65	0.59	0.87	0.77	0.50	0.75	0.65	0.94	0.73	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	0.024	< 0.010	< 0.010	0.050	< 0.010	0.041	0.072	0.019	0.025	0.032	0.019	1	1
Iron	< 0.25	< 0.25	< 0.25	< 0.25	0.27	< 0.25	1.4	0.65	0.92	1.4	< 0.25	1.2	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0065	< 0.0050	0.0075	0.0075
Manganese	**3.1**	**4.6**	**0.68**	**0.24**	**7.5**	**0.78**	**12**	**9.0**	**7.3**	**7.1**	**9.4**	**11**	0.15	0.15
Nickel	0.018	0.040	< 0.010	< 0.010	0.023	< 0.010	0.054	0.068	0.024	0.024	0.030	0.019	0.1	0.1
Zinc	< 0.050	0.20	0.13	0.053	0.18	0.14	0.088	< 0.050	0.082	0.075	< 0.050	0.066	5	5
SPLP Metals, mg/L														
Arsenic	0.0069	0.014	0.0043	0.0057	< 0.0040	0.0097	< 0.0040	< 0.0040	< 0.0040	0.0042	< 0.0040	< 0.0040	---	0.05
Barium	0.032	0.19	0.046	0.035	0.046	0.12	< 0.020	< 0.020	< 0.020	< 0.020	0.036	< 0.020	2	2
Chromium	0.011	0.022	0.0060	0.0044	< 0.0040	0.015	< 0.0040	< 0.0040	< 0.0040	0.0074	< 0.0040	< 0.0040	0.1	0.1
Cobalt	0.0045	0.0072	< 0.0040	< 0.0040	< 0.0040	0.0041	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	0.072	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**12**	**25**	3.8	1.5	< 0.10	**14**	0.56	1.0	0.41	**6.6**	2.8	1.0	5	5
Lead	**0.012**	**0.0099**	< 0.0020	0.0036	< 0.0020	**0.011**	< 0.0020	< 0.0020	< 0.0020	0.0040	0.0069	0.0037	0.0075	0.0075
Manganese	0.084	0.14	0.031	0.015	< 0.0040	0.12	0.0079	0.020	0.011	0.057	0.054	0.041	0.15	0.15
Nickel	0.079	0.028	0.0041	< 0.0040	< 0.0040	0.015	< 0.0040	< 0.0040	< 0.0040	0.0094	0.0052	< 0.0040	0.1	0.1
Zinc	0.043	0.075	< 0.020	< 0.020	< 0.020	0.060	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-34-06	2531V-34-07	2531V-34-08	2531V-34-09	2531V-34-09	2531V-35-01	2531V-35-01 (Dup 1)	2531V-35-01	2531V-35-02	2531V-36-01	2531V-36-01	2531V-36-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	7-14	0-1	0-1	0-7	7-14	0-5	0-5	5-9	0-3.5	0-5	5-9	0-3.5		
Sample Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-34	2531V-34	2531V-34	2531V-34	2531V-34	2531V-35	2531V-35	2531V-35	2531V-35	2531V-36	2531V-36	2531V-36		
Parameter														
Laboratory soil pH (s.u.)	7.61	8.84	9.04	7.66	7.83	8.89	8.73	8.59	9.31	9.13	8.99	9	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	14000	13000	13000	14000	10000	3400	2600	2600	4500	3500	4000	3500	---	---
Antimony	< 2.1	< 2.0	< 2.0	< 2.1	< 2.0	< 1.9	< 1.8	< 2.0	< 2.0	< 1.9	< 2.0	< 1.9	5	82
Arsenic	10	9.0	8.6	7.9	7.7	6.1	8.3	6.7	5.3	6.1	4.5	**13**	11.3 / 13	61
Barium	94	85	110	100	67	18	17	12	22	15	18	17	1,500	14,000
Beryllium	0.72	0.70	0.68	0.74	0.54	< 0.48	< 0.45	< 0.49	< 0.49	< 0.46	< 0.49	< 0.48	22	410
Cadmium	< 0.52	< 0.49	< 0.49	< 0.53	< 0.51	< 0.48	< 0.45	< 0.49	< 0.49	< 0.46	< 0.49	< 0.48	5.2	200
Calcium	37000	54000	40000	39000	45000	130000	110000	150000	110000	130000	120000	120000	---	---
Chromium	26	21	22	23	17	6.7	5.1	6.4	7.6	6.2	7.2	7.7	21	690
Cobalt	14	11	9.9	11	11	4.5	3.6	3.4	6.5	4.5	5.4	4.5	20	12,000
Copper	28	27	26	28	22	12	6.7	7.3	9.2	11	9.1	12	2,900	8,200
Iron	26000	24000	22000	25000	21000	13000	9800	11000	16000	13000	13000	17000	15,000 / 15,900	---
Lead	21	20	40	19	17	7.7	21	5.3	6.0	6.9	5.5	7.1	107	700
Magnesium	21000	29000	23000	22000	26000	73000	61000	76000	58000	68000	61000	59000	325,000	730,000
Manganese	860	600	540	630	490	420	300	270	400	380	380	320	630 / 636	4,100
Mercury	0.030	0.031	0.037	0.030	0.027	< 0.018	< 0.018	< 0.016	< 0.020	< 0.022	< 0.021	< 0.017	0.89	0.1
Nickel	33	29	25	30	25	11	12	7.3	11	10	9.4	12	100	4,100
Potassium	1800	1600	1200	1700	1300	660	520	580	810	700	740	600	---	---
Sodium	130	1600	2200	330	260	250	220	220	640	340	540	390	---	---
Vanadium	30	28	29	32	25	12	8.7	11	17	12	16	15	550	1,400
Zinc	80	69	71	66	55	31	19	21	36	36	31	39	5,100	61,000
TCLP Metals, mg/L														Class I Groundwater [c/]
Barium	1.0	0.63	0.58	0.96	0.71	0.52	0.73	0.46	0.47	0.44	0.39	0.44	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.032	< 0.010	< 0.010	0.044	0.029	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.065	< 0.010	1	1
Iron	1.2	1.5	1.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.31	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.0076**	< 0.0050	**0.014**	**0.0083**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**14**	**1.5**	**0.21**	**9.5**	**10**	**0.95**	**0.79**	**1.3**	**1.3**	**1.3**	**5.2**	**1.2**	0.15	0.15
Nickel	0.028	0.017	< 0.010	0.034	0.028	0.012	< 0.010	0.021	0.017	0.018	0.085	0.017	0.1	0.1
Zinc	0.080	0.059	0.078	< 0.050	< 0.050	0.13	0.19	0.13	0.12	0.12	0.17	0.10	5	5
SPLP Metals, mg/L														
Arsenic	0.0046	< 0.0040	0.0051	< 0.0040	< 0.0040	0.0066	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0088	---	0.05
Barium	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.057	0.025	0.032	< 0.020	0.020	0.022	0.073	2	2
Chromium	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0086	0.0046	0.0047	< 0.0040	< 0.0040	< 0.0040	0.011	0.1	0.1
Cobalt	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0042	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	0.74	2.8	0.86	0.72	1.4	**9.7**	4.4	3.2	2.9	1.9	2.3	**14**	5	5
Lead	< 0.0020	0.0031	0.0034	< 0.0020	< 0.0020	0.0048	0.0030	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0056	0.0075	0.0075
Manganese	0.029	0.022	0.030	0.031	0.020	0.066	0.034	0.019	0.026	0.013	0.018	0.10	0.15	0.15
Nickel	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0098	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.013	0.1	0.1
Zinc	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.036	0.026	< 0.020	< 0.020	< 0.020	< 0.020	0.059	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-36-03	2531V-37-01	2531V-37-02	2531V-37-03	2531V-37-04	2531V-41-01	2531V-41-02	2531V-41-03	2531V-41-03	2531V-41-04	2531V-41-05	2531V-41-05 (Dup 2)	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-3.5	0-3.5	0-3.5	0-3.5	0-3.5	0-1	0-1	0-7	7-14	0-3.5	0-3.5	0-3.5		
Sample Date	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17	8/7/17	8/7/17	7/27/17	7/27/17	7/27/17	7/27/17	7/27/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-36	2531V-37	2531V-37	2531V-37	2531V-37	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41	2531V-41		
Parameter														
Laboratory soil pH (s.u.)	9.16	8.64	8.72	8.05	8.62	8.56	8.48	8.61	7.45	8.71	8.09	7.94	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	13000	12000	19000	20000	15000	12000	11000	14000	11000	4800	18000	19000	---	---
Antimony	< 2.1	< 2.0	< 2.5	< 2.1	< 1.9	< 2.0	< 2.0	< 2.1	< 2.2	< 2.0	< 2.2	< 2.1	5	82
Arsenic	8.7	10	**18**	**29**	**14**	9.1	5.2	**18**	6.8	6.4	**17**	**21**	11.3 / 13	61
Barium	65	52	79	130	82	65	67	81	92	36	130	130	1,500	14,000
Beryllium	0.79	0.69	1.2	1.7	0.91	0.61	0.57	0.85	0.72	< 0.51	1.0	1.2	22	410
Cadmium	< 0.52	< 0.49	< 0.62	1.1	< 0.49	< 0.51	< 0.49	< 0.53	< 0.54	< 0.51	< 0.54	< 0.53	5.2	200
Calcium	120000	100000	35000	4400	100000	22000	64000	61000	90000	150000	44000	12000	---	---
Chromium	20	20	29	31	23	18	21	23	17	9.2	23	23	21	690
Cobalt	10	10	16	20	13	11	11	14	8.6	5.3	15	16	20	12,000
Copper	24	21	37	71	30	22	29	26	23	14	28	36	2,900	8,200
Iron	24000	24000	39000	62000	32000	23000	22000	33000	21000	12000	36000	41000	15,000 / 15,900	---
Lead	15	14	31	44	21	16	49	93	70	17	33	38	107	700
Magnesium	58000	55000	23000	5400	56000	13000	38000	33000	48000	68000	25000	9100	325,000	730,000
Manganese	560	480	1100	1600	610	620	370	840	590	410	920	510	630 / 636	4,100
Mercury	< 0.020	< 0.020	< 0.027	0.066	0.024	0.025	0.030	0.025	0.041	0.019	0.041	0.048	0.89	0.1
Nickel	30	28	47	79	37	27	28	32	23	13	34	38	100	4,100
Potassium	2300	1900	2900	1700	2300	1100	1800	1800	1500	720	1500	1400	---	---
Sodium	1400	930	1600	1300	1200	1300	1800	440	590	880	1100	1300	---	---
Vanadium	25	24	34	39	27	29	27	31	22	12	35	36	550	1,400
Zinc	56	56	100	200	83	52	73	120	80	35	86	100	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.56	0.50	0.73	0.61	0.66	0.93	0.66	0.73	1.2	0.70	1.5	1.3	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.026	0.066	< 0.010	< 0.010	0.055	0.037	< 0.010	< 0.010	0.025	< 0.010	0.024	0.018	1	1
Iron	< 0.25	< 0.25	< 0.25	0.72	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.51	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.015**	**0.057**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.9**	**6.6**	**0.39**	0.020	**5.4**	**8.2**	0.11	**0.58**	**5.1**	**0.56**	**15**	**10**	0.15	0.15
Nickel	0.055	**0.11**	< 0.010	< 0.010	0.065	0.064	0.014	< 0.010	0.029	< 0.010	0.024	0.021	0.1	0.1
Zinc	0.16	0.19	0.20	0.27	0.17	< 0.050	< 0.050	0.18	0.33	0.17	0.22	0.22	5	5
SPLP Metals, mg/L														
Arsenic	0.0053	0.0045	0.0049	0.011	0.0062	0.0044	0.0072	< 0.0040	< 0.0040	0.0063	0.0057	0.0042	---	0.05
Barium	0.046	0.047	0.063	0.083	0.074	0.029	0.052	0.055	0.091	0.077	0.064	0.062	2	2
Chromium	0.0075	0.0077	0.0085	0.014	0.0095	0.0092	0.017	0.0071	0.0044	0.011	0.0076	0.0066	0.1	0.1
Cobalt	< 0.0040	< 0.0040	< 0.0040	0.0043	< 0.0040	< 0.0040	0.0064	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**5.2**	**5.7**	**7.2**	**19**	**8.9**	**9.1**	**15**	4.8	1.9	**9.9**	**5.8**	**6.7**	5	5
Lead	0.0021	0.0023	0.0072	0.0067	0.0035	0.0067	**0.015**	0.0049	0.0022	0.0044	0.0056	0.0031	0.0075	0.0075
Manganese	0.028	0.037	0.041	**0.16**	0.040	0.053	**0.17**	0.029	0.0085	0.076	0.059	0.042	0.15	0.15
Nickel	0.0056	0.0070	0.0077	0.019	0.010	0.0099	0.017	0.0052	< 0.0040	0.012	0.0066	0.0066	0.1	0.1
Zinc	0.022	< 0.020	0.030	0.073	0.037	0.056	0.073	0.024	< 0.020	0.031	0.027	0.024	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-43-01	2531V-43-02	2531V-43-03	2531V-43-03 (Dup 10)	2531V-43-04	2531V-43-05	2531V-43-05	2531V-43-06	2531V-43-06 (Dup 5)	2531V-43-06	2531V-43-07	2531V-43-07	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-1	0-1	0-5	5-9	0-5	0-5	5-9	0-5	5-9		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17	8/7/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43		
Parameter														
Laboratory soil pH (s.u.)	8.21	8.82	8.1	9.3	9.04	8.38	8.41	8.22	8.2	8.25	9.05	8.99	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	3700	10000	23000	8800	7900	12000	6000	5300	9100	8600	7800	4000	---	---
Antimony	< 2.0	< 2.0	< 2.2	< 1.9	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 2.1	< 1.9	< 2.0	5	82
Arsenic	4.2	9.9	**17**	7.3	7.6	8.5	4.7	4.7	6.5	7.8	**23**	5.5	11.3 / 13	61
Barium	67	56	150	30	44	63	26	23	46	58	55	17	1,500	14,000
Beryllium	< 0.50	0.73	1.6	0.62	0.53	0.54	< 0.50	< 0.51	0.53	0.53	0.60	< 0.50	22	410
Cadmium	0.92	< 0.51	< 0.54	< 0.46	< 0.50	< 0.50	< 0.50	< 0.51	< 0.48	< 0.52	< 0.48	< 0.50	5.2	200
Calcium	160000	110000	33000	120000	120000	81000	130000	120000	130000	94000	75000	150000	---	---
Chromium	75	20	36	17	16	21	12	12	17	18	23	11	21	690
Cobalt	5.7	13	21	9.9	10	13	7.0	6.5	9.4	9.6	11	4.6	20	12,000
Copper	68	28	47	21	20	31	14	18	18	20	27	13	2,900	8,200
Iron	24000	27000	46000	21000	20000	28000	14000	14000	20000	21000	36000	13000	15,000 / 15,900	---
Lead	41	20	31	20	17	58	7.1	7.0	11	15	19	7.8	107	700
Magnesium	91000	61000	23000	83000	55000	45000	64000	61000	76000	54000	46000	82000	325,000	730,000
Manganese	590	600	390	480	460	600	390	430	540	530	450	770	630 / 636	4,100
Mercury	< 0.020	0.021	0.028	< 0.018	0.026	0.027	< 0.019	< 0.020	< 0.020	< 0.019	< 0.022	< 0.021	0.89	0.1
Nickel	18	31	56	25	24	31	16	16	21	23	27	12	100	4,100
Potassium	630	1800	2600	1600	1500	2000	1200	960	1600	1300	1400	1200	---	---
Sodium	580	1800	3700	1600	2100	2000	940	620	890	960	1000	610	---	---
Vanadium	17	25	45	29	20	26	16	16	23	22	33	14	550	1,400
Zinc	230	65	100	48	51	79	33	30	47	55	65	35	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.47	0.46	0.70	0.22	0.45	0.36	0.22	0.33	0.31	0.35	0.56	0.23	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.014	0.046	0.019	0.023	0.11	0.019	0.019	< 0.010	0.015	< 0.010	< 0.010	< 0.010	1	1
Iron	0.85	**6.4**	0.58	< 0.25	2.2	< 0.25	< 0.25	< 0.25	2.8	< 0.25	0.44	< 0.25	5	5
Lead	< 0.0050	**0.017**	< 0.0050	< 0.0050	< 0.0050	**0.0091**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.3**	**12**	**5.5**	**5.2**	**12**	**6.6**	**3.9**	**0.78**	**4.1**	**1.5**	**0.29**	**1.3**	0.15	0.15
Nickel	0.018	0.047	0.024	0.031	0.084	0.022	0.048	< 0.010	0.049	0.014	< 0.010	0.012	0.1	0.1
Zinc	< 0.10	0.077	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	< 0.0040	0.0042	0.0061	0.020	0.019	0.0072	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0053	< 0.0040	---	0.05
Barium	< 0.020	< 0.020	0.037	0.10	0.092	0.048	0.028	0.028	0.021	0.029	0.049	0.030	2	2
Chromium	0.0045	0.0072	0.015	0.048	0.033	0.016	0.0098	0.0089	0.0081	0.010	0.014	0.011	0.1	0.1
Cobalt	< 0.0040	< 0.0040	0.0056	0.025	0.020	0.0074	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0043	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	0.060	0.048	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	2.8	**6.6**	**13**	**48**	**37**	**16**	**8.7**	**6.1**	**5.2**	**6.1**	**11**	**8.9**	5	5
Lead	0.0035	0.0061	**0.0088**	**0.039**	**0.025**	**0.017**	0.0030	< 0.0020	< 0.0020	0.0025	0.0039	0.0030	0.0075	0.0075
Manganese	0.020	0.066	0.14	**0.50**	**0.46**	**0.18**	0.076	0.031	0.035	0.048	0.092	0.060	0.15	0.15
Nickel	0.0044	0.0091	0.015	0.062	0.049	0.019	0.0094	0.0063	0.0055	0.0068	0.013	0.010	0.1	0.1
Zinc	0.028	0.031	0.044	0.13	0.11	0.070	0.048	< 0.040	< 0.040	< 0.040	0.052	0.054	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-43-08	2531V-43-09	2531V-43-10	2531V-43-11	2531V-43-11	2531V-55-01	2531V-55-02	2531V-56-01	2531V-56-01 (Dup 14)	2531V-56-01	2531V-56-01	2531V-56-02	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	0-1	0-1	0-1	0-5	5-9	0-1	0-1	0-6	0-6	6-12	12-18	0-6		
Sample Date	8/9/17	8/8/17	8/7/17	8/7/17	8/7/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-43	2531V-43	2531V-43	2531V-43	2531V-43	2531V-55	2531V-55	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
Laboratory soil pH (s.u.)	8.52	8.73	8.71	8.04	7.53	8.73	8.87	8.05	8.22	7.61	7.96	9.28	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	8400	10000	10000	9000	12000	11000	15000	8100	15000	12000	8100	8800	---	---
Antimony	< 2.1	< 2.0	< 2.0	< 2.0	< 2.1	< 2.0	< 2.3	< 2.0	< 2.1	< 2.3	< 2.1	< 2.0	5	82
Arsenic	**12**	8.2	7.9	8.7	9.0	7.5	**13**	10	**14**	6.3	7.5	5.0	11.3 / 13	61
Barium	42	76	78	68	96	130	88	67	120	130	52	38	1,500	14,000
Beryllium	0.58	0.52	0.62	0.55	0.63	0.84	0.99	0.59	1.4	0.81	0.64	0.60	22	410
Cadmium	< 0.52	< 0.49	< 0.51	< 0.51	< 0.52	< 0.51	< 0.57	< 0.50	0.99	< 0.56	< 0.52	< 0.51	5.2	200
Calcium	110000	39000	65000	77000	72000	11000	68000	92000	67000	5100	80000	120000	---	---
Chromium	20	18	18	17	17	20	27	15	30	22	17	18	21	690
Cobalt	11	9.5	11	11	9.1	14	16	11	19	9.2	11	10	20	12,000
Copper	29	22	22	23	20	24	41	26	46	19	29	19	2,900	8,200
Iron	29000	21000	22000	22000	21000	21000	33000	24000	36000	21000	28000	18000	15,000 / 15,900	---
Lead	18	24	23	31	12	34	46	24	210	14	16	10	107	700
Magnesium	64000	24000	37000	45000	43000	7500	41000	53000	39000	5500	42000	62000	325,000	730,000
Manganese	530	430	640	620	540	1200	710	690	830	550	480	470	630 / 636	4,100
Mercury	< 0.023	0.036	0.038	0.022	0.036	0.040	0.046	0.020	0.031	0.032	< 0.022	< 0.019	0.89	0.1
Nickel	28	22	24	24	21	21	36	25	42	28	35	25	100	4,100
Potassium	1700	1400	1500	1300	960	1400	1900	1000	2000	1500	1600	1800	---	---
Sodium	2200	1500	2900	1400	340	1000	2800	1100	2800	570	200	1600	---	---
Vanadium	22	26	26	23	32	30	33	21	36	28	24	22	550	1,400
Zinc	60	65	59	58	48	85	110	81	170	81	82	40	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	< 0.050	0.51	0.44	0.90	1.3	0.59	0.42	1.0	0.55	0.41	0.39	0.20	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	0.016	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	< 0.010	< 0.010	0.021	0.034	< 0.010	0.032	0.022	0.023	< 0.010	0.021	0.041	1	1
Iron	**14**	< 0.25	< 0.25	< 0.25	< 0.25	0.68	0.37	0.89	0.32	0.54	< 0.25	< 0.25	5	5
Lead	**0.0077**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.016**	< 0.0050	**0.017**	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	0.14	0.14	**0.72**	**11**	**9.7**	**0.19**	**9.3**	**8.8**	**6.9**	**2.5**	**3.1**	**4.9**	0.15	0.15
Nickel	0.018	< 0.010	< 0.010	0.019	0.036	< 0.010	0.070	0.020	0.027	0.061	0.046	0.045	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.13	**23**	< 0.050	0.058	< 0.050	< 0.10	0.056	5	5
SPLP Metals, mg/L														
Arsenic	0.017	< 0.0040	0.010	0.0071	< 0.0040	0.0091	0.018	< 0.0040	0.011	0.0085	< 0.0040	0.0081	---	0.05
Barium	0.092	< 0.020	0.080	0.048	0.036	0.072	0.099	< 0.020	0.045	0.031	< 0.020	0.052	2	2
Chromium	0.034	< 0.0040	0.028	0.017	0.0073	0.023	0.037	0.0071	0.016	0.012	0.0049	0.022	0.1	0.1
Cobalt	0.019	< 0.0040	0.0064	0.0078	< 0.0040	0.0062	0.011	< 0.0040	0.0057	< 0.0040	< 0.0040	0.0070	1	1
Copper	0.048	< 0.040	0.058	< 0.040	< 0.040	< 0.040	0.049	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**38**	1.1	**32**	**16**	**5.9**	**19**	**37**	**6.8**	**13**	**12**	3.7	**19**	5	5
Lead	**0.022**	0.0051	**0.019**	**0.014**	0.0029	**0.015**	**0.038**	0.0034	**0.045**	0.0041	0.0023	**0.0085**	0.0075	0.0075
Manganese	**0.41**	0.048	0.15	**0.20**	0.094	**0.17**	**0.21**	0.052	0.11	0.044	0.020	0.14	0.15	0.15
Nickel	0.050	< 0.0040	0.023	0.020	0.0064	0.017	0.042	0.0087	0.016	0.0088	0.0051	0.022	0.1	0.1
Zinc	0.11	< 0.020	0.12	0.063	0.044	0.077	0.19	0.033	0.051	0.039	0.024	0.059	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.

Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-02	2531V-56-02	2531V-56-02 (Dup 13)	2531V-56-03	2531V-56-03	2531V-56-03	2531V-56-04	2531V-56-04 (Dup 12)	2531V-56-04	2531V-56-04	2531V-56-05	2531V-56-05	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	12-18	0-6	6-12	12-18	0-6	0-6	6-12	12-18	0-6	6-12		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
Laboratory soil pH (s.u.)	8.5	8.38	8.21	8.74	8.76	8.77	8.54	10.21	8.07	8.48	8.87	7.48	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	8200	2900	5000	4900	1500	1400	10000	16000	13000	5400	14000	9800	---	---
Antimony	< 2.0	< 1.9	< 2.1	< 1.9	< 1.9	< 1.9	< 2.1	< 2.0	< 2.2	< 2.0	< 2.3	< 1.9	5	82
Arsenic	6.0	4.0	9.4	5.3	**13**	4.7	8.3	9.3	**15**	**14**	7.5	6.3	11.3 / 13	61
Barium	37	18	30	29	10	8.2	64	69	94	27	82	87	1,500	14,000
Beryllium	0.55	< 0.47	< 0.53	< 0.48	< 0.47	< 0.47	0.78	1.0	0.83	< 0.50	0.90	0.72	22	410
Cadmium	< 0.51	< 0.47	< 0.53	< 0.48	< 0.47	< 0.47	< 0.51	< 0.51	< 0.54	< 0.50	< 0.57	< 0.48	5.2	200
Calcium	140000	220000	61000	170000	190000	230000	97000	58000	60000	160000	130000	61000	---	---
Chromium	19	7.2	14	11	5.6	6.0	19	24	23	11	25	22	21	690
Cobalt	9.4	5.1	7.8	6.7	3.9	3.2	11	13	19	5.8	12	8.7	20	12,000
Copper	18	11	17	15	14	9.3	24	28	32	12	23	24	2,900	8,200
Iron	18000	11000	20000	14000	19000	10000	24000	28000	38000	14000	26000	20000	15,000 / 15,900	---
Lead	9.8	5.2	12	7.9	7.4	4.2	21	23	17	6.2	30	36	107	700
Magnesium	68000	130000	120000	75000	100000	120000	56000	36000	37000	85000	74000	35000	325,000	730,000
Manganese	470	480	550	440	360	370	540	410	890	350	560	440	630 / 636	4,100
Mercury	< 0.019	< 0.018	< 0.022	< 0.019	< 0.021	< 0.018	0.020	< 0.020	0.025	< 0.023	0.023	0.026	0.89	0.1
Nickel	22	12	19	14	9.3	6.9	27	26	40	15	31	21	100	4,100
Potassium	1800	940	1200	1000	400	450	1400	1400	1700	1100	2300	1400	---	---
Sodium	1100	410	600	1500	650	580	1700	5000	1000	400	1700	310	---	---
Vanadium	22	9.5	17	15	9.1	7.2	26	42	26	14	28	26	550	1,400
Zinc	39	21	33	33	24	18	56	71	70	27	62	77	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.39	0.21	0.34	0.20	0.10	0.084	0.32	0.52	0.75	0.31	0.33	0.58	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.044	< 0.010	< 0.010	0.048	0.019	< 0.010	0.072	0.045	0.020	0.13	0.064	0.012	1	1
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.35	**9.7**	< 0.25	< 0.25	0.28	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	**0.021**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**4.7**	**0.94**	**1.1**	**4.5**	**2.2**	**1.7**	**7.9**	**9.8**	**8.1**	**7.2**	**8.3**	**6.4**	0.15	0.15
Nickel	0.025	0.015	0.011	0.047	0.041	0.025	0.059	0.046	0.022	**0.17**	0.058	0.023	0.1	0.1
Zinc	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	0.061	< 0.10	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	0.0042	< 0.0040	< 0.0040	0.0081	< 0.0040	< 0.0040	0.0083	0.025	0.017	< 0.0040	0.0073	< 0.0040	---	0.05
Barium	0.031	< 0.020	< 0.020	0.048	< 0.020	< 0.020	0.054	0.046	0.078	0.032	0.047	< 0.020	2	2
Chromium	0.013	< 0.0040	0.0047	0.017	< 0.0040	< 0.0040	0.017	0.016	0.026	0.011	0.015	< 0.0040	0.1	0.1
Cobalt	< 0.0040	< 0.0040	< 0.0040	0.0072	< 0.0040	< 0.0040	0.0074	0.0063	0.016	< 0.0040	0.0048	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**9.2**	0.14	2.2	**17**	< 0.10	< 0.10	**17**	**12**	**35**	**5.2**	**13**	2.1	5	5
Lead	0.0049	< 0.0020	< 0.0020	**0.0080**	< 0.0020	< 0.0020	**0.013**	**0.010**	**0.016**	0.0034	0.0074	< 0.0020	0.0075	0.0075
Manganese	0.071	< 0.0040	0.010	**0.19**	< 0.0040	< 0.0040	**0.21**	**0.18**	**0.35**	0.053	0.13	0.016	0.15	0.15
Nickel	0.0099	< 0.0040	< 0.0040	0.020	< 0.0040	< 0.0040	0.022	0.017	0.037	0.0084	0.015	< 0.0040	0.1	0.1
Zinc	0.032	< 0.020	< 0.020	0.060	< 0.020	< 0.020	0.056	0.041	0.077	0.027	0.046	0.021	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-05	2531V-56-06	2531V-56-06	2531V-56-06 (Dup 11)	2531V-56-06	2531V-56-07	2531V-56-07	2531V-56-07	2531V-56-08	2531V-56-08	2531V-56-08	2531V-56-09	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	12-18	0-6	6-12	6-12	12-18	0-6	6-12	12-18	0-6	6-12	12-18	0-6		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter														
Laboratory soil pH (s.u.)	7.8	8.36	7.81	8.18	8.17	7.96	8.66	7.42	7.55	8.06	8.05	8.59	<6.25, >9.0	---
Total Metals, mg/kg														
Aluminum	17000	11000	15000	18000	14000	19000	7200	4100	15000	4100	3000	10000	---	---
Antimony	< 2.3	< 2.2	< 2.0	< 2.1	< 2.0	< 1.8	< 2.0	< 2.0	< 1.9	< 1.9	< 1.9	< 2.1	5	82
Arsenic	8.3	**12**	**12**	**12**	4.0	**16**	3.2	2.0	8.2	6.0	4.4	**13**	11.3 / 13	61
Barium	150	70	230	110	120	130	33	19	81	21	13	100	1,500	14,000
Beryllium	1.2	0.79	1.2	1.2	0.90	1.4	< 0.50	< 0.49	0.79	< 0.48	< 0.47	0.67	22	410
Cadmium	0.59	< 0.55	< 0.50	< 0.52	< 0.51	< 0.45	< 0.50	< 0.49	< 0.48	< 0.48	< 0.47	< 0.52	5.2	200
Calcium	4500	140000	10000	70000	86000	9400	110000	160000	2100	110000	130000	45000	---	---
Chromium	31	21	23	29	31	31	15	11	22	8.8	7.6	17	21	690
Cobalt	24	12	14	17	26	18	7.6	6.4	15	6.2	4.6	12	20	12,000
Copper	43	28	28	33	28	42	16	15	17	20	11	20	2,900	8,200
Iron	39000	28000	30000	35000	27000	43000	18000	14000	25000	13000	11000	21000	15,000 / 15,900	---
Lead	23	16	18	33	19	24	8.6	8.5	17	6.4	6.2	33	107	700
Magnesium	6600	88000	8700	37000	53000	9000	55000	83000	3800	61000	59000	28000	325,000	730,000
Manganese	**1700**	710	1100	800	1300	380	410	490	690	490	310	910	630 / 636	4,100
Mercury	0.042	< 0.019	0.028	0.038	< 0.020	0.033	< 0.020	< 0.018	0.023	< 0.020	< 0.022	0.059	0.89	0.1
Nickel	44	31	36	40	43	54	19	15	23	16	10	21	100	4,100
Potassium	2300	1600	1200	2500	1900	2100	1600	1000	1400	690	610	1100	---	---
Sodium	420	980	630	590	520	1900	380	370	670	500	260	870	---	---
Vanadium	39	29	42	38	31	37	18	17	33	16	11	28	550	1,400
Zinc	110	63	70	85	72	86	36	38	50	31	28	65	5,100	61,000
TCLP Metals, mg/L													Class I Groundwater [c/]	
Barium	0.53	0.34	1.5	0.66	0.33	0.60	0.22	0.19	0.23	0.18	0.11	0.58	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	0.025	0.052	0.039	0.028	0.012	0.032	0.050	0.026	< 0.010	0.031	0.044	< 0.010	1	1
Iron	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.33	< 0.25	< 0.25	< 0.25	2.7	3.7	< 0.25	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0052	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**8.7**	**7.2**	**8.7**	**9.8**	**2.8**	**5.7**	**4.7**	**3.1**	**0.31**	**4.1**	**4.3**	**0.69**	0.15	0.15
Nickel	0.075	0.052	0.045	0.021	0.015	0.035	0.054	0.035	< 0.010	0.063	0.067	< 0.010	0.1	0.1
Zinc	0.080	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061	< 0.050	< 0.050	< 0.050	< 0.050	5	5
SPLP Metals, mg/L														
Arsenic	0.0042	< 0.0040	0.0045	0.0061	< 0.0040	0.0068	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0081	---	0.05
Barium	0.065	0.040	0.054	0.045	0.042	0.055	0.032	< 0.020	0.039	< 0.020	< 0.020	0.036	2	2
Chromium	0.021	0.014	0.013	0.015	0.015	0.017	0.012	< 0.0040	0.013	< 0.0040	< 0.0040	0.013	0.1	0.1
Cobalt	0.0050	< 0.0040	< 0.0040	0.0051	0.0050	0.0060	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**17**	**9.2**	**12**	**12**	**11**	**14**	**8.2**	0.11	**9.6**	0.50	2.0	**11**	5	5
Lead	0.0058	0.0041	0.0042	**0.0077**	0.0058	0.0070	0.0048	< 0.0020	0.0041	< 0.0020	< 0.0020	0.0073	0.0075	0.0075
Manganese	**0.22**	0.084	**0.16**	0.098	0.13	0.14	0.052	0.071	0.10	< 0.0040	0.0094	0.086	0.15	0.15
Nickel	0.019	0.011	0.012	0.015	0.015	0.018	0.0080	< 0.0040	0.0094	< 0.0040	< 0.0040	0.011	0.1	0.1
Zinc	0.063	0.038	0.040	0.047	0.041	0.041	0.031	< 0.020	0.041	< 0.040	< 0.040	0.054	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-3 (Continued)
Comparison of Detected Constituents to Applicable Reference Concentrations - Inorganics
Illinois Department of Transportation, District One
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Boring ID	2531V-56-09	2531V-56-09	2531V-56-10	2531V-56-10	2531V-56-10 (Dup 4)	2531V-56-10	2531V-56-11	2531V-56-11	2531V-56-11	Soil Reference Concentrations [a/]	Soil Remediation Objective for Construction Workers [b/]
Sample Depth, ft	6-12	12-18	0-6	6-12	6-12	12-18	0-6	6-12	12-18		
Sample Date	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17		
Excavation Area(s) [ISGS Site No.(s)]	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56	2531V-56		
Parameter											
Laboratory soil pH (s.u.)	8.48	8.34	8.29	8.75	8.36	8.83	8.28	8.39	7.76	<6.25, >9.0	---
Total Metals, mg/kg											
Aluminum	7100	2800	9700	2800	13000	2500	11000	9700	7900	---	---
Antimony	< 2.1	< 2.0	< 2.1	< 2.1	< 2.2	< 1.9	< 2.2	< 2.1	< 2.1	5	82
Arsenic	2.7	1.7	9.6	4.9	**14**	4.1	9.3	6.3	8.4	11.3 / 13	61
Barium	35	16	79	21	130	17	100	86	79	1,500	14,000
Beryllium	< 0.52	< 0.49	0.68	< 0.51	0.90	< 0.48	0.70	0.63	0.57	22	410
Cadmium	< 0.52	< 0.49	< 0.54	< 0.51	< 0.55	< 0.48	< 0.54	< 0.52	< 0.52	5.2	200
Calcium	79000	110000	42000	120000	94000	130000	51000	66000	59000	---	---
Chromium	14	6.9	18	7.7	23	8.1	19	18	17	21	690
Cobalt	4.0	4.1	11	4.7	13	3.9	10	12	11	20	12,000
Copper	14	15	24	13	28	8.4	23	20	24	2,900	8,200
Iron	16000	12000	22000	13000	30000	10000	23000	19000	21000	15,000 / 15,900	---
Lead	7.4	5.9	14	6.4	33	4.4	23	14	14	107	700
Magnesium	49000	59000	27000	67000	51000	67000	30000	31000	31000	325,000	730,000
Manganese	180	370	620	320	860	240	650	340	710	630 / 636	4,100
Mercury	< 0.019	< 0.021	0.027	< 0.021	0.024	< 0.018	0.027	< 0.024	< 0.020	0.89	0.1
Nickel	12	8.9	27	11	32	8.2	26	20	27	100	4,100
Potassium	920	590	1300	660	1500	720	1400	1700	1600	---	---
Sodium	870	450	980	440	1500	470	210	1400	790	---	---
Vanadium	21	13	28	11	39	12	29	25	24	550	1,400
Zinc	42	29	61	29	73	22	66	58	63	5,100	61,000
TCLP Metals, mg/L										Class I Groundwater [c/]	
Barium	0.49	0.17	1.0	0.51	0.74	0.37	0.83	0.81	0.98	2	2
Cadmium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.005	0.005
Chromium	0.012	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.1	0.1
Cobalt	< 0.010	0.041	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.082	1	1
Iron	< 0.25	2.7	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.2	5	5
Lead	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0075	0.0075
Manganese	**0.70**	**5.4**	**1.6**	**1.0**	**0.21**	**1.7**	**0.19**	**1.1**	**4.8**	0.15	0.15
Nickel	0.020	0.067	0.017	0.015	< 0.010	0.022	< 0.010	0.016	**0.21**	0.1	0.1
Zinc	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.20	5	5
SPLP Metals, mg/L											
Arsenic	< 0.0040	< 0.0040	0.0050	0.011	0.0074	0.012	< 0.0040	0.0074	< 0.0040	---	0.05
Barium	0.047	< 0.020	0.034	0.061	0.048	0.068	0.022	0.042	0.043	2	2
Chromium	0.020	0.0080	0.011	0.019	0.016	0.023	0.0072	0.013	< 0.0040	0.1	0.1
Cobalt	< 0.0040	< 0.0040	< 0.0040	0.0067	< 0.0040	0.0098	< 0.0040	< 0.0040	< 0.0040	1	1
Copper	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.040	< 0.040	< 0.040	< 0.040	0.65	0.65
Iron	**15**	**6.3**	**10**	**30**	**16**	**41**	**5.5**	**12**	0.95	5	5
Lead	0.0054	0.0028	0.0047	**0.0094**	**0.0081**	**0.012**	0.0022	0.0061	< 0.0020	0.0075	0.0075
Manganese	0.072	0.036	0.074	0.14	0.13	**0.17**	0.030	0.053	0.042	0.15	0.15
Nickel	0.012	0.0046	0.0092	0.021	0.013	0.025	0.0048	0.0085	< 0.0040	0.1	0.1
Zinc	0.061	< 0.040	0.046	0.088	0.062	0.095	< 0.040	0.048	< 0.040	5	5

--- - Refers to not applicable or value not available

[a/] Soil reference concentrations from MAC table. Background values for MSA counties are included as applicable.
Inorganic Soil Reference Concentrations (xx.xx / xx.xx) Include the Most Stringent values from the MAC Table / and the MSA County Value From the MAC Table as Applicable

[b/] Soil Remediation Objective for Construction Workers, most stringent of the Ingestion or Inhalation exposure route.

[c/] Soil Remediation Objective for the Groundwater Component of the Groundwater Ingestion Route, Class I Groundwater

Shaded values indicate concentration exceeds reference concentration

Table 4-4
Estimated Construction Management/Land Acquisition Costs -
Illinois Department of Transportation
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Pay Item/Area	Est. Vol. of Excavation (CY)	Estimated Non-Special Waste Disposal Volume In Existing IDOT ROW (Construction) (CY)*	Estimated Non-Special Waste Disposal Volume In Areas of Land Acquisition (Remediation) (CY)*	Unit	Unit Cost ($)	Construction Mgmt Cost ($)	Land Acquisition Cost ($)
2531V-13	193	48	0		75	6,738.75	0.00
2531V-14	378	189	189		75	15,735.00	15,735.00
2531V-15	87	0	0		75	0.00	0.00
2531V-16	19	10	0		75	3,832.50	0.00
2531V-17	68	68	0		75	8,220.00	0.00
2531V-18	757	0	0		75	0.00	0.00
2531V-21	8	8	0		75	3,720.00	0.00
2531V-23	98	25	0		75	4,957.50	0.00
2531V-32	51	51	0		75	6,945.00	0.00
2531V-33	660	220	220		75	18,060.00	18,060.00
2531V-34	44,159	243	243		75	19,773.75	19,773.75
2531V-35	1,864	466	0		75	38,070.00	0.00
2531V-36	2,147	1,095	0		75	85,242.75	0.00
2531V-37	4,122	3,092	0		75	234,982.50	0.00
2531V-41	653	261	0		75	22,710.00	0.00
2531V-43	4,032	733	0		75	58,101.82	0.00
2531V-55	12	0	0		75	0.00	0.00
2531V-56	1,165	318	318		75	25,389.55	25,389.55
Total Non-Special Waste Disposal Volumes [1, 4]	**60,473**	**6,826**	**970**	cu yd	75	552,479	78,958
Special Waste Plans & Reports [2]							
Soil Disposal Analysis [3]		1		Lump sum	1500	750	750
					Total Costs:	**553,229**	**79,708**
Total Estimated Cost for Non-Special Waste Disposal						**632,937**	
Total Estimated Cost (rounded to the nearest 100)						**632,900**	

Assumptions:

* Refers to the approximate volume of soil planned for landfill disposal as non-special waste. The volume of soil planned for CCDD/CSFO disposal is not presented in this table. The non-special waste disposal volumes were estimated based on the number and depth of samples per area.

[1] Excavation, transportation, and disposal cost are based on 50 mile distance to permitted facility. Truck capacity is 13 cubic yards.

[2] Special waste plans assume the following documents and costs are required: - 1) Site health and safety plan at $1,300; 2) site contamination operation plan at $1,300; 3) Erosion control plan at $1,300; 4) one final report at $2,100, and 5) labor, expenses, and equipment for air monitoring field oversight for a time period of 39 days ((6826+970 CY)/200 CY per day) at this property, at $1,200 per day ($46,800 total). The total cost for documents and oversight described is $52,800. These costs are based on an excavation and loading rate of approximately 200 cubic yd per day. For cost estimating purposes, this cost is divided equally across all PESA sites ($46,800/15 Sites with non-special waste disposal = $3,120 per site).

[3] For cost estimating purposes, this cost is divided equally between construction management and land acquisition costs. Soil sampling and analysis is property specific and is based on the identified contaminants of concern. The laboratory analytical methods for soil dispsoal analysis are as follows:

TCLP Metals - EPA Methods 1311 for extraction, 6010B, and 7470A.

TCLP (organics) - EPA Methods 1311 for extraction; 8260B VOCs; 8270C SVOCs; 8081A pesticides; 8151A herbicides

PCBs - EPA Method 8082

Reactive sulfide and cyanide - EPA Method 7.3.4.2/9034 and 7.3.3.2/9014, respectively.

pH - EPA Method 9040B/9045C

Flashpoint - EPA Method1010

Paint Filter - EPA Method 9095A

[4] This volume of waste should be managed to a Non-Special Waste Landfill.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This section contains conclusions and recommendations based on the findings of the PSI of eighteen (18) properties that were identified where excess soil will be generated as a result of the proposed modifications to the existing roadway located along Illinois Route 59 (Sutton Road) at the intersection of US Route 20 (Lake Street), including on- and off-ramps at the intersection, located in the Villages of Bartlett and Streamwood, Cook County, Illinois. Additional discussion regarding the prevention of accelerated contaminant migration is also presented.

5.1 CONCLUSIONS

- Eighty (80) soil borings were advanced along the Project Area using a GeoProbe to depths ranging from one (1) to eighteen (18) ft bgs. A total of 153 soil samples were collected from the 80 borings. These soil borings were associated with the following properties: 2531V-13, 2531V-14, 2531V-15, 2531V-16, 2531V-17, 2531V-18, 2531V-21, 2531V-23, 2531V-32, 2531V-33, 2531V-34, 2531V-35, 2531V-36, 2531V-37, 2531V-41, 2531V-43, 2531V-55, and 2531V-56.

- Soil excavated from within the vicinity of borings 2531V-13-03, 14-02, 14-03, 16-01, 18-05, 18-06, 32-01, 37-02, 37-03, 37-04, 41-03, 41-05, 43-03, 43-07, 56-01, 56-04, 56-05, 56-07, and 56-10, as depicted with **orange** hatching on Figure 4-1 is considered impacted, exceeding soil reference concentrations. Soil in the vicinity of these soil borings may be managed off-site as non-special waste (a (5)).

- Soil excavated in the vicinity of 17-01, 18-01, 23-03, 23-04, 32-02, 33-01, 33-02, 33-03, 33-05, 43-02, 43-04, 43-08, 55-01, 55-02, and 56-06 as depicted with **yellow** hatching on Figure 4-1, exceeded a reference concentration, > most stringent MAC value, but < background. The material may be managed on-site or managed off-site as non-special waste (a(1)).

- Soil excavated in the vicinity of 2531V-14-01, 18-03, 18-04, 18-07, 23-01, 34-08, 35-02, 36-01, 36-03, and 56-02, as depicted with **purple** hatching on Figure 4-1, is considered impacted with a soil pH outside the allowable range for CCDD disposal (6.25 to 9.0). Soil in the vicinity of these soil borings may be managed on-site as fill material or managed and disposed off-site as “uncontaminated soil”. This excavated soil cannot be taken to a CCDD/USFO facility due to soil pH readings outside of the allowable range (b(1)).

- Soil excavated in the vicinity of 2531V-15-01, 18-08, 33-06, 34-01, 36-02, 43-05, 43-11, 56-03, and 56-09, as depicted with **blue** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value, but achieved the MAC for MSA Counties. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County (a (2)).

- Soil excavated in the vicinity of 2531V-32-03, as depicted with **green** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value, but achieved the MAC for an MSA County excluding Chicago and the MAC within the Chicago corporate limits. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County or Chicago (a (3)).

- Soil excavated in the vicinity of 2531V-43-01, as depicted with **pink** hatching on Figure 4-1, exceeded a reference concentration, > the most stringent MAC value and the MAC within Chicago corporate limits, but achieved the MAC for an MSA County excluding Chicago. This material may be managed on-site or off-site to a CCDD/USFO facility within an MSA County excluding Chicago (a (4)).

- Soils in the vicinity of the remaining borings in this area achieve the MACs and is considered unrestricted and may be managed on-site or off-site, including disposal at a CCDD/USFO facility.

- No constituents were detected at levels exceeding the TACO Tier 1 remediation objectives for the Construction Worker exposure route.

- Saturated conditions were not encountered in the soil borings advanced adjacent to the subject properties. As a result, a groundwater evaluation was not conducted.

- A total of approximately 7,795 cubic yards of impacted soil may be excavated during construction activities. An estimated 6,826 cubic yards of impacted soil may be excavated within the existing IDOT ROW, with an estimated cost to manage these soils of approximately $553,229 as presented in Table 4-4. An estimated 970 cubic yards of impacted soil may be excavated from areas to be acquired by IDOT, with an estimated cost to manage these soils of approximately $79,708 as presented in Table 4-4.

5.2 RECOMMENDATIONS

- Based upon the concentrations of arsenic, iron, lead, and manganese within the maximum excavation depth as well as the elevated soil pH measurements, the soil generated from within the vicinity of borings 2531V-13-03, 14-02, 14-03, 16-01, 18-05, 18-06, 32-01, 37-02, 37-03, 37-04, 41-03, 41-05, 43-03, 43-07, 56-01, 56-04, 56-05, 56-07, and 56-10 during construction activities must be managed off-site as non-special waste.

- The soil in the vicinity of borings 17-01, 18-01, 23-03, 23-04, 32-02, 33-01, 33-02, 33-03, 33-05, 43-02, 43-04, 43-08, 55-01, 55-02, and 56-06 may be managed on-site as fill material, or managed off-site as non-special waste.

- The soil in the vicinity of borings 14-01, 18-03, 18-04, 18-07, 23-01, 34-08, 35-02, 36-01, 36-03, and 56-02 may be managed on-site as fill material or managed and disposed off-site as “uncontaminated soil”. This excavated soil cannot be taken to a CCDD/USFO facility due to soil pH readings outside of the allowable range.

- Soils in the vicinity of the remaining borings in this area achieve the MACs and may be managed on-site or off-site, including disposal at a CCDD/USFO.

- No further investigation activities are recommended for these properties for the purpose of this construction project. However, in the event additional construction activities are planned for this property outside the existing construction limits, additional investigation may be warranted.

Table 5-1
Summary of Non-Special Waste Volume Calculations
Illinois Department of Transportation
IL Route 59 - US Route 20
Bartlett/Streamwood, Cook County, Illinois

Site No.	Total Volume, cu yd	Non-Special Waste Volume, cu yd [1]	
		In Existing IDOT ROW (Construction)	In Areas of Land Acquisition (Remediation) (CY)
2531V-13	193	48	0
2531V-14	378	189	189
2531V-15	87	0	0
2531V-16	19	10	0
2531V-17	68	68	0
2531V-18	757	0	0
2531V-21	8	8	0
2531V-23	98	25	0
2531V-32	51	51	0
2531V-33	660	220	220
2531V-34	44,159	243	243
2531V-35	1,864	466	0
2531V-36	2,147	1,095	0
2531V-37	4,122	3,092	0
2531V-41	653	261	0
2531V-43	4,032	733	0
2531V-55	12	0	0
2531V-56	1,165	318	318
Total Volume:	**60,473**	**6,826**	**970**
Total Non-Special Waste Volume:		**7,795**	

[1] Refers to the approximate volume of soil planned for landfill disposal as non-special waste. The volume of soil planned for CCDD/CSFO disposal is not presented in this table. The non-special waste disposal volumes were estimated based on the number and depth of samples per area.

6.0 PREVENTION OF ACCELERATED CONTAMINANT MIGRATION

Potentially impacted soils may exist outside the limits of the project ROW near the Project Area. Therefore, potential methods to prevent the accelerated migration of contaminants were evaluated. Specific actions that may be implemented include source reduction/elimination, limited restrictive barriers, and stormwater runoff controls. These actions are evaluated in the following subsections.

6.1 SOURCE REDUCTION/ELIMINATION

Reduction and/or elimination of the source of apparent contamination will ultimately reduce and/or prevent the further migration of contamination. The source of organics and/or inorganics adjacent to the properties could be associated with fill materials; however, this is unknown. Thus, the specific source cannot be determined definitively based on available information; therefore, source reduction/elimination is not recommended.

6.2 LIMITED RESTRICTIVE BARRIERS

Backfill materials installed surrounding pipe and/or utility lines can provide a pathway for accelerated contaminant migration. Placement of limited restrictive barriers between contaminated material and backfill would minimize or prevent such accelerated migration. Based on the proposed construction activities and analytical results, the placement of a limited restrictive barrier (i.e., an engineered barrier), is not recommended at the subject properties.

6.3 STORMWATER RUNOFF CONTROLS

There is a potential for stormwater to become contaminated through contact with soil in excavations or through contact with soil that has been excavated at the properties. To minimize the potential for stormwater to come into contact with potentially impacted soil, all potentially impacted soil should be managed as rapidly as possible.

The USEPA has developed and implemented specific regulations regarding the control of stormwater runoff associated with construction activities (40 CFR 122). Recommended measures that could be used include, but are not limited to, the placement of protective tarps or barriers over inactive excavations and/or associated excavated soil to reduce the volume of stormwater that comes into contact with contaminants. Stormwater that enters into and collects in any excavations can be pumped into secured containers and subsequently disposed. Alternatively, if the schedule of IDOT construction activities is feasible, or if the sequence of activities can be modified allowing the accumulated stormwater in an excavation area to recede into the ground will minimize or eliminate the need to manage and dispose of the water off-site as a special (non-Resource Conservation & Recovery Act [RCRA]) waste.

7.0 ENDORSEMENTS

The scope and depth of this study are consistent with those proposed in the final Work Plan, submitted on May 19, 2017, and accepted by the Illinois Department of Transportation, District One on May 19, 2017. The field observations and results reported herein are considered sufficient in detail and scope to form an informed and professional opinion as to the obvious potential environmental hazards along the Project Area. This assessment is complete and is believed to be accurate. Huff & Huff, Inc. cannot guarantee or warrant that the information provided is fully representative of all conditions across the entire Project Area.

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