



Contractor's Name

Berger Excavating Contractors, Inc.

Contractor's Address

1205 Garland Road

City

Wauconda

State

IL

Zip Code

60084

STATE OF ILLINOIS

Local Public Agency

Village of Buffalo Grove

County

Cook

Section Number

Street Name/Road Name

Various

Type of Funds

Local

CONTRACT BOND (when required)

For a County and Road District Project

Submitted/Approved

Highway Commissioner Signature

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

For a Municipal Project

Submitted/Approved/Passed

Signature

Date

Beverly Sussman

12/6/21

Official Title

VILLAGE PRESIDENT

Department of Transportation

Concurrence in approval of award

Regional Engineer Signature

Date

Local Public Agency	Local Street/Road Name	County	Section Number
Village of Buffalo Grove	Various	Cook	

1. THIS AGREEMENT, made and concluded the 6th day of December 2021 between the Village of Buffalo Grove, known as the party of the first part, and Berger Excavating Contractors, Inc., its successor, and assigns, known as the party of the second part.

2. For and in consideration of the payments and agreements mentioned in the Proposal hereto attached, to be made and performed by the party of the first part, and according to the terms expressed in the Bond referring this contract, the party of the second part agrees with said party of the first part, at its own proper cost and expense, to do all the work, furnish all materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described, and in full compliance with all of the terms of this contract.

3. It is also understood and agreed that the LPA Formal Contract Proposal, Special Provisions, Affidavit of Illinois Business Office, Apprenticeship or Training Program Certification, and Contract Bond hereto attached, and the Plans for Section _____ in Village of Buffalo Grove, approved by the Illinois Department of Transportation on _____, are essential documents of this contract and are a part hereof.

4. IN WITNESS WHEREOF, the said parties have executed this contract on the date above mentioned.

Attest: The Village of Buffalo Grove

Clerk	Date
	12/6/21

(SEAL)

Party of the First Part	Date
By:	12/6/21
(If a Corporation)	

Corporate Name
BERGER EXCAVATING CONTRACTORS, INC.

President, Party of the Second Part	Date
By:	12/6/2021
(If a Limited Liability Corporation)	

(SEAL)

LLC Name

Manager or Authorized Member, Party of the Second Part
By: _____

(If a Partnership)

Partner	Date
_____	_____

Partner	Date
_____	_____

Attest: Secretary	Date
	12/6/2021

(SEAL)

Partners doing Business under the firm name of
Party of the Second Part

(If an individual)

Party of the Second Part	Date
_____	_____



Contract Bond



Local Public Agency	County	Street Name/Road Name	Section Number
Village of Buffalo Grove	Cook	Various	

Bond information to be returned to Local Public Agency at 50 Raupp Blvd, Buffalo Grove, Illinois, 60089
Complete Address

We, Berger Excavating Contractors, Inc., 1205 Garland Road, Wauconda, Illinois, 60084
Contractor's Name and Address

a/an Corporation organized under the laws of the State of Illinois as PRINCIPAL, and
State

Western Surety Company, 801 Warrenville Rd., Lisle, IL 60532
Surety Name and Address

as SURETY, are held and firmly bound unto the above Local Public Agency (hereafter referred to as "LPA") in the penal sum of
Three Million Two Hundred One Thousand Seven Hundred Twenty Five Dollars and Thirty Six Cents

Dollars (\$3,201,725.36) lawful money of the United States, to be paid to said LPA, the payment of which we bind ourselves, successors and assigns jointly to pay to the LPA this sum under the conditions of this instrument.

WHEREAS, THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that the said Principal has entered into a written contract with the LPA acting through its awarding authority for the construction of work on the above sections, which contract is hereby referred to and made a part hereof, as if written herein at length, and whereby the said Principal has promised and agreed to perform said work in accordance with the terms of said contract, and has promised to pay all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished to such Principal for the purpose of performing such work and has further agreed to pay all direct and indirect damages to any person, firm, company or corporation to whom any money may be due from the Principal, subcontractor or otherwise for any such labor, materials, apparatus, fixtures or machinery so furnished and that suit may be maintained on such bond by any such person, firm, company or corporation for the recovery of any such money.

NOW, THEREFORE, if the said Principal shall perform said work in accordance with the terms of said contract, and shall pay all sums of money due or to become due for any labor, materials, apparatus, fixtures or machinery furnished to it for the purpose of constructing such work, and shall commence and complete the work within the time prescribed in said contract, and shall pay and discharge all damages, direct and indirect, that may be suffered or sustained on account of such work during the time of the performance thereof and until the said work shall have been accepted, and shall hold the LPA and its awarding authority harmless on account of any such damages and shall in all respects fully and faithfully comply with all the provisions, conditions and requirements of said contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective agents this 16th day of December, 2021.
Day Month and Year

PRINCIPAL

Company Name

Company Name

By
 Signature & Title Date

By
 Signature & Title Date

Attest
 Signature & Title Date

Attest
 Signature & Title Date

(If PRINCIPAL is a joint venture of two or more contractors, the company names and authorized signature of each contractor must be affixed.)

STATE OF IL

COUNTY OF LAKE

I, SHANNON PAYSON, a Notary Public in and for said county, do hereby certify that

JULIE CHAMBERLIN
Notary Name

Insert name of Individuals signing on behalf of PRINCIPAL

who is/are each personally known to me to be the same person(s) whose name(s) is/are subscribed to the foregoing instrument on behalf of PRINCIPAL, appeared before me this day in person and acknowledged respectively, that he/she/they signed and delivered said instrument freely and voluntarily for the uses and purposes therein set forth.

Given under my hand and notarial seal this 6 day of DECEMBER, 2021
Day Month, Year



Notary Public Signature

Shannon Payson

Date commission expires JUNE 19, 2023

SURETY

Name of Surety

Western Surety Company

Title

By: Kelly A. Gardner
Kelly A. Gardner, Attorney-in-Fact

STATE OF IL

COUNTY OF DuPage

I, Alexa Costello, a Notary Public in and for said county, do hereby certify that

Kelly A. Gardner

Insert name of Individuals signing on behalf of SURETY

who is/are each personally known to me to be the same person(s) whose name(s) is/are subscribed to the foregoing instrument on behalf of SURETY, appeared before me this day in person and acknowledged respectively, that he/she/they signed and delivered said instrument freely and voluntarily for the uses and purposes therein set forth.

Given under my hand and notarial seal this 16th day of December, 2021
Day Month, Year



Notary Public Signature

Alexa Costello

Date commission expires November 19, 2023

Approved this 6TH day of DECEMBER, 2021
Day Month, Year

Attest:

Local Public Agency Clerk Signature

Brenda M. Swanson

Date

12/6/21

Awarding Authority

VILLAGE OF BUFFALO GROVE

Awarding Authority Signature

Brenda M. Swanson

Date

12/6/21

VILLAGE Clerk
Local Public Agency Type

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

James I Moore, Stephen T Kazmer, Dawn L Morgan, Melissa Schmidt, Amy Wickett, Kelly A Gardner, Jennifer J Mc Comb, Tariese M Pisciotto, Diane M Rubright, Martin Moss, Individually

of Downers Grove, IL, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 20th day of June, 2021.



WESTERN SURETY COMPANY

Paul T. Bruflat

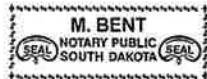
Paul T. Bruflat, Vice President

State of South Dakota }
County of Minnehaha } ss

On this 20th day of June, 2021, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

March 2, 2026



M. Bent

M. Bent, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 16th day of December, 2021



WESTERN SURETY COMPANY

L. Nelson

L. Nelson, Assistant Secretary

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.



Village of Buffalo Grove

**VILLAGE OF BUFFALO GROVE
CAMBRIDGE ON THE LAKE LIFT STATION
RECONSTRUCTION**

VoBG-2021-03

November 2021

BIDDING AND CONTRACT DOCUMENTS

Village of Buffalo Grove
Public Works Department



SECTION 1 – PROPOSAL

TITLE

Local Public Agency Formal Contract Proposal Cover
Notice to Bidders
Proposal
Schedule of Prices – Base Bid
Schedule of Prices – Alternative A
Schedule of Prices – Alternative B
Contractor Certifications
Signatures
Local Public Agency Proposal Bid Bond
Affidavit of Illinois Business Office
Affidavit of Availability
Exhibit A – Public Contract Statement
Description of Work

SECTION 2 – SPECIAL PROVISIONS AND SPECIFICATIONS

TITLE

Check Sheet for Recurring Special Provisions
Check Sheet for BDE Special Provisions
BDE Special Provisions
Special Provisions Cover
General Provisions
Special Provisions
IDOT District One – Special Provisions
Lift Station – Technical Specifications

APPENDIX A

TITLE

Lake Boulevard Traffic Control Exhibit
Example Pay Estimate – Clarifying Statement Letter
Example Weekly Letter Update
Example Driveway Closure Notice Letter
Example Letter of Credit
Temporary No Parking Sign Example
Exhibit No 109 Materials List
Soil Boring Reports
Cook County Prevailing Wage Rates
IEPA Source Site Certification by Owner or Operations LPC-662



Village of Buffalo Grove

**VILLAGE OF BUFFALO GROVE
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
VoBG-2021-03**

SECTION 1

PROPOSAL



**Local Public Agency
Formal Contract
Proposal**

PROPOSAL SUBMITTED BY		
Contractor's Name		
Street	P.O. Box	
City	State	Zip Code

STATE OF ILLINOIS

COUNTY OF Cook / Lake
Village of Buffalo Grove
 (Name of City, Village, Town or Road District)

FOR THE IMPROVEMENT OF

STREET NAME OR ROUTE NO. Cambridge on the Lake Lift Station Reconstruction
 SECTION NO. N/A
 TYPES OF FUNDS General (Local)

SPECIFICATIONS (required)

PLANS (required)

For Municipal Projects
 Submitted/Approved/Passed

Mayor President of Board of Trustees Municipal Official

Date

Department of Transportation

Released for bid based on limited review

Regional Engineer

Date

For County and Road District Projects
 Submitted/Approved

Highway Commissioner

Date

Submitted/Approved

County Engineer/Superintendent of Highways

Date

Note: All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed.

RETURN WITH BID

NOTICE TO BIDDERS

County Cook / Lake
Local Public Agency Buffalo Grove
Section Number N/A
Route Various

Sealed proposals for the improvement described below will be received electronically at www.vbg.org/bids
50 Raupp Blvd, Buffalo Grove, IL 60516 until 9:00 AM on November 18, 2021

Sealed proposals will be opened and read publicly via video conferencing https://bit.ly/3jgBjPp
NA, Online at 9:00 AM on November 18, 2021

DESCRIPTION OF WORK

Name Cambridge on the Lake Lift Station Reconstruction Length: 2156.00 feet (0.41 miles)
Location Lake Boulevard, Cambridge Park, Buffalo Grove Road, Old Buffalo Grove Road
Proposed Improvement Lift Station Demolition & Construction, Sanitary Sewer Replacement, Water Main Replacement
Detention Pond and Volume Control Construction, Access Road Construction, Pavement and Landscape Restoration.

1. Plans and proposal forms will be available in the office of www.vbg.org/bids
Office of the Purchasing Manger - (847) 459-2500

2. [X] Prequalification
If checked, the 2 low bidders must file within 24 hours after the letting an "Affidavit of Availability" (Form BC 57), in duplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work. One original shall be filed with the Awarding Authority and one original with the IDOT District Office.

3. The Awarding Authority reserves the right to waive technicalities and to reject any or all proposals as provided in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals.

4. The following BLR Forms shall be returned by the bidder to the Awarding Authority:
a. BLR 12200: Local Public Agency Formal Contract Proposal
b. BLR 12200a Schedule of Prices
c. BLR 12230: Proposal Bid Bond (if applicable)
d. BLR 12325: Apprenticeship or Training Program Certification (do not use for federally funded projects)
e. BLR 12326: Affidavit of Illinois Business Office

5. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.

6. Submission of a bid shall be conclusive assurance and warranty the bidder has examined the plans and understands all requirements for the performance of work. The bidder will be responsible for all errors in the proposal resulting from failure or neglect to conduct an in depth examination. The Awarding Authority will, in no case be responsible for any costs, expenses, losses or changes in anticipated profits resulting from such failure or neglect of the bidder.

7. The bidder shall take no advantage of any error or omission in the proposal and advertised contract.

8. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Agency and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.

9. Permission will be given to a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

RETURN WITH BID

10. All bidders are prohibited from making any contact with the Village President, Trustees, or any other official or employee of the Village (collectively, 'Municipal Personnel') with regard to the Project, other than in the manner and to the person(s) designated herein. The Buffalo Grove Village Manager reserves the right to disqualify any bidder that is found to have contacted Municipal Personnel in any manner with regard to the Project. Additionally, if the Buffalo Grove Village Manager determines that the contact with Municipal Personnel was in violation of any provision of 720 ILCS 5/33E, the matter will be turned over to the State's Attorney for review and prosecution.
11. All prime contractors shall be IDOT prequalified contractors with a value equal to or greater for the type of work they are to perform as part of the Contract. Furthermore, all bidders are required to register with the Village of Buffalo Grove at:

<https://vrapp.vendorregistry.com/Vendor/Register/Index/buffalo-grove-village-of-il-vendor-registration>

OR

www.vbg.org/bids

12. All bid proposals must be submitted electronically through the Village's Vendor Registry online procurement system. Hard copy bids will not be accepted. As read results of the bids will be posted to the Village's webpage, www.vbg.org/bids as soon as possible following the bid opening. In order to submit a bid proposal, bidders

- a. Go to www.vbg.org/bids
- b. Select on the project description, '2022 Cambridge on the Lakes Lift Station and Forcemain' and click the large red button at the top



- c. Log into your account and enter your total bid.
- d. Include an attachment (up to 200 MB), the following bid documents only:
 - i. Local Public Agency Formal Contract Proposal (8 pages)
 - ii. Local Agency Proposal Bid Bond
- e. The following documents will be requested by the two (2) as read low bidders immediately following the bid opening.
 - i. Affidavit of Illinois Business Office
 - ii. Affidavit of Availability
 - iii. Village of Buffalo Grove Public Contract Statements

All bids will be opened and read publicly via the Microsoft Teams video conferencing platform.

Please join from your computer, tablet, or smartphone.

<https://bit.ly/3igBjPp>

All communication during the bid process shall be directed to:

Ciorba Group, Inc.
Attn: Luke Mattson, PE
8725 W. Higgins Road, Suite 600
Chicago, Illinois 60631
(773) 892-9795
lmattson@ciorba.com

13. **A Pre-Bid meeting will be held for this project with the following details:**
 - Date:** 11/10/2021
 - Time:** 1:00 PM
 - Location:** Buffalo Grove Public Works, 51 Raupp Boulevard, Lower-Level Meeting Room
 - COVID-19 Protocol:** Face mask coverings are required inside the building.

RETURN WITH BID

PROPOSAL

County Cook / Lake
Local Public Agency Buffalo Grove
Section Number NA
Route Various

1. Proposal of
for the improvement of the above section by the construction of Lift Station Demolition & Construction, Sanitary Sewer Replacement, Water Main Replacement, Detention Pond and Volume Control Construction, Access Road Construction, Pavement and Landscape Restoration.

a total distance of 2156.00 feet, of which a distance of 2156.00 feet, (0.410 miles) are to be improved.

- 2. The plans for the proposed work are those prepared by Ciorba Group, Inc.
and approved by the Department of Transportation on
3. The specifications referred to herein are those prepared by the Department of Transportation and designated as "Standard Specifications for Road and Bridge Construction" and the "Supplemental Specifications and Recurring Special Provisions" thereto, adopted and in effect on the date of invitation for bids.
4. The undersigned agrees to accept, as part of the contract, the applicable Special Provisions indicated on the "Check Sheet for Recurring Special Provisions" contained in this proposal.
5. The undersigned agrees to complete the work within working days or by 10/14/2022 unless additional time is granted in accordance with the specifications.
6. A proposal guaranty in the proper amount, as specified in BLRS Special Provision for Bidding Requirements and Conditions for Contract Proposals, will be required. Bid Bonds will be allowed as a proposal guaranty. Accompanying this proposal is either a bid bond if allowed, on Department form BLR 12230 or a proposal guaranty check, complying with the specifications, made payable to:

Treasurer of

The amount of the check is Bid Bond (10% of Total Bid) ().

- 7. The successful bidder at the time of execution of the contract will be required to deposit a contract bond for the full amount of the award. If this proposal is accepted and the undersigned fails to execute a contract and contract bond as required, it is hereby agreed that the Bid Bond or check shall be forfeited to the Awarding Authority.
8. Each pay item should have a unit price and a total price. If no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity, the unit price shall govern. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
9. A bid will be declared unacceptable if neither a unit price nor a total price is shown.
10. The undersigned submits herewith the schedule of prices on BLR 12200a covering the work to be performed under this contract.

RETURN WITH BID



SCHEDULE OF PRICES

Route _____ Various
 County _____ Cook / Lake
 Local Agency _____ Village of Buffalo Grove
 Village Project # _____ VoBG-2021-03

Base Bid Scope of Work:

For complete information covering these items, see plans and specifications

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION

The following Unit Prices will be used for basis of payment and shall be the bidder's proposal for completing the entire improvements herein.

Item No.	Items	Unit	Quantity	Unit Price	Total
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	1,136		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	1,553		
20101400	NITROGEN FERTILIZER NUTRIENT	POUND	57		
20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	57		
20101700	SUPPLEMENTAL WATERING	UNIT	77		
20200100	EARTH EXCAVATION	CU YD	210		
20800150	TRENCH BACKFILL	CU YD	2,491		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3,052		
25000100	SEEDING, CLASS 1	ACRE	0.6		
25100125	MULCH, METHOD 3	ACRE	0.6		
25200100	SODDING	SQ YD	541		
28000510	INLET FILTERS	EACH	16		
35102100	AGGREGATE BASE COURSE, TYPE B 9"	SQ YD	462		
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	72		
40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	58		
40700100	BITUMINOUS MATERIALS (TACK COAT)	POUND	229		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	56		
44000100	PAVEMENT REMOVAL	SQ YD	41		
44000300	CURB REMOVAL	FOOT	366		
44000600	SIDEWALK REMOVAL	SQ FT	459		
44201711	CLASS D PATCHES, TYPE IV, 5 INCH	SQ YD	723		
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	11		
550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	21		
55100500	STORM SEWER REMOVAL 12"	FOOT	24		
55100700	STORM SEWER REMOVAL 15"	FOOT	21		
56100700	WATER MAIN 8"	FOOT	404		
56400500	FIRE HYDRANTS TO BE REMOVED	EACH	2		
60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	1		
60500040	REMOVING MANHOLES	EACH	2		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	239		
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	125		
67100100	MOBILIZATION	L SUM	1		

RETURN WITH BID

The following Unit Prices will be used for basis of payment and shall be the bidder's proposal for completing the entire improvements herein.

Item No.	Items	Unit	Quantity	Unit Price	Total
A2002716	TREE, CARYA OVATA (SHAGBARK HICKORY), 2" CALIPER, BALLED AND BURLAPPED	EACH	2		
A2005016	TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2" CALIPER, BALLED AND BURLAPPED	EACH	2		
A2006516	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	2		
A2007616	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 2" CALIPER, BALLED AND BURLAPPED	EACH	2		
D2001772	EVERGREEN, PICEA ABIES (NORWAY SPRUCE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	2		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		
Z0018700	DRAINAGE STRUCTURE TO BE REMOVED	EACH	1		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	200		
Z0056648	STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12"	FOOT	24		
Z0056900	SANITARY SEWER 8"	FOOT	13		
Z0057200	SANITARY SEWER 15"	FOOT	331		
Z0057300	SANITARY SEWER 18"	FOOT	161		
X0322464	ABANDON AND FILL EXISTING SANITARY MANHOLE	EACH	1		
X0322791	FILL EXISTING SANITARY SEWERS	CU YD	35		
X0325950	GATE VALVE 8" WITH VAULT, 5' DIAMETER	EACH	1		
X0487800	SANITARY SEWER REMOVAL 12"	FOOT	104		
X0840000	SANITARY SEWER REMOVAL 8"	FOOT	72		
X5610658	WATER MAIN TO BE ABANDONED, 8"	FOOT	579		
X5610706	WATER MAIN REMOVAL, 6"	FOOT	10		
X5610708	WATER MAIN REMOVAL, 8"	FOOT	30		
X5630706	CONNECTION TO EXISTING WATER MAIN 6"	EACH	1		
X5630708	CONNECTION TO EXISTING WATER MAIN 8"	EACH	2		
X5640175	FIRE HYDRANT COMPLETE	EACH	2		
X6022810	MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
X6022820	MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
X6026055	SANITARY MANHOLE, SPECIAL	EACH	1		
X6026500	MANHOLES, DROP TYPE, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		
X6026622	VALVE VAULTS TO BE REMOVED	EACH	1		
X6026632	VALVE BOXES TO BE REMOVED	EACH	1		
X6028000	MANHOLES TO BE RECONSTRUCTED (SPECIAL)	EACH	1		
X6060079	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-3.12 (SPECIAL)	FOOT	127		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1		
XX000679	CUT AND CAP EXISTING WATER MAIN	EACH	4		
XX000714	FENCE TO BE REMOVED AND RE-ERECTED	FOOT	72		
XX000882	WOOD FENCE	FOOT	310		
XX003424	CONNECTION TO EXISTING STRUCTURE	EACH	1		
XX003668	PRECONSTRUCTION VIDEO TAPING	L SUM	1		
XX005485	STEEL CASING PIPE, BORED AND JACKED 30"	FOOT	591		
XX007687	SANITARY SEWERS PUSHED IN STEEL CASING, 18"	FOOT	591		
XX007839	GEOBLOCK POLYETHYLENE POROUS PAVEMENT SYSTEM	SQ YD	38		
XX008746	VALVE WITH VALVE BOX, 6"	EACH	1		

RETURN WITH BID

The following Unit Prices will be used for basis of payment and shall be the bidder's proposal for completing the entire improvements herein.

Item No.	Items	Unit	Quantity	Unit Price	Total
XX008889	PVC CASING PIPE 15"	FOOT	42		
XX008956	STEEL CASING PIPE, BORED AND JACKED, 20"	FOOT	87		
BG1	SANITARY FORCE MAIN 10", OPEN CUT	FOOT	216		
BG2	SANITARY FORCE MAIN 10", DIRECTIONALLY DRILLED	FOOT	748		
BG3	SANITARY FORCE MAIN 10", PUSHED THROUGH CASING	FOOT	87		
BG5	TRAFFIC CONTROL AND PROTECTION, BUFFALO GROVE ROAD (SPECIAL)	L SUM	1		
BG6	MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID (SPECIAL)	EACH	1		
BG7	WATER MAIN 8", DIRECTIONALLY DRILLED	FOOT	214		
LS-01 50 00	TEMPORARY FACILITIES AND CONTROLS	L SUM	1		
LS-01 51 00	TEMPORARY BYPASS PUMPING SYSTEM	L SUM	1		
LS-01 71 13	MOBILIZATION AND DEMOBILIZATION	L SUM	1		
LS-02 41 00	DEMOLITION	L SUM	1		
LS-03 00 00-1	WET WELL TOP SLAB	L SUM	1		
LS-03 00 00-2	WET WELL	L SUM	1		
LS-03 00 00-3	METER / VALVE / BYPASS VAULT	L SUM	1		
LS-03 00 00-4	CONCRETE GENERATOR PAD	L SUM	1		
LS-03 00 00-5	CONCRETE TRAFFIC BOX ENCLOSURE PAD	L SUM	1		
LS-22 13 13	PROCESS PIPING AND APPURTENANCES	L SUM	1		
LS-22 13 19	PROCESS VALVES AND APPURTENANCES	L SUM	1		
LS-22 13 29	SUBMERSIBLE SOLIDS HANDLING PUMPS	L SUM	1		
LS-22 14 29	SUMP PUMP SYSTEM	L SUM	1		
LS-26 05 16	ELECTRICAL WIRES AND CABLES	L SUM	1		
LS-26 05 26	GROUNDING	L SUM	1		
LS-26 05 33	ELECTRICAL CONDUIT	L SUM	1		
LS-26 20 00-1	ELECTRICAL SERVICE AND DISTRIBUTION	L SUM	1		
LS-26 20 00-2	ELECTRIC SERVICE UTILITY FEE	ALLOWANCE	1	\$55,000.00	\$55,000.00
LS-26 36 20	DIESEL ENGINE GENERATOR	L SUM	1		
LS-31 23 16-1	EARTHWORK	L SUM	1		
LS-31 23 16-2	COMPACTED CA-6 SUBGRADE	L SUM	1		
LS-31 23 16-3	COMPACTED CA-1 SUBGRADE	L SUM	1		
LS-31 41 00	TEMPORARY SOIL RETENTION SYSTEMS	L SUM	1		
LS-33 09 30	WASTEWATER PUMPING CONTROL SYSTEM	L SUM	1		
PROPOSAL OF UNIT PRICE BASE BID TOTAL					

Written Amount for Proposal of Unit Price Base Bid Total

--

RETURN WITH BID



SCHEDULE OF PRICES

Route _____ Various
 County _____ Cook / Lake
 Local Agency _____ Village of Buffalo Grove
 Village Project # _____ VoBG-2021-03

ALTERNATIVE A Scope of Work:

ALTERNATIVE A provides for the use of open cutting sections of the the proposed water main and sanitary force main shown for directional drilling in the BASE BID. The schedule of prices below include ADDITION items that differ from the BASE BID. The schedule of prices below also include DEDUCT items, that **shall include unit pricing taken from the base bid**. If Alternative A is accepted by the Village, the ADDITION items shall be added to the BASE BID and the DEDUCT items shall be deducted from the BASE BID. For complete information covering these items, see plans and specifications

ALTERNATIVE A

The following Unit Prices will be used for basis of payment.

ADDITION SCHEDULE

Item No.	Items	Unit	Quantity	Unit Price	Total
20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	14		
20101700	SUPPLEMENTAL WATERING	UNIT	19		
20800150	TRENCH BACKFILL	CU YD	529		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	770		
25000100	SEEDING, CLASS 1	ACRE	0.16		
25100125	MULCH, METHOD 3	ACRE	0.16		
44201711	CLASS D PATCHES, TYPE IV, 5 INCH	SQ YD	348		
56100700	WATER MAIN 8"	FOOT	214		
BG1	SANITARY FORCE MAIN 10", OPEN CUT	FOOT	748		
SUBTOTAL OF UNIT PRICE ALTERNATIVE A ADDITION					

DEDUCT SCHEDULE (UNIT PRICES SHALL BE FROM BASE BID)

Item No.	Items	Unit	Quantity	Unit Price	Total
BG7	WATER MAIN 8", DIRECTIONALLY DRILLED	FOOT	214		
BG2	SANITARY FORCE MAIN 10", DIRECTIONALLY DRILLED	FOOT	748		
SUBTOTAL OF UNIT PRICE ALTERNATIVE A DEDUCT					

SUM OF ADDITION AND DEDUCT SUBTOTALS RESULTS IN A NET (CIRCLE ONE)	INCREASE / DECREASE
ALTERNATIVE A NET CHANGE TOTAL	

Written Amount for Proposal of Unit Price ALTERNATIVE A Total

RETURN WITH BID



SCHEDULE OF PRICES

Route _____ Various
 County _____ Cook / Lake
 Local Agency _____ Village of Buffalo Grove
 Village Project # _____ VoBG-2021-03

ALTERNATIVE B Scope of Work:

ALTERNATIVE B include the construction of retention pond detention, volume control, and storm sewer bypass piping in Cambridge Park, adjacent to the proposed lift station. The schedule of prices below include ADDITION items for this work. If Alternative B is accepted by the Village, the ADDITION items shall be added to the BASE BID. For complete information covering these items, see plans and specifications

ALTERNATIVE B

The following Unit Prices will be used for basis of payment.

ADDITION SCHEDULE

Item No.	Items	Unit	Quantity	Unit Price	Total
20101400	NITROGEN FERTILIZER NUTRIENT	POUND	115		
20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	115		
20200100	EARTH EXCAVATION	CU YD	2,831		
20800150	TRENCH BACKFILL	CU YD	27		
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	1,767		
25000100	SEEDING, CLASS 1	ACRE	1.5		
25000310	SEEDING, CLASS 4	ACRE	.5		
25000312	SEEDING, CLASS 4A	ACRE	.5		
25100125	MULCH, METHOD 3	ACRE	1.3		
25100630	EROSION CONTROL BLANKET	SQ YD	3,375		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	159		
28000400	PERIMETER EROSION BARRIER	FOOT	1,309		
28001100	TEMPORARY EROSION CONTROL BLANKET	SQ YD	7,691		
50104400	CONCRETE HEADWALL REMOVAL	EACH	1		
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1		
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	15		
550A0090	STORM SEWERS, CLASS A, TYPE 1 18"	FOOT	14		
550A0120	STORM SEWERS, CLASS A, TYPE 1 24"	FOOT	8		
550A0140	STORM SEWERS, CLASS A, TYPE 1 30"	FOOT	58		
550A0160	STORM SEWERS, CLASS A, TYPE 1 36"	FOOT	306		
55100500	STORM SEWER REMOVAL 12"	FOOT	130		
55100900	STORM SEWER REMOVAL 18"	FOOT	72		
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	390		
60108204	PIPE UNDERDRAINS, TYPE 2, 4"	FOOT	71		
60204505	CATCH BASINS, TYPE A, 5'-DIAMETER, TYPE 8 GRATE	EACH	2		
60224005	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 8 GRATE	EACH	1		
60224448	MANHOLES, TYPE A, 7'-DIAMETER, TYPE 8 GRATE	EACH	1		
60224458	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 8 GRATE	EACH	2		
60500040	REMOVING MANHOLES	EACH	2		
K1005481	SHREDDED BARK MULCH 3"	SQ YD	1,339		
Z0013797	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	150		

RETURN WITH BID

The following Unit Prices will be used for basis of payment.

ADDITION SCHEDULE

Item No.	Items	Unit	Quantity	Unit Price	Total
Z0076870	UNDERDRAIN CONNECTION TO STRUCTURE	EACH	1		
X0100020	EARTH EXCAVATION (UNSUITABLE MATERIAL)	CU YD	1,423		
X0322918	PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER	EACH	4		
X0322936	REMOVE EXISTING FLARED END SECTION	EACH	2		
X0326806	WASHOUT BASIN	L SUM	1		
X0326981	ENGINEERED SOIL FURNISH AND PLACE (SPECIAL)	CU YD	670		
X0426200	DEWATERING	L SUM	1		
X0795800	COARSE AGGREGATE	TON	536		
X1200042	MANHOLES, TYPE A, 9'-DIAMETER, WITH 2 TYPE 1 FRAMES, CLOSED LID, RESTRICTOR PLATE	EACH	1		
X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	1,034		
X2800500	INLET PROTECTION, SPECIAL	EACH	6		
XX009314	GEOTEXTILE FABRIC	SQ YD	1,536		
BG4	OBSERVATION WELL	EACH	5		
SUBTOTAL OF UNIT PRICE ALTERNATIVE B ADDITION					

Written Amount for Proposal of Unit Price ALTERNATIVE B Total

--

RETURN WITH BID

CONTRACTOR CERTIFICATIONS

County	<u>Cook / Lake</u>
Local Public Agency	<u>Buffalo Grove</u>
Section Number	<u>NA</u>
Route	<u>Various</u>

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

- Debt Delinquency.** The bidder or contractor or subcontractor, respectively, certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue unless the individual or other entity is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of tax. Making a false statement voids the contract and allows the Department to recover all amounts paid to the individual or entity under the contract in a civil action.
- Bid-Rigging or Bid Rotating.** The bidder or contractor or subcontractor, respectively, certifies that it is not barred from contracting with the Department by reason of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33E-4. A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation. A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.
- Bribery.** The bidder or contractor or subcontractor, respectively, certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the State of Illinois or any unit of local government, nor has the firm made an admission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm.
- Interim Suspension or Suspension.** The bidder or contractor or subcontractor, respectively, certifies that it is not currently under a suspension as defined in Subpart I of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative Code. Furthermore, if suspended prior to completion of this work, the contract or contracts executed for the completion of this work may be cancelled.
- Conflict of Interest.** The Village of Buffalo Grove Municipal Code requires the following verification relative to conflict of interest and compliance with general ethics requirements of the Village:

The undersigned supplier hereby represents and warrants to the Village of Buffalo Grove as a term and condition of acceptance of the this (bid or purchase order) that none of the following Village Officials are either an office or director of supplier or owns five percent (5%) or more of the Supplier: the Village President, the members of the Village Board of Trustees, the Village Clerk, the Village Treasurer, the members of the Planning & Zoning Commission, the Village Manager and his Assistant or Assistants, or the heads of the various departments of the Village of Buffalo Grove.

If the foregoing representation and warranty is inaccurate, state the name of the Village official who either is an officer or director of your business entity or owns five percent (5%) or more thereof:

(Official) _____

RETURN WITH BID

SIGNATURES

County Cook / Lake
Local Public Agency Buffalo Grove
Section Number NA
Route Various

(If an individual)

Signature of Bidder _____

Business Address _____

(If a partnership)

Firm Name _____

Signed By _____

Business Address _____

Inset Names and Addressed of All Partners



(If a corporation)

Corporate Name _____

Signed By _____

President

Business Address _____

Inset Names of Officers



President _____

Secretary _____

Treasurer _____

Attest: _____
Secretary



Local Public Agency Proposal Bid Bond



Local Public Agency Village of Buffalo Grove	County Cook / Lake	Section Number NA
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WE, _____ as PRINCIPAL, and _____ as SURETY, are held jointly, severally and firmly bound unto the above Local Public Agency (hereafter referred to as "LPA") in the penal sum of 10% of the total bid price, or for the amount specified in the proposal documents in effect on the date of invitation for bids, whichever is the lesser sum. We bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly pay to the LPA this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the said PRINCIPAL is submitting a written proposal to the LPA acting through its awarding authority for the construction of the work designated as the above section. THEREFORE if the proposal is accepted and a contract awarded to the PRINCIPAL by the LPA for the above designated section and the PRINCIPAL shall within fifteen (15) days after award enter into a formal contract, furnish surety guaranteeing the faithful performance of the work, and furnish evidence of the required insurance coverage, all as provided in the "Standard Specifications for Road and Bridge Construction" and applicable Supplemental Specifications, then this obligation shall become void; otherwise it shall remain in full force and effect.

IN THE EVENT the LPA determines the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the LPA acting through its awarding authority shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees, and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ of _____ Day Month and Year

Principal		Principal	
Company Name	<input type="text"/>	Company Name	<input type="text"/>
Signature	Date	Signature	Date
By: <input type="text"/>	<input type="text"/>	By: <input type="text"/>	<input type="text"/>
Title	<input type="text"/>	Title	<input type="text"/>

(If Principal is a joint venture of two or more contractors, the company names, and authorized signatures of each contractor must be affixed.)

Surety	
Name of Surety	<input type="text"/>
Signature of Attorney-in-Fact	Date
By: <input type="text"/>	<input type="text"/>

STATE OF IL
COUNTY OF _____
I _____, a Notary Public in and for said county do hereby certify that

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)
who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instruments as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____ Month and Year.

(SEAL)

Notary Public Signature

Date commission expires _____



Affidavit of Illinois Business Office



Local Public Agency	County	Street Name/Road Name	Section Number
Village of Buffalo Grove	Cook / Lake	Various	NA

I, _____ of _____, _____,
Name of Affiant City of Affiant State of Affiant

being first duly sworn upon oath, state as follows:

1. That I am the _____ of _____.
Officer or Position Bidder
2. That I have personal knowledge of the facts herein stated.
3. That, if selected under the proposal described above, _____, will maintain a business office in the
Bidder
 State of Illinois, which will be located in _____ County, Illinois.
County
4. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.
5. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

Signature	Date
Print Name of Affiant	

Notary Public

State of IL
 County _____

Signed (or subscribed or attested) before me on _____ by
(date)

_____, authorized agent(s) of
(name/s of person/s)

Bidder

(SEAL)

Signature of Notary Public

My commission expires _____



Bureau of Construction
2300 South Dirksen Parkway/Room 322
Springfield, IL 62764

Instructions: Complete this form by either typing or using black ink. "Authorization to Bid" will not be issued unless both sides of this form are completed in detail. Use additional forms as needed to list all work.

Part I. Work Under Contract

List below all work you have under contract as either a prime contractor or a subcontractor. It is required to include all pending low bids not yet awarded or rejected. In a joint venture, list only that portion of the work which is the responsibility of your company. The uncompleted dollar value is to be based upon the most recent engineer's or owners estimate, and must include work subcontracted to others. If no work is contracted, show NONE.

	1	2	3	4	Awards Pending	Accumulated Totals
Contract Number						
Contract With						
Estimated Completion Date						
Total Contract Price						
Uncompleted Dollar Value if Firm is the Prime Contractor						
Uncompleted Dollar Value if Firm is the Subcontractor						
Total Value of All Work						

Part II. Awards Pending and Uncompleted Work to be done with your own forces.

List below the uncompleted dollar value of work for each contract and awards pending to be completed with your own forces. All work subcontracted to others will be listed on the reverse of this form. In a joint venture, list only that portion of the work to be done by your company. If no work is contracted, show NONE.

Earthwork						
Portland Cement Concrete Paving						
HMA Plant Mix						
HMA Paving						
Clean & Seal Cracks/Joints						
Aggregate Bases, Surfaces						
Highway, R.R., Waterway Struc.						
Drainage						
Electrical						
Cover and Seal Coats						
Concrete Construction						
Landscaping						
Fencing						
Guardrail						
Painting						
Signing						
Cold Milling, Planning, Rotomilling						
Demolition						
Pavement Markings (Paint)						
Other Construction (List)						
Totals						

Disclosure of this information is REQUIRED to accomplish the statutory purpose as outlined in the "Illinois Procurement Code." Failure to comply will result in non-issuance of an "Authorization To Bid." This form has been approved by the State Forms Management Center.

Part III. Work Subcontracted to Others.

For each contract described in Part I, list all the work you have subcontracted to others.

	1	2	3	4	Awards Pending
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Subcontractor					
Type of Work					
Subcontract Price					
Amount Uncompleted					
Total Uncompleted					

Notary

I, being duly sworn, do hereby declare this affidavit is a true and correct statement relating to ALL uncompleted contracts of the undersigned for Federal, State, County, City and private work, including ALL subcontract work, ALL pending low bids not yet awarded or rejected and ALL estimated completion dates.

Officer or Director

Title

Signature

Date

Company

Address

City

State

Zip Code

Subscribed and sworn to before me

this _____ day of _____, _____

(Signature of Notary Public)

My commission expires _____

(Notary Seal)

Add pages for additional contracts

EXHIBIT A - PUBLIC CONTRACT STATEMENT

This Public Contract Statement (the “**Contract Statement**”) has been executed by the below supplier, Contractor or vendor (collectively the “**Contractor**”) in order for the Village of Buffalo Grove to obtain certain information necessary prior to awarding a public contract. The Contract Statement shall be executed and notarized and submitted as part of the Bid Proposal.

CERTIFICATION OF CONTRACTOR/BIDDER

In order to comply with 720 Illinois Compiled Statutes 5/33 E-1 et seq., the Village of Buffalo Grove requires the following certification be acknowledged:

The Contractor certifies that it is not barred from bidding or supplying any goods, services or construction let by the Village of Buffalo Grove with or without bid, due to any violation of either Section 5/33 E-3 or 5/33 E-4 of Article 33E, Public Contracts, of the Chapter 720 of the Illinois Compiled Statutes, as amended. This act relates to interference with public contracting, bid rigging and rotating, kickbacks, and bidding.

CERTIFICATION RELATIVE TO 65 ILCS 5/11-42.1.1

In order to comply with 65 Illinois Compiled Statutes 5/11-42.1.1, the Village of Buffalo Grove requires the following certification:

The Contractor does hereby swear and affirm that it is not delinquent in the payment of any tax administered by the Illinois Department of Revenue unless it is contesting such tax in accordance with the procedures established by the appropriate revenue act, its liability for the tax or the amount of the tax. The undersigned further understands that making a false statement herein: (1) is a Class A misdemeanor, and (2) voids the contract and allows the Village to recover all amounts paid to it under the contract.

CONFLICT OF INTEREST

The Village of Buffalo Grove Municipal Code requires the following verification relative to conflict of interest and compliance with general ethics requirements of the Village:

The Contractor represents and warrants to the Village of Buffalo Grove as a term and condition of acceptance of their Bid Proposal that none of the following Village officials is either an officer or director of Contractor nor owns five percent (5%) or more of the Contractor: the Village President, the members of the Village Board of Trustees, the Village Clerk, the Village Treasurer, the members of the Zoning Board of Appeals and the Plan Commission, the Village Manager and his/her Assistant, or the heads of the various departments within the Village.

If the foregoing representation and warranty is inaccurate, state the name of the Village official who either is an officer or director of your business entity or owns five percent (5%) or more thereof: _____.

IN WITNESS WHEREOF, the below Contractor has signed and sealed this Contract Statement as of this ____ day of _____, 20__.

Print Name of Contractor

Signature

Print Title

Given under my hand and official seal, this ____ day of _____, 20__.

Notary Public#

DESCRIPTION OF WORK

BASE BID

LOCATION OF WORK:

- A. The project is located between Old Buffalo Grove Road (on the west end) and Lake Boulevard (east end) with work in between located in the right of way of Buffalo Grove Road, and within Cambridge Park located at 951 S Buffalo Grove Rd. The limits of the project location are constrained to the public right of way and Village Public Utility Easements.

SCOPE OF WORK:

- A. The work includes, but is not necessarily limited to, the following major items:

1. Cambridge on the Lake Lift Station

- a. Selective demolition of existing can-type pump station.
- b. Construction of new wet well with duplex submersible pump operation including new wet well top with access hatch.
- c. Installation of new submersible solids handling pumps with constant speed drives and controls.
- d. Dewatering
- e. Associated electrical and instrumentation work.
- f. New valve / meter / bypass vault.
- g. New traffic box control panel.
- h. New electrical service conduit and transformer pad.
- i. New diesel engine generator.
- j. Contractor bypass pumping.
- k. Access road construction.
- l. Restoration.

2. Utility Work – Lake Boulevard

- a. ± 750' 18" sanitary sewer by open cut and bore and jack construction, including manholes.
- b. ± 600' 8" water main by open cut and directional drilling construction, including valve vaults, hydrants, and connection.

3. Utility Work – Cambridge Park

- a. ± 960' 10" sanitary force main by open cut and directional drilling construction.

4. Utility Work – Buffalo Grove Road

- a. ± 90' 10" sanitary force main by bore and jack construction.
- b. ± 235' 15" sanitary sewer by open cut construction, including manholes.

5. Utility Work – Old Buffalo Grove Road

- a. ± 95' 15" sanitary sewer by open cut construction.

ALTERNATIVE 1

LOCATION OF WORK:

- A. This particular work is located in Cambridge Park and on the north / south leg of Lake Boulevard where directional drilling is in the BASE BID. The limits of the project location are constrained to the public right of way and Village Public Utility Easements.

SCOPE OF WORK:

- A. The work includes, but is not necessarily limited to, the following major items:
 - 1. Lake Boulevard: Open cutting approximately 214' of 8" water main in lieu of directional drilling.
 - 2. Cambridge Park: Open cutting approximately 778' of 10" sanitary force main in lieu of directional drilling.

ALTERNATIVE 2

LOCATION OF WORK:

- A. This particular work is located in Cambridge Park, north and west of the proposed lift station.

SCOPE OF WORK

- B. The work includes, but is not necessarily limited to, the following major items:
 - 1. Excavation, embankment, and restoration work for the construction of 1.93 acre feet of detention and associated outlet works in and along existing retention ponds.
 - 2. Excavation, embankment, construction, and restoration work for 0.38 acre feet of volume control including underdrain and outlet works.
 - 3. Construction of \pm 400' of 12" - 36" bypass storm sewer and associated structures.



Village of Buffalo Grove

VILLAGE OF BUFFALO GROVE
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
VoBG-2021-03

SECTION 2

SPECIAL PROVISIONS AND SPECIFICATIONS



Local Public Agency	County	Section Number
Village of Buffalo Grove	Cook / Lake	N/A

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

Recurring Special Provisions

Check Sheet #		Page No.
1	<input type="checkbox"/> Additional State Requirements for Federal-Aid Construction Contracts	97
2	<input type="checkbox"/> Subletting of Contracts (Federal-Aid Contracts)	100
3	<input type="checkbox"/> EEO	101
4	<input type="checkbox"/> Specific EEO Responsibilities Non Federal-Aid Contracts	111
5	<input type="checkbox"/> Required Provisions - State Contracts	116
6	<input type="checkbox"/> Asbestos Bearing Pad Removal	122
7	<input type="checkbox"/> Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal	123
8	<input type="checkbox"/> Temporary Stream Crossings and In-Stream Work Pads	124
9	<input type="checkbox"/> Construction Layout Stakes Except for Bridges	125
10	<input type="checkbox"/> Construction Layout Stakes	128
11	<input type="checkbox"/> Use of Geotextile Fabric for Railroad Crossing	131
12	<input type="checkbox"/> Subsealing of Concrete Pavements	133
13	<input type="checkbox"/> Hot-Mix Asphalt Surface Correction	137
14	<input type="checkbox"/> Pavement and Shoulder Resurfacing	139
15	<input type="checkbox"/> Patching with Hot-Mix Asphalt Overlay Removal	140
16	<input type="checkbox"/> Polymer Concrete	142
17	<input type="checkbox"/> PVC Pipeliner	144
18	<input type="checkbox"/> Bicycle Racks	145
19	<input type="checkbox"/> Temporary Portable Bridge Traffic Signals	147
20	Reserved	149
21	<input type="checkbox"/> Nighttime Inspection of Roadway Lighting	150
22	<input type="checkbox"/> English Substitution of Metric Bolts	151
23	<input type="checkbox"/> Calcium Chloride Accelerator for Portland Cement Concrete	152
24	<input type="checkbox"/> Quality Control of Concrete Mixtures at the Plant	153
25	<input checked="" type="checkbox"/> Quality Control/Quality Assurance of Concrete Mixtures	161
26	<input type="checkbox"/> Digital Terrain Modeling for Earthwork Calculations	177
27	Reserved	179
28	<input type="checkbox"/> Preventive Maintenance - Bituminous Surface Treatment (A-1)	180
29	Reserved	186
30	Reserved	187
31	Reserved	188
32	<input type="checkbox"/> Temporary Raised Pavement Markers	189
33	<input type="checkbox"/> Restoring Bridge Approach Pavements Using High-Density Foam	190
34	<input type="checkbox"/> Portland Cement Concrete Inlay or Overlay	193
35	<input type="checkbox"/> Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	197
36	<input type="checkbox"/> Longitudinal Joint and Crack Patching	200
37	<input type="checkbox"/> Concrete Mix Design - Department Provided	202

Local Public Agency

County

Section Number

Village of Buffalo Grove

Cook / Lake

N/A

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

Local Roads And Streets Recurring Special Provisions

<u>Check Sheet #</u>		<u>Page No.</u>
LRS 1	Reserved	204
LRS 2	<input type="checkbox"/> Furnished Excavation	205
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance	206
LRS 4	<input checked="" type="checkbox"/> Flaggers in Work Zones	207
LRS 5	<input checked="" type="checkbox"/> Contract Claims	208
LRS 6	<input checked="" type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	209
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals	215
LRS 8	Reserved	221
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments	222
LRS 10	Reserved	223
LRS 11	<input checked="" type="checkbox"/> Employment Practices	224
LRS 12	<input checked="" type="checkbox"/> Wages of Employees on Public Works	226
LRS 13	<input checked="" type="checkbox"/> Selection of Labor	228
LRS 14	<input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks	229
LRS 15	<input checked="" type="checkbox"/> Partial Payments	232
LRS 16	<input type="checkbox"/> Protests on Local Lettings	233
LRS 17	<input type="checkbox"/> Substance Abuse Prevention Program	234
LRS 18	<input type="checkbox"/> Multigrade Cold Mix Asphalt	235

BDE SPECIAL PROVISIONS
For the November 5, 2021 Letting

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

File Name	#		Special Provision Title	Effective	Revised
80099	1	<input type="checkbox"/>	Accessible Pedestrian Signals (APS)	April 1, 2003	April 1, 2020
80274	2	<input type="checkbox"/>	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192	3	<input type="checkbox"/>	Automated Flagger Assistance Device	Jan. 1, 2008	
80173	4	<input type="checkbox"/>	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80426	5	<input type="checkbox"/>	Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	
80436	6	<input type="checkbox"/>	Blended Finely Divided Minerals	April 1, 2021	
80241	7	<input type="checkbox"/>	Bridge Demolition Debris	July 1, 2009	
50261	8	<input type="checkbox"/>	Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481	9	<input type="checkbox"/>	Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491	10	<input type="checkbox"/>	Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531	11	<input type="checkbox"/>	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80425	12	<input type="checkbox"/>	Cape Seal	Jan. 1, 2020	Jan. 1, 2021
80384	13	<input type="checkbox"/>	Compensable Delay Costs	June 2, 2017	April 1, 2019
80198	14	<input type="checkbox"/>	Completion Date (via calendar days)	April 1, 2008	
80199	15	<input type="checkbox"/>	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293	16	<input type="checkbox"/>	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311	17	<input type="checkbox"/>	Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80261	18	<input type="checkbox"/>	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387	19	<input type="checkbox"/>	Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
80434	20	<input type="checkbox"/>	Corrugated Plastic Pipe (Culvert and Storm Sewer)	Jan. 1, 2021	
80029	21	<input type="checkbox"/>	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	March 2, 2019
80402	22	<input type="checkbox"/>	Disposal Fees	Nov. 1, 2018	
80378	23	<input type="checkbox"/>	Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80421	24	<input type="checkbox"/>	Electric Service Installation	Jan. 1, 2020	
80415	25	<input type="checkbox"/>	Emulsified Asphalts	Aug. 1, 2019	
80423	26	<input type="checkbox"/>	Engineer's Field Office and Laboratory	Jan. 1, 2020	
80229	27	<input type="checkbox"/>	Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80417	28	<input type="checkbox"/>	Geotechnical Fabric for Pipe Underdrains and French Drains	Nov. 1, 2019	
80420	29	<input type="checkbox"/>	Geotextile Retaining Walls	Nov. 1, 2019	
80433	30	<input type="checkbox"/>	Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	
80304	31	<input type="checkbox"/>	Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2020
80422	32	<input type="checkbox"/>	High Tension Cable Median Barrier	Jan. 1, 2020	Nov. 1, 2020
80416	33	<input type="checkbox"/>	Hot-Mix Asphalt – Binder and Surface Course	July 2, 2019	Nov. 1, 2019
80398	34	<input type="checkbox"/>	Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Nov. 1, 2019
80406	35	<input type="checkbox"/>	Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT)	Jan. 1, 2019	July 1, 2021
80347	36	<input type="checkbox"/>	Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	July 2, 2019
80383	37	<input type="checkbox"/>	Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	July 2, 2019
80411	38	<input type="checkbox"/>	Luminaires, LED	April 1, 2019	July 1, 2021
80393	39	<input type="checkbox"/>	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	March 1, 2019
80045	40	<input type="checkbox"/>	Material Transfer Device	June 15, 1999	Aug. 1, 2014
80418	41	<input type="checkbox"/>	Mechanically Stabilized Earth Retaining Walls	Nov. 1, 2019	Nov. 1, 2020
80424	42	<input type="checkbox"/>	Micro-Surfacing and Slurry Sealing	Jan. 1, 2020	Jan. 1, 2021
80428	43	<input type="checkbox"/>	Mobilization	April 1, 2020	
80412	44	<input type="checkbox"/>	Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80430	45	<input type="checkbox"/>	Portland Cement Concrete – Haul Time	July 1, 2020	
80359	46	<input type="checkbox"/>	Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2019
80431	47	<input type="checkbox"/>	Portland Cement Concrete Pavement Patching	July 1, 2020	

80432	48	<input type="checkbox"/>	Portland Cement Concrete Pavement Placement	July 1, 2020	
80300	49	<input type="checkbox"/>	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
34261	50	<input type="checkbox"/>	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	51	<input type="checkbox"/>	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306	52	<input type="checkbox"/>	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 2, 2021
80407	53	<input type="checkbox"/>	Removal and Disposal of Regulated Substances	Jan. 1, 2019	Jan. 1, 2020
80419	54	<input type="checkbox"/>	Silt Fence, Inlet Filters, Ground Stabilization and Riprap Filter Fabric	Nov. 1, 2019	July 1, 2021
80395	55	<input type="checkbox"/>	Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340	56	<input type="checkbox"/>	Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127	57	<input type="checkbox"/>	Steel Cost Adjustment	April 2, 2004	Aug. 1, 2017
80408	58	<input type="checkbox"/>	Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
80413	59	<input type="checkbox"/>	Structural Timber	Aug. 1, 2019	
80397	60	<input type="checkbox"/>	Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	61	<input type="checkbox"/>	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
80437	62	<input type="checkbox"/>	Submission of Payroll Records	April 1, 2021	
80435	63	<input type="checkbox"/>	Surface Testing of Pavements – IRI	Jan. 1, 2021	April 1, 2021
80298	64	<input type="checkbox"/>	Temporary Pavement Marking	April 1, 2012	April 1, 2017
80409	65	<input type="checkbox"/>	Traffic Control Devices - Cones	Jan. 1, 2019	
80410	66	<input type="checkbox"/>	Traffic Spotters	Jan. 1, 2019	
20338	67	<input type="checkbox"/>	Training Special Provisions	Oct. 15, 1975	
80318	68	<input type="checkbox"/>	Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
80429	69	<input type="checkbox"/>	Ultra-Thin Bonded Wearing Course	April 1, 2020	
* 80439	70	<input type="checkbox"/>	Vehicle and Equipment Warning Lights	Nov. 1, 2021	
80288	71	<input type="checkbox"/>	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
* 80440	72	<input type="checkbox"/>	Waterproofing Membrane System	Nov. 1, 2021	
* 80302	73	<input type="checkbox"/>	Weekly DBE Trucking Reports	June 2, 2012	Nov. 1, 2021
80414	74	<input type="checkbox"/>	Wood Fence Sight Screen	Aug. 1, 2019	April 1, 2020
80427	75	<input type="checkbox"/>	Work Zone Traffic Control Devices	Mar. 2, 2020	
80071	76	<input type="checkbox"/>	Working Days	Jan. 1, 2002	

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

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

The following special provisions have been deleted from use.

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

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

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

BLENDED FINELY DIVIDED MINERALS (BDE)

Effective: April 1, 2021

Revise the second paragraph of Article 1010.01 of the Standard Specifications to read:

“Different sources or types of finely divided minerals shall not be mixed or used alternately in the same item of construction, except as a blended finely divided mineral product according to Article 1010.06.”

Add the following article to Section 1010 of the Standard Specifications:

“1010.06 Blended Finely Divided Minerals. Blended finely divided minerals shall be the product resulting from the blending or intergrinding of two or three finely divided minerals. Blended finely divided minerals shall be according to ASTM C 1697, except as follows.

- (a) Blending shall be accomplished by mechanically or pneumatically intermixing the constituent finely divided minerals into a uniform mixture that is then discharged into a silo for storage or tanker for transportation.
- (b) The blended finely divided mineral product will be classified according to its predominant constituent or the manufacturer’s designation and shall meet the chemical requirements of its classification. The other finely divided mineral constituent(s) will not be required to conform to their individual standards.”

80436

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

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

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

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

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

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

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

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

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

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

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

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

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

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

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

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

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

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

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

Add the following to Section 109 of the Standard Specifications.

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

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

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

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

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

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

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

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

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

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

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 1, 2014

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Diesel Retrofit Deficiency Deduction

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

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

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

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

80261

DISPOSAL FEES (BDE)

Effective: November 1, 2018

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

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

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

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

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

80402

EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

“1032.06 Emulsified Asphalts. Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

- (a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

Test	HFE-90	HFE-150	HFE-300
Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS ^{1/}	50 min.	50 min.	50 min.
Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), %	0.10 max.	0.10 max.	0.10 max.
Storage Stability Test, 1 day, (AASHTO T 59), %	1 max.	1 max.	1 max.
Coating Test (All Grades), (AASHTO T 59), 3 minutes	stone coated thoroughly		
Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, %	65 min. 7 max.	65 min. 7 max.	65 min. 7 max.

Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm	90-150	150-300	300 min.
Float Test at 140 °F (60 °C), (AASHTO T 50), sec.	1200 min.	1200 min.	1200 min.

1/ The emulsion shall be pumpable.

- (d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

Test	Result
Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS	75 max.
Sieve test, retained on No. 20 (850 µm) sieve, %	0.10 max.
Distillation to 500 °F (260 °C) residue, %	38 min.
Oil distillate by volume, %	4 max.

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

- (e) Delete this subparagraph.
- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
 - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
 - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be 374 ± 9 °F (190 ± 5 °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
 - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be 50.0 ± 1.0 °F (10.0 ± 0.5 °C).

(6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

Test	Requirement
Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS	20-100
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max.
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min.
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3 max.
Tests on Residue from Evaporation	
Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm	40 max.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Ash Content, (AASHTO T 111), % ^{1/}	1 max.

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

Grade	Use
SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh)	Tack Coat
PEP	Prime Coat
RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2	Bituminous Surface Treatment
CQS-1hP (formerly CSS-1h Latex Modified)	Micro-Surfacing Slurry Sealing Cape Seal™

GEOTECHNICAL FABRIC FOR PIPE UNDERDRAINS AND FRENCH DRAINS (BDE)

Effective: November 1, 2019

Revise Article 1080.01(a) of the Standard Specifications to read:

“(a) Fabric Materials. Fabric materials shall be as follows.

- (1) Knitted Fabric. Knitted fabric envelope shall be Type A according to ASTM D 6707 and be a continuous one piece knitted polymeric material that fits over the pipe underdrain like a sleeve. It shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (2) Woven or Nonwoven Fabric. The fabric shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (3) Physical Properties. The physical properties for knitted, woven, and nonwoven fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Knitted ^{1/}	Woven ^{2/}	Nonwoven ^{2/}
Grab Strength, lb (N) ASTM D 4632 ^{3/}	--	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{3/}	--	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{3/}	--	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{3/}	180 (800) min.	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{4/}	30 (0.60) max.	40 (0.425) max.	40 (0.425) max.
Permittivity, sec ⁻¹ ASTM D 4491	1.0 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	--	50 min.	50 min.

1/ Manufacturer's certification to meet test requirements.

2/ NTPEP results or manufacturer's certification to meet test requirements.

3/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

4/ Values represent the maximum average roll value.”

Revise Article 1080.05 of the Standard Specifications to read:

“1080.05 Geotechnical Fabric for French Drains and Pipe Underdrains, Type 2. Geotechnical fabric for french drains and pipe underdrains, Type 2 shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.

The fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{3/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	0.2 min.	
Ultraviolet Stability % retained strength after 500 hours of exposure - ASTM D 4355	50 min.	

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

3/ Values represent the maximum average roll value.”

MANHOLES, VALVE VAULTS, AND FLAT SLAB TOPS (BDE)

Effective: January 1, 2018
 Revised: March 1, 2019

Description. In addition to those manufactured according to the current standards included in this contract, manholes, valve vaults, and flat slab tops manufactured prior to March 1, 2019, according to the previous Highway Standards listed below will be accepted on this contract:

Product	Previous Standards		
Precast Manhole Type A, 4' (1.22 m) Diameter	602401-05	602401-04	602401-03
Precast Manhole Type A, 5' (1.52 m) Diameter	602402-01	602402	602401-03
Precast Manhole Type A, 6' (1.83 m) Diameter	602406-09	602406-08	602406-07
Precast Manhole Type A, 7' (2.13 m) Diameter	602411-07	602411-06	602411-05
Precast Manhole Type A, 8' (2.44 m) Diameter	602416-07	602416-06	602416-05
Precast Manhole Type A, 9' (2.74 m) Diameter	602421-07	602421-06	602421-05
Precast Manhole Type A, 10' (3.05 m) Diameter	602426-01	602426	
Precast Valve Vault Type A, 4' (1.22 m) Diameter	602501-04	602501-03	602501-02
Precast Valve Vault Type A, 5' (1.52 m) Diameter	602506-01	602506	602501-02
Precast Reinforced Concrete Flat Slab Top	602601-05	602601-04	

The following revisions to the Standard Specifications shall apply to manholes, valve vaults, and flat slab tops manufactured according to the current standards included in this contract:

Revise Article 602.02(g) of the Standard Specifications to read:

“(g) Structural Steel (Note 4) 1006.04

Note 4. All components of the manhole joint splice shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.”

Add the following to Article 602.02 of the Standard Specifications:

“(s) Anchor Bolts and Rods (Note 5) 1006.09

Note 5. The threaded rods for the manhole joint splice shall be according to the requirements of ASTM F 1554, Grade 55, (Grade 380).”

Revise the second paragraph of Article 1042.10 of the Standard Specifications to read:

“Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top (Highway Standard 602601) shall be manufactured according to AASHTO M 199 (M 199M), except as shown on the plans. Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi (31,000 kPa) at 28 days and manholes,

valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days.”

80393

MOBILIZATION (BDE)

Effective: April 1, 2020

Replace Articles 671.02(a), (b), and (c) of the Standard Specifications with the following:

“(a) Upon execution of the contract, 90 percent of the pay item will be paid.

(b) When 90 percent of the adjusted contract value is earned, the remaining ten percent of the pay item will be paid along with any amount bid in excess of six percent of the original contract amount.”

80428

PORTLAND CEMENT CONCRETE – HAUL TIME (BDE)

Effective: July 1, 2020

Revise Article 1020.11(a)(7) of the Standard Specifications to read:

“(7) Haul Time. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work. The maximum haul time shall be as follows.

Concrete Temperature at Point of Discharge, °F (°C)	Maximum Haul Time ^{1/} (minutes)	
	Truck Mixer or Truck Agitator	Nonagitator Truck
50 - 64 (10 - 17.5)	90	45
> 64 (> 17.5) - without retarder	60	30
> 64 (> 17.5) - with retarder	90	45

1/ To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.”

PORTLAND CEMENT CONCRETE PAVEMENT PLACEMENT (BDE)

Effective: July 1, 2020

Revise the fifth paragraph of Article 420.07 of the Standard Specifications to read:

“The concrete shall be deposited uniformly across the subgrade or subbase as close as possible to its final position. The time elapsing from when the concrete is unloaded until it is incorporated into the work shall not exceed 20 minutes. When required, hand spreading shall be accomplished with shovels.”

80432

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revised: January 2, 2021

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). RAS is the material produced from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material by weight of RAS, as defined in the Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”. RAS shall come from a facility source on the Department’s “Qualified Producer List of Certified Sources for Reclaimed Asphalt Shingles” where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual RAP stockpiles meeting one of the following definitions. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. “Homogeneous Surface”).

Prior to milling, the Contractor shall request the Department provide documentation on the quality of the RAP to clarify the appropriate stockpile.

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the No. 4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mixture composition of the mix design.
- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. Conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.
- (4) Conglomerate "D" Quality (Conglomerate DQ). Conglomerate DQ RAP stockpiles shall be according to Articles 1031.02(a)(1)-1031.02(a)(3), except they may also consist of RAP from HMA shoulders, bituminous stabilized subbases, or HMA (High or Low ESAL) binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, non-bituminous surface treatment (i.e. high friction surface treatments), pavement fabric, joint sealants, plant cleanout, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) or fine FRAP up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be B quality or better from an

approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

Additional processed RAP/FRAP/RAS shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the original stockpile after the test results for the working pile are found to meet the requirements specified in Articles 1031.03 and 1031.04.

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

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2,000 tons (1,800 metric tons) and one sample per 2,000 tons (1,800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4,000 tons (3,600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the Department proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Each sample shall be split to obtain two equal samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1,000 tons (900 metric tons) and one sample per 500 tons (450 metric tons) or a minimum of once per week, whichever is more frequent, thereafter. A minimum of five samples are required for stockpiles less than 1,000 tons (900 metric tons).

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The

Contractor shall perform a washed extraction and test for unacceptable materials on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

The Contractor shall obtain and make available all of the test results from the start of the original stockpile.

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

- (a) Limits of Precision. The limits of precision between the Contractor's and the Department's split sample test results shall be according to the following.

Test Parameter	Limits of Precision		
	RAP	FRAP	RAS
% Passing			
1/2 in. (12.5 mm)	6.0 %	5.0 %	
# 4 (4.75 mm)	6.0 %	5.0 %	
# 8 (2.36 mm)	4.0 %	3.0 %	4.0 %
# 30 (600 µm)	3.0 %	2.0 %	4.0 %
# 200 (75 µm)	2.5 %	2.2 %	4.0 %
Asphalt Binder	0.4 %	0.3 %	3.0 %
G _{mm}	0.035	0.030	

If the test results are outside the above limits of precision, the Department will immediately investigate.

- (b) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation, and when applicable G_{mm}. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous/ Conglomerate
1 in. (25 mm)	
1/2 in. (12.5 mm)	± 8 %
# 4 (4.75 mm)	± 6 %
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	
# 30 (600 µm)	± 5 %
# 200 (75 µm)	± 2.0 %
Asphalt Binder	± 0.4 % ^{1/}
G _{mm}	± 0.03 ^{2/}

1/ The tolerance for FRAP shall be ± 0.3 percent.

- 2/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Aggregate Bulk (Dry) Specific Gravity (Gsb) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)".

If more than 20 percent of the test results for an individual parameter (individual sieves, G_{mm} , and/or asphalt binder content) are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the Department for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for solvent extractions according to the document "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (c) Evaluation of RAS and RAS Blended with Manufactured Sand or Fine FRAP Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	± 5 %
# 30 (600 µm)	± 4 %
# 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If more than 20 percent of the test results for an individual parameter (individual sieves and/or asphalt binder content) are out of the above tolerances, or if the unacceptable material exceeds 0.5 percent by weight of material retained on the No. 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the Department for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate DQ stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Class I binder, HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C quality coarse aggregate.

(3) RAP from BAM stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus No. 4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate sample to the District Office. Consultant laboratory services will be at no additional cost to the Department. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

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

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

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

(2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) surface and binder mixture applications.

(3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. FRAP from conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus No. 4 (4.75 mm) homogeneous FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.

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

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

- (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.
- (1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement (ABR) shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	--	--	25

IL-4.75	--	--	35
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- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the individual parameter test results, as defined in Article 1031.04, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

The RAP, FRAP, and RAS stone bulk specific gravities (G_{sb}) shall be according to the "Determination of Aggregate Bulk (Dry) Specific Gravity (G_{sb}) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)" procedure in the Department's Manual of Test Procedures for Materials.

1031.08 HMA Production. HMA production utilizing RAP/FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP/FRAP and/or RAS feed system to remove or reduce oversized material.

If the RAP/FRAP and/or RAS control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and/or RAS and either switch to the virgin aggregate design or submit a new mix design.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.
- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within

± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAP/FRAP/RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP/RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP/RAS are recorded in a wet condition.)
- i. A positive dust control system shall be utilized when the combined contribution of reclaimed material passing the No. 200 sieve exceeds 1.5 percent.

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).

- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Applications. RAP in aggregate applications shall be according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications" and the following.

- (a) RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B shall be as follows.
 - (1) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
 - (2) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted.
- (b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Article 1031.06, except "Conglomerate DQ" and "Non-Quality" may be used."

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revised: January 1, 2020

Revise Section 669 of the Standard Specifications to read:

“SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

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

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

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

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

- (a) Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

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

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

The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field and documented using BDE 2730A "Regulated Substances Pre-Construction Plan (RSPCP) Addendum" and submitted to the Engineer for approval.

CONSTRUCTION REQUIREMENTS

669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities at the contract specific work areas. As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 "Regulated Substances Monitoring Daily Record (RSMDR)".

- (a) Environmental Observation. Prior to beginning excavation, the Contractor shall mark the limits of the contract specific work areas. Once work begins, the monitoring personnel shall be present on-site continuously during the excavation and loading of material.
- (b) Field Screening. Field screening shall be performed during the excavation and loading of material from the contract specific work areas, except for material classified according to Article 669.05(b)(1) or 669.05(c) where field screening is not required.

Field screening shall be performed with either a photoionization detector (PID) (minimum 10.6eV lamp) or a flame ionization detector (FID), and other equipment as appropriate, to monitor for potential contaminants associated with regulated substances. The PID or FID shall be calibrated on-site, and background level readings taken and recorded daily, and as field and weather conditions change. Field screen readings on the PID or FID in excess of background levels indicates the potential presence of regulated substances requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

669.05 Regulated Substances Management and Disposal. The management and disposal of soil and/or groundwater containing regulated substances shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC, but still considered within area background levels by the Engineer, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable. If the soils cannot be utilized within the right-of-way, they shall be managed and disposed of at a landfill as a non-special waste.
 - (2) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County identified in 35 Ill. Admin. Code 742 Appendix A. Table G, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above and the materials do not contain special waste or hazardous waste, as determined by the Engineer, the soil shall be managed and disposed of at a landfill as a non-special waste.
 - (6) When analytical results indicate soil is hazardous by characteristic or listing pursuant to 35 Ill. Admin. Code 721, contains radiological constituents, or the Engineer otherwise determines the soil cannot be managed according to Articles 669.05(a)(1)

through (a)(5) above, the soil shall be managed and disposed of off-site as a special waste or hazardous waste as applicable.

(b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.

(1) The pH of the soil is less than 6.25 or greater than 9.0.

(2) The soil exhibited PID or FID readings in excess of background levels.

(c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 Ill. Admin. Code 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.

(d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Ill. Admin. Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste or hazardous waste as applicable. Special waste groundwater shall be containerized and trucked to an off-site treatment facility, or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sanitary sewer or combined sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sanitary sewer or combined sewer.

Groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench, it may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority, or it shall be containerized and trucked to an off-site treatment facility as a special waste or hazardous waste. The Contractor is prohibited from discharging groundwater within the trench through a storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive

soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Contractor shall obtain all documentation including any permits and/or licenses required to transport the material containing regulated substances to the disposal facility. The Contractor shall coordinate with the Engineer on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate waste disposal approvals with the disposal facility.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation that the Contractor is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

Transportation and disposal of material classified according to Article 669.05(a)(5) or 669.05(a)(6) shall be completed each day so that none of the material remains on-site by the close of business, except when temporary staging has been approved.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number provided by the Bureau of Design and Environment. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill permitted for disposal of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by their permit and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 Ill. Admin. Code 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 Ill. Admin. Code 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;
- (6) a material subject to the waste analysis and recordkeeping requirements of 35 Ill. Admin. Code 728.107 under land disposal restrictions of 35 Ill. Admin. Code 728;
- (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
- (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.

(b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:

- (1) the means by which the generator has determined the waste is not a hazardous waste;
- (2) the means by which the generator has determined the waste is not a liquid;
- (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
- (4) if the waste does not undergo testing, an explanation as to why no testing is needed;

(5) a description of the process generating the waste; and

(6) relevant material safety data sheets.

669.07 Temporary Staging. Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. Soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Temporary staging shall be accomplished within the right-of-way and the Contractor's means and methods shall be described in the approved or amended RSPCP. Staging areas shall not be located within 200 feet (61 m) of a public or private water supply well; nor within 100 feet (30 m) of sensitive environmental receptor areas, including wetlands, rivers, streams, lakes, or designated habitat zones.

The method of staging shall consist of containerization or stockpiling as applicable for the type, classification, and physical state (i.e., liquid, solid, semisolid) of the material. Materials of different classifications shall be staged separately with no mixing or co-mingling.

When containers are used, the containers and their contents shall remain intact and inaccessible to unauthorized persons until the manner of disposal is determined. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could cause the waste to be reclassified as a hazardous or special waste.

When stockpiles are used, they shall be covered with a minimum 20-mil plastic sheeting or tarps secured using weights or tie-downs. Perimeter berms or diversionary trenches shall be provided to contain and collect for disposal any water that drains from the soil. Stockpiles shall be managed to prevent or reduce potential dust generation.

When staging non-special waste, special waste, or hazardous waste, the following additional requirements shall apply:

- (a) **Non-Special Waste.** When stockpiling soil classified according to Article 669.05(a)(1) or 669.05(a)(5), an impermeable surface barrier between the materials and the ground surface shall be installed. The impermeable barrier shall consist of a minimum 20-mil plastic liner material and the surface of the stockpile area shall be clean and free of debris prior to placement of the liner. Measures shall also be taken to limit or discourage access to the staging area.
- (b) **Special Waste and Hazardous Waste.** Soil classified according to Article 669.05(a)(6) shall not be stockpiled but shall be containerized immediately upon generation in containers, tanks or containment buildings as defined by RCRA, Toxic Substances Control

Act (TSCA), and other applicable State or local regulations and requirements, including 35 Ill. Admin. Code Part 722, Standards Applicable to Generators of Hazardous Waste.

The staging area(s) shall be enclosed (by a fence or other structure) to restrict direct access to the area, and all required regulatory identification signs applicable to a staging area containing special waste or hazardous waste shall be deployed.

Storage containers shall be placed on an all-weather gravel-packed, asphalt, or concrete surface. Containers shall be in good condition and free of leaks, large dents, or severe rusting, which may compromise containment integrity. Containers must be constructed of, or lined with, materials that will not react or be otherwise incompatible with the hazardous or special waste contents. Containers used to store liquids shall not be filled more than 80 percent of the rated capacity. Incompatible wastes shall not be placed in the same container or comingled.

All containers shall be legibly labeled and marked using pre-printed labels and permanent marker in accordance with applicable regulations, clearly showing the date of waste generation, location and/or area of waste generation, and type of waste. The Contractor shall place these identifying markings on an exterior side surface of the container.

Storage containers shall be kept closed, and storage pads covered, except when access is needed by authorized personnel.

Special waste and hazardous waste shall be transported and disposed within 90 days from the date of generation.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Admin. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Admin. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the District Environmental Studies Unit (DESU). Upon confirmation of a release of contaminants and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the tank is located and the DESU Manager).

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank;
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the tank excavation zone and entered into subsurface structures (such as sewers or basements).

The tank excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substances Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a "Regulated Substances Final Construction Report (RSFCR)" to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof to the nearest 0.5 calendar day, for REGULATED SUBSTANCES MONITORING.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of UST removal, soil excavation, soil and content sampling, the management of excavated soil and UST content, and UST disposal, will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for

NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) will be paid for according to Article 109.04. The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

When the waste material for disposal requires sampling for landfill disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT."

SILT FENCE, INLET FILTERS, GROUND STABILIZATION AND RIPRAP FILTER FABRIC (BDE)

Effective: November 1, 2019

Revised: April 1, 2020

Revise Article 280.02(m) and add Article 280.02(n) so the Standard Specifications read:

“(m) Above Grade Inlet Filter (Fitted)..... 1081.15(j)
 (n) Above Grade Inlet Filter (Non-Fitted)..... 1081.15(k)”

Revise the last sentence of the first paragraph in Article 280.04(c) of the Standard Specifications to read:

“The protection shall be constructed with hay or straw bales, silt filter fence, above grade inlet filters (fitted and non-fitted), or inlet filters.

Revise the first sentence of the second paragraph in Article 280.04(c) of the Standard Specifications to read:

“When above grade inlet filters (fitted and non-fitted) are specified, they shall be of sufficient size to completely span and enclose the inlet structure.”

Revise Article 1080.02 of the Standard Specifications to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall consist of woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence.

The fabric for ground stabilization shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 2 and nonwoven fabrics shall be Class 1 according to AASHTO M 288.

The physical properties for silt fence and ground stabilization fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Silt Fence Woven ^{1/}	Ground Stabilization Woven ^{2/}	Ground Stabilization Nonwoven ^{2/}
Grab Strength, lb (N) ^{3/} ASTM D 4632	123 (550) MD 101 (450) XD	247 (1100) min. ^{4/}	202 (900) min. ^{4/}
Elongation/Grab Strain, % ASTM D 4632 ^{4/}	49 max.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{4/}	--	90 (400) min.	79 (350) min.

Puncture Strength, lb (N) ASTM D 6241 ^{4/}	--	494 (2200) min.	433 (1925) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{5/}	30 (0.60) max.	40 (0.43) max.	40 (0.43) max.
Permittivity, sec ⁻¹ ASTM D 4491	0.05 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	70 min.	50 min.	50 min.

- 1/ NTPEP results or manufacturer's certification to meet test requirements.
- 2/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP's DataMine.
- 3/ MD = Machine direction. XD = Cross-machine direction.
- 4/ Values represent the minimum average roll value (MARV) in the weaker principle direction, MD or XD.
- 5/ Values represent the maximum average roll value."

Revise Article 1080.03 of the Standard Specifications to read:

“1080.03 Filter Fabric. The filter fabric shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 3 for riprap gradations RR 4 and RR 5, and Class 2 for RR 6 and RR 7 according to AASHTO M 288. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. Nonwoven fabrics shall be Class 2 for riprap gradations RR 4 and RR 5, and Class 1 for RR 6 and RR 7 according to AASHTO M 288. After forming, the fabric shall be processed so that the yarns or filaments retain their relative positions with respect to each other. The fabric shall be new and undamaged.

The filter fabric shall be manufactured in widths of not less than 6 ft (2 m). Sheets of fabric may be sewn together with thread of a material meeting the chemical requirements given for the yarns or filaments to form fabric widths as required. The sheets of filter fabric shall be sewn together at the point of manufacture or another approved location.

The filter fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}				
	Gradation Nos. RR 4 & RR 5		Gradation Nos. RR 6 & RR 7	
	Woven	Nonwoven	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	157 (700) min.	247 (1100) min.	202 (900) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	56 (250) min.	90 (400) min.	79 (350) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	309 (1375) min.	494 (2200) min.	433 (1925) min.
Ultraviolet Stability, % retained strength after 500 hours of exposure - ASTM D 4355	50 min.			

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP's DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

As determined by the Engineer, the filter fabric shall meet the requirements noted in the following after an onsite investigation of the soil to be protected.

Soil by Weight (Mass) Passing the No. 200 sieve (75 µm), %	Apparent Opening Size, Sieve No. (mm) - ASTM D 4751 ^{1/}	Permittivity, sec ⁻¹ ASTM D 4491
49 max.	60 (0.25) max.	0.2 min.
50 min.	70 (0.22) max.	0.1 min.

1/ Values represent the maximum average roll value.”

Revise Article 1081.15(h)(3)a of the Standard Specifications to read:

“a. Inner Filter Fabric Bag. The inner filter fabric bag shall be constructed of woven yarns or nonwoven filaments made of polyolefins or polyesters with a minimum silt and debris capacity of 2.0 cu ft (0.06 cu m). Woven fabric shall be Class 3 and nonwoven fabric shall be Class 2 according to AASHTO M 288. The fabric bag shall be according to the following.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.	
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.	

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Revise Article 1081.15(i)(1) of the Standard Specifications to read:

“(i) Urethane Foam/Geotextile. Urethane foam/geotextile shall be triangular shaped having a minimum height of 10 in. (250 mm) in the center with equal sides and a minimum 20 in. (500 mm) base. The triangular shaped inner material shall be a low density urethane foam. The outer geotextile fabric cover shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters placed around the inner material and shall extend beyond both sides of the triangle a minimum of 18 in. (450 mm). Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288.

(1) The geotextile shall meet the following properties.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.

Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	30 (0.60) max.
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Add the following to Article 1081.15(i) of the Standard Specifications.

“(3) Certification. The manufacturer shall furnish a certificate with each shipment of urethane foam/geotextile assemblies stating the amount of product furnished and that the material complies with these requirements.”

Revise the title and first sentence of Article 1081.15(j) of the Standards Specifications to read:

“(j) Above Grade Inlet Filters (Fitted). Above grade inlet filters (fitted) shall consist of a rigid polyethylene frame covered with a fitted geotextile filter fabric.”

Revise Article 1081.15(j)(2) of the Standard Specifications to read:

(2) Fitted Geotextile Filter Fabric. The fitted geotextile filter fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288. The filter shall be fabricated to provide a direct fit to the frame. The top of the filter shall integrate a coarse screen with a minimum apparent opening size of 1/2 in. (13 mm) to allow large volumes of water to pass through in the event of heavy flows. The filter shall have integrated anti-buoyancy pockets capable of holding a minimum of 3.0 cu ft (0.08 cu m) of stabilization material. Each filter shall have a label with the following information sewn to or otherwise permanently adhered to the outside: manufacturer’s name, product name, and lot, model, or serial number. The fitted geotextile filter fabric shall be according to the table in Article 1081.15(h)(3)a above.”

Add Article 1081.15(k) to the Standard Specifications to read:

“(k) Above Grade Inlet Filters (Non-Fitted). Above grade inlet filters (non-fitted) shall consist of a geotextile fabric surrounding a metal frame. The frame shall consist of either a) a circular cage formed of welded wire mesh, or b) a collapsible aluminum frame, as described below.

(1) Frame Construction.

- a) Welded Wire Mesh Frame. The frame shall consist of 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh formed of #10 gauge (3.42 mm) steel conforming to ASTM A 185. The mesh shall be 30 in. (750 mm) tall and formed into a 42 in. (1.05 m) minimum diameter cylinder.
 - b) Collapsible Aluminum Frame. The collapsible aluminum frame shall consist of grade 6036 aluminum. The frame shall have anchor lugs that attach it to the inlet grate, which shall resist movement from water and debris. The collapsible joints of the frame shall have a locking device to secure the vertical members in place, which shall prevent the frame from collapsing while under load from water and debris.
- (2) Geotextile Fabric. The geotextile fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. The woven filter fabric shall be a Class 3 and the nonwoven filter fabric shall be a Class 2 according to AASHTO M 288. The geotextile fabric shall be according to the table in Article 1081.15(h)(3)a above.
- (3) Geotechnical Fabric Attachment to the Frame.
- a) Welded Wire Mesh Frame. The woven or nonwoven geotextile fabric shall be wrapped 3 in. (75 mm) over the top member of a 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh frame and secured with fastening rings constructed of wire conforming to ASTM A 641, A 809, A 370, and A 938 at 6 in. (150 mm) on center. The fastening rings shall penetrate both layers of geotextile and securely close around the steel mesh. The geotextile shall be secured to the sides of the welded wire mesh with fastening rings at a spacing of 1 per sq ft (11 per sq m) and securely close around a steel member.
 - b) Collapsible Aluminum Frame. The woven or nonwoven fabric shall be secured to the aluminum frame along the top and bottom of the frame perimeter with strips of aluminum secured to the perimeter member, such that the anchoring system provides a uniformly distributed stress throughout the geotechnical fabric.
- (4) Certification. The manufacturer shall furnish a certificate with each shipment of above grade inlet filter assemblies stating the amount of product furnished and that the material complies with these requirements.”

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

80391

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact

attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH-16 compliant is available, an NCHRP 350 or MASH-2009 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”



Local Public Agency	County	Section Number
Village of Buffalo Grove	Cook / Lake	N/A

The following Special Provision supplement the "Standard Specifications for Road and Bridge Construction", adopted

April 1, 2016, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures of Materials" in effect on the date of invitation of bids, and the Supplemental Specification and Recurring Special Provisions indicated on the Check Sheet included here in which apply to and govern the construction of the above named section, and in case of conflict with any parts, or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

Cambridge on the Lake Lift Station Reconstruction

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1. SCOPE OF WORK

The provisions of Article 104.02 of the Standard Specifications are hereby amended as follows: “The Village of Buffalo Grove (Village) expressly reserves the right to remove from or add to the project any portions thereof included in the 2021 Cambridge Utility & Street Improvements. Such reductions, if any, shall be made in writing by the Village prior to execution of the Contract Documents. Any reduction in the scope of work required by the Village prior to the execution of the Contract Documents shall not result in an adjustment to the contract or to the price originally bid.”

2. DEFINITION OF VILLAGE OF BUFFALO GROVE

All references in the contract relating to the Department, Awarding Authority, Village of Buffalo Grove, Village, etc. shall mean the Village of Buffalo Grove.

3. CLEAN CONSTRUCTION AND DEMOLITION DEBRIS (CCDD) MATERIAL DISPOSAL

Work under this item shall be performed in compliance with the Illinois Environmental Protection Agency (IEPA) guidelines in effect at the time of construction.

The Contractor will be required to make all arrangements for coordination and submission of the necessary documents with their chosen CCDD or other suitable disposal facility. Written confirmation of preliminary approval must be provided from the disposal facility and confirmed by the Owner as acceptable.

All surplus, clean material generated from the Contractor’s activities must be disposed of at an IEPA permitted CCDD or otherwise acceptable facility. The Contractor is responsible for providing documentation to the Village for each load hauled off-site showing the quantity of material and the location the material was disposed of.

Disposal of clean material not in compliance with these requirements will constitute breach of contract. If the Contractor fails to provide adequate documentation supporting the legal disposal of clean material according to this special provision, the Contractor shall be fined \$1,000 per load of material and will assume all liability associated with material disposed of not in compliance with this special provision.

No extra compensation will be allowed to the Contractor for any expenses incurred complying with these requirements including but not limited to: delays, inconvenience, or interruptions in the work resulting from compliance with these requirements. All costs associated with material disposal shall be included into the appropriate unit bid prices for the work.

4. JULIE NOTIFICATION

The Contractor shall call the Joint Utility Locating Information for Excavators (JULIE) (1-800-892-0123 or 811), a minimum of forty-eight (48) hours in advance of work being done in the area in accordance with Article 107.39 of the Standard Specifications.

For utilities which are not members, excluding homeowners, the Contractor shall contact the owners directly. The Contractor will be required to cooperate with all utility companies and municipal agencies involved in connection with the removal, temporary relocation, reconstruction or abandonment by these agencies of any and all services.

No additional compensation will be allowed the Contractor for any expense incurred by complying with these requirements, or because of delays, inconvenience or interruptions in his work resulting from the failure of the municipal agencies or utility company to remove, relocate, reconstruct or abandon their services.

5. PREQUALIFICATION OF BIDDERS

Bidders shall be prequalified with the Illinois Department of Transportation in accordance with Article 102.01 of the Standard Specifications and is required by all bidders.

All bidders are required to fully register with the Village of Buffalo Grove, including IRS Form W-9, at:

<https://vrapp.vendorregistry.com/Vendor/Register/Index/buffalo-grove-village-of-il-vendor-registration>

OR

www.vbg.org/bids

Select the link 'Register My Business'

Please contact Vendor Registry at (844) 802-9202 for assistance in the registration process.

The Village of Buffalo Grove reserves the right to reject any or all proposals if the bidder does not comply with the requirements as stated herein.

6. COMPLETION DATE

The Contractor shall commence the work to be performed under this contract, 10 days following the execution of the contract. The work shall be prosecuted in such a manner and with such a supply of materials, equipment and labor as considered necessary to ensure its completion according to the time specified in the contract. The Contractor shall substantially complete all work in the contract by **Friday, October 14, 2022**, including landscape restoration, as defined in Article 108.04 of the Standard Specifications.

The Village shall have the authority to suspend the work whole or in part due to the failure of the Contractor to carry out provisions of the contract; unsuitable severe weather; conditions considered unsuitable for the prosecution of the work or for any other condition or reason deemed to be in the public interest. The period of suspension shall not count against the time of performance established in the contract unless the suspension is ordered due to the acts or omissions of the Contractor. The Contractor shall not be paid additional compensation on account of any suspension ordered pursuant to Article 108.07 of the Standard Specifications.

Following substantial completion, the Contractor shall provide the Engineer written notice in accordance with Article 105.13 of the Standard Specifications. The Contractor will have fourteen (14) calendar days to correct any deficiencies following the scheduled final inspection and punch list submittal by the Engineer.

In case of failure to complete the work on time by the interim completion date, completion date, working days, and/or the deficient punch list items, the provisions of Article 108.09 of the Standard Specifications shall apply, **except regardless of the contract amount, the daily charge shall be \$2,000 per calendar day overrun.** Landscape restoration planting times shall follow Article 250.07 of the Standard Specifications.

The estimated Village Board award date for this project is Tuesday, December 6, 2022 with an anticipated commencement date of Tuesday, December 20, 2022.

7. WINTER SHUTDOWN

At the sole discretion of the Village, the Village may enact a winter shutdown of all Contract related work on the project. This winter shutdown could be due to dry utility conflicts, nonperformance by the Contractor, acts of God, or other events that have caused a delay in the Contract. If the delay in the contract is due to Contractor nonperformance as reasonable determined by the Village, all temporary work required to prepare the work site for winter shall be borne by the Contractor including any demobilization and remobilization costs of their materials and equipment. If the shutdown is due to events outside the Contractors control, as reasonably determined by the Village, all work associated with the winter shutdown will be paid for in accordance with article 109.04 or applicable pay items for the work performed. It is the Village's intent to complete this project by the completion date as specified herein.

The Village, based on the requested scope of work involved with the winter shutdown, will establish a completion date for the Contractor to complete all work associated with the winter shutdown. The timeframe allotted for the work will be developed by the Village based on publish productivity rates within the IDOT BDE manual. If the Contractor fails to complete the requested winter shutdown work as outlined above and within the letter provided by the Village, a per calendar day charge of \$2,000 will be applied to the amount due to the Contractor in addition to any liquidated damages or other fines that are accrued during this timeframe. This charge will cease upon successful completion of the requested work in the winter shutdown request from the Village.

The following is a list of possible work that will be requested by the Village to prepare the site for a winter shutdown:

1. All drainage and utility structures within the pavement shall be flush with the binder course pavement and accessible.
2. Absolutely no equipment or surplus materials should be left on-site or in the surrounding area over the winter.
3. Install all temporary erosion control features if the site is not considered stabilized.
4. Drainage must be provided at all curb line drainage structures. Temporary asphalt ramps shall be installed during the Binder Course placement at a longitudinal taper length of 15' on either side of the structure. This work will be included in the cost per ton for HMA Binder Course (Special).
5. Any gravel trenches or sidewalk gaps shall have a 2" HMA Binder Course installed.
6. Semi-permanent flumes for storm and/or sanitary sewer.
7. Install temporary asphalt ramps at all project limits and at side roads during the Binder Course placement at a taper length of 15'.
8. Install temporary asphalt ramps at all ADA crosswalks during the Binder Course placement at a taper length of 2'.
9. All regulatory and warning signs should be installed at the proper locations and heights before suspending the project.
10. All temporary sign supports should be removed and temporary work zone signs that do not apply to current conditions should be removed from the site.
11. Place temporary pavement markings at locations directed by the Engineer.

8. CONTRACT SEQUENCING

The Contractor shall notify the Engineer at least 72 hours in advance of beginning work and 48 hours prior to construction commencement on each subsequent street. Construction operations shall be conducted in a manner such that streets will remain open to all traffic. At no time shall residents or business owners be kept out of their driveway over a weekend or holiday as defined in Article 107.09 of the Standard Specifications.

Work shall be scheduled so that it is continuous on the various roadways. The Contractor and approved Subcontractor(s) shall, at all times, employ and provide sufficient labor, tools, equipment, and other incidental items for prosecuting the work to full completion in the manner and time required by the contract.

9. CONSTRUCTION WORK PERIODS

Construction operations shall be completed in accordance with Article 107.09 of the Standard Specifications. All work shall be confined to the period beginning at 7:00 AM and ending at 6:00 PM on weekdays and 8:00 AM to 6:00 PM on Saturdays. No work shall be done on Sundays or legal holiday periods as defined in Article 107.09 of the Standard Specifications.

Any work outside the allowed time periods in accordance with the Village Ordinance, including but not limited to, material deliveries, mobilization of equipment, warming up machinery, or truck staging, a penalty of \$1,000 per occurrence may be imposed.

10. SUGGESTED CONSTRUCTION SEQUENCING

Due to the multiple permits and segmented nature of the work, project sequencing is of utmost important to the Village to ensure this project is completed on budget and within the timeframe specified.

The Contractor shall be prepared to discuss the project sequencing along with the project schedule at the preconstruction meeting and recommend any changes to the below plan. Changes to the suggested sequencing may cause temporary work in order to perform the improvements as proposed. Any additional temporary work other than what is outlined in the current plan/bid documents will not be paid for separately but would be included in the cost requiring the temporary work.

The sequence numbers listed below are in no particular order and are solely listed for ease of discussion and planning.

#1 Cambridge on the Lake Lift Station Construction (Civil Works)

Completion of the civil work items (wet well and valve / meter / bypass vault) of the lift station shall be completed at the same time as the Lake Boulevard Sanitary Sewer work due to the shared excavation locations required for the deep sewer installations. Early construction of these items will also allow for longer times to allow the excavations to settle ahead of the restoration work.

#2 Lake Boulevard Sanitary Sewer

This work shall take place ahead of the Lake Boulevard Water Main work due to large excavations required for the bore and jack operations that will overlap with the proposed water main. This work shall also take place ahead of the proposed lift station work since use of the new sanitary sewers are an integral part of the lift station start-up process. This work shall be done as an initial step in the process to allow for settlement of the deep excavations required for the bore and jack process and deep manhole installations.

#3 Lake Boulevard Water Main

This section of water main shall be removed and replaced while traffic control is set up on Lake Boulevard for the sanitary sewer work but shall be installed after the sanitary sewer between the proposed wet well and the new easternmost sanitary sewer at approximate Station 67+49. Step one of the install would be to make the norther connection and valve along with capping the main on the south end (just west of the building service), both in the same day. Then all main can be installed toward the south and then to the east. The hydrant near the east end should be the last piece, which will be capped on the outside for filling, flushing and testing. Once passed the east end of the main will be connected the same day as the building at 225 Lake Blvd.

#4 Cambridge Park Force Main

This work can take place anytime within the project schedule but must be complete prior to the proposed lift station start-up date. This work shall not become a controlling item of the lift station work.

#5 Buffalo Grove Road and Old Buffalo Grove Road Sanitary Sewer

This work can take place anytime within the project schedule but must be complete prior to the proposed lift station start-up date. This work shall not become a controlling item of the lift station work.

#6 Cambridge on the Lake Lift Station Construction (Mechanical / Electrical / Controls)

Completion of the mechanical work items of the lift station can be completed at any time during the project after the civil work items have been installed. If completed early in the project schedule, the new pumps shall remain offsite at a temperature-controlled facility until the electrical work commences on the site.

Electrical and controls work shall be sequenced leading up to the start-up schedule such that electrical and controls sub-contractors are available to attend the start-up immediately upon completion of their work. This work shall be started only after the new electrical service and transformer have been installed.

Lift Station start-up shall be sequenced at the end of the project after all other contract work has been completed with the exception of the Existing Lift Station Abandonment and possibly restoration work.

#7 Cambridge on the Lake Existing Lift Station Abandonment

The abandonment of the existing lift station and associated force main shall be completed only after the proposed lift station has been commissioned at start-up followed by a two-week observation period of the new station.

#8 Cambridge Park Detention Basin and Volume Control (Alternative B)

This work shall be completed at any time during the project, prior to the lift station start-up. The bypass storm sewer work should be completed as early in the project as possible to allow the pond to dry out to the greatest extent possible, prior to detention basin excavation activities.

11. PRE-CONSTRUCTION MEETING

Prior to commencing any construction operations, there shall be a pre-construction meeting. The Village or Engineer will set the time and date of the meeting following Contract award.

The following shall be submitted by the Contractor for review at the pre-construction meeting:

A Progress Schedule in accordance with Article 108.02.

The 24-hour emergency phone number and contact information of the assigned Contractor's superintendent, or otherwise.

The name and 24-hour emergency phone number of the person in the direct employ of the Contractor who is responsible for administrating the Traffic Control and Protection on the Contract.

A list of subcontractors with contact information, including but not limited to name, phone number, and email address, and include quantity and type of work to be sublet for each respective subcontractor in accordance with Article 108.01 of the Standard Specifications.

A list of proposed sources of material.

Hot-mix asphalt and concrete mix designs, and respective quality control plans.*

Any applicable shop drawing submittals.*

*Shop drawings and mix designs for concrete and bituminous items to be installed on the project shall be submitted to the Village no less than ten (10) calendar days from the effective notice to proceed dated letter or the scheduled date of the pre-construction meeting, whichever occurs earlier. A monetary penalty of \$500 may be imposed for each required submittal thereafter.

12. SUB-CONTRACTING

Add the following to the end of ARTICLE 108.01 SUBCONTRACTING.

"The apparent low Bidder on a "Request for Approval of a Subcontractor" (BC 260a) form shall submit to the office of Engineer within ten (10) calendar days after the receipt of bids, a list of the names of Bidder's proposed subcontractors along with a description of the work to be performed by each. The Village will then review and reserves the right to reject the use of any subcontractor on the project due to past performance or the apparent inability to properly perform the item of work."

13. AUTHORITY OF THE ENGINEER

Revise ARTICLE 105.01 AUTHORITY OF ENGINEER to read:

“All work shall be done in accordance with the requirements of the Contract, the Engineer shall have the right, but not the obligation, to observe all work. The Engineer shall decide all questions that arise as to the interpretation of the Plans and Specifications and as to disputes and mutual rights between Contractors under the Specifications. The Engineer shall advise the Village of Buffalo Grove as to the quality and acceptability of materials furnished and work performed, rate of progress of the work, and acceptable fulfillment of the Contract. The Engineer will determine the amount of materials furnished and work performed. The Engineer’s advice and determinations shall be conditions precedent to the right of the Contractor to receive money due the Contractor under the Contract.”

“The Engineer will notify the Contractor in writing if the work is to be suspended by the Village of Buffalo Grove wholly or in part due to the failure of the Contractor to carry out provisions of the contract; for failure to carry out orders; for such periods due to unsuitable weather; for conditions considered unsuitable for the prosecution of the work or for any other condition or reason deemed to be in the public interest.”

“In case of failure on the part of the Contractor to execute work as directed by the Engineer, the Village of Buffalo Grove may, at the expiration of a period of 48 hours after giving notice in writing to the Contractor, proceed to execute such work as may be deemed necessary, and the cost thereof shall be deducted from compensation due or which may become due to the Contractor under the contract.”

The Engineer shall not assume any of the responsibilities of the Contractor’s superintendent or of subcontractors; shall not expedite the work for the Contractor; and shall not advise on, or issue directions concerning aspects of construction means, methods, techniques, sequences or procedures, or safety precautions in connection with the work.

14. STATUS OF UTILITIES

Effective: June 1, 2016

Revised: January 1, 2020

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

UTILITIES TO BE ADJUSTED

General Provisions

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

This list represents potential utility adjustments determined by the Design Engineer.

Stage/Location	Type	Description	Responsible Agency
Cambridge on the Lake Lift Station Construction	Proposed Lift Station Electrical Service	New Electrical Service Conductors and Transformer	ComEd
Cambridge on the Lake Lift Station Abandonment	Existing Lift Station Electrical Service	Existing Electrical Service and Transformers to be Abandoned	ComEd

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility. The Design JULIE locate request was submitted on August 18, 2020 by the Design Engineer.

Agency/Company Responsible to Resolve Conflict	Name of Contact	Phone	E-mail address
Village of Arlington Heights	Steve Mullany	(847) 368-5800	SMULLANY@VAH.COM
Wide Open West	Paul Flinkow	(630) 536-3139	PAUL.FLINKOW@WOWINC.COM
ATT/DISTRIBUTION	Kari Martin	(630) 573-5757	km2618@att.com
COMED	Collin Salek	(847) 816-5383	Collin.Salek@ComEd.com
COMCAST	Reena Thomas	(224) 229-5862	Reena_Thomas@comcast.com
MCI			INVESTIGATIONS@VERIZON.COM
NICOR GAS	Charles Parrott	(630) 388-3319	gasmaps@aglresources.com

General Provisions

VINAKOM COMMUNICATIONS	Scott Neville	(847) 380-9536	Scott.neville@vinakom.com
VILLAGE OF WHEELING	Jon Tack	(847) 417-3913	JTACK@WHEELING.GOV
WHEELING TWSP ROAD DIST.	Mark Tobberman	(847) 259-7730	HighwayManager@wheelingtowship.com

UTILITIES TO BE WATCHED AND PROTECTED

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

No facilities requiring extra consideration.

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility. The Design JULIE locate request was submitted on August 18, 2020 by the Design Engineer.

(See previous Contact Information Table above.)

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

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

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

15. MAINTENANCE OF ROADWAYS AND EROSION CONTROL

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

The Contractor shall be required to control dust or air-borne dirt resulting from construction operations by utilizing a mechanical street sweeper on all pavement within or adjacent to the project work zone throughout the duration of the project. The resulting debris shall be disposed of off-site in accordance with Article 202.03 of the Standard Specifications. Individual fire hydrant use shall not be permitted to control dust at specific locations. The Contractor shall provide dust control operations daily or as directed by the Engineer.

The cost of this work shall be included in the unit prices bid and no additional compensation shall be allowed to control dust as specified herein.

No excavations shall be left open during non-work hours unless approved by the Village and adequately protected from the public.

The Contractor will be required over the course of construction to clean inlet filter baskets weekly or prior to a forecasted rain event. Many of the homes in the Village have lower garages and are susceptible to damage when streets flood. The Contractor shall be held liable for any damage to private structures if it is determined that the damage was due to the Contractor's neglect as specified herein. In the event water is not properly running through inlet filter baskets caused by debris, the Village crews may respond to resident calls about street flooding. Any Village expense occurred in labor or materials responding to these calls will be back charged to the Contractor and deducted from a future pay request.

The Contractor will be required to perform erosion control best management practices as listed on the plans, specifications, and details during construction. Discharge of sediment-laden water or construction debris into the storm sewer system or waterways will not be permitted and subjected to a monetary penalty as noted in the monetary penalties general condition. In addition, the Contractor will be responsible for cleaning all storm sewer systems and waterways to their preconstruction condition to the satisfaction of the Engineer. In the event of an illicit discharge, regardless of blame, the Contractor shall concentrate their work efforts on remedying the situation to correct the deficiency.

The work zone shall be maintained in accordance with Section 701 of the Standard Specifications. Negligence by the Contractor to follow these minimum guidelines that result in or cause damage to Village equipment during snow fall removal or any other similar Village operation will be the direct responsibility of the Contractor to repair. The repair will be completed by the Village and the cost of the repair will be deducted from the next pay request due to the Contractor.

It shall be the Contractor's responsibility to properly store and protect materials and equipment from damage resulting from snow removal and salt application operations. If it is determined by the Village or Engineer that new materials that were supposed to be permanently incorporated in the work were damaged or deemed unacceptable due to the Contractor's negligence to adhere to the above, the unacceptable material shall be removed immediately from the site of the work according to Section 106 of the Standard Specifications and no additional compensation shall be allowed to replace the new materials in-kind.

Within 24 hours following snow removal operations within the project limits, the Contractor shall be required to clean the project site and adjacent roadways of any loose materials that were inadvertently displaced. This includes, but is not limited to, the pavement area, curb line, driveway pavement, sidewalk, and parkways. If the Contractor does not comply with this requirement, a monetary penalty of \$1,000 per calendar day will be imposed for failure to provide the maintenance of roadway in a timely manner.

All operations by the Contractor such as flushing, dewatering, leaking water trucks or equipment, repairs to broken water services or water main, or similar that cause freezing of water on the pavement or sidewalk shall be maintained by salting, sanding or removal of the condition by the Contractor to the satisfaction of the Engineer.

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

16. CONSTRUCTION STAGING AND MAINTENANCE OF BASE COURSE

All pavement removal, curb installation, and hot-mix asphalt binder installation shall be completed in accordance with Section(s) 202, 406, 423, 440, and 606 of the Standard Specifications and as specified herein.

Pavement removal and hot-mix asphalt binder course placement shall be staged in a manner to minimize the exposure of vehicular traffic over the existing base course following pavement removal.

No pavement removal operations shall commence if rain is in the forecast within the following five working days. If the Contractor does not follow this requirement, any diskings, drying or undercut operations required by the Engineer to provide a sufficient subbase prior to paving shall be completed by the Contractor at no additional cost to the Village.

Roadways excavated to subgrade and/or subbase material shall have the hot-mix asphalt binder course installed within seven (7) calendar days from the first day of pavement removal on that respective street segment.

There shall be no placement of hot-mix asphalt permitted on scheduled days of refuse pickup. The Contractor shall be responsible for determining the current refuse schedule and incorporating it into their progress schedule accordingly.

No resident shall be without driveway access and no sidewalk shall be barricaded or closed for more than seven (7) calendar days unless specifically listed otherwise in the plans or herein.

Prior to driveway access impediment due to proposed curb and gutter or driveway pavement operations, the Contractor shall be required to deliver resident notification letters approved by the Engineer to each respective residence or business owner notifying them of the day and time they will not be able to get in and out of their driveway. After the new concrete curb has set, the Contractor shall install all required forms for installation of the driveway pavement for inspection by the Engineer. The Contractor is required to install curb and driveway pavement within two (2) calendar days of each other. Example: If the curb is poured on Monday the driveways will be required to be poured on the same day after the curb is set or on Tuesday. If the curb in front of the resident is not being replaced the Contractor shall frame and pour the driveway on the same day. The driveways shall be properly barricaded until the concrete is sufficiently cured. If, at the discretion of the Engineer, the driveway requires that the old aggregate base course be removed and replaced, it shall be completed prior to pouring the new concrete combination curb & gutter or not until after it has been allowed to cure for a minimum of three (3) calendar days, or after the concrete has reached 2,500 psi as verified by cylinder breaks. Any additional cylinders cast and testing costs associated with this verification shall be included in the cost of the contract. Proposed portland cement concrete sidewalk shall follow the same timeframe as noted above.

If the Contractor does not install proposed concrete curb, driveway pavement, and/or sidewalk in the time frame specified herein, a monetary penalty of \$250 per calendar day will be imposed for each day, and each occurrence the work is not completed.

The Contractor will be required to furnish and install a temporary ramp immediately following pavement removal operations. Each ramp shall be installed the full driveway width of material determined by the Contractor. Each temporary ramp shall be removed prior to paving operations, the respreading of stone on the base or paving over hot-mix asphalt ramps will not be allowed. If the Contractor fails to install or maintain a temporary ramp in a timely manner, a monetary penalty of \$250 per calendar day will be imposed.

The Contractor shall make themselves aware of the surroundings and of private property. The Village will not tolerate entering private property or driving equipment/vehicles on a driveway within the public right of way to remain for any reason during construction unless prior approval has been granted by the property owner. The Contractor will incur a monetary penalty of \$500 per occurrence as determined by the Engineer for violation of this requirement.

17. PERIOD OF ESTABLISHMENT

This work shall include all labor, material, and equipment necessary to furnish and install pulverized topsoil, seed, fertilizer nutrients and Mulch Method 3A in accordance with Sections 211, 250, 251, and 252 of the Standard Specifications and as specified herein.

Pulverized topsoil shall be placed to a maximum depth of four (4) inches and not be placed until the area has been shaped, trimmed, and finished to the lines and grades as directed by the Engineer. All irregularities, depressions, or high points in the surface shall be filled or smoothed out before topsoil is placed. The surface of the topsoil shall be blended to match the existing terrain and adjacent roadway, and be free from clods, stones, sticks, and debris.

The Contractor shall furnish and place the IDOT class of seed specified, and be produced and tested in the current year, be of good quality, and free of weeds. Fertilizer nutrients shall be applied at a 1:1 ratio in accordance with Article 250.04 of the Standard Specifications. Within 24 hours of seed placement, mulch shall be placed by method 3A in accordance with Article 251.03(d) of the Standard Specifications.

It is recommended that the Contractor water the area every other day at a rate of three (3) gallons per square yard, however, it is the sole and exclusive responsibility of the Contractor to make required adjustments to the watering rate or schedule.

To be acceptable for final payment, the landscaped areas shall undergo a 30-day period of establishment beginning on the last day that seed is sowed. During this period, the Contractor shall be responsible for, at no additional cost to the Village, watering, removing weeds and maintaining the seeded areas and repairing any damage to the seeded areas due to but not limited to, errant vehicles, severe weather or all other causes. At the end of the 30-day period of establishment, the Village or Engineer will inspect the landscaped area and if deemed unsatisfactory, the Contractor shall be required to provide means and methods necessary to establish a live, healthy turf area. Should the seed not germinate because of prevailing cool weather, the period of establishment may be adjusted as determined by the Engineer. It shall be the sole and exclusive responsibility of the Contractor, not the Engineer, for maintaining and monitoring the landscape restoration during the period of establishment. If the placed landscape restoration has not been approved by the Village or Engineer sixty (60) calendar days following installation, the Contractor will incur a monetary penalty of \$250 per calendar day.

Upon project completion and expiration of the second period of establishment noted above, any additional failure by the Contractor to achieve a healthy growth of vegetation as defined will be considered failure to complete the project on time and liquidated damages will be applied accordingly.

Planting times shall be April 1 to June 15 and August 1 to November 1.

The Contractor shall provide the Engineer with proper documentation on the landscaping materials supplied to the project such as topsoil source, topsoil certification, fertilizer bags, seed tags, and seed bags.

Upon placement of topsoil, seed, fertilizer nutrients, and mulch, 75 percent of each respective pay item will be paid. Upon final acceptance of the topsoil, seed, fertilizer nutrients, and mulch placed, the remaining 25 percent of each respective pay item will be paid.

The Village may postpone permanent seeding operations if deemed necessary. In such an event, the completion date may be extended accordingly.

18. PROTECTION OF MAILBOXES

The Contractor shall take all necessary precautions when working near mailboxes within or adjacent to the project limits. If at the Contractor's discretion, a mailbox will interfere with construction operations, a temporary mailbox shall be located per the United States Postal Service requirements and the permanent mailbox reinstalled following said operation. At no time shall a resident be without a mailbox or not receive mail due to a mailbox being removed, replaced or damaged. The Contractor shall replace, at no additional cost to the Village, any mailbox or post which has been damaged by the Contractor's operations due to neglect, misconduct or poor workmanship. The cost of all materials required and all labor necessary to comply with the above Provisions will not be paid for separately, but shall be considered as included in the unit prices bid and no additional compensation will be allowed.

The Contractor shall refer to the mailbox installation detail included in appendix A for installation requirements.

The Contractor must maintain access for both residents and mail carriers to all mailboxes throughout the duration of the project.

19. SAW CUTTING

The Contractor shall be required to perform a perpendicularly straight joint by full-depth machine sawing of all proposed items to be removed prior to removal operations to prevent damage or spalling to existing hardscape to remain. Simple or partial depth scoring shall not be permitted. Saw cut locations may or may not be shown on the plans, however, shall be required in the field. All sawcut slurry, regardless of the amount, shall be promptly removed to prevent tracking. Any slurry tracked or left on surfaces to remain shall be thoroughly cleaned or replaced, at the direction of the Village or Engineer, by the Contractor at no additional cost to the Village.

The Contractor shall replace, at no additional cost to the Village, any hardscape, outside of the limit of improvements, damaged by the Contractor's operations due to neglect, misconduct, or poor workmanship.

20. USE OF FIRE HYDRANTS

The indiscriminate use of fire hydrants is strictly prohibited. The Contractor can obtain non-potable water in bulk at no charge at the Buffalo Grove Public Works Department, 51 Raupp Blvd. The Contractor shall provide a water truck or containment and driver to obtain and transport the water. All water obtained from the Village shall be used for this project only. If deemed necessary, the Village reserves the right to restrict or refuse the use of Village water. The Contractor will be responsible for executing the required paperwork and follow all requirements of the Village. If it is determined that the Contractor or its subcontractors operate or use a Village fire hydrant, a monetary penalty of \$1,000 per occurrence that will be imposed.

21. EXISTING HARDSCAPE

Any damage to existing hardscape from tracked equipment or due to the Contractor's negligence, workmanship, or neglect shall be replaced at the Contractor's expense. It is recommended rubber tired or rubber tracked equipment is used. Any unwarranted disturbance to the existing hardscape to remain will warrant repairs made joint to joint and in conformance with the bid documents with limits specified in the Maintenance Letter of Credit general condition. The Engineer and Village shall determine the limit of removal and replacement operations, and all work shall be completed to the satisfaction of the Engineer.

22. TREE PROTECTION AND PRESERVATION

This work shall consist of pruning existing trees, shrubs, or bushes in accordance with Section 201 of the Standard Specifications, except as modified herein.

Breaking off branches of plant material to remain during clearing or construction operations will not be allowed. Preceding any existing tree pruning or trimming operations, the Contractor shall demonstrate that there is no other practical method to complete the work and request permission from the Engineer. All pruning shall be done according to the current ANSI A300 (Part 1) – Pruning Standard.

All branches and foliage pruned or trimmed shall be disposed of off-site in accordance with Article 202.03 of the Standard Specifications.

All existing trees larger than 6" in diameter and not specifically designated for removal, which are removed or damaged due to the Contractor's neglect, shall be inspected by the Village Forester or his designated representative. For each infraction that causes damage to a tree, a monetary penalty of \$1,000 may be imposed and the replacement of the damaged tree required, depending on the extent of injury caused to each tree. No replacement tree shall have a diameter of less than 3" or more than 6", unless authorized by the Village of Buffalo Grove. All new plantings shall be completed in accordance with Section 253 of the Standard Specifications.

23. USE OF THE WORK SITE

The Contractor shall use the Work Site solely to complete the Work and such related activities as may be authorized or directed by the Village. Except as provided herein, Contractor shall not (nor shall Contractor cause or permit any employee or person under Contractor's control) to display or broadcast commercial, political, or religious messages or advertisements of any nature at the Work Site or in connection with the Work. The foregoing shall not be construed to prohibit the following at the Work Site or in connection with the Work: (a) the use of equipment, materials, or other items (e.g. personnel uniforms and clothing) that identify the Contractor (such as by displaying the Contractor's name, logo, slogan, contact information, or similar messages) or that identify the maker or supplier of such equipment, material, or item; or (b) the use or display of signs, flags, cones, traffic control devices, markers, or other similar devices that reasonably relate to the Work, Work Site safety, public safety, or regulatory compliance; or (c) personal speech, religious practice, or expression by any individual performing Work or at the Work Site; or (d) upon written approval or direction of the Village, the display of information regarding the sponsor of the Work or funding sources for the Work.

In addition, Contractor shall not (nor shall Contractor require or permit its personnel, subcontractors, or subcontractors' personnel to) conduct any prohibited political activity at the Work Site or while performing the Work. Contractor and its personnel or subcontractors (including any subcontractor's personnel) shall not intentionally or knowingly use the Work Site or any other property or resources of the Village in connection with any prohibited political activity. For purposes of this section, the term "prohibited political activity" shall have the meaning set forth in Section 5 of the State Officials and Employees Ethics Act, 5 ILCS 430/1-5.

24. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor agrees to defend, pay on behalf of, indemnify, and hold harmless the Village, its elected and appointed officials, agents, employees and volunteers and others working on behalf of the Village against any and all claims, demands, suits or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the Village, its elected and appointed officials, agents, employees and volunteers and others working on behalf of the Village, by reason of personal injury, including bodily injury and death, and/or property damage, whether damage to property of the Village or of a third party, including loss of use thereof, which arises out of or is in any way connected or associated with the Contract and the Work.

For this project, the Village also hired a Consultant, Ciorba Group, Inc. The Contractor shall indemnify the Consultant in the same manner as the Village, as stated above.

25. INSURANCE REQUIREMENTS

12.04.080 - Insurance.

A. Required Coverages and Limits. Unless otherwise provided by franchise, license, or similar agreement, each Contractor occupying right-of-way or constructing any facility in the right-of-way shall secure and maintain the following liability insurance policies insuring the Contractor as named insured and naming the Village, and its elected and appointed officers, officials, agents, and employees, the Buffalo Grove Park District, and its elected and appointed officers, officials, agents, and employees and Ciorba Group, Inc. and employees as additional insureds on the policies listed in subsection (A)(1) and (A)(2) of this section:

1. Commercial general liability insurance, including premises-operations, explosion, collapse, and underground hazard (commonly referred to as "X," "C," and "U" coverages) and products-completed operations coverage with limits not less than:
 - a. Five million dollars for bodily injury or death to each person,
 - b. Five million dollars for property damage resulting from any one accident, and
 - c. Five million dollars for all other types of liability;
2. Automobile liability for owned, non-owned and hired vehicles with a combined single limit of one million dollars for personal injury and property damage for each accident;
3. Worker's compensation with statutory limits; and
4. Employer's liability insurance with limits of not less than one million dollars per employee and per accident.

If the Contractor is not providing such insurance to protect the contractors and subcontractors performing the work, then such contractors and subcontractors shall comply with this section.

B. Excess or Umbrella Policies. The coverages required by this section may be in any combination of primary, excess, and umbrella policies. Any excess or umbrella policy must provide excess coverage over underlying insurance on a following-form basis such that when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss.

C. Copies Required. The Contractor shall provide copies of any of the policies including all endorsements or certificates required by this section to the Village within ten calendar days following receipt of a written request therefor from the Village.

D. Maintenance and Renewal of Required Coverages. The insurance policies required by this section shall contain the following endorsement:

"It is hereby understood and agreed that this policy may not be canceled nor the intention not to renew be stated until thirty (30) calendar days after receipt by the Village, by registered mail or certified mail, return receipt requested, of a written notice addressed to the Village Manager of such intent to cancel or not to renew."

Within ten (10) calendar days after receipt by the Village of said notice, and in no event later than ten (10) calendar days prior to said cancellation, the Contractor shall obtain and furnish to the Village evidence of replacement insurance policies meeting the requirements of this section.

E. Self-Insurance. A Contractor may self-insure all or a portion of the insurance coverage and limit requirements required by subsection A of this section. A Contractor that self-insures is not required, to the extent of such self-insurance, to comply with the requirement for the naming of additional insureds under subsection A of this section, or the requirements of subsections B through D of this section. A Contractor that elects to self-insure shall provide to the Village evidence sufficient to demonstrate its financial ability to self-insure the insurance coverage and limit requirements required under subsection A of this section, such as evidence that the Contractor is a "private self-insurer" under the Workers Compensation Act.

F. Effect of Insurance and Self-Insurance on Contractor's Liability. The legal liability of the Contractor to the Village and any person for any of the matters that are the subject of the insurance policies or self-insurance required by this section shall not be limited by such insurance policies or self-insurance or by the recovery of any amounts thereunder.

G. Insurance Companies. All insurance provided pursuant to this section shall be effected under valid and enforceable policies, issued by insurers legally able to conduct business with the licensee in the State of Illinois. All insurance carriers and surplus line carriers shall be rated "A-" or better and of a class size "X" or higher by A.M. Best Company.

H. Verification of Coverage. Contractor shall furnish the Village with certificates of insurance naming the Village, its officials, agents, employees, and volunteers as additional insured's and with original endorsements, affecting coverage required herein. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be received and approved by the Village before any work commences. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

Subcontractors. Contractor shall include all subcontractors as insured's under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage's for subcontractors shall be subject to all of the requirements stated herein.

J. Assumption of Liability. The contractor assumes liability for all injury to or death of any person or persons including employees of the contractor, any subcontractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to the Contract.

K. Workers' Compensation and Employers' Liability Coverage. The insurer shall agree to waive all rights of subrogation against the Village of Buffalo Grove, its officials, employees, agents and volunteers for losses arising from work performed by Contractor for the municipality.

L. Failure to Comply. In the event the Contractor fails to obtain or maintain any insurance coverage's required under this contract, The Village may purchase such insurance coverage's and charge the expense thereof to the Contractor.

Nothing contained herein is intended to constitute, nor shall it constitute a waiver of the rights, defenses and/or other immunities provided or available to the Village under law including, but not limited to, the Local Governmental and Governmental Employees Tort Immunity Act.

26. ACCIDENTS

In the event of any accident of any kind that involves the general public or property of the Village or a third party, the Contractor shall immediately notify the Village by phone as well as provide Notice of the same. The Notice shall include a full accounting of all details of the accident. The Contractor shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

27. NO ASSIGNMENT

If the Contractor sublets or assigns any part of the Work then the Contractor shall not under any circumstances be relieved of its liabilities hereunder. All transactions of the Village shall be with the Contractor. Subcontractors shall be recognized only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competence. The Contractor shall not assign, transfer, convey, sell or otherwise dispose of the whole or any part of this Contract to any person, firm or corporation without written consent of the Village or authorized representative.

28. DEFAULT

The following shall constitute a default an "**Event of Default**" by the Contractor under this Contract:

- A. If the Contractor shall fail to strictly observe or perform one or more of the terms, conditions, covenants and agreements of this Contract;
- B. If there shall be placed on any property owned by the Village any mechanics', materialmens' or suppliers' lien;
- C. If there shall be instituted any proceeding against the Contractor seeking liquidation, dissolution or similar relief and the same shall not be dismissed within forty-five (45) calendar days;
- D. If there shall be appointed any trustee, receiver or liquidator of the Contractor and such appointment shall not have been vacated within forty-five (45) calendar days; and

- E. If the Contractor fails to maintain or obtain any and all permits, licenses and the like, if any, required by the Village, State or Federal governments for the Work.

Upon any Event of Default the Village shall have the option of (i) terminating the Contract; (ii) pursuing any remedy available to it at law or in equity; or (iii) pursuing both simultaneously. In addition, upon an Event of Default, the Village may withhold payments due to the Contractor until it has hired a replacement of the Contractor and deducted all costs of hiring a replacement.

29. DELAYS

The Contractor shall not be liable in damages for delays in performance when such delay is the result of fire, flood, strike, acts of God, or by any other circumstances which are beyond the control of the Contractor; provided, however, under such circumstances the Village may, at its option, cancel the Contract.

30. COMPLIANCE WITH LAWS

The Contractor shall comply with all applicable laws, regulations and rules promulgated by any federal, state, local, or other governmental authority or regulatory body pertaining to all aspects of the Work, now in effect, or which may become in effect during the performance of the Work. The scope of the laws, regulations, and rules referred to in this paragraph includes, but is in no way limited to, the Illinois Human Rights Act, Illinois Equal Pay Act of 2003, Occupational Safety & Health Act along with the standards and regulations promulgated pursuant thereto (including but not limited to those safety requirements involving work on elevated platforms), all forms of traffic regulations, public utility, Interstate and Intrastate Commerce Commission regulations, Workers' Compensation Laws, Public Construction Bond Act, Public Works Preference Act, Employment of Illinois Workers on Public Works Act, USA Security Act, federal Social Security Act (and any of its titles), and any other law, rule or regulation of the Illinois Department of Labor, Department of Transportation, Illinois Environmental Protection Act, Illinois Department of Natural Resources, Illinois Department of Human Rights, Human Rights Commission, EEOC, and the Village of Buffalo Grove. Notwithstanding the following, the Contractor shall particularly note that:

A. NO DISCRIMINATION – The Contractor shall comply with the provisions of the Illinois Public Works Employment Discrimination Act and the Illinois Human Rights Act/Equal Opportunity Clause which, pursuant to Illinois law, are deemed to be part of this Contract.

B. FREEDOM OF INFORMATION - The Contractor agrees to furnish all documentation related to the Contract, the Work and any documentation related to the Village required under an Illinois Freedom of Information Act (ILCS 140/1 et. seq.) (“**FOIA**”) request within five (5) calendar days after the Village issues Notice of such request to the Contractor. The Contractor agrees to defend, indemnify and hold harmless the Village, and agrees to pay all reasonable costs connected therewith (including, but not limited to attorney’s and witness fees, filing fees and any other expenses) for the Village to defend any and all causes, actions, causes of action,

disputes, prosecutions, or conflicts arising from Contractor's actual or alleged violation of FOIA or the Contractor's failure to furnish all documentation related to a FOIA request within five (5) calendar days after Notice from the Village for the same. Furthermore, should the Contractor request that the Village utilize a lawful exemption under FOIA in relation to any FOIA request thereby denying that request, Contractor agrees to pay all costs connected therewith (such as attorneys' and witness fees, filing fees and any other expenses) to defend the denial of the request. This defense shall include, but not be limited to, any challenged or appealed denials of FOIA requests to either the Illinois Attorney General or a court of competent jurisdiction.

C. ILLINOIS WORKERS ON PUBLIC WORKS ACT - To the extent applicable, the Contractor shall comply with the Illinois Workers on Public Works Act, 30 ILCS 570/1 et seq., and shall provide to the Village any supporting documentation necessary to show such compliance.

D. NOT A BLOCKED PERSON - The Contractor affirms and covenants that neither the Contractor nor any individual employed by the Contractor for this Work or under this Contract is a person forbidden from doing business with a unit of local government under Executive Order No. 13224 (Sept 23, 2001), 66 Fed.Reg. 49,079 (Sept 23, 2001) or is a person registered on the Specially Designated Nationals and Blocked Persons List. The Contractor shall indemnify the Village from all costs associated with failure to comply with this paragraph.

E. SUBSTANCE ABUSE PREVENTION ON PUBLIC WORKS ACT - The Contractor knows, understands and acknowledges its obligations under the Substance Abuse Prevention on Public Works Act (820 ILCS 265/1 et seq.), and shall comply and require all subcontractors and lower tiered contractors to comply with the requirements and provisions thereof.

31. NO WAIVER OF RIGHTS

A waiver by the Village of any Event of Default or any term of provision of this Contract shall not be a waiver of the same Event of Default, another Event of Default or any other term or provision of this Contract.

32. TERMINATION OF THE CONTRACT

Voluntary Termination. Notwithstanding any other provision hereof, the Village may terminate this Contract during the Initial Term with or without cause, at any time upon thirty (30) calendar days prior written notice to the Contractor.

Termination for Breach. Either party may terminate this Contract upon written notice to the other party following material breach of a material provision of this Contract by the other party if the breaching party does not cure such breach within fifteen (15) calendar days of receipt of written notice of such breach from the non-breaching party.

33. CONTROLLING LAW AND VENUE

This Contract is entered into in the State of Illinois, for work to be performed in the State of Illinois and shall be governed by and construed in accordance with the laws of the State of Illinois. Any legal matters or dispute shall be resolved in the Circuit Court of Cook County and the Parties hereby submit to the jurisdiction of such Circuit Court. This Contract shall be construed without regard to any presumption or other rule requiring construction against the Party causing the Contract to be drafted.

34. MISCELLANEOUS

- A. AMENDMENT** – This Contract may be amended only in writing executed by both Parties.
- B. NO RECORDING** – This Contract, or a memorandum thereof, may not be recorded in any form by either Party. If either Party records this Contract, or a memorandum thereof, they shall immediately file a release of the same.
- C. SECTION HEADINGS** – The headings in the Contract are intended for convenience only and shall not be taken into consideration in any construction or interpretation of the Contract.
- D. NO THIRD PARTY BENEFICIARIES** – This Contract does not confer any rights or benefits on any third party.
- E. BINDING EFFECT** – This Contract shall be binding and inure to the benefit of the Parties hereto, their respective legal representatives, heirs and successors-in-interest.
- F. ENTIRE AGREEMENT** – This Contract supersedes all prior agreements and understandings and constitutes the entire understanding between the Parties relating to the subject matter hereof.
- G. SEVERABILITY** - If any term, condition or provision of the Contract is adjudicated invalid or unenforceable, the remainder of the Contract shall not be affected and shall remain in full force and effect, to the fullest extent permitted by law.
- H. TORT IMMUNITY DEFENSES** - Nothing contained in this Contract is intended to constitute nor shall constitute a waiver of the rights, defenses, and immunities provided or available to the Village under the Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10 *et seq*

35. APPLICATION FOR PAYMENT

At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the Contract, and the value thereof at the contract unit prices according to Article 109.02 of the Standard Specifications. For each pay period, the quantity cut off will be the first Saturday of each month. During the second week, the Engineer and Contractor will agree to the quantities completed to-date. The Contractor shall submit an agreed upon invoice electronically to the Engineer by the end of the working day of the third Monday of the month. The Village will begin their payment process and will result in the review of the payment at the next regularly scheduled Village Board meeting. Prior to the release of payment, the Contractor shall submit electronically, all certified payroll reports, applicable waivers, and a notarized and signed clarifying statement for Village Attorney review and subsequent approval. Prior to the release of the check, hard-copies of all applicable waivers and the clarifying statement shall be received by the Village.

All payments under this Contract must be approved by the Village Board at a regularly scheduled meeting. The Village reserves the right to request any receipts, invoices, proof of payments as the Village, in its sole discretion, may deem necessary to justify the payment requested prior to paying the requested payment. A Final Lien Waiver from the Contractor, its subcontractors, and all material suppliers shall be furnished with the final application for payment.

The Contractor acknowledges that the Village is a unit of local government and that all payments under the Contract are subject to the Local Government Prompt Payment Act, 50 ILCS 505 et seq. To that extent, the Village shall have forty-five calendar (45) days from receipt of a bill or invoice to pay the same before it is considered late under the Contract. Interest, if any, charged for any late payments will be subject to the interest rate caps specified in the Prompt Payment Act

36. CERTIFIED PAYROLL REPORTS

Pursuant to PA 100-1177 the Illinois Department of Labor (IDOL) has activated an electronic database (Payroll Portal) capable of accepting and retaining certified payrolls submitted under the State of Illinois Prevailing Wage Act (820 ILCS/130/1). All contractors and subcontractors completing work for the Village of Buffalo Grove pursuant to the Act must submit all certified payroll through the IDOL Payroll Portal.

The Village is an Illinois unit of local government and the Work hereunder is subject to the Illinois Prevailing Wage Act, 820 ILCS 130/0.01, et seq. Consequently, the Contractor and each subcontractor shall submit with their application for payment(s) the email certification received from their IDOL Payroll Portal submittal with each of their pay requests. Any delay in processing the payments due to a lack of aforementioned email certification shall not be an event of default by the Village and shall not excuse any delay by the Contractor who shall proceed with the Work as if no delay in payment has occurred. The Contractor and Village shall agree to take any further steps not outlined above to ensure compliance with the Prevailing Wage Act. Upon two business days' Notice, the Contractor and each subcontractor shall make available to the Village their records to confirm compliance with the Prevailing Wage Act. Finally, to ensure compliance with Prevailing Wage Act, the Contractor and each subcontractor shall keep for a period of not less than 5 years after the Work has been completed records of all laborers, mechanics, and other workers employed by them for the Work; the records shall include each worker's name, address, telephone number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, the starting and ending times of work each day and, when available, last four digits of the social security number. The Contractor shall provide a list of every name, address, phone number and email of every sub-contractor for the Work.

If the contractor must submit the payroll to the Village of Buffalo Grove for reasons outside of their control, the Village requests that the Contractor submit all certified payroll reports, including subcontractors, and EEO reporting be sent electronically in separate files for each respective Contractor/subcontractor with the weeks ending date in the file name to kjohnson@vbg.org (i.e. Contractor Name Week Ending.pdf) as shown in the sample letter in Exhibit D.

The Contractor is responsible for providing all records in accordance with the Illinois Department of Labor's (IDOL) requirements pertaining to the Prevailing Wage Act on the standard IDOL form. Only the last four (4) digits of the employee's social security number will be required; the remaining digits shall be "X" or redacted. To complete the certified payroll request for release of payment, the Contractor must supply a signed and notarized written statement that all necessary documentation has been turned over for the pay period pertaining to that payment requested.

Under P.A. 98-0328, the public body must retain copies of the certified payroll for 5 years rather than 3 years as was the case previously. The Illinois Department of Labor (IDOL) has created model certified payroll forms which can be found at the IDOL website www.illinois.gov/idol. The new form consists of three pages identified as the "certified transcript of payroll affidavit" and "certified transcript of payroll instructions". The new forms on the IDOL website can be filled in online and then printed out. Under P.A. 98-0482, contractors and subcontractors will have to provide additional information with respect to working hours, wage rates, overtime rates and fringe benefits. The IDOL's model certified payroll forms are the most current forms for compliance with P.A. 98-0482 and should be used in public works contracts

37. MONETARY PENALTIES

All work shall be completed in accordance with the Contract Documents in a reasonable and timely manner. For each occurrence that work is not completed in a reasonable and timely manner, a monetary penalty will be deducted from the final pay application. The Contractor shall make themselves and all subcontractors aware of the following deficiency and deductions:

Description	Penalty	Per Occurrence
Failure to Sweep Roadway	\$250	Calendar Day
Failure to Maintain Trench	\$250	Calendar Day
Failure to Adhere to Period of Establishment Requirements	\$250	Calendar Day
Distributing Unapproved Resident Notices	\$100	Household
Failure to Distribute Notices in a Timely Manner	\$100	Household
Failure to Distribute Notice to Resident	\$100	Household
Failure to Provide Access in a Timely Manner	\$250	Household/Occurrence Per Day
Failure to Provide Weekly Update to Engineer/Maintain Schedule	\$1,000	Per Occurrence
Failure to Attend a Scheduled Weekly Meeting	\$1,000	Per Occurrence
Failure to Respond in a Timely Manner to a Resident	\$250	Calendar Day
Failure to Ramp Roadway or Driveway	\$250	Household/Roadway Per Day
Use of Fire Hydrant or Valve	\$1,000	Each
Failure to Provide Maintenance of Roadway in a Timely Manner as Determined by the Engineer	\$1,000	Calendar Day
Entering Private Property	\$500	Per Occurrence
Failure to Provide Portable Facilities	\$100	Calendar Day
Illicit Discharge of Silt or Construction Debris	\$1,000	Per Occurrence

General Provisions

Failure to Submit Shop Drawings on Time	\$500	Per Occurrence
Failure to Maintain Erosion and/or Sediment Control Devices	\$1,000	Per Occurrence
Working Outside Allowable Work Hours	\$1,000	Per Occurrence

At the discretion of the Engineer and without notice, the Contractor shall have deducted the monetary penalty amount as listed above for each occurrence on the final pay application.

38. WEEKLY PROGRESS MEETING AND SCHEDULE UPDATES

The Contractor will be required to provide weekly schedule updates with the anticipated schedule for the following week by 3:00PM every Thursday starting ten (10) calendar days after contract execution and continuing until the project is formally accepted by the Village. The Contractor will be required to submit an initial weekly schedule update with the anticipated schedule the Thursday prior to construction commencement; if the Contractor fails to submit this initial notice, no work shall be permitted to begin. The weekly progress update shall be emailed to the Resident Engineer and Village project representative. The Contractor shall make every effort to maintain the schedule within one (1) calendar day of delay, excluding weather or unforeseen circumstances. Failure to maintain the schedule may result in a monetary penalty of \$1,000 per calendar day if it is determined that substantial effort to maintain the schedule is not made.

If, at the discretion of the Village or Engineer, a mandatory weekly progress meeting may be scheduled to coordinate anticipated work. This meeting will be held on Thursday following receipt of the weekly progress update. If the Contractor fails to attend a mandatory weekly meeting requested by the Village or Engineer a monetary penalty of \$1,000 per occurrence will be imposed.

39. PUBLIC NOTIFICATION

The Contractor shall be required to provide and distribute letters to residents or business owners anytime access will be affected to a home or utility service is interrupted. Letters shall be typed on standard 8.5" x 11" paper and an envelope may or may not be used. All letters, including those written and distributed by a subcontractor, shall be printed on the General Contractor's letterhead and include the name, address, and telephone number of the General Contractor's person in charge.

Letters shall be taped to a non-painted surface using painters tape or approved equal, and will be placed in as many locations as needed to ensure they will be visible to residents. Distributing letters via mailbox is discouraged, however, must be compliant with all United States Postal Service federal regulations. Notification letters shall include, but is not limited to, the following information:

- Exact day and time work is to begin that will affect access (weather permitting).

- How the resident will know they may resume normal access to their property.
- The anticipated length of the closure (no more than one week will be permitted).
- Specific location where parking is permitted, both overnight and during the working day (as signed and normally permitted during daytime).
- The Village of Buffalo Grove Police Department has been notified that overnight parking will be permitted. (It shall be the responsibility of the Contractor to confirm this with the Village.)
- The Contractor will go door-to-door the moment prior to work is to begin to ensure all accommodations are made.
- General Contractor's person in charge name and contact information for additional information or specific requests.
- If applicable, provide Resident flushing procedures (following reconnection of the water service, resident to flush inside of the house via the bath or utility sink for ten minutes prior to consumption).

Notification letters shall be distributed a minimum of 24 hours prior to access being affected or otherwise. If this requirement is not met, work shall not commence. **All letters must be approved by the Village or Engineer prior to and for each individual distribution occurrence.** Additional letters may be required when weather or other unforeseen circumstances change the schedule. When requested, the Contractor is required to return or provide correspondence from a resident within 24 hours.

Under special circumstances, the Village may choose to write a notification letter and the Contractor shall still be responsible for delivering the letter as specified herein. An example of a resident notification letter can be found in Appendix A.

The Contractor must comply with all of the above-mentioned statements otherwise a monetary penalty of \$100 per household, per calendar day shall be imposed.

40. MAINTENANCE LETTER OF CREDIT

The Contractor will be required to post a Letter of Credit for a period of One Year (1-yr) from date of final acceptance by the Village. Final acceptance will be the date the Final Payment is made to the Contractor. The Letter of Credit shall be in a form acceptable to the Village in the amount of 10% (ten percent) of the awarded contract value. Unless under emergency situations the Village will offer the Contractor the ability to fix or repair any item prior to drawing from the Letter of Credit. If the Contractor elects to perform the repairs themselves all work must be complete within 14 calendar days of notice from the Village or the Village reserves the right to perform the repairs themselves.

The Letter of Credit shall cover all necessary repairs or replacements as deemed necessary by the Village due to poor workmanship, failed materials, any settlement, excessively spalled, chert popped or cracked concrete, storm, sanitary and water main failures, restoration establishment, and other items as completed by the Contractor under the Contract.

All required pavement repairs shall be from curb line to the nearest cold joint. Pavement repairs shall have all joints routed and filled with crack seal material including along the edge of pavement 30 calendar days after installation.

If the Contractor elects to not perform the repairs or does not perform them in the time allotted the Village will perform the work and collect from the Letter of Credit any damages incurred by the Village to perform the repairs

41. WATER AND SEWER SERVICES

The Village of Buffalo Grove will not locate private water and sewer service lines as part of the JULIE notification system. The property owner is the owner of these services from the building to the main and are exempt from the JULIE system.

The Contractor is fully responsible for protecting all utilities near or in their excavation area and shall make themselves fully aware of the exact location of each utility; marked or not marked. The Contractor may elect to locate any and all utilities marked or unmarked, at their expense. Repeated damage to service lines will need to be repaired from the main to the right-of-way as directed by the Engineer. The Contractor shall be responsible for repairs to all damaged utilities incurred as determined by the Village or Engineer.

All repairs to damaged water and sewer service lines shall be completed with material equal to, including size, of the existing service. Connections of dissimilar materials shall be made with stainless steel non-shear mission couplings or appropriate flare couplings for water services. All fittings for copper water service lines shall be of the "flare" type regardless of temporary or permanent use. Any damage to existing water service lines during construction shall be repaired with the existing main under pressure. The Contractor shall have a crimping tool and e-z out or freeze kit on-site to make repairs as required. Repair of service lines in this manner shall only be performed on lines that will be abandoned as part of this project, if applicable.

The Contractor shall refer to the Village of Buffalo Grove Materials List in Appendix A for all material requirements. This work shall not be paid for separately and no additional cost incurred will be the responsibility of the Village.

42. EARTH EXCAVATION

All earth excavation required to complete this project to the proposed lines, grades, and cross sections shall be in accordance with Section 202 of the Standard Specifications. Earth excavation will not be paid for separately but shall be included in the cost of the item requiring the excavation. All surplus excavated material shall be disposed of off-site in accordance with Article 202.03 of the Standard Specifications.

43. RETAINAGE AND WAIVERS

The Village of Buffalo Grove has the option to retain from the amount due to the Contractor a maximum of ten percent (10%) from each pay request. The Contractor may request the retainage be reduced and provide reasoning for such reduction in writing to the Village. The Village has the option to accept or deny the request and shall be considered final. The retainage may be held until the Village determines the project to be final and accepted, at which time any warranty or maintenance period shall commence.

The Contractor shall submit, for each pay request submittal, original partial or final waivers from all subcontractors and material suppliers for the work payment is requested from the Village; trailing waivers will not be permitted. The Village will not remit payment to the Contractor until all original hard-copies of waivers for the work the Contractor is requesting payment for are received and reviewed. To help expedite the process, the Village is willing to review draft waivers after the invoice has been submitted for the pay request. When the draft waivers are reviewed and found acceptable, and the check is cut according to the Village's Warrant schedule, then the check and final waivers can be exchanged accordingly.

44. FINAL SITE INSPECTION

After the Contractor has submitted the notice of final completion to the Village, the Contractor shall schedule a final site inspection with the Village and Engineer. The Contractor shall provide a laborer or Contractor's representative for the final inspection that will be responsible for the following:

1. Open and inspect all existing and newly installed storm structures, sanitary structures, and valve vaults.
2. Key all hydrant auxiliary boxes and operate the valve.
3. Key all b-box's and operate the valve.
4. Key all valves and operate the valve.
5. Review general site cleanliness and condition of landscaping, curb, sidewalk, pavement, etc.

Upon completion of the final site inspection, the Engineer will provide the Contractor a list of any deficiencies documented. The Contractor will have fourteen (14) calendar days to correct any deficiencies following the scheduled final inspection and punch list submittal by the Engineer.

45. PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work in accordance with Article 107.04 of the Standard Specifications. No work shall be performed until all applicable permit requirements are fulfilled.

The following permits shall be applicable to this Contract:

- Illinois Environmental Protection Agency – Division of Water Pollution Control (SWPPP)
- Illinois Environmental Protection Agency – Division of Public Water Supplies
- Illinois Environmental Protection Agency – Division of Water Pollution Control
- Illinois Department of Transportation
- Cook County Highway Department
- Metropolitan Water Reclamation District of Greater Chicago

46. RED LINE AS-BUILTS

This work shall consist of supplying red line as-builts of the installed utility improvements including but not limited to rim, inverts, top of pipe elevations, service locations, vertical offsets, underdrain installations, and other underground utilities.

The as-builts shall have red marks and installed elevations wherever on the engineering drawings a proposed grade, structure, invert or any other proposed item is shown. All elevations shall be recorded on the NAVD 88 datum, consistent with the plans. The as-builts shall be submitted to the Village in red marked PDF file on the issued for construction drawings.

As-builts with insufficient recorded information will be rejected. As-builts must be turned in with the Contractors notice of completion. Failure to submit as-builts with the notice of completion will begin to trigger liquidated damages after the project completion date or when working days have been exhausted. This work shall not be paid for separately but shall be considered included in the cost of the Contract.

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SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016 (hereinafter referred to as the "Standard Specifications"); the "Supplemental Specifications and Recurring Special Provisions", adopted January 1, 2021 as amended; the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" in effect on the date of the invitation of bids; and the latest edition of the "Standard Specifications for Water & Sewer Construction in Illinois".

1. CLEARING AND GRUBBING

Description: This work shall include all labor, material, and equipment necessary to clear the construction areas shown on the plans as "Incidental Clearing and Grubbing" and other locations as required to execute the work.

Construction: This work shall comply with applicable sections of Section 202 of the Standard Specifications.

Measurement and Payment: This work will not be measured for payment but shall be considered included in the cost of the pay items requiring the work.

2. STORM SEWER REMOVAL (55100500, 55100700, 55100900)

Description: This work shall include all labor, material, and equipment necessary to remove existing storm sewer at locations shown on the Engineering plans in accordance with Article 551 of the Standard Specifications and as specified herein.

Construction: Storm sewer pipe shall be removed completely and not crushed in place; material not suitable for salvage shall be disposed according to Article 202.03. Excavation of trenches shall be performed according to the applicable requirements of Article 550.04. Backfill of trenches shall be performed according to the applicable requirements of Article 208.03 for locations where sewer is not being replaced in the same trench. For locations where sewer is being replaced in the same trench, trench backfill shall not be paid for as part of the sewer removal. All measurements shall be the internal diameter of the sewer pipe.

The Contractor will be required to provide bypass pumping during removal of the proposed sanitary sewer.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for SANITARY SEWER REMOVAL, of the size specified which shall include all labor, material, and equipment required to complete the work as specified herein.

3. WATER MAIN (56100700)

Description: This item shall include all labor, material, and equipment necessary to furnish and construct ductile iron water main, of the diameter specified in accordance with Section 561 of the Standard Specifications, Section 41 of the Standard Specifications for Water and Sewer Construction in Illinois and as specified herein.

Water Main: All water main bolts and nuts for all MJ connections, hydrants, valves, and other appurtenances shall have bolts manufactured with A304 stainless steel and all nuts and washers shall be manufactured with series 300 stainless steel.

All bends, fittings and accessories required for installation of the water main as specified and shown on the plans shall be included in the cost of water main.

Open Cut Installation: The requirements of Section 40-2.01 of the Standard Specifications for Water and Sewer Construction in Illinois are modified as follows: Water Main shall be cement lined ductile iron pipe with "push on" single gasket joints and shall be thickness class 52. The pipe shall conform to ANSI A-21.51 and ANSI A-21.4, and AWWA C104 with joints meeting ANSI A-21.11. Fittings shall be ductile iron, 250 psi pressure rating, cement lined, with restrained push-on joints and shall meet ANSI A-21.10.

Mega-Lug retainer glands shall be required at all connections of ductile iron water main with bends, tees, crosses, reducers and other fittings.

No deflection of pipe will be allowed unless specified on the plans or approved in writing by the Engineer.

Vertical offsets shown on the plans will not be paid for separately but shall be included in the linear foot price of the water main.

All joints within the IDOT Right of Way shall be restrained type.

All testing and chlorination shall conform to Sections 41-2.12 and 41-2.13 of the Standard Specifications for Water and Sewer Construction in Illinois AWWA C651-14 and the requirements of the Municipality.

Water mains and water services within 3' of the water main shall be polyethylene encased as described in ANSI/AWWA C105.A21.5 and ANSI/AWWA C600. The polyethylene wrap shall be installed as shown by the Ductile Iron Pipe Research Association publication "Polyethylene Encasement Installation Guide".

Excavation, Bedding and Backfilling: This work shall be performed in accordance with Sections 20 and 22 of the Standard Specifications for Water and Sewer Construction in Illinois and the detail for

“Water Main Installation” shown on the Plans. Granular bedding, 4 inches thick, shall be installed under all water main. Additional granular material to 6 inches above the pipe shall be installed. Granular material from 4 inches below the bottom of the pipe to 6 inches above the top of the pipe shall not be paid for separately but shall be considered included in the pay item. Trench backfill shall be required where the trench is located within 5-feet of existing or proposed pavements and shall be paid for separately as TRENCH BACKFILL. The material used for this item shall be exclusively IDOT certified Class B coarse aggregate material meeting the gradation of CA-11 in accordance with Section 1004 of the Standard Specifications. All aggregate must be crushed, rounded aggregate will not be permitted. The backfill material shall be compacted to 95% modified proctor density as required by ASTM D1557 or AASHTO T-180.

Trench width for payment purposes shall include the outside diameter width of the pipe plus 18” on each side of the pipe. Trench height for payment purposes shall be from 6” above the pipe to the subgrade elevation of the final pavements or proposed topsoil. Any sheeting or shoring required for open-cut trenches shall be provided and installed as included in the Contract. Sheeting or shoring shall comply with any governing Federal or State agencies, laws and local ordinances.

Where the trench crosses sidewalks, roads, and driveways, the trench shall be backfilled to the existing grade at the end of each working day with trench backfill material or protected by other means as approved by the engineer (plates, temporary pavement, etc.). If trench backfill is used, the final four inches (4”) shall include a CA-6 stone cap. This temporary backfill (or other methods) shall not be paid for separately but shall be considered included in the cost of the water main installation. No separate payment will be considered for the removal of this temporary stone or other backfill in preparation of final paving.

Pressure and Leakage Testing of Water Mains: Pressure testing of the water mains shall be in accordance with Section 41-2.12 of the Standard Specifications for Water and Sewer Construction in Illinois and as specified herein. Water main shall be subjected to a minimum hydrostatic pressure test of 150 pounds per square inch (psi) for a period of not less than two (2) hours. The maximum allowable leakage will be that stated in section 41-2.14C the Standard Specifications for Water and Sewer Construction in Illinois. In addition, the hydrostatic pressure shall not drop more than five (5) psi during the test.

Chlorination of Water Mains: Disinfection of water mains shall be performed according to AWWA C651-14 and section 41-2.15 of the Standard Specifications for Water and Sewer Construction in Illinois. Where conflicts between the above requirements exist, the more restrictive requirement shall govern or as approved by the Engineer

Chlorine shall be applied by the use of (1) liquid chlorine only. All work as listed shall be included with this pay item.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for WATER MAIN, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

4. FIRE HYDRANTS TO BE REMOVED (56400500)

Description: This work shall include all labor, material, and equipment necessary to remove and dispose of existing fire hydrant assemblies at locations shown on the Engineering plans and as specified herein.

Construction: Fire hydrants shall be removed completely, including, but not limited to, the entire barrel section including the seat, the existing auxiliary valve, and valve box. Fire hydrant assemblies shall be delivered to the Village of Buffalo Grove Public Works yard or at a location determined by the Village in good condition. Good condition is defined as the material is delivered without damage to the joints or fittings and can be repurposed. Material damaged due to the Contractor's negligence shall be replaced at no additional cost to the Village with equal material in good condition.

The Contractor shall coordinate delivery of materials with the Department of Public Works a minimum of 48-hours prior to delivery of the materials noted above.

The remaining open pipe fire hydrant lead shall be bulk headed with brick and mortar, or a mechanical joint cap, as directed by the Engineer. Any materials not suitable for salvage shall be disposed of according to Article 202.03 of the Standard Specifications.

The open excavation shall be backfilled with approved excavated materials. At the Contractors discretion to prevent future settlement, trench backfill material may be used at the Contractors expense as specified herein.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for FIRE HYDRANTS TO BE REMOVED, which shall include all labor, material, and equipment required to complete the work as specified herein.

5. SHREDDED BARK MULCH 3" (K1005481)

Description. This work shall consist of installing a layer of shredded bark as shown in the volume control facility detail.

Construction Requirements. The mulch shall be shredded hardwood, non floatable mulch and installed per the Drainage Details in the Plans. The mulch shall be milled and screened to a maximum 4 in. particle size and shall be free from sawdust, clay, trash and any artificially introduced chemical compounds. Grass clippings shall not be used as mulch. The layer of mulch shall not exceed the depth shown in the Plans to ensure plant roots are rooted in the soil. The Contractor must keep a clearance of 3 in. around new plantings in the bioswale to facilitate watering and air exchange.

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

Basis of Payment. The work shall be paid for at the contract unit price per square yard for SHREDDED BARK MULCH 3”.

6. STABILIZED CONSTRUCTION ENTRANCE (Z0013797)

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

Materials. All materials shall conform to the applicable requirements of Materials, Division 100 and specific references as follows:

Coarse Aggregate Section 1004

Filter Fabric..... Section 1080

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

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

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

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

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

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

7. CONSTRUCTION LAYOUT (Z0013798)

Description: The Contractor shall furnish and place construction layout stakes for the proposed work. The Engineer will provide adequate reference points to the centerline of survey and bench marks as shown in the plans. Any additional control points set by the Engineer will be identified in the field to the Contractor and all field notes will be kept by the Engineer.

The Contractor shall provide field forces, equipment, and material to set all additional stakes for the portions of this project as described above, which are needed to establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout of the work.

Stakes for line and grade of pavement and/or curb shall be set at sufficient station intervals (not to exceed 50 ft) to assure substantial conformance to plan line and grade. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract nor to determine property lines between private properties.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

Responsibility of the Engineer: The Engineer will make random checks of the Contractor's staking to determine if the work is in conformance with the plans. Where the Contractor's work will tie into work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.

Where the Contractor, in setting construction stakes, discovers discrepancies, the Engineer will check to determine their nature and make whatever revisions are necessary in the plans.

It is not the responsibility of the Engineer, except as provided herein, to check the correctness of the Contractor's stakes; any errors apparent will be immediately called to the Contractor's attention and s(he) shall make the necessary correction before the stakes are used for construction purposes.

Where the plan quantities for excavation are to be used as the final pay quantities, the Engineer will make sufficient checks to determine if the work has been completed in conformance with the plan cross sections.

Responsibility of the Contractor: The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. S(he) shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and/or filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.

At the completion of the grading operations, the Contractor shall set stakes at 100 ft Station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Engineer.

All work shall be according to normally accepted self-checking surveying practices. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Village at the completion of the project. All notes shall be neat, orderly and in accepted form.

Measurement and Payment: This work will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT.

8. DRAINAGE STRUCTURE TO BE REMOVED (Z0018700)

Description: This work shall consist of removing drainage inlets or catch basin structures, per Section 605 of the Standard Specifications.

Construction: This work will consist of removing the frame and cover of the existing manhole, breaking down the manhole walls for a complete removal to ready the excavation for replacement of a new drainage structure. If the structure is in pavement, the pavement will be restored under a different pay item. If the frame or cover is deemed re-useable by the Engineer, the frame and/or cover must be delivered to the Village at a location identified by the Engineer. Any debris, including the frame and cover must be disposed of off-sight in an approved manner. The contractor will pay for all disposal fees.

Basis of Payment: The work shall be paid for at the contract unit price each for DRAINAGE STRUCTURE TO BE REMOVED. Salvaging of the frame and cover is included in this pay item.

9. STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, 12" (Z0056648)

Description. This work shall consist of furnishing and installing storm sewer pipe of the type and required size at the locations shown on the Plans or as authorized by the Engineer. **The pipe shall be PVC water main quality pipe in accordance with Section 40-2.01 of the Standard Specifications for Water and Sewer Construction in Illinois.** The pipe shall be constructed over, under, or parallel to proposed water main in order to protect the water main per the separation requirements in the Standard Specifications for Water and Sewer Construction in Illinois.

The pipe, gaskets, fittings and pressure rating shall conform to Section 40-2.02 and 40-2.05B of the Water and Sewer Specifications. The pipe will be laid at the original grade of the storm sewer that is replaced, and shall be reconnected at both ends with water tight couplings at no additional cost.

Excavation, bedding, and backfilling shall be in accordance with Special Provision 3 for Water Main.

Connections to existing manholes, inlets or catch basins shall be cored into the existing structure, if the hole resultant from STORM SEWER REMOVAL is not sufficient. The proposed pipe shall be bricked and/or mortared in place to provide a water tight seal. The coring, brick and mortar shall not be paid for separately, but shall be considered included in the cost of this pay item.

Basis of Payment. This work shall be paid for at the contract unit price per foot for STORM SEWERS, TYPE 1, WATER MAIN QUALITY PIPE, of the required type and size, which price shall be payment in full for all work required as described above. Any couplings required for reconnection to existing storm sewers or structures will be considered included in this pay item.

10. SANITARY SEWER (Z0056900, Z0057200, Z0057300)

Description: This work shall include all labor, material, and equipment necessary to furnish and install sanitary sewer, of the diameter, material and strength class specified in accordance with Section 550 of the Standard Specifications and as specified herein.

Construction: The material used for pipe and fittings shall be as follows:

- | | |
|-----------------|--|
| Diameter < 18”: | PVC SDR 26, of the diameter specified, conforming to ASTM D-3034 pipe standards with rubber gasket joints conforming to ASTM D-3212. |
| Diameter ≥ 18”: | PVC PS46, of the diameter specified, conforming to ASTM F-679 pipe standards with rubber gasket joints conforming to ASTM-D3212. |

All sanitary sewer shall be tested in accordance with the Standard Specifications for Water and Sewer Construction in Illinois. All flexible sanitary sewer pipe shall be tested by Method D and either Method A, B, or C as outlined in Section 31-1.12. All sanitary sewer must also be tested by Method E. The Contractor shall provide the Engineer a copy of the video on a digital video disc. The video must be in color and proceed no faster than one (1) foot per second.

Excavation, Bedding and Backfilling: This work shall be performed in accordance with Sections 20 and 22 of the Standard Specifications for Water and Sewer Construction in Illinois and the detail for “Water Main Installation” shown on the Plans. Granular bedding, 4 inches thick, shall be installed under all sewer. Additional granular material to 12 inches above the pipe shall be installed. Granular material from 4 inches below the bottom of the pipe to 12 inches above the top of the pipe

shall not be paid for separately but shall be considered included in the pay item. Trench backfill shall be required where the trench is located within 5-feet of existing or proposed pavements and shall be paid for separately as TRENCH BACKFILL. The material used for this item shall be exclusively IDOT certified Class B coarse aggregate material meeting the gradation of CA-11 in accordance with Section 1004 of the Standard Specifications when sewer is located outside of Cook County right of way. All aggregate must be crushed, rounded aggregate will not be permitted. The backfill material shall be compacted to 95% modified proctor density as required by ASTM D1557 or AASHTO T-180.

All trenches within Cook County ROW shall be trench backfilled with FA-6 sand in accordance with Method 1 in accordance with Article 550.07 of the IDOT Standard Specifications.

Trench width for payment purposes shall include the outside diameter width of the pipe plus 18" on each side of the pipe. Trench height for payment purposes shall be from 12" above the pipe to the subgrade elevation of the final pavements or proposed topsoil. Any sheeting or shoring required for open-cut trenches shall be provided and installed as included in the Contract. Sheeting or shoring shall comply with any governing Federal or State agencies, laws and local ordinances.

Where the trench crosses sidewalks, roads, and driveways, the trench shall be backfilled to the existing grade at the end of each working day with trench backfill material or protected by other means as approved by the engineer (plates, temporary pavement, etc.). If trench backfill is used, the final four inches (4") shall include a CA-6 stone cap. This temporary backfill (or other methods) shall not be paid for separately but shall be considered included in the cost of the water main installation. No separate payment will be considered for the removal of this temporary stone or other backfill in preparation of final paving.

Measurement and Payment: Sanitary sewer will be measured for payment in place in feet along the length from end to end, including sanitary sewer service wye fittings, but excluding through manholes.

This work will be measured in place and paid for at the contract unit price per foot (FT) for SANITARY SEWERS, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

11. UNDERDRAIN CONNECTION TO STRUCTURE (Z0076870)

Description: This work shall consist of making a pipe underdrain connection to an existing drainage structure or culvert as shown in the plans and in accordance with Section 601 of the Standard Specifications.

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

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

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

12. EARTH EXCAVATION (UNSUITABLE MATERIAL) (X0100020)

Description: The work shall consist of the removal and disposal of all material to excavate the first foot within the existing retention pond footprints.

Construction: Excavation for the proposed improvements shall be in accordance with Section 202 of the Standard Specifications. The excavation of the retention basin shall be completed by the use of mechanical dredging. Hydraulic dredging will not be permitted. The Contractor should anticipate that the dredged material will be saturated. The Contractor shall not receive additional compensation for hauling or legally disposing of this material. The sediment removed from the bottom of the basin shall be hauled to an appropriate disposal site in sealed trucks. There will be no additional payment for hauling overly saturated soils from the site. The excavation quantity shall be determined by the Village by obtaining cross-sections of the pond and computing the cubic yard volume by the average end area method after earth excavation is complete. The quantity will not be determined by counting truckloads of material that are removed from the site.

The saturated state of the material being removed will prevent it from being accepted at a CCDD facility. The Contractor shall select a landfill mandated by definition 32 of the contaminant within the State of Illinois. The Village will review and accept or reject the facility proposed by the Contractor to use as a landfill. The selection of a landfill and any additional soil or water testing required by the IEPA or the selected landfill shall not be paid for separately, but shall be considered included in the price for EARTH EXCAVATION (UNSUITABLE MATERIAL). Any necessary clearing within or to gain access to the excavation areas, as described in Article 201.01(a) of the Standard Specifications shall not be measured for payment but shall be considered included in the cost of "EARTH EXCAVATION (UNSUITABLE MATERIAL)".

Basis of Payment: This work shall be paid for at the contract unit price per cubic yard for EARTH EXCAVATION (UNSUITABLE MATERIAL), which price shall include all labor, materials, testing, equipment and incidentals required to complete the work as described above.

13. ABANDON AND FILL EXISTING SANITARY MANHOLE (X0322464)

Description: This work shall consist of the Removal and disposal of the frame and lid of the sanitary manhole and abandoning in-place an existing sanitary manhole in the location shown on the plans and filling with CLSM per the applicable portions of Article 605 and Article 593 of the standard specifications. If the frame or cover is deemed re-useable by the Engineer, the frame and/or cover must be delivered to the Village at a location identified by the Engineer.

Measurement and Payment: This work will be measured for payment, complete in place per EACH for ABANDON AND FILL EXISTING SANITARY MANHOLE and shall consist of all time, labor, and materials to complete the operation.

14. FILL EXISTING SANITARY SEWERS (X0322791)

Description: This work shall include all labor, material, and equipment necessary to furnish and fill the existing sanitary sewer with controlled low-strength material in accordance with Section 593 of the Standard Specifications and as specified herein.

Construction: This work shall consist of filling existing sanitary sewer to be abandoned with Controlled Low Strength Material (CLSM). The utility shall be plugged on all ends with a plug material meeting approval of the Engineer. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during the filling operation, the Contractor shall be responsible for the cost of repairing the plugs and filling the remainder of the pipe. CLSM shall be placed to completely fill all voids and crevices within the abandoned pipe. CLSM shall be placed by low pressure pumping with a maximum length of flow limited only by the safe allowable load that may be applied to the abandoned utility. Additional access holes, where required, or as directed by the Engineer, shall be opened to assure the complete filling of the utility.

The capping and/or plugging required to fill the pipe as described will be included with this pay item.

The Contractor shall submit to the Engineer a mix design for the flowable fill used on the project. The mix design shall generally conform to the following mix as designed by Prairie Material Mix #6115811, or approved by the Engineer:

Cement: 80 Pounds
Fly Ash 910 Pounded line
Sand 1850 Pounds
Water 54.7 Gallons
A/E 1-25%
Slump 10+/- 1"

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per cubic yard (CY) for FILL EXISTING SANITARY SEWER, which shall include all labor, material, and equipment required to complete the work as specified herein.

15. PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER (X0322918)

Description: This work shall consist of installing a manhole/catch basin over an existing sewer as directed in Sections 502 and 550 of the Standard Specifications.

Construction: The Contractor shall carefully remove the existing storm sewer which falls within the structure. After the manhole/catch basin is installed, the manhole/catch basin shall be mortared with a non-shrink concrete grout.

Basis of Payment: The work shall be paid for at the contract unit price per each for PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER.

16. REMOVE EXISTING FLARED END SECTION (X0322936)

Description: This work shall consist of the removal and disposal of flared end sections at locations shown on the plans, in accordance with the applicable portions of Section 551 of the Standard Specification, and as directed by the Engineer.

Method of Measurement: Removal of existing concrete end sections will be measured for payment in units of each at the locations designated on the plans.

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

17. GATE VALVE 8" WITH VAULT, 5' DIAMETER (X0325950)

Description: This work shall include all labor, material, and equipment to install water valves, of the diameter specified, in a vault at the locations specified on the plans in accordance with Section 561 of the Standard Specifications, and the detail "Standard Valve In Vault".

Water valves shall conform to AWWA C504, AWWA C508, or AWWA C509. All valves shall turn counterclockwise, or to left, to open. Valves shall be American Flow Control, Series 2500 Resilient Wedge Gate Valves and shall have the manufacturer and year cast on the body with raised letters. **Valves shall have an all stainless steel trim.**

Valves shall be installed in concrete vaults in conformance with the details shown on the detail. Valves shall be installed using stainless steel bolts. A 1" corp shall be installed on each side of each new valve in the vault to facilitate chlorination, flushing, and pressure testing.

Backfill around vault in addition to water main trench backfill, shall be CA-11 trench backfill when under pavement and shall be included in the cost of the pay item.

Basis of Payment: This work will be paid for at the contract unit price per each for GATE VALVE 12" WITH VAULT, 5' DIAMETER and shall include all labor, material, and equipment required to complete the work as specified herein.

18. WASHOUT BASIN (X0326806)

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

approval from the Engineer. The washout basin location(s) must be approved by the Engineer prior to installation.

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

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

19. ENGINEERED SOIL FURNISH AND PLACE (SPECIAL) (X0326981)

Description. This work shall consist of installing the bioswale engineered soil mix furnished and completed in place.

Construction Requirements. The engineered soil media mix shall be of the dimensions specified in the Plans and have a makeup of 50% sand, 30% compost, and 20% topsoil (or district mix). Soil organic content matter should be between 8% - 10% by weight and shall contain less than 5% mineral fines content (clay). Soil compaction must be achieved to 85% maximum density per ASTM D 1557 and have a minimum long-term hydraulic conductivity of 1 in/hr per ASTM D2434 and maximum immediate hydraulic conductivity of 12 in/hr. Soil shall be mixed uniformly. The Contractor must submit documentation to the Engineer showing specifications are met prior to start of any work or procurement of any materials.

The contractor may obtain engineered soil for this Work off site or created by testing native soils and mixing with imported materials as needed to achieve specifications but will notify the Engineer when such course of action will take place. Unsaturated soil must be placed in 8 in. lifts and must not be placed if saturated. To preserve infiltration capacity of native soil, the contractor must keep machinery outside of bioswale area. After soil placement, each lift must be compacted to 85% maximum density using water until just saturated or by walking on the surface. Do not use a vibratory compactor.

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

Basis of Payment. The work shall be paid for at the contract unit price per cubic yard for ENGINEERED SOIL FURNISH AND PLACE (SPECIAL).

20. DEWATERING (X0426200)

Description: This work consists of the dewatering of the existing ponds to facilitate construction activities as well as to accommodate the inflow and storm water runoff.

Construction Methods: It is anticipated that sequencing the construction of the bypass storm sewer piping will be required to accommodate the inflow of storm water runoff that currently enters the ponds. Alternatively, a temporary bypass channel, cofferdam, or pumping will be required to accommodate the inflow of storm water runoff throughout construction until acceptance by the Village.

The Contractor will be required to manage the pond water level within the limits of construction. The method of managing the water will be left to the Contractor to determine. The Contractor shall provide a water management plan to the Village for review and approval prior to the start of construction.

The discharge of water from either pumping or storm water runoff must meet applicable state and federal standards for water quality and/or be treated to prevent discharge of 34 sediment to adjacent water bodies/ponds. The Contractor must also take necessary precautions to avoid scour in the areas where the water is pumped.

Basis of Payment:

This work shall be paid for at the contract lump sum price for DEWATERING. The contract price shall be considered to be all inclusive of labor, materials and equipment for the purposes of managing water within the project area. The Contractor is responsible for maintenance of the water throughout the duration of the project.

21. SANITARY SEWER REMOVAL (X0487800, X0840000)

Description: This work shall include all labor, material, and equipment necessary to remove existing sanitary sewer at locations shown on the Engineering plans in accordance with Article 551 of the Standard Specifications and as specified herein.

Construction: Sanitary sewer pipe shall be removed completely and not crushed in place; material not suitable for salvage shall be disposed according to Article 202.03. Excavation of trenches shall be performed according to the applicable requirements of Article 550.04. Backfill of trenches shall be performed according to the applicable requirements of Article 208.03 for locations where sewer is not being replaced in the same trench. For locations where sewer is being replaced in the same trench, trench backfill shall not be paid for as part of the sewer removal. All measurements shall be the internal diameter of the sewer pipe.

The Contractor will be required to provide bypass pumping during removal of the proposed sanitary sewer.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for SANITARY SEWER REMOVAL, of the size specified which shall include all labor, material, and equipment required to complete the work as specified herein.

22. COARSE AGGREGATE (X0795800)

Description: This work shall consist of placing coarse aggregate at the volume control facility within the detention pond, as shown in the plans. The work shall be completed in accordance with Section 601.06, and applicable portions of Article 1004.

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

Basis of Payment: This work will be paid for at the contract unit price per ton for COARSE AGGREGATE.

23. MANHOLES, TYPE A, 9' DIAMETER, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE (X1200042)

Description. This work shall consist of installing a new manhole of the specified size, grate and/or frame and lid at locations as designated in the plans. The work shall be completed in accordance with the MWRD detail as shown in the plans and the applicable portions of Sections 602 and 604 of the Standard Specifications.

Method of Measurement and Basis of Payment. The work shall be paid for at the contract unit price per each for MANHOLES, TYPE A, WITH 2 TYPE 1 FRAMES, CLOSED LID, RESTRICTOR PLATE, of the diameter specified.

24. EXCAVATION (SPECIAL) (X2020410)

Description. This work shall be completed in accordance with Section 202 of the Standard Specifications and shall consist of the excavation, stockpiling, re-stockpiling, and transportation of suitable excavated material to final grading locations within Cambridge Park.

A 15% shrink factor shall be applied to the excavated quantity for re-embankment of final grades. If excess material is identified due to a differing true shrinkage factor, the contractor shall notify the engineer of the potential excess in order for the engineer to provide grading modifications to incorporate the material to the final grades.

Clearing and grubbing associated with this work shall not be paid for separately but shall be considered included in the cost of EXCAVATION (SPECIAL).

Tree removal will be paid for separately as quantified.

Measurement and Payment: This work will be measured in accordance with Article 202.07 at the contract unit price per cubic yard (CY) for EARTH EXCAVATION (SPECIAL), which price shall include all labor, material, and equipment required to complete the work as specified herein.

25. INLET PROTECTION, SPECIAL (X2800500)

Description: This work shall consist of protecting inlets in pervious areas as shown in Inlet Protection, Special, detail.

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

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

26. WATER MAIN TO BE ABANDONED, 8" (X5610658)

Description: This work shall include all labor, material, and equipment necessary to furnish and fill the existing water main with controlled low-strength material in accordance with Section 593 of the Standard Specifications and as specified herein.

Construction: This work shall consist of filling existing water main to be abandoned with Controlled Low Strength Material (CLSM). The utility shall be plugged on all ends with a plug material meeting approval of the Engineer. The plug shall be adequate to withstand the hydrostatic load created during the filling operation. If the plugs fail during the filling operation, the Contractor shall be responsible for the cost of repairing the plugs and filling the remainder of the pipe. CLSM shall be placed to completely fill all voids and crevices within the abandoned pipe. CLSM shall be placed by low pressure pumping with a maximum length of flow limited only by the safe allowable load that may be applied to the abandoned utility. Additional access holes, where required, or as directed by the Engineer, shall be opened to assure the complete filling of the utility.

The capping and/or plugging required to fill the pipe as described will be included with this pay item.

The Contractor shall submit to the Engineer a mix design for the flowable fill used on the project. The mix design shall generally conform to the following mix as designed by Prairie Material Mix #6115811, or approved by the Engineer:

Cement: 80 Pounds
Fly Ash 910 Pounded line
Sand 1850 Pounds
Water 54.7 Gallons
A/E 1-25%
Slump 10+/- 1"

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot for WATER MAIN TO BE ABANDONED, 8", which shall include all labor, material, and equipment required to complete the work as specified herein.

27. WATER MAIN REMOVAL (X5610706, X5610708)

Description: This work shall include all labor, material, and equipment necessary to remove and dispose of existing water main, of the diameter specified, at locations shown on the Engineering plans in accordance with Section 551 of the Standard Specifications and as specified herein.

Construction: Excavation of trenches shall be performed according to the applicable requirements of Article 550.04. Trench backfill for water main removal will be measured for payment according to Article 208.03, except an addition will be made for one-half of the volume of the pipe removed.

Materials resulting from the removal of existing water main shall be disposed of off-site according to Article 202.03 of the Standard Specifications.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for WATER MAIN REMOVAL, of the diameter specified, which price shall include all labor, material, and equipment required to complete the work as specified herein.

28. CONNECTION TO EXISTING WATER MAIN (X5630706, X5630708)

Description: This work shall include all labor, material, and equipment necessary to complete the non-pressure connection of the proposed water main to the existing water main at locations shown on the Engineering plans in accordance with Section 41 of the Standard Specifications for Water and Sewer Construction in Illinois and as specified herein.

Construction: The work shall include all pipe, reducers, fittings, solid sleeves, excavation, concrete thrust blocking, and disposal of surplus excavated materials. Connection of ductile iron water main to existing cast iron water main will require the use of a Tyler Long Pattern Duo Solid Sleeve. The Contractor shall notify the Engineer a minimum of 72 hours prior to any required water main shut downs.

As these connections cannot be pressure tested or chlorinated, the Contractor shall swab all pipe fittings with a 2% hypochlorite solution using a new clean long-string mop in the presence of the Engineer, and the new section of water main must be pressurized prior to backfilling. **441 OMNI Couplings shall not be permitted.**

This pay item shall also include the removal of the existing water main pipe as necessary to install the proposed improvements as shown on the Engineering plans. All ductile iron pipe will be paid for separately to the connection point at the existing main.

Because of the age of the existing water system, the Village cannot assure that a complete shutdown will be achievable. The Contractor shall be equipped with enough pumps as necessary to complete the work as specified herein.

Trench backfill will not be paid for separately for this item but shall be considered included in the trench backfill quantified for the propose water main installation.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for CONNECTION TO EXISTING WATER MAIN, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

29. FIRE HYDRANT COMPLETE (X5640175)

Description: This work shall include all labor, material, and equipment necessary to furnish and install a new fire hydrant assembly in accordance with Section 564 of the Standard Specifications, Section 45 of the Standard Specifications for Water and Sewer Construction in Illinois and as specified herein.

Construction: This work effort includes all materials required to fully complete the fire hydrant assembly installation in accordance with the plan detail including, but not limited to, fire hydrant tee, all hydrant lead piping, "direct assembly" auxiliary valve, auxiliary valve box and stabilizer, fire hydrant, thrust blocking, joint restraints and backfill, etc., except open excavations shall be backfilled and paid for with applicable trench backfill contract pay items.

The Contractor will be responsible for protecting the installed hydrants during construction. It is recommended that the hydrants be covered with a protective bag to ensure no chips, scratches or other damage is done to the hydrants during construction. Any damage to the factory installed paint shall be repaired at the factory. Touch up paint or spray paint will not be an acceptable method of painting for any new hydrants.

Fire hydrants shall be set plumb and level with their nozzles paralleled with or at right angles to the roadway, with the pumper nozzle normal to the roadway. They shall conform to the established grade, with nozzles at a minimum of eighteen (18) inches above finished grade.

At the direction of the Engineer, fire hydrant barrel extensions may be required to be furnished and installed if hydrants are not ordered to account for the design grades of the water main. Fire hydrant extensions and parts shall be manufactured by Waterous and shall have all stainless street trim. Any labor, material, or equipment necessary to furnish and install fire hydrant barrel extensions shall be considered included in the cost of FIRE HYDRANT COMPLETE.

The Contractor shall refer to the Village of Buffalo Grove Materials List in Appendix A for all material requirements. The open excavations shall be backfilled and paid for with applicable trench backfill contract pay items.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for FIRE HYDRANT COMPLETE which shall include all labor, material, and equipment required to complete the work as specified herein.

30. MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID (X6022810)

31. MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID (X6022820)

Description: This work shall include all labor, material, and equipment necessary to furnish and install sanitary manholes at locations shown on the Engineering plans in accordance with Section 602 of the Standard Specifications, the applicable plan details, and as specified herein.

Construction: The sanitary manhole shall be precast reinforced concrete sections furnished with cast in watertight resilient rubber gasket couplings manufactured in accordance with ASTM C-923. The units shall be sealed with external sealing bands, preformed flexible joint sealant or mastic joint sealer, and shall be watertight. An external chimney seal shall be furnished in accordance with ASTM C-923 and installed according to the manufacturer's recommendation. The lid shall be cast iron with the word 'Sanitary' imprinted and embossed with 'Village of Buffalo Grove and have concealed pick holes and watertight gaskets installed in accordance with Section 604 of the Standard Specifications.

All proposed sanitary manholes shall be tested by either ASTM C-969 or ASTM C-1244.

Trench backfill required to backfill manhole excavations shall not be paid for separately but shall be considered included in the cost of MANHOLES, SANITARY, of the diameter, frame and lid specified.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for MANHOLES, SANITARY, of the diameter, frame and lid type specified, which price shall include all labor, material, and equipment required to complete the work as specified herein.

32. SANITARY MANHOLE, SPECIAL (X6026055)

Description: This work shall consist of installing a new manhole over an existing sanitary sewer at the location shown on the plans.

Construction: The work shall be done in accordance with the applicable portions of the Special Provision for MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSE LID, Sections 550 and 602 of the Standard Specifications, and the detail "Sanitary Manhole".

The Contractor shall carefully remove the existing sanitary sewer which falls within the footprint of the proposed structure. After the manhole is installed, new pipe spools shall be constructed with a connection to the existing pipe with a non-shear coupling and a connection to the manhole with a flexible rubber connector conforming to ASTM C-923.

SANITARY MANHOLE, SPECIAL shall be constructed to maintain existing flow from southeast to northwest toward Buffalo Grove Manhole BG #1010 until the proposed lift station is ready for commissioning. During this period, the proposed west invert shall be plugged with a pneumatic plug. This plug shall be removed once the proposed lift station is ready for commissioning. After commissioning, the northwest penetration shall be grouted with 2' concrete mortar plug.

Basis of Payment. This work will be paid at the contract unit price each for SANITARY MANHOLE, SPECIAL, which price shall be full compensation for all work and materials, excavation, removal of spoils, all new sanitary sewer pipe required to connect manhole to existing sanitary sewer, connections to existing pipes, bedding, testing, bypass pumping, temporary and permanent pipe plugs, and any other incidental items required for a completed structure.

33. MANHOLES, DROP TYPE, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID (X6026500)

Description: This work shall consist of installing a new manhole with an exterior drop structure, at the location shown on the plans.

Construction: The work shall be done in accordance with the applicable portions of the Special Provision for MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSE LID, Sections 550 and 602 of the Standard Specifications, and the detail "Sanitary Manhole".

Additionally, the work shall include the construction of an exterior drop structure as shown on the detail for "Typical Drop Manhole Connection".

Basis of Payment. This work will be paid at the contract unit price each for SANITARY MANHOLE, DROP TYPE, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID which price which price shall include all labor, material, and equipment required to complete the work as specified herein.

34. VALVE VAULTS TO BE REMOVED (X6026622)

Description: This work shall include all labor, material, and equipment necessary to remove existing valve vaults and valves, regardless of size, at locations shown on the Engineering plans in accordance with Section 605 of the Standard Specifications and as specified herein.

Construction: Water valves shall be removed by either cutting the existing pipe or loosening the existing bolts. Valve vaults shall be removed, frame and lid included, to a partial depth approximately three feet below finished grade and filled with CA-11 aggregate material as specified herein.

The existing water valves shall be salvaged and delivered to the Village of Buffalo Grove Public Works yard or at a location determined by the Village. The Engineer or Department of Public Works will determine if the existing frame and lid is salvageable. If so, the frame and lid shall also be delivered to the Village of Buffalo Grove Public Works Yard. Any material not suitable for salvage shall be disposed of off-site according to Article 202.03 of the Standard Specifications.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for VALVE VAULTS TO BE REMOVED, which shall include all labor, material, and equipment required to complete the work as specified herein.

35. VALVE BOXES TO BE REMOVED (X6026632)

Description: This work shall include all labor, material, and equipment necessary to remove existing valve boxes and valves, regardless of size, at locations shown on the Engineering plans in accordance with Section 605 of the Standard Specifications and as specified herein.

Construction: Water valves shall be removed by either cutting the existing pipe or loosening the existing bolts. Valve boxes shall be removed full depth and the open excavation left as a result of the valve box removed shall be filled with CA-11 aggregate material as specified herein.

The existing water valves shall be salvaged and delivered to the Village of Buffalo Grove Public Works yard or at a location determined by the Village. The Engineer or Department of Public Works will determine if the existing valve box is salvageable. If so, the valve box shall also be delivered to the Village of Buffalo Grove Public Works Yard. Any material not suitable for salvage shall be disposed of off-site according to Article 202.03 of the Standard Specifications.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for VALVE BOXES TO BE REMOVED, which shall include all labor, material, and equipment required to complete the work as specified herein.

36. MANHOLES TO BE RECONSTRUCTED (SPECIAL) (X6028000)

Description: This work shall consist of reconstructing existing storm sewer manhole B14-8750 in accordance with applicable sections of Section 602 of the Standard Specifications and the detail for "B14-8750 STORM SEWER MANHOLE RECONSTRUCTION".

Construction: Care shall be taken to minimize disturbance of parkway access to structure, located behind existing trees and adjacent to a private property fence. Manhole frame and grate shall be removed and set aside for re-installation. Excavate around structure and remove top concentric modular block riser and top slab of the lower barrel section. Confirm inside and outside diameter of lower modular block manhole section. Install precast eccentric cone riser of appropriate geometry. Cone shall be flat bottom, without tongue and groove to transition between old and new concrete. Transition joint shall be cleaned and leveled. Cone shall be set upon mastic strip. Internal joint shall be grouted with hydraulic cement. External joint shall be wrapped with 6" butyl wrap.

Flows in manhole shall be controlled to allow for existing lower section improvements which shall consist of cleaning existing walls with high pressure spray application; grout existing pipe joints with hydraulic cement. Grout entire internal surface with hydraulic cement.

Backfill improvement with excavated materials. Restore disturbed area required for access and excavation for the work with Topsoil Furnish and Place 4", Seeding Class 1, and Mulch Method 3. Restoration shall be considered included in the cost of MANHOLES TO BE RECONSTRUCTED (SPECIAL).

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for MANHOLES TO BE RECONSTRUCTED (SPECIAL), which shall include all labor, material, and equipment required to complete the work as specified herein.

37. COMBINATION CONCRETE CURB AND GUTTER, TYPE M-3.12 (SPECIAL) (X6060079)

Description: This work shall include all labor, material, and equipment necessary to construct concrete curb, and combination concrete curb and gutter, of the type specified, as marked by the Engineer in accordance with Section 606 of the Standard Specifications and as specified herein.

Construction: The Contractor shall closely match the existing concrete curb and gutter style type of the adjacent existing curb and gutter. This work shall include the installation of two #4 continuous reinforcing bars as shown on the Engineering plans along the full length of the new curb and gutter. At points where the proposed concrete curb and gutter abuts existing concrete, two #4 smooth epoxy coated dowel-bars shall be installed at 24" on center. The depth of the proposed concrete gutter shall match the existing adjacent depth, but not less than nine (9) inches.

The material used for this item shall be exclusively portland cement concrete in accordance with Section 1020 of the Standard Specifications and shall have polyurethane coated fiber in the mix. The fiber shall be mixed in the concrete at a rate of 1.5 lbs per cubic yard of concrete at the ready mix plant. Mixing of the concrete and fibers shall not be permitted on the project site.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for COMBINATION CONCRETE CURB AND GUTTER, of the type specified, (SPECIAL) which shall include all labor, material, and equipment required to complete the work as specified herein.

38. TRAFFIC CONTROL AND PROTECTION, (SPECIAL) (X7010216)

Description: This Special Provision applies to all work on the project, with the exception of work located the S. Buffalo Grove Road right of way.

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

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

Delays to the Contractor caused by complying with these requirements will be considered included in the cost of the contract, and no additional compensation will be allowed.

Standards

701006, 701011, 701301, 701501, 701801 and 701901

Details

TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways
TC-22 Arterial Road Information Sign

Special Provisions

Maintenance of Roadways and Erosion Control
Construction Staging and Maintenance of Base Course
Protection of Mailboxes
Traffic Control Plan
LRS 3 – Work Zone Traffic Control Surveillance
LRS 4 – Flaggers in Work Zones
BDE - Traffic Control Devices – Cones
BDE – Work Zone Traffic Control Devices

No roads or segments shall be closed without prior written approval from the Village and Engineer. The Contractor must present to the Engineer, a detour plan with a detailed description addressing how resident access will be maintained and all applicable signage. Submittal of a road closure request to the Engineer does not guarantee approval. Any additional traffic control devices required for road closures per the Contractor’s request shall not be paid for separately but shall be included in the cost of the contract.

The Contractor shall be properly advised of the regulated weight limits within the surrounding areas of the project. No additional compensation in time or monetary value will be allowed. The Village of Buffalo Grove Police Department requires permits for Overweight/Over-Sized Trucks or Vehicles. The Contractor can find additional information at www.vbg.org/645/Truck-Enforcement or by calling (847) 459-2560.

Temporary “No Parking” signs must be approved by the Engineer prior to installation and the Village must be notified for each individual use or occurrence. The temporary signs must be POSTED AND DATED at least 24 hours before the intended date of use and shall be a minimum size of 8.5”x11”, with a contrasting background and be lathe or post mounted. Any signage that is posted without the Engineer’s approval will be assessed a monetary penalty of \$500 per day until removed. **The Contractor shall not tow or move any vehicles.**

Lake Boulevard Traffic Control

The Contractor shall refer to the exhibit “Lake Boulevard Traffic Control” in Appendix A for details on the allowable traffic control phasing for various items of work. The work Phases shall be defined as follows:

PHASE 1

Duration: 12 Weeks
Work Items: Lift Station Deep Civil Structures (Wet Well and Valve Vault)
Sanitary Sewers Upstream (East) of the Lift Station in Lake Boulevard
Water Main in Lake Boulevard

Traffic Control: Comply with the details outlined under “Description” of this special provision and provide works zone isolation in accordance with the exhibit “Lake Boulevard Traffic Control” in Appendix A.

Cons. Access: Construction traffic shall only access the sites from the west half of the Lake Boulevard Loop. Construction traffic shall not advance east of Station 67+75.

PHASE 2

Duration: 14 Weeks

Work Items: Balance of Lift Station Work (Site piping, electrical, controls, access road, etc.)
Sanitary Sewers and Force Main Downstream (West) of Lift Station
Demolition of Existing Cambridge on the Lake Lift Station
Alternative B Work (If Applicable)
Restoration

Traffic Control: Comply with the details outlined under “Description” of this special provision. Allow normal movement along Lake Boulevard without work zone isolation, allowing bi-directional vehicle access around Lake Boulevard.

Cons. Access: Construction traffic shall only access the sites from the west half of the Lake Boulevard Loop. Construction traffic shall not advance south of Station 61+50 except during restoration work and the demolition of the existing lift station.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per lump sum (LS) for TRAFFIC CONTROL AND PROTECTION, (SPECIAL), which shall include all labor, material, and equipment required to complete the work as specified herein.

39. CUT AND CAP EXISTING WATER MAIN (XX000679)

Description: This work shall include all labor, material, and equipment necessary to excavate, expose, cut and cap existing water main pipe in a neat and workmanlike manner at locations shown on the Engineering plans or at the direction of the Engineer and as specified herein.

Construction: Ends shall be capped with a mechanical plug or cap to prevent infiltration into the abandoned water main. Aggregate trench backfill material will be paid for according to Article 208.04 of the Standard Specifications. This item shall only be used at locations shown on the Engineering plans or at the direction of the Engineer. If applicable, plugs or caps required at existing fire hydrant leads, valves that were removed, or for temporary use to abandon the water main in place will be included in the cost of each applicable pay item.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for CUT AND CAP EXISTING WATER MAIN, regardless of size, which shall include all labor, material, and equipment required to complete the work as specified herein.

40. FENCE TO BE REMOVED AND RE-ERECTED (XX000714)

Description: This work includes all labor, materials, and equipment necessary to remove, store and re-erect the existing fence shown on the plans to be removed and re-erected. Work shall include the replacement of the existing fence posts between the panels. Posts shall be of the same size and material but shall be installed in steel ground socket to allow for future pole removal. Ground socket shall be embedded in concrete.

Existing panels shall be salvaged and re-erected.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for FENCE TO BE REMOVED AND RE-ERECTED, which shall include all labor, material, and equipment required to complete the work as specified herein.

41. WOOD FENCE (XX001249)

Description: This work shall consist of furnishing and installing a 5-foot-tall sight screen wood fence.

Materials: Materials shall comply with Section 641.02 of the Standard Specifications for Road and Bridge Construction. Wood type shall be Western Red Cedar. Fence shall have a height of 5-feet and shall be board to board privacy style.

Construction: Wooden fence construction shall be according to the applicable portions of Sections 507 and 641.03 of the Standard Specification for Road and Bridge Construction.

Posts shall be spaced according to manufacturer's requirements on the Village of Buffalo Grove Building Code.

Measurement and Payment: This work will be measure in place and paid for at the contract unit price per foot (FT) for WOOD FENCE, which shall include all labor, material, and equipment required to complete the work as specified herein.

42. CONNECTION TO EXISTING STRUCTURE (XX003424)

Description: This work shall include all labor, material, and equipment necessary to complete the connection of the proposed storm sewer to the existing storm sewer structure at locations shown on the Engineering plans and as specified herein.

Construction: The existing structure wall shall be machine cored with a circular bit to a distance not to exceed three (3) inches beyond the outside circumference of the new pipe. If required by the Engineer, the existing bench shall be modified to accept the new pipe. The gap between the cored hole of the structure and the outside diameter of the new sewer shall be filled with brick and hydraulic cement.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for CONNECTION TO EXISTING STRUCTURE, which shall include all labor, material, and equipment required to complete the work as specified herein.

43. PRECONSTRUCTION VIDEO TAPING (XX003668)

Description: This work shall include the completion of a digital video of the project site, which will be used to resolve disputes over damage property. The video shall be of the existing conditions prior to mobilization. Any disputed damage not shown on this video that the Village determines could be the fault of the Contractor shall be repaired at the Contractor's expense. Video shall have shots of concrete, pavement and landscaping in the project area at a close enough range to show cracks and existing damage.

Basis of Payment: This work shall be paid for at the contract unit price per lump sum for PRECONSTRUCTION VIDEO TAPING which price shall include the completion and delivery of two (2) duplicate videos on CD or DVD format.

44. STEEL CASING PIPE, BORED AND JACKED 30" (XX005485)

45. STEEL CASING PIPE, BORED AND JACKED, 20" (XX008956)

Description: This work shall include all labor, material, and equipment necessary to furnish and install smooth steel casing pipe jacked in place by auger boring methods in accordance with Section 516 of the Standard Specifications and as specified herein.

Construction: The Contractor shall submit shop drawings and material certification for the steel casing and casing spacers, and a detailed outline of the installation procedures. A list of all equipment and materials used to auger and jack steel casing shall be submitted to the Engineer a minimum of four weeks prior to the start of the jacking operation.

All casing pipe shall be new and unused. The casing pipe shall be smooth steel pipe conforming to ASTM A 139, Grade B with a minimum yield strength of 35,000 PSI. The steel pipe shall be plain end, and be in at least eighteen (18) foot lengths (except the last section, where a shorter section may be necessary to obtain the total casing length shown on the plans). All joints shall be solidly butt-welded with a smooth non-obstructing joint inside. All welds shall comply with American Welding Society recommended standards.

The casing diameter should be sized to provide a minimum of four (4) inches between the inside of the casing pipe and the largest outside diameter of the carrier pipe (including pipe bells) to allow deflection of the casing pipe and installation of casing spacers. The minimum wall thickness required for smooth steel pipe shall be as follows:

Nominal Diameter (IN)	Minimum Wall Thickness of Smooth Steel Pipe (IN)
20	0.375"
30	0.469"

Casing spacers, also referred to as Carrier Pipe Supports, and hardware shall be T-304 stainless steel conforming to ASTM 304. The connecting flanges shall be ribbed and the shell lined with PVC. Casing spacers shall be a minimum of eight (8) inches wide and shall electrically isolate the carrier pipe from the casing pipe. Casing runners shall have a coefficient of friction <0.13 per ASTM D-1894 on smooth steel surface. Casing spacers shall be installed a maximum of two (2) feet from the end of the casing pipe. The carrier pipe supports shall be installed on the carrier pipe per the manufacturer's recommendations, and a maximum spacing of ten (10) feet on ductile iron carrier pipe, and six (6) feet for PVC and HDPE. The height and supports shall be appropriate size to keep the carrier pipe 'restrained' and centered within the casing pipe. A ½" to 1" clearance will be allowed between the top runners and the casing pipe. Casing spacers shall be manufactured by the Cascade Waterworks Mfg. Co., or approved equal.

The carrier and casing pipe shall be sealed with rubber end caps and stainless steel bands conforming to ASTM C-923 as manufactured by Cascade Waterworks Mfg. Co., Model CCES, or approved equal.

The casing pipe shall be constructed by the auger and jacking method, with the augering and jacking operation being simultaneous and no unsupported excavation in front of the casing. The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than two (2) inches.

It shall be the Contractors responsibility to field verify existing utilities prior to auger boring operations. If existing utility lines of any nature are encountered which conflict with new construction, the Contractor shall notify the Engineer immediately. The Contractor shall not make claims for additional costs, nor the Owner seek a credit.

This work shall also include saw cutting, removal and disposal of existing pavement and surplus excavated materials necessary to construct jacking pits and receiving pits, trench protection, foundation and drainage for the augering machine, utility exploration, and backfilling with select excavated materials and Coarse aggregate backfill under pavement sections. All shoring and trench protection shall meet current OSHA safety requirements. Trench backfill will not be paid for separately for boring and receiving pits.

If the jacking and receiving pits are to remain open overnight, the Contractor shall install six (6) foot tall temporary fence panels, panel stands (feet), sandbags, and temporary swing gates, as applicable, to protect the public. This work shall be considered included in the cost of STEEL CASING PIPE BORED AND JACKED pay items.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for STEEL CASING PIPE BORED AND JACKED, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

46. SANITARY SEWERS PUSHED IN STEEL CASING, 18" (XX007687)

Description: This work shall include all labor, material, and equipment necessary to furnish and install sanitary sewer, of the diameter specified, in casing pipe, in accordance with Section 550 of the Standard Specifications and as specified herein.

Construction: The material used shall be PVC PS46, of the diameter specified, conforming to ASTM F-679 pipe standards with rubber gasket joints conforming to ASTM-D3212. and be installed per the manufacturer's recommendation on the casing insulators to center the proposed sanitary sewer in the casing pipe. The sanitary sewer shall be installed within the casing pipe so that the pipeline is electrically isolated from the steel casing pipe.

All sanitary sewer shall be tested in accordance with the Standard Specifications for Water and Sewer Construction in Illinois. All flexible sanitary sewer pipe shall be tested by Method D and either Method A, B, or C as outlined in Section 31-1.12. All sanitary sewer must also be tested by Method E. The Contractor shall provide the Engineer a copy of the video on a digital video disc. The video must be in color and proceed no faster than one (1) foot per second.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for SANITARY SEWERS PUSHED IN STEEL CASING, 18", of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

47. GEOBLOCK POLYETHYLENE POROUS PAVEMENT SYSTEM (XX007839)

Description: This work shall consist of constructing porous flexible pavement at those locations shown on the restoration plan.

Materials: Engineered base materials shall conform with the base details for the Presto Geosystems Geoblock 5150 porous flexible pavement system. Topsoil shall be sourced on-site from stripped topsoil. If additional topsoil is required, it shall be furnished in accordance with Section 211.03 of the Standard Specifications.

Construction Requirements:

Topsoil Excavation:

Topsoil shall be excavated and placed according to Section 211 of the Standard Specifications.

Subgrade Preparation:

Prepare subgrade as specified in Section 301 of the Standard Specifications. Excavate area allowing for unit thickness and the engineered base depth. Provide adequate drainage from excavated area if area has potential to collect water, when working with in-place soils that have poor permeability. Ensure in-place soil is relatively dry and free from standing water. Uniformly grade base. Level and clear base of large objects, such as rocks and pieces of wood.

Base Preparation:

Ensure aggregate portion of base is free from fines and has a known percentage void-space of 30% or greater when compacted. Particle size should range in size from 0.375 to 1.0 inch. Mix engineered base of clear stone (e.g. CA-7) or crushed rock, homogenously blended with topsoil. Add and blend topsoil before placement equal to void percentage in aggregate. Pulverized topsoil portion shall equal plus or minus 25% of the total volume and be added and blended to produce a homogenous mixture prior to placement.

Place engineered base thickness of 6 inches. The width of the engineered base shall extend 6" beyond the outside limits of the specified mat width. The additional engineered base width shall be included in the cost of the pay item. Compact the mixture to 95% Standard Proctor.

The limits of Topsoil Excavation and Placement shall extend 5.5 feet outside of the centerline of the proposed pipe, unless otherwise dimensioned on the Erosion and Landscaping Plan. In no case shall Topsoil Excavation and Placement extend beyond the Construction Limits. Topsoil Excavation and Placement beyond these limits, and depths exceeding 12-inches, shall be paid for by the Contractor.

Installing Units:

Place units with the square hole to the ground. Place units with long direction of unit perpendicular to direction of traffic. Ensure final seam pattern has seams perpendicular to traffic flow straight and seams parallel to traffic flow staggered. Cut units with a hand or power saw to custom fit contours and around obstacles. Ensure required traffic load transfer and support.

Place first row of units against a stationary edge, when available. If the units are placed between two perpendicular stationary edges, allow for potential thermal expansion of the units by keeping the units away from the stationary edge. Slide units together so interlocking tab joint is fully engaged. Units should not protrude above desired surface elevation.

Prevent units from shifting during installation with placement of either temporary wood stakes or permanent metal stakes through holes in units.

Anchoring Units:

Anchor units in-place after installation of all the units within the defined area. Anchor units with 0.5 inch (13 mm) #4 rebar to prevent movement of the units. Anchor length shall be 12.0 inches (305 mm). Drive anchors through the holes in the Geoblock units along the perimeter as required.

Infilling Units:

Infill units with on-site topsoil immediately after units are installed to minimize potential of joint separation. Spread topsoil infill uniformly over units to a level even with the top of the cell wall. Use spreading methods to prevent over-compaction of cell infill.

Measurement and Payment: This work shall be measured in place and the area calculated in square yards shall be paid for at the contract unit price per square yard for GEOBLOCK POLYETHYLENE POROUS PAVEMENT SYSTEM which shall include all labor, material, and equipment required to complete the work as specified herein.

48. VALVE WITH VALVE BOX, 6" (XX008746)

Description: This work shall consist of furnishing and installing a water main valve with an auxiliary valve box and shall be installed per the requirements of the latest edition of the Standard Specification for Sewer and Water Main Construction in Illinois, and the Plan Detail "Auxiliary Box & Valve". Auxiliary boxes shall be cast iron. To maintain box to valve alignment, boxes shall be installed with Valve Box Stabilizers. Auxiliary boxes shall be installed no deeper than eight (8) feet below final grade.

Water valves shall conform to AWWA C504, AWWA C508, or AWWA C509. All valves shall turn counterclockwise, or to left, to open. Valves shall be American Flow Control, Series 2500 Resilient Wedge Gate Valves and shall have the manufacturer and year cast on the body with raised letters. Valves shall have an all stainless steel trim.

Valve box shall be Tyler 664-S with "Water" embossed in the lid. A rubber valve box stabilizer shall be required.

Basis of Payment: This work will be paid for at the contract unit price each for VALVE WITH VALVE BOX, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

49. PVC CASING PIPE (XX008889)

Description: This work shall be in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois", Village of Buffalo Grove requirements, the special provision for WATER MAIN, and the detail(s) provided in the plans, except as modified herein.

The work shall consist of installing water main quality PVC casing pipes around water mains where indicated on plans as "PVC CASING PIPE" to meet water and sewer separation

requirements as shown on Standard Drawings No. 22 and 23 in the “Standard Specifications for water and Sewer Main Construction in Illinois”, complete in place by open cut method.

Basis of Payment: This work will be paid for at the contract unit price per foot for PVC CASING PIPE, of the diameter specified. This Pay Item does not include the pipe within the casing, which is paid for per the special provision for WATER MAIN.

50. GEOTEXTILE FABRIC (XX009314)

Description: This work shall consist of placing geotextile fabric at the volume control facility within the detention pond, as shown in the plans. The work shall be completed in accordance with Section 210.03, except no lap will be added, and applicable portions of Article 1080.

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

Basis of Payment: This work shall be paid for at the contract unit price per square yard for GEOTEXTILE FABRIC.

51. SANITARY FORCE MAIN 10”, OPEN CUT (BG1)

Description. This work includes furnishing and installing PVC force main, AWWA C900 for Class 235 pressure pipe with a standard dimension ratio of 18. The work shall be done in accordance with Sections 20, 22, 40 and 41 of the Standard Specifications for Water and Sewer Construction in Illinois (Current Edition) and the details shown on the Plans. The minimum depth of cover over the force main shall be 5’-0”.

Materials. Materials for Sanitary Force Main installation shall include:

A. Pipe:

1. Design and manufacture: AWWA C900, ANSI D1784.
2. Class 235; dimension ration 18.
3. Cell Classification 12454-B.
4. Outside diameter: Identical to that of cast iron or ductile iron pipe.

B. Joints:

1. Provide couplings and thrust-restraint components: Nonmetallic, CertainTeed “Certa-Lok” restrained joint C-900 / RJ PVC pipe, or equal.
2. Design pipe and couplings as integral system. Pipe and couplings shall be provided by single manufacturer for maximum reliability and interchangeability.
3. Join pipe and couplings using high-strength flexible plastic splines inserted into precision-machined mating grooves, which align when pipe is fully inserted, providing a full 360° restraint with evenly distributed loading.
4. Do not use external pipe-to-pipe restraining devices which may damage pipe surface as result of point loading.

C. Fittings:

1. Sizes and angles of bends and fittings have been provided on the plan set and are the best estimates provided. The Contractor shall ascertain in the field the proper angle bend required at no additional cost to the Village. All bends required for the installation of the water main shall not be paid for separately, but shall be considered included in the per foot cost of this pay item.
2. Ductile iron fittings shall have mechanical joints complying with ANSI A21.10 or A21.53.
 - a. Fittings to include cement lining complying with ANSI A21.4, standard thickness.
 - b. Bolts shall be A304 stainless steel
 - c. Nuts and washers shall be manufactured with series 300 stainless steel.
 - d. Provide restrained joints:
 - (1) Mechanical joint retainer gland systems that provide locking segments shaped to pipe barrel and that do not create stress points on pipe barrel.
 - (2) Acceptable products:
 - i. Megalug System:
 - (a) Series 2000PV Megalug for MJ to Pipe (C900).
 - (b) Series 1500 Megalug Harness for push on joint (C900).
 - (c) Or approved equal.

D. Pipe tracer wire:

1. Materials:
 - a. Wire: 7x19SS (T304) PVC coated stainless steel Aircraft Cable, minimum 3/16-inch diameter.
 - b. Tape: Polyethylene coated duct tape.

Excavation, Bedding and Backfilling: This work shall be performed in accordance with Sections 20 and 22 of the Standard Specifications for Water and Sewer Construction in Illinois and the detail shown on the Plans. Granular bedding, 4 inches thick, shall be installed under all force main. Additional granular material to 12 inches above the pipe shall be installed. Granular material from 4 inches below the bottom of the pipe to 12 inches above the top of the pipe shall not be paid for separately but shall be considered included in the pay item. CA-11 trench backfill shall be required where the trench is located within 5-feet of existing or proposed pavements and shall be paid for separately as TRENCH BACKFILL. Trench width for payment purposes shall include the outside diameter width of the pipe plus 18" on each side of the pipe. Trench height for payment purposes shall be from 12 inches above the pipe to the subgrade elevation of the final pavements or proposed topsoil. Any sheeting or shoring required for open-cut trenches shall be provided and installed as included in the Contract. Sheeting or shoring shall comply with any governing Federal or State agencies, laws and local ordinances.

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

Pressure and Leakage Testing: Pressure testing of the force mains shall be in accordance with Section 41-2.12 of the Standard Specifications for Water and Sewer Construction in Illinois and as specified herein. Force main shall be subjected to a minimum hydrostatic pressure test of 150 pounds per square inch (psi) for a period of not less than two (2) hours. The maximum allowable leakage will be that stated in section 41-2.14C the Standard Specifications for Water and Sewer Construction in Illinois. In addition, the hydrostatic pressure shall not drop more than five (5) psi during the test.

Basis of Payment. This work shall be paid for at the contract unit price per foot for SANITARY FORCE MAIN 10", OPEN CUT, which price shall include all labor, equipment, materials and incidentals required to complete the work described above.

52. SANITARY FORCE MAIN 10", DIRECTIONALLY DRILLED (BG2)

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

Submittals:

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

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

- A. Contractor performing horizontal directional drilling shall have the following qualifications:
 1. Experience with at least 3 projects of similar pipe diameters and pipe/pullback lengths.

2. Experience with and use of a pressure probe.
3. Supervision and drillers, each with a minimum of 5 years of experience with similarly sized projects.

General Construction Requirements:

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

Directional Drilling System:

- A. Provide hydraulically or pneumatically operated, fluid-assisted, remote guided drilling system capable of installing pipe indicated on the Drawings by trenchless methods.
 1. Provide compressors, pumps, apparatus, tools, and all devices certified as suitable by the system manufacturer to install the new pipe without damaging or stressing the pipe.
 2. Provide recovery system that will recover bentonite slurries or other drilling fluids without releasing the slurry onto the surrounding ground or water surfaces.
 3. Provide, use and maintain downhole pressure monitoring equipment.
 4. Provide and stock a complete variety of equipment, tools and materials to respond to release events. Equipment and tools include, but are not limited to: backhoe, dozer, tank or dump trucks, rowboat, barrels, vacuum truck, vacuum hoses, shovels, hand tools, lumber, sandbags, tarps, silt fence, compost filter logs, coir wattles, straw bales, spill containment socks and pads, spill berms and portable pumps.
- B. Provide certification from pipe manufacturer that the proposed pipe material and strength classification is appropriate for this project's application(s).

PVC Pipe (Splined Joint):

- A. Material:
 1. Provide 12454A or B polyvinyl chloride complying with ASTM D-1784.
 2. Provide pipe that complies with AWWA C900 Class 235 pressure pipe with a standard dimension ratio of 18 (SDR-18).
 3. Provide restrained joint PVC pipe with restraining grooves, built-in sealing gaskets, and beveled edges, manufactured to C.I. O.D.
 4. Acceptable manufacturer: CertainTeed Certa-Lok.
 5. Provide blue pipe for potable water applications.
- B. Joints:
 1. PVC restrained joint separate coupling or integral bell, with elastomeric seal and restraining grooves.

2. Restraining spline: Provide splines sized to fit coupling grooves made of Nylon 101.
3. Provide restrained joint mechanical gland adapters for connection to ductile iron pipe at ends of PVC piping.
4. Acceptable manufacturer: CertainTeed Certa-Lok or Certa-Lok RJIB.

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

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

Protection:

- A. Protect existing utilities indicated or made known. This shall include the potholing of all utilities shown on the plans, identified by JULIE, or other information, along the drilling alignment.
- B. Protect trees and shrubs by plank wrappers securely wired in place or by providing a fence around the tree or shrub of sufficient distance away and of sufficient height so trees and shrubs will not be damaged in any way as part of this Work.
 1. Do not permit any equipment to operate within 5 feet of any trees or shrubs that are to remain or in a manner as to harm overhanging branches.
- C. Protection of persons and property:
 1. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.
 2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations under this Section.
- D. Remove the top six (6) inches of topsoil at entry and exit locations and stockpile the topsoil on-site. Cover the topsoil with tarps and sandbags or other weights to keep the tarps in place. Surround topsoil storage areas and the drilling and separation equipment and tanks with silt fence.
- E. Use means necessary to prevent dust from becoming a nuisance to the public, to neighbors, and to other work being performed on or near the work areas.
- F. Maintain access to the work areas at all times.
- G. Provide protection to environment, public and private property, and public or private utilities from drilling mud that is utilized as lubricant or hole support during drilling and pipe insertion.
 1. Provide vac-trucks and apparatus of sufficient size and quantity to reclaim all mud that may be discharged during operations.
 2. Provide trucks, end loaders, and any other equipment and manpower necessary to maintain a clean and safe work site during operation.

- H. HDD activities shall be constantly monitored by the Contractor and may be monitored by the representatives of the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. Monitoring shall include:
 - 1. Inspection along the drill path.
 - 2. Pothole all utilities shown on the plans, identified by JULIE, or other information, along the drilling alignment.
 - 3. Continuous examination of drilling mud pressure gauges and return flows to the surface pits by the Contractor.
 - 4. Monitoring of drill status information regarding drilling conditions and alignment of the drilling profile during the course of drilling activities, by the Contractor.
 - 5. If a release event occurs, contain the drilling fluids and continue inspection to determine any potential for movement of released drilling mud into or within a wetland or water body. Collect drilling mud returns at the release location for future analysis, as required. Notify the Owner, the Engineer, the Resident Project Representative and Environmental Inspector, or any combination of these representatives. The Owner, or their representative, will keep documentation and photographs of release events.
 - 6. If a monitoring indicates a release is occurring or has occurred, the Contractor shall immediately begin containment.
 - a. The Contractor shall determine and implement any modifications to the drilling technique or composition of drilling fluid (e.g., thickening of mud by increasing bentonite content, temporary lowering of the downhole pressures, etc.) to minimize or prevent further releases of drilling mud.
 - b. If a release occurs within a wetland or water body, reasonable actions within the limitation of directional drilling technology and the Contractor's ability, shall be taken to re-establish drilling mud circulation.
 - c. The Owner may evaluate the release to determine if containments structures are warranted and can effectively contain the release. When making this determination, the Owner may consider if placement of containments structures will cause additional adverse environmental impact.
 - d. Upon completion of the drilling operations, the Owner may consult with applicable regulatory agencies to determine any final clean-up requirements for the release.
 - e. If public health and safety are threatened by the release, drilling operations might be shut down until the threat is eliminated. This measure would be taken as a last resort because of the potential for drill hole collapse resulting from loss of downhole pressure.
- I. Dispose of all bentonite slurry, drilling mud, cuttings, pit spoils, etc. at a legal off-site disposal area.

Installation and Receiving Pits:

- A. Provide pits as required to install and receive pipes.
 - 1. Provide tight sheeting where required to provide protection to public, permitting agency and public property, and adjacent utilities.

2. Comply with OSHA requirements for type, installation, and removal of sheeting.
3. Leave sheeting in place where indicated on the Drawings.
4. Provide fencing around pits to secure the area and to provide protection to the public.
- B. Provide pits of length and width as necessary to install pipes and sized to fit area available for Work.
- C. Provide dewatering as required to allow excavation of pits and installation of pipes.
 1. Provide protection to environment from erosion or sedimentation resulting from all pumping operations.
- D. Backfilling of pits:
 1. Backfill with compacted granular backfill materials at all locations within 5-feet of curb, sidewalks, roadways, or driveways.
 2. Backfill with compacted excavated materials where granular backfill material is not indicated.
 3. Comply with compaction requirements outlined in Special Provision for "SANITARY FORCE MAIN, 10", OPEN CUT" under the section "Excavation, Bedding, and Backfilling" except that trench backfill for pits shall not be paid for separately but shall be considered included in the cost of "SANITARY FORCE MAIN, 10", DIRECTIONALLY DRILLED".
 4. Re-grade slopes and ditches to match preconstruction condition and adjacent area.
 5. Remove all construction debris, materials, excess excavated material, and sheeting from construction area upon completion of the Work.

Pipe Installation:

- A. Install pipe by HDD methods unless conditions require installation by open-cut methods.
- B. Complete open-cut installation in strict accordance with pertinent provisions of the Special Provision for "SANITARY FORCE MAIN, 10", OPEN CUT".
- C. Provide pipe insertion pits necessary for complete installation of pipe.
 1. Position pits at locations indicated on the Drawings whenever possible.
 2. Provide additional pits as required to install new pipe.
 3. Provide all traffic control, barricades, flagmen, and other items at insertion pit areas as necessary to complete the work.
 4. Provide tight sheeting at insertion pits to keep pit to the minimum size necessary to do the work.
 - a. Remove sheeting when work is completed.
- D. Connect to manholes or valve vaults where indicated on the Drawings and as outlined in these Specifications.
- E. Install PVC pipe by pulling the pipe into place.
 1. Provide winch systems designed to protect structures, provide directional stability, and pull pipe from insertion point to exit point without causing damage to the pipe being inserted.
 2. Insert pipe in a continuous operation from point to point.
 3. Provide lubricants as specified by pipe manufacturer to avoid stressing of pipe beyond its elastic limit during insertion.

4. Provide silencers, mufflers, or other devices required to reduce noise from compressors and other equipment to meet limits as outlined by Owner's local ordinances.
- F. Joints:
1. For PVC, provide elastomeric seals in non-metallic restrained joint couplings that are restrained with use of nylon splines.
 - a. Utilize ductile iron mechanical gland adapters only when connecting to ductile iron pipe at extremities of PVC installation.
- G. Provide transition fittings and temporary plugs and/or caps on pipes where pipes are left for others to connect to.
- H. Provide neoprene or rubber seals between drilled pipe and carrier pipe at termination of drilled pipe, if dual pipes are indicated.
- I. Mark location of drilled pipe termination points on "Job Set" of plans, measured from adjacent permanent structures or iron pins.
- J. Install pipe tracer wire (and conduit) pulled into place alongside the main pipe, at each drilling location for the total length of pipe.
1. Connect tracer wire to ductile or steel pipe or to tracer wire on pipe installed by other methods with a "hard" connection at each end of directional drilled pipe.

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

Pressure and Leakage Testing: Installed force main by directional drilling shall comply with leakage testing, and pressure testing in accordance with the Special Provision for SANITARY FORCE MAIN, 10", OPEN CUT.

Basis of Payment. The work shall be paid for at the contract unit price per foot for SANITARY FORCE MAIN, 10", DIRECTIONALLY DRILLED and shall include all work described in this special provision including potholing for utilities and trench backfill of the drilling and receiving pits.

53. SANITARY FORCE MAIN 10", PUSHED THROUGH CASING (BG3)

Description: This work shall include all labor, material, and equipment necessary to furnish and install sanitary force main, of the diameter specified, in casing pipe, in accordance with Section 550 of the Standard Specifications and as specified herein.

Construction: The material used shall be as specified in the special provision for SANITARY FORCE MAIN 10", OPEN CUT and be installed per the manufacturer's recommendation on the casing insulators to center the proposed sanitary sewer in the casing pipe. The sanitary sewer shall be installed within the casing pipe so that the pipeline is electrically isolated from the steel casing pipe.

All sanitary sewer shall be tested in accordance with the special provision for SANITARY FORCE MAIN 10", OPEN CUT.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per foot (FT) for SANITARY FORCE MAIN 10", PUSHED THROUGH STEEL CASING, which shall include all labor, material, and equipment required to complete the work as specified herein.

54. OBSERVATION WELL (BG4)

Description: This work shall consist of installing observation wells at the volume control facility within the detention pond, as shown in the plans.

Materials: The observation well shall be constructed of a perforated 6" PVC pipe in accordance with Section 1040.03. A 6' collar and overflow grate shall be connected to the top of the well. The bottom of the well shall be connected to the perforated underdrain of the volume control facility, with the appropriate fittings.

Once the nylon sock is fitted over the well, it must be held in place by hand until at least half of the engineered soil mix depth has been placed.

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

Basis of Payment: This work will be paid for at the contract unit price per each for OBSERVATION WELL.

55. TRAFFIC CONTROL AND PROTECTION, BUFFALO GROVE ROAD (SPECIAL) (BG5)

Description: This work shall include all labor, material, and equipment necessary to plan, furnish, install, maintain, relocate, and remove all applicable traffic control devices required to complete the work associated along Buffalo Grove Road according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

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

The Contractor shall contact the Cook County Highway Department at least 72 hours in advance of beginning work.

Standards:

701606, 701701, 701801 and 701901

Details:

TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways

TC-22 Arterial Road Information Sign

Special Provisions:

Maintenance of Roadways and Erosion Control
Construction Staging and Maintenance of Base Course
Protection of Mailboxes
Traffic Control Plan
LRS 3 – Work Zone Traffic Control Surveillance
LRS 4 – Flaggers in Work Zones
BDE - Traffic Control Devices – Cones
BDE – Work Zone Traffic Control Devices

No signage shall be installed within the Cook County right-of-way without prior approval by the Cook County Highway Department and all applicable permit requirements are fulfilled. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work in accordance with Article 107.04 of the Standard Specifications.

Work shall be conducted between weekday hours of 9 a.m. – 3 p.m. unless otherwise approved by Cook County through coordination with the Village and the Engineer.

This work will be measured in place and paid for at the contract unit price per lump sum (LS) for TRAFFIC CONTROL AND PROTECTION – BUFFALO GROVE ROAD, (SPECIAL), which shall include all labor, material, and equipment required to complete the work as specified herein.

56. MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID (SPECIAL) (BG6)

Description: This work shall include all labor, material, and equipment necessary to furnish and install sanitary manholes at locations shown on the Engineering plans in accordance with the special provision for MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID. Additionally, this work shall include the interior lining of the manhole with Spectrashield multi-layer polymer lining system to a final minimum thickness of 500 mils. If structure lining is completed off-site, touch up lining material shall be applied at pipe connections during construction.

The cost of bypassing live sewer flows around the manhole shall be considered included in the cost of the pay item.

Measurement and Payment: This work will be measured in place and paid for at the contract unit price per each (EA) for MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID (SPECIAL) which price shall include all labor, material, and equipment required to complete the work as specified herein.

57. WATER MAIN 8", DIRECTIONALLY DRILLED (BG7)

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

Construction: This work shall conform with Special Provision 52 for SANITARY FORCE MAIN, 10", DIRECTIONALLY DRILLED, except that the materials shall conform to the following:

DUCTILE IRON PIPE (RESTRAINED JOINT):

A. Material:

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

POLYETHYLENE WRAP:

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

PIPE TRACER WIRE:

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

Basis of Payment. The work shall be paid for at the contract unit price per foot for WATER MAIN 8", DIRECTIONALLY DRILLED and shall include all work described in this special provision including potholing for utilities and trench backfill of the drilling and receiving pits.

INDEX FOR GENERAL PROVISIONS

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1. FRICTION AGGREGATE (D-1)

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

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

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

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

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

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Use	Mixture	Aggregates Allowed								
		<u>Other Combinations Allowed:</u> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><i>Up to...</i></td> <td style="width: 50%;"><i>With...</i></td> </tr> <tr> <td>25% Limestone</td> <td>Dolomite</td> </tr> <tr> <td>50% Limestone</td> <td>Any Mixture D aggregate other than Dolomite</td> </tr> <tr> <td>75% Limestone</td> <td>Crushed Slag (ACBF) or Crushed Sandstone</td> </tr> </table>	<i>Up to...</i>	<i>With...</i>	25% Limestone	Dolomite	50% Limestone	Any Mixture D aggregate other than Dolomite	75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone
<i>Up to...</i>	<i>With...</i>									
25% Limestone	Dolomite									
50% Limestone	Any Mixture D aggregate other than Dolomite									
75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone									
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/6/} : Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone. <u>Other Combinations Allowed:</u> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><i>Up to...</i></td> <td style="width: 50%;"><i>With...</i></td> </tr> <tr> <td>50% Dolomite^{2/}</td> <td>Any Mixture E aggregate</td> </tr> <tr> <td>75% Dolomite^{2/}</td> <td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td> </tr> <tr> <td>75% Crushed Gravel^{2/} or Crushed Concrete^{3/}</td> <td>Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag</td> </tr> </table>	<i>Up to...</i>	<i>With...</i>	50% Dolomite ^{2/}	Any Mixture E aggregate	75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone	75% Crushed Gravel ^{2/} or Crushed Concrete ^{3/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag
<i>Up to...</i>	<i>With...</i>									
50% Dolomite ^{2/}	Any Mixture E aggregate									
75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone									
75% Crushed Gravel ^{2/} or Crushed Concrete ^{3/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag									
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/6/} : Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone. <u>Other Combinations Allowed:</u> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><i>Up to...</i></td> <td style="width: 50%;"><i>With...</i></td> </tr> <tr> <td>50% Crushed Gravel^{2/}, Crushed Concrete^{3/}, or Dolomite^{2/}</td> <td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td> </tr> </table>	<i>Up to...</i>	<i>With...</i>	50% Crushed Gravel ^{2/} , Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone				
<i>Up to...</i>	<i>With...</i>									
50% Crushed Gravel ^{2/} , Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone									

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

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

Effective: June 26, 2006

Revised: April 1, 2016

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

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

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

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

“A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent.”

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

“(c) RAP Materials (Note 5)1031”

Add the following note to 1030.02 of the Standard Specifications:

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

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

Effective: November 1, 2019

Revised: October 15, 2020

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

Materials. Revise Article 1004.03(c) to read:

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

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

1/ CA 16 or CA 13 may be blended with the CA 11.

2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ The specified coarse aggregate gradations may be blended.

4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

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

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

HMA Nomenclature. Revise the “High ESAL” portion of the table in Article 1030.01 to read:

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

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

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

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

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

Note 2. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be a SBS PG 76-22 for IL-4.75, except where modified herein. The elastic recovery shall be a minimum of 80.

Note 3. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

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

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

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High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}										
Sieve Size	IL-19.0 mm		SMA 12.5		SMA 9.5		IL-9.5mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)										
1 in. (25 mm)		100								
3/4 in. (19 mm)	90	100		100						
1/2 in. (12.5 mm)	75	89	80	100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	90	100
#8 (2.36 mm)	20	42	16	24 ^{4/}	16	32 ^{4/}	34 ^{5/}	52 ^{2/}	70	90
#16 (1.18 mm)	15	30					10	32	50	65
#30 (600 μm)			12	16	12	18				
#50 (300 μm)	6	15					4	15	15	30
#100 (150 μm)	4	9					3	10	10	18
#200 (75 μm)	3	6	7.0	9.0 ^{3/}	7.5	9.5 ^{3/}	4	6	7	9 ^{3/}
#635 (20 μm)			≤ 3.0		≤ 3.0					
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with N_{design} = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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“ If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure.”

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

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

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

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

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

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

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

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

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

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

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm);

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

Construction Requirements.

Add the following to Article 406.03 of the Standard Specifications:

"(j) Oscillatory Roller 1101.01"

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

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

Revise Article 406.05(c) to read.

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

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

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

Revise Article 406.06(d) to read:

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

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

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

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

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

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Bridge Decks ^{2/}	T _B	- -	T _F	As specified in Articles 582.05 and 582.06.
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3/ A vibratory roller (V_D) or oscillatory roller (O_T or O_B) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.”

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

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

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

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

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

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

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

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

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

“(a) High ESAL Mixtures. A test strip of 300 ton (275 metric tons), except for SMA mixtures it will be 400 ton (363 metric ton), will be required for each mixture on each contract at the beginning of HMA production for each construction year according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”. At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results.”

Method of Measurement:

Add the following after the fourth paragraph of Article 406.13 (b):

“The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design’s G_{mb}.”

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

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

4. TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996

Revised: January 2, 2007

Description.

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

Materials.

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

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

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.

Note 2. Type A sheeting can be used on the plywood base.

Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.

Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

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

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

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

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

Method of Measurement.

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

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

Basis Of Payment.

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

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SUBMITTALS
SECTION 01 33 00

PART 1 – GENERAL

1.01 SCOPE

- A. This Section establishes minimum requirements and procedures for Submittals by the Contractor for materials and equipment provided for under the Work of this Contract. Specific details for additional drawings, data and information to be submitted shall be in accordance with the applicable requirements of other Sections of these Specifications.

- B. Acceptable Manufacturers and Equipment Suppliers for various items of equipment are specified in respective Sections of these Contract Documents. For convenience of designation in the Contract Documents, certain equipment, articles, materials, and processes are designated by manufacturer trade name or catalog name and number. Such designation shall be deemed to be followed by the words “or approved equal” whether such words are shown or not. The Contractor may offer material or processes which are equal to that so indicated or specified at the time of Bid. The burden of proof as to comparative quality and suitability of alternatives shall be upon the Contractor. After acceptance of Bid, no substitutions will be allowed, except as stated in the Bid. (Exception: Where Specifications indicate “No Substitutions Allowed” the Contractor shall provide the designated manufacturers equipment without exception.)

1.02 SUBMITTAL PROCEDURES

- A. The Contractor shall, within 10 calendar days after receiving the Notice to Proceed, prepare and submit for review a construction schedule together with a detailed list of all the submittals which the Contractor proposes to make to meet the requirements of this and other Sections, including the dates on which the Contractor proposes to make such submittals.

- B. The Contractor shall submit submittals in electronic format. If hard copies are submitted, the Contractor shall submit 3 hard copies of the submittal packages to the Engineer for each submittal iteration if the submittal is provided as a hard copy.

- C. The Engineer will make internal distribution to the Owner and other interested parties.

- D. Submittals shall be in the English language.

- E. Weights, measures, and units shall be English units.

F. Symbols and drawings shall conform to ANSI Y32.2 / IEEE 315/SCA Z99.

1.03 CONTRACTOR RESPONSIBILITIES

- A. Review submittals prior to submission.
- B. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance to specifications.
- C. Coordinate each submittal with other submittals and with requirements of Work and of Contract Documents.
- D. Notify Engineer in writing, at time of submission, of any deviations in submittals from requirements of Contract Documents. Any such deviations permitted by Engineer will require modifications of Contract Documents.
- E. Provide space on Shop Drawings for Contractor and Engineer stamps.
- F. When Shop Drawings are revised for resubmission, identify all changes made since previous submission.
- G. Submittals containing language imposing duties on others (such as verification of dimensions or supply of related information) inconsistent with contract language shall be null and void.
- H. Submittals shall not be used as media for inquiries for information or for verification of information that must be supplied by others to Contractor. Inquiries or verification of information shall be made by separate Contractor submittal using Request for Information (RFI) process.
- I. Begin no fabrication or Work which requires submittal review until return of submittals by Engineer with stamp, as either "Furnish as Submitted", or "Furnish as Corrected."
- J. Distribute copies of reviewed submittals that carry Engineer stamp as either "Furnish as Submitted" or "Furnish as Corrected" as appropriate. Instruct parties to promptly report any inability to comply with requirements.

K. Submittals not requested will not be recognized or processed.

1.04 ENGINEER DUTIES

- A. Review required submittals within 15 calendar days and in accordance with schedule, only for general conformance to design concept of Project and compliance with information given in Contract Documents. Review shall not extend to means, methods, sequences, techniques, or procedures of construction or to safety precautions or program incident thereto. Review of a separate item as such will not indicated approval of assembly in which item functions.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or review of submittal. Engineer's action on submittals is classified as follows:
1. Furnish as Submitted: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents. Contractor may proceed with fabrication of work in submittal.
 2. Furnish as Corrected: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents, except as noted by reviewer. Contractor may proceed with fabrication of work in submittal with modifications and corrections as indicated by reviewer.
 3. Revise and Resubmit: Submittal has been reviewed and appears not to be in conformance to design concept of Project or with Contract Documents. Contractor shall not proceed with fabrication of work in submittal, but instead shall make any corrections required by reviewer and resubmit for review.
 4. Rejected: Submittal is being returned without having been reviewed because: 1) not required by Contract Documents; 2) grossly incomplete; 3) indicates no attempt at conformance to Contract Documents; 4) cannot be reproduced; 5) lacks Contractor's completed approval stamp; or 6) lacks design professional's seal when required by law or Contract Documents. If submittal is required by Contract Documents, Contractor shall not proceed with Work as detailed in submittal, but instead shall correct defects and resubmit for review.
- C. Return one copy of submittals to Contractor. Contractor shall make additional distribution as required.
- D. Submittals which do not contain markup, or which have minor markup that can be adequately described without referencing submittal, will not be

returned. Reviewer will return signed submittal stamp with written description of Review's comments.

- E. Review of submittals shall not relieve Contractor from responsibility for any variation from Contract Documents unless Contractor has, in writing, called Engineer's attention to such variation at time of submission, and Engineer has given written concurrence pursuant to Contract Documents to specific variation, nor shall any concurrence by Engineer or other reviewer relieve Contractor from responsibility for errors or omissions in submittals.

1.05 SHOP DRAWINGS SUBMITTALS

- A. Submit for review for limited purpose of checking for conformance to information given and design concept expressed in Contract Documents. Produce copies and distribute in accordance with article "Submittal Procedures" and for record documents purposes as described in Section 01 33 00.
- B. Designate in construction schedule, or in separate coordinated submittal schedule, dates for submission and dates that reviewed submittals will be needed.
- C. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in Work or in work of other contractors.
- D. Present in clear and thorough manner, complete with respect to dimensions, design criteria, materials of construction, and like information to enable review of information as required.
- E. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Drawings.
- F. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- G. Equipment which is identified on Contract Documents with tag number or name shall be identified on Shop Drawing with same tag.
- H. Schedule submittals to expedite Project. Coordinate submission of related items.
- I. For each submittal for review, allow 10 calendar days to complete review process.
- J. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

K. Shop Drawings shall be submitted in electronic format.

1. Submit electronic copy to Engineer at project site.
2. Text documents shall be submitted in .pdf format.
3. Drawings shall be submitted in .pdf format.
4. Electronic submittal shall be suitable for reproduction in black and white.
5. Samples may be submitted to Engineer at address given in these documents.

L. Submittals shall contain:

1. Date of submission and dates of any previous submissions.
2. Project title and number.
3. Contract identification.
4. Names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer
5. Identification of product, with Specification section number and article number.
6. Field dimensions, clearly identified as such.
7. Relation to adjacent or critical features of Work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Identification of deviations from Contract Documents.
10. Identification of revisions on resubmittals.
11. An 8" x 3" blank space for Contractor and reviewer stamps.
12. Indication of Contractor's approval, initialed or signed, with wording substantially as follows:

"Contractor represents to Owner and Engineer that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or assumes full responsibility for doing so and has reviewed or coordinated each submittal with requirements of Work and Contract Documents."

13. If Contract Documents include performance specifications stating required results which can be verified as meeting stipulated criteria, so that further design by Contractor prior to fabrication is necessary, Submittal depicting such design must be prepared under seal of professional engineer registered licensed in appropriate state and Submittal shall be signed and sealed in accordance with applicable regulations and with following certification statement:

"I hereby certify that this engineering document was prepared by me or under my direct personal supervision, that I am a duly registered licensed professional engineer under laws of state of Illinois and I accept responsibility for adequacy of this document to meet criteria stipulated in Contract Documents."

M. Product Data:

1. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
2. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

N. Design Data:

1. Submit for Engineer's knowledge as contract administrator or for Owner.
2. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

O. Data sheets:

1. Data sheets may require information not known until Contractor's engineering is complete. Furnish estimated values based on good engineering judgment. Estimated values shall be identified by placement of "(est.)" next to value.
2. Data Sheets shall be updated and resubmitted by Contractor once final values are known.
3. Do not leave items blank or labeled "To Be Determined" or "Later."
4. Do not submit manufacturer Product Data instead of completed data sheets.

P. Test reports:

1. Submit for Engineer's knowledge as contract administrator or for Owner.
2. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

Q. Certificates:

1. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor.

2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
3. Certificates may be recent or previous test results on material or product, but must be acceptable to reviewer.

R. Manufacturer's instructions:

1. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.
2. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

S. Manufacturer's field reports:

1. Submit report in duplicate within 30 days of observation for information.
2. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

T. Erection drawings:

1. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
2. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

U. Samples:

1. Samples for selection as specified in product sections:
 - a. Submit for aesthetic, color, or finish selection.
 - b. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns for selection.
2. Submit to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
3. Include identification on each sample, with full Project information.
4. Submit number specified in individual Specification Sections; 1 of which will be retained by Engineer.
5. Reviewed Samples which may be used in Work are indicated in individual Specification Sections.
6. Samples will not be used for testing purposes unless specifically stated in specification section.

7. Field Samples and mock-ups:
 - a. Erect at Project Site, at location acceptable to Engineer.
 - b. Size or area: That specified in respective Specification Section.
 - c. Fabricate each Sample and mock-up complete and finished.
 - d. Remove mock-ups upon acceptance of Work or when acceptable to Engineer.

V. Proposed products list:

1. Within 15 days after date of Notice to Proceed, submit list of major products proposed to Engineer for use, with name of manufacturer, trade name, and model number of each product.
2. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

W. Operations and maintenance manuals:

1. Designate in construction schedule, or in separate coordinated schedule, dates for submission and dates that reviewed operations and maintenance manuals will be needed.
2. Operations and maintenance manuals shall be presented in clear and thorough manner, complete with respect to dimensions, design criteria, materials of construction, and like information to enable reviewer to review information as required. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Drawings.

1.06 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in submittals required by Engineer and resubmit until stamped as either "Furnish and Submitted" or "Furnish as Corrected."
- B. Text and depictions changed on Submittal shall be back-circled (clouded).
- C. Engineer will assume that portions of Submittal not back-circled have not been changed by Contractor from previous submission.
- D. Indicate revision number and date in document revision block.

1.07 DISTRIBUTION

- A. Distribute reproductions of Shop Drawings which carry Engineer stamp as either "Furnish and Submitted" or "Furnish as Corrected" to:
 1. Job site file.

2. Record Documents file.
 3. Other affected contractors.
 4. Subcontractors.
 5. Supplier or fabricator.
- B. Distribute Samples which carry Engineer stamp as either "Furnish and Submitted" or "Furnish as Corrected" as directed by Engineer.

1.08 VIDEO DOCUMENTATION OF EXISTING CONDITIONS

- A. Prior to construction, perform video recording in all areas to be disturbed by construction. Recording shall document significant features that may be affected by construction activity. Payment for Video Documentation of Existing Conditions shall only occur if video documentation is provided prior to Contractor Mobilization / Start of Construction.
- B. Provide labor, equipment, and materials for televising and complete video documentation of construction areas.
- C. Personnel and equipment:
1. Furnish equipment, supplies, and materials necessary to complete Work as specified.
 2. Equipment not giving proper results shall be replaced.
- D. Camera and other components shall provide clean, clear, and sharp color picture.
- E. Video/photographic recording:
1. Provide complete color video recording of construction areas. Video recording media produced shall be compatible with Owner's video equipment.
 2. Produce video recordings of sufficient quality to allow proper in-house viewing with minimum of distortion; no image tearing.
 3. Provide voice narration on video recording to document following information:
 4. Name of city, street, and date upon which video inspection was made.
 5. Description of special features, i.e. cracked pavements, special landscaping, etc.
 6. Stop camera at special features for minimum of 10 seconds to allow for photographic documentation.
 7. Deliver video recording to Engineer who, after review, will deliver recording to Owner for permanent records.
 8. Label each recording to identify sewer and limits of coverage.

F. Recording procedure:

1. Camera shall be moved at uniform rate consistent with amount of detail being recorded.
2. Take necessary steps and adopt procedures to ensure optimum viewing conditions.

1.09 SAFETY PROCEDURES MANUAL

A. Prepare and submit to Owner safety procedures manual defining Contractor's safety program for work on site. Manual shall include:

1. Safety responsibilities of Contractor's personnel.
2. Description of Contractor's safety program.
3. Requirements of use of personal protective equipment.
4. General safety-related rules of conduct.
5. Fire prevention measures.
6. Accident reporting procedures.

PART 2 – PRODUCTS

As specified in applicable sections of the Contract Documents.

PART 3 – EXECUTION

As specified in applicable sections of the Contract Documents.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

**QUALITY ASSURANCE
SECTION 01 43 00**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This Section covers Quality Assurance and Control requirements for this contract, which include but are not limited to the following:
1. Perform the inspections and test required by the Specifications.
 2. Provide product certifications as required by the Specifications.
 3. Test, adjust, balance, and operate mechanical and electrical equipment to demonstrate that they have been properly assembled, aligned, adjusted, wired, and connected. Make any adjustments or replacements found necessary.
 4. Neither observations by Engineer, Owner's Representative, nor inspections, tests, or approvals by other than Contractors, shall relieve Contractor from his/her obligation to perform the Work in accordance with the requirements of the Contract Documents.
- B. The Contractor is responsible for controlling the quality of work, including work of its subcontractors, suppliers, and manufacturers and for assuring the quality specified in the Technical Specifications is achieved.

1.02 CONTRACTOR FURNISHED TESTING LABORATORY SERVICES

- A. An independent commercial testing laboratory acceptable to the Engineer shall perform all tests that require the services of a laboratory to determine compliance with the Contract Documents. The laboratory shall be staffed with experienced technicians, properly equipped, and fully qualified to perform the tests in accordance with the specified standards.
- B. Preliminary Testing Services: The Contractor shall be responsible for all testing laboratory services in connection with concrete materials and mix designs, the design of asphalt mixtures, gradation tests for structural and embankment fills, backfill materials, and all other tests and engineering data required for the Engineer's review of materials and equipment proposed to be used in the Work. The Contractor shall obtain the Engineer's acceptance of the testing laboratory before having services performed, and shall pay all costs for services.
- C. The Contractor shall not retain any testing laboratory against which the Owner or the Engineer have reasonable objection, and if at any time during the construction process the services become unacceptable to the Owner, or the Engineer, either the Owner or the Engineer may direct in writing that such services be terminated. The request must be supported with evidence of

improper testing or unreasonable delay. If the Engineer determines that sufficient cause exists, the Contractor shall terminate the services and engage a different testing laboratory.

- D. Transmittal of Test Reports: Written reports of testing and engineering data furnished by the Contractor for the Engineer's review of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.
- E. The Contractor's testing laboratory shall furnish four copies of a written report of each test performed by laboratory personnel within three days after each test is completed. Distribution shall be two copies of each test report to the Engineer's Representative, one copy to the Owner, and one copy for the Contractor.

1.03 CONTRACTOR FURNISHED TESTING AND INSPECTION SERVICES

- A. The Contractor will employ the services of an independent testing agency to conduct concrete testing.
- B. The Contractor shall furnish a construction schedule and a minimum of 48 hour notice of readiness for testing and inspection of the work. The Engineer shall determine the exact time and location of field sampling and testing, and may require such additional sampling and testing as necessary to determine that materials and equipment conform with data previously furnished by Contractor and with the Contract Documents.
- C. The Contractor shall schedule the work to permit adequate time for testing and re-testing should test results not conform to the contract documents.
- D. The Contractor shall furnish material samples and cooperate in the field sampling and testing activities, interrupting the work when necessary. The Contractor shall furnish personnel, facilities and access to assist in the sampling and testing activities.

1.04 QUALITY ASSURANCE

- A. Codes and Standards: Refer to Article 3 - Documents: Intent, Requirements, Reuse, paragraph 3.03 of the General Conditions.
- B. Copies of applicable referenced standards are not included in the Contract Documents. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, the Contractor shall obtain a copy or copies directly from the publication source and maintain at the jobsite, available to the Contractor's personnel, subcontractors, and Engineer.

- C. Quality of Materials: Unless otherwise specified, all materials and equipment furnished for permanent installation in the Work shall conform to applicable standards and specifications and shall be new, unused, and free from defects and imperfections, when installed or otherwise incorporated in the Work. The Contractor shall not use material and equipment for any purpose other than that intended or specified unless the Engineer authorizes such use.
- D. Where so specified, products or workmanship shall also conform to the additional performance requirements included within the Contract Documents to establish a higher or more stringent standard or quality than that required by the referenced standard.

1.05 MATERIALS AND EQUIPMENT

- A. The Contractor shall maintain control over procurement sources to ensure that materials and equipment conform to specified requirements in the Contract Documents.
- B. The Contractor shall comply with manufacturer's printed instructions regarding all facets of materials and/or equipment movement, storage, installation, testing, startup, and operation. Should circumstances occur where the contract documents are more stringent than the manufacturer's printed instructions, the Contractor shall comply with the specifications. In cases where the manufacturer's printed instructions are more stringent than the contract documents, the Contractor shall advise the Engineer of the disparity and conform to the manufacturer's printed instructions. In either case, the Contractor is to apply the more stringent specification or recommendation, unless approved otherwise by the Engineer.

1.06 MANUFACTURER'S FIELD SERVICES

- A. When specified in the technical specifications sections, the Contractor shall arrange for and provide technical representation from manufacturer's of respective equipment, items or components. The manufacturer's representative shall be a factory trained service engineer/technician with the type and length of experience specified in the technical specifications.
- B. Services Furnished Under This Contract: An experienced, competent, and authorized factory trained service engineer/technician representative of the manufacturer of each item of equipment for which field services are indicated in the specifications shall visit the site of the Work and inspect, operate, test, check, adjust if necessary, and approve the equipment installation. In each case, the manufacturer's service representative shall be present when the equipment is placed in operation. The manufacturer's service representative shall revisit the jobsite as often as necessary until all problems are corrected and the equipment installation and operation are satisfactory to the Engineer.

C. Refer to specific Technical Specification sections for additional requirements.

1.07 CERTIFICATION FORMS AND CERTIFICATES

A. The Contractor shall be responsible for submitting the certification forms and certificates in conformance with the requirements specified in Section 01 33 00 – Submittals.

PART 2 – PRODUCTS

All materials and equipment shall be provided as required by the Contractor for any specified testing.

PART 3 – EXECUTION

3.01 QUALITY CONTROL

A. Quality control is the responsibility of the Contractor, and the Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.

B. Certifications for personnel, procedures, and equipment associated with special processes (e.g., welding, cable splicing, instrument calibration, surveying) shall be maintained in the Contractor's field office, available for inspection by the Engineer. Copies shall be made available to the Engineer upon request.

C. Means and methods of construction and installation processes are the responsibility of the Contractor, and at no time is it the intent of the Engineer to supersede or void that responsibility.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

TEMPORARY FACILITIES AND CONTROLS
SECTION 01 50 00

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish and install temporary facilities as hereunder specified, plus other unspecified temporary facilities, including labor, materials, services, utilities, and equipment, as may be required for proper performance of Contract, except as otherwise provided. Temporary facilities shall be approved by the Owner and other authorities having legal jurisdiction. Locate facilities where and as directed, and maintain in safe and sanitary condition at all times until completion of Work.
- B. At completion of work, or sooner when no longer needed, remove all temporary facilities, except where certain facilities are specified to remain or to be relocated for use under future contracts.

1.02 CONSTRUCTION EQUIPMENT

- A. Erect, equip, operate, and maintain construction equipment in strict accordance with applicable statutes, laws, ordinances, rules, and regulations of authorities having jurisdiction.

1.03 SAFETY PRECAUTIONS

- A. Provide and maintain barricades, fencing, shoring, pedestrian walkways including attached lights, other lights, and other safety precautions to properly guard against personal injury and property damage as prescribed by authority having jurisdiction (See also General Conditions, Article 7).
- B. Maintain such items for duration of Work, and repair, replace, and relocate them as necessary for safe protection.
- C. Provide such additional safety precautions as may be prescribed by authorities having jurisdiction.

1.04 ROADS AND ACCESSWAYS

- A. Entrance to Work Site: The Contractor and subcontractors shall use only those access points or entrance ways as directed by the Owner.
 - 1. Maintain access roads and parking areas in satisfactory condition during the Contract, and repair damages attributable to Work of this Project at intervals as needed. At completion of the Contract, roads, parking areas and entrance ways shall be left in condition at least equal to that existing

at start of the Contract, except as may be otherwise be required by the Contract documents.

1.05 TRAFFIC CONTROL, PUBLIC SAFETY AND CONVENIENCE

- A. The CONTRACTOR shall at all times conduct his work so as to assure the least possible obstruction to traffic and inconvenience to the general public and provide adequate protection of persons and property in the vicinity of the work.
- B. The work zone shall be maintained in accordance with Special Provisions of this Contract.
- C. No roads shall be closed without prior written approval from the Engineer. Prior to any road closure the Contractor must present to the Engineer a detour plan with description on how resident access will be maintained and signage for the closure. Submittal of a road closure request to the Engineer does not guarantee approval by the Engineer. All additional traffic control required for road closures per the Contractors request shall be included in the cost of the applicable contract pay items.

1.06 USE OF VILLAGE PROPERTY

- A. On-Site Storage and Work Areas: The Village will allocate available on-site storage and work areas to the Contractor, subject to change as may be necessary by job progress, such as site development or intervening work.
- B. Village Property and Right-of-Way: Operations shall be confined to Village property and right-of-way to greatest extent, and shall not encroach on areas other than those designated or approved for such use by the Village.
 - 1. Ascertain, observe, and comply with rules and regulations in effect, including but not restricted to, parking and traffic regulations, hours of allowable ingress and egress to main arteries, and the like.
- C. Existing Improvements in Streets and Parking Area: Existing signs, fire hydrants, underground valves and meter boxes, manholes, and other items occurring adjacent to the site shall be left undisturbed, unobstructed, and easily accessible at all times during construction, except as otherwise indicated or agreed to between Contractor and Village authorities.
- D. Covering, moving, trimming, or altering which may become necessary shall be done only with consent of and in cooperation with Village authorities having jurisdiction. Contractor shall pay costs that may be incurred.
- E. Make detailed examination of such Village property at start of work and conditions shall be noted by Contractor and confirmed by Village.

1. Village streets and other existing improvements therein adjacent to site, if damaged by this work, shall be repaired by the Contractor at intervals as needed. At the completion of the project, all such items not included in the Contract shall be left in condition at least equal to that at the start of operations.
 2. Repair work shall conform to requirements of the Village. This includes, but is not restricted to, temporary walks for pedestrians, cleaning of mud and debris, air pollution control, and traffic control.
- F. Protection of Trees and Shrubs: Existing trees and shrubs to remain shall not be injured during the course of this work. Trim tree only to the extent required for construction. Coordinate with Village and Property Owner for any tree trimming required.
1. If any tree or shrub during the course of, or as a result of construction operations is injured to extent of causing its permanent disfigurement or death, the Contractor shall pay the cost of damages to the Village for each tree or shrub so injured, amount to be agreed upon by the Village and Contractor.
- G. Protection of Existing Utilities: Protect from damage, existing utility lines not specified to be altered by Work of this Contract; any such features damaged shall be repaired or replaced to condition equal to that existing prior to commencing work of this Contract. Unless otherwise specified, maintain existing utility service at all times during construction. Utility service lines found entering site and not indicated to remain or to be incorporated in new Work, shall be plugged, capped, or otherwise abandoned by Contractor in manner satisfactory to Utility Companies whose services are involved, except as otherwise required.

1.07 CLEAN UP OF WORK AND DISPOSAL OF TRASH

- A. Keep work and storage areas clean and free of rubbish and perform protective and cleanup work within one day of being so notified by the Owner.
- B. Dispose of trash resulting from work. Recycle materials to the extent practicable.

1.08 SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures at each construction location. Existing facility use is not permitted. Provide at time of project mobilization.

1.09 TEMPORARY WATER

- A. Make arrangements for water required for construction purposes; furnish and install temporary piping or hose to carry water to every part of construction.

1.10 TEMPORARY ELECTRICITY

- A. The site currently has a dedicated electric service for the existing lift station which may remain active until the service transfer is made between the old and new service (scheduled by the Contractor). The existing service shall not be modified in any way that impacts the operation of the existing lift station while still in service.
- B. The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the Work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, panelboards, outlets, lamps, fuses, controls, meters and accessories.
- C. The electric service shall be of sufficient capacity and characteristics to supply the proper current for the various types of construction tools, motors, welding machines, lights, heating plant, pumps, and other work required.
- D. The Contractor shall pay charges and fees by power company for providing the electrical service and for power used at no additional cost to the Owner.
 - 1. Perform all work in accordance with the power company's requirements and in manner approved by power company.
 - 2. Notify power company prior to work.
- E. The Contractor shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

1.11 DEWATERING FACILITIES

- A. Provide and maintain dewatering and pumping facilities to keep site reasonably dry, and to protect materials and installed work from water damage until dewatering is no longer required. Remove dewatering facilities from site when no longer needed. The Contractor shall refer to the soil boring report provided in Section 02 06 14.

1.12 SECURITY

- A. Contractor shall be responsible for security of Work involved in this Project, during entire time of Contract. Make good all damages to work and loss of materials due to vandalism or theft, within this responsibility.

1.13 TEMPORARY FENCING

- A. Provide commercial grade chain link fence to prevent trespass by workmen and suppliers onto private property and the public from the construction site.
- B. Provide 6-foot high fence around construction site. Equip fence with vehicular and pedestrian gates with locks.
- C. Coordinate location of temporary fencing with Owner's Representative.

PART 2 – PRODUCTS

As specified in applicable sections of the Contract Documents.

PART 3 – EXECUTION

As specified in applicable sections of the Contract Documents.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section

4.02 PAYMENT

- A. Payment for the Work specified under this section will be made at the lump sum price for TEMPORARY FACILITIES AND CONTROLS.

--- END OF SECTION ---

TEMPORARY BYPASS PUMPING SYSTEMS
SECTION 01 51 00

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Furnishing all materials, labor, equipment, power, maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing raw wastewater flow around the work area at each lift station for the durations specified and disassembly of the bypass pumping system as specified herein.
- B. Be responsible for the design, installation and operation of the temporary pumping system. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.
- C. The Contractor is responsible to maintain flow at each station throughout the contract period of construction. Once the Contractor mobilizes, the Village cedes responsibilities of station operations to the Contractor until Substantial Completion is reached.

1.02 SYSTEM DESCRIPTION

A. Bypass Pumping Layout

- 1. The existing lift station is arranged with a single 6-foot diameter wet well upstream of the dry well. This wet well has multiple incoming sewer flows with an estimated average daily flow of 205,000 GPD. The upstream gravity system has an estimated maximum volume of 15,000 gallons bypass pumping must be active or roughly 2-hours. There is currently bypass valving on site to pump from the wet well around the dry well. It shall be the responsibility to review the site layout for the preparation and submittal of a bypass pumping plan.

B. Design Requirements:

- 2. Provide bypass pumping systems with firm capacity to pump down the flows listed in 1.02.A above.
- 3. Provide all pumps of adequate size to handle peak flow, and temporary discharge piping to ensure that the total flow of the main can be safely diverted around the pumping station. Bypass pumping system will be required to operate 24 hours per day.

4. Provide control system for the bypass pumping system which will run the pump(s) between preset levels. Additional controls are required to for high-high level and low-low Level alarms, and any pump faults.
 5. Provide adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown. One standby pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use in the event of primary pump failure.
 6. The bypass pumping system shall be capable of bypassing the flow around the work area as necessary for satisfactory performances of work.
 7. Make all arrangements for bypass pumping during the time when the pumping station is shut down for any reason. System must overcome any existing force main pressure on discharge.
- C. It is essential to the operations of the existing wastewater system that there be no interruption in the flow of sewage throughout the duration of the project. To this end, provide, maintain and operate all temporary facilities such as, pumping equipment (both primary and back-up units as required), conduits, all necessary power, and all other labor and equipment necessary to intercept the wastewater flow before it reaches the point where it would interfere with the work, carry it past the work and return it to the existing wastewater downstream of the work.
- D. Provide all necessary means to safely convey the raw wastewater past the work area. Do not stop or impede the main flows under any circumstances.
- E. Maintain wastewater flow around the work area in a manner that will not cause surcharging of wastewater, damage to existing pipe line and that will protect public and private property from damage and flooding.
- F. Fluid Character: Provide pumping units to pump raw wastewater.
- G. Furnish pumps which meet rating capacity and head indicated on Process Pump Schedule.
- H. Pumps shall be capable of passing a minimum of a 3-inch non-deformable sphere.

1.03 SUBMITTALS

- A. Provide all submittals, including the following, in accordance with Section 01 33 00, SUBMITTALS.

B. Data:

1. Pump Data:

- a. Pump performance curves. Draw curves for the specified conditions. Include head, brake horsepower, efficiency and required NPSH, all plotted as a function of capacity, from zero to maximum capacity.
- b. Calculations of static lift, friction losses, and flow velocity.
- c. Submit a specific, detailed description of the proposed pumping system.
- d. Submit operating descriptions, component descriptions, control schematics, electrical connection diagrams and general arrangement drawings, for control equipment.

D. Drawings:

1. Shop Drawings:

- a. Submit shop drawings, including arrangement and erection drawings of the equipment and equipment operating characteristics. Include the following:
 - i. Submit detailed plans and descriptions outlining all provisions and precautions to be taken regarding the handling of existing wastewater flows. The plan shall include schedules, locations elevations, capacities of equipment, materials and all other incidental items necessary and/or required to insure proper protections of the facilities, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and all permit conditions.
 - ii. The plan shall include but not be limited to details of the following:
 - (a) Staging areas for pumps;
 - (b) Number, size, material, location and method of installation of suction piping;
 - (c) Number, size, material, location of installation of discharge piping;
 - (d) Bypass pump sizes, capacity, number of each size to be on site and motor power of fuel requirements;
 - (e) Standby power generator size, location;
 - (f) Downstream discharge plan;
 - (g) Thrust and restraint block sizes and locations;

- (h) Sections showing suction and discharge pipe depth, embedment, select fill and special backfill;
- (i) Method of noise control for each pump and/or generator;
- (j) Any temporary pipe supports and anchoring required;
- (k) Design plans and computation for access to bypass pumping locations indicated on the drawings;
- (l) Calculations for selection of bypass pumping pipe size;
- (m) Schedule for installation of and maintenance of bypass pumping lines;
- (n) Plan indicated selection location of bypass pumping line locations.

PART 2 – PRODUCTS

2.01 EQUIPMENT

- A. All pumps used shall be centrifugal self-priming units that do not require the use of footvalves or Compressor in the priming system. The pumps shall be diesel or electric powered. Pumps shall have sound attenuation enclosure designed for operation at sound levels of 70 decibels and below. The Contractor is fully responsible for coordinating and obtaining temporary electrical service. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of influent flows. The pumps shall not be hydraulic submersible type.
- B. The Contractor shall include one stand-by temporary bypass pump to be maintained on site. Stand-by temporary bypass pumps shall be on-line and shall be piped into the inflow and to the bypass piping so that upon starting the stand-by pump shall take over and pick up the flow. Stand-by temporary bypass pumps shall be isolated from the primary bypass system by valving as required.
- C. Provide the necessary stop/start control system for each pump. The control system shall remotely contact the contractor with notification of any problem. The contractor is responsible for responding within one (1) hour to the alarm and correcting the problem.
- D. Discharge Piping – in order to prevent the accidental spillage of flows, all discharge systems shall be temporarily constructed of rigid pipe with positive, restrained joints.
- E. Under no circumstances will aluminum “Irrigation” type piping and glued PVC pipe be allowed. Discharge hose will only be allowed in short sections and by specific permission from the ENGINEER. Provide piping materials of steel pipe, ductile iron pipe, or fused, high density polyethylene pipe.

PART 3 – EXECUTION

3.01 PRECAUTIONS

- A. Be responsible for locating any existing utilities in the area selected for installing the bypass pipelines. Locate bypass pipelines to minimize any disturbance to existing utilities and obtain approval of the pipeline locations from the ENGINEER. All costs associated with relocating utilities and obtaining all approvals shall be included in the Contract Price.

3.02 INSTALLATION AND REMOVAL

- A. Make connections to the existing wastewater pipelines and construct temporary bypass pumping structures only at the access location indicated on the drawings and as may be required to provide adequate suction conduit.
- B. Plugging or blocking of wastewater flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance or work, it is to be removed in a manner that permits the wastewater flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.
- C. The installation of the bypass pipelines is prohibited in all wetland areas. The pipeline must be located off streets and sidewalks and on shoulder of the roads. When the bypass pipeline crosses local streets and private driveways, place the bypass pipelines in trenches and cover with temporary pavement. Upon completion of the bypass pumping operations, and after the receipt of written permission from the ENGINEER, remove all the piping, restore all property to pre-construction condition and restore all pavement. Be responsible for obtaining any approvals for placement of the temporary pipeline within public ways from the city.

3.03 FIELD QUALITY CONTROL AND MAINTENANCE

- A. Testing: Perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to actual operation. Test the piping at a test pressure of 50 psi. Provide 24 hours notice to the ENGINEER prior to testing.
- B. Inspection: Inspect bypass pumping system as needed to ensure that the system is working correctly.
- C. Maintenance Service: Insure that the temporary pumping system is properly maintained and a responsible operator is on hand at all times when pumps are operating.

D. Extra Materials:

1. Spare parts for pumps and piping shall be kept on site as required.
2. Adequate hoisting equipment for each pump and accessories shall be maintained on the site.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum price for TEMPORARY BYPASS PUMPING.

--- END OF SECTION ---

MOBILIZATION AND DEMOBILIZATION SECTION 01 71 13

PART 1 – GENERAL

1.01 SCOPE:

- A. The work consists of the mobilization and demobilization of the contractor's forces and equipment necessary for performing the work required under the contract for LS items. It does not include mobilization and demobilization for specific items of work for which payment is provided elsewhere in the contract. Mobilization will not be considered as work in fulfilling the contract requirements for commencement of work.

1.02 MOBILIZATION:

- A. Mobilization shall include all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable; and other items specified in this specification.

1.03 DEMOBILIZATION:

- A. Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for this contract.

PART 2 – PRODUCTS

As specified in applicable sections of the Contract Documents.

PART 3 – EXECUTION

Mobilization schedule shall be presented at the Preconstruction Meeting. Notification of changes in mobilization and demobilization schedules shall be submitted to the Owner 48 hours in advance of mobilization / demobilization activities.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

A. MOBILIZATION AND DEMOBILIZATION will not be measured for payment.

4.02 PAYMENT

A. This work will be paid for at the lump sum price for MOBILIZATION AND DEMOBILIZATION.

B. The amount of which the Contractor will receive payment for, according to the following schedule, will be limited to one percent of the original contract amount. Should the bid for MOBILIZATION AND DEMOBILIZATION exceed one percent, the amount over one percent will not be paid until 90 percent of the adjusted contract value is earned.

1. Upon execution of the contract, 75 percent of the pay item will be paid.
2. Upon completion of 90 percent of the adjusted contract value, the remaining 25 percent of the pay item will be paid along with any amount in excess of one percent of the original contract amount.

--- END OF SECTION ---

**CLOSEOUT PROCEDURES
SECTION 01 77 00**

PART 1 – GENERAL

1.01 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.02 FINAL CLEANING

- A. Provide final cleaning prior to final acceptance.
- B. Clean interior and exterior, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.
- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Replace filters of operating equipment.
- E. Clean all sanitary manholes and storm sewer manholes, catch basins, and inlets.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.03 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Engineer seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 01 33 00 that equipment or system has been properly installed and is functioning correctly.

1.04 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel 2 weeks prior to date of Substantial Completion.
- B. Demonstrate Project equipment and instruct in a classroom environment located at the project site and instructed by a qualified manufacturer's representative who is knowledgeable about the Project.
- C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at each location.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F. Amount of time required for instruction on each item of equipment and system is that specified in individual sections.

1.05 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

C. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

D. Prohibit traffic from landscaped areas.

1.06 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
2. Specifications.
3. Addenda
4. Change Orders and other modifications to the Contract.
5. Reviewed Shop Drawings, Product Data, and Samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawings: Legibly mark each item to record actual construction including:

1. Measured depths of foundations in relation to finished floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract Drawings.
6. All elevations shall be recorded on the NAVD 88 datum, consistent with the plans.
7. As-builts with insufficient recorded information will be rejected. In particular the contractor shall note where all elevation adjustments and alignment adjustments have been installed.
8. As-builts must be turned in with the Contractors notice of completion. Failure to submit as-builts with the notice of completion will begin to trigger liquidated damages after the project completion date or when working days have been exhausted.

G. Submit documents to Engineer with claim for final Application for Payment.

1.07 OPERATION AND MAINTENANCE DATA

- A. Operation and maintenance data shall be in English language.
- B. Submit data bound in 8-1/2" x 11" text pages, 3-D side ring binders with durable plastic covers.
- C. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of project, and subject matter of binder when multiple binders are required.
- D. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- E. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- F. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.

2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:

- a. Significant design criteria.
- b. List of equipment.
- c. Parts list for each component.
- d. Operating instructions.
- e. Maintenance instructions for equipment and systems.
- f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

3. Part 3: Project documents and certificates, including the following:

- a. Shop drawings and product data.
- b. Air and water balance reports.
- c. Certificates.
- d. Originals or Photocopies of warranties and bonds.

G. Submit draft copy of completed volumes 15 calendar days prior to final inspection. Draft copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.

H. Submit 3 sets of revised final volumes, within 10 calendar days after final inspection.

I. Submit digital format of manuals in PDF format in addition to hardcopies described above.

1.08 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Provide spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed; obtain receipt prior to final payment.

1.09 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten calendar days after completion of the applicable item of work.

- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify that documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- C. Provide Table of Contents and assemble in 3-D side ring binder with durable plastic cover.
- D. Submit prior to final Application for Payment.
- E. Time of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 calendar days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 calendar days after acceptance, listing the date of acceptance as the beginning of the warranty or bond period.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections for 2 years from date of Substantial Completion.
- B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- D. Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

PART 2 – PRODUCTS

As specified in applicable sections of the Contract Documents.

PART 3 – EXECUTION

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

SITE PREPARATION SECTION 02 10 00

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Provide labor, material, tools and equipment to prepare site as indicated and specified.

PART 2 – PRODUCTS

As specified in applicable sections of the Contract Documents.

PART 3 – EXECUTION

3.01 EXISTING TREES AND VEGETATION

- A. Avoid cutting or injuring trees and vegetation outside easement line and outside areas to be cleared as indicated, without Engineer's permission.
- B. Accept responsibility for damages outside these lines.
- C. Remove trees within permanent and temporary easement as designated by Engineer.
- D. All damage to existing hardscape from tracked equipment shall be replaced at the Contractor's expense. It is recommended rubber tired or rubber tracked equipment is used. Any unwarranted disturbance to the existing hardscape to remain will warrant repairs made joint to joint and in conformance with the bid documents. All work shall be done to the satisfaction of the Engineer. The Engineer shall determine with the Village limits of removals and replacements due to the Contractor's negligence.

3.02 CLEARING

- A. Cut or remove trees, brush, and other vegetative matter such as snags, bark and refuse, from areas to be cleared. Clear ground to width of permanent easement unless otherwise directed.
- B. Cut trees, stumps, and stubs to be cleared, except where clearing done by machinery, as close to ground surface as practicable, but no more than 6 in. above ground surface for small trees and 12 in. for larger trees.

3.03 GRUBBING, STRIPPING, DISPOSAL

- A. Remove stumps and roots larger than 3 in. in diameter to a depth of 12 in., and roots larger than ½ in. in diameter to a depth of 6 in. Measure depths to cut from existing ground surface or proposed finished grade, whichever is lower.
- B. Strip stumps, roots, foreign matter, topsoil and unsuitable earth from ground surface. Utilize topsoil insofar as possible for finished surfacing.
- C. Promptly dispose off site material from clearing and grubbing not reused or stockpiled. In doing so, observe all applicable laws, ordinances, rules and regulations. Do not consider work completed until final cleaning, unless otherwise directed.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

**DEMOLITION
SECTION 02 41 00**

PART 1 – GENERAL

1.01 SCOPE

A. This work shall consist of the selective demolition of equipment, piping and electrical and mechanical systems from the wet well and dry well; sidewalk removal; curb removal; pavement removal; wet well concrete fill; wet well benching / patching / plugging; generator removal.

B. Wet Well Demolition:

1. Equipment, piping and other materials to be removed from the wet well include, but are not limited to:
 - a. The existing bubbler, sump discharge, and pressure transducer lines / conduit including all tees, elbows and other fitting.
 - b. The existing pump suction line that shall be plugged with 2' of non-shrink concrete / mortar plug.
2. Holes left at the bottom and the sides of the wet well walls shall be sealed with a high performance, non-metallic, non-shrink cementitious grout such as SikaGrout 212 or approved equal. Otherwise the existing wet-well structure will remain and efforts will be made to protect the structure from damage.
3. The existing wet well shall be filled with flowable per the details shown on the demolition plan.

C. Dry Well Demolition

1. Equipment and piping to be removed from the dry well include, but are not limited to:
 - a. Existing pumps, valves, piping and controls.
 - b. Existing sump pumps and discharge lines.
 - c. All lighting fixtures, heaters, dehumidifier, compressors, switches, and blowers including brackets and electrical components.
 - d. Disconnection of the electrical service.
 - e. The existing pump suction line and force main discharge lines that shall be plugged and mechanically capped.

2. After removal from the dry well the PLC controls, level controls and flow meter equipment shall be turned over to the Village Public Works Department.
3. After selective demolition, the entrance tube shall be removed a minimum depth of 5-foot below existing grade or as deep as needed to accommodate the final proposed site improvements. The controlled low strength material shall be Mix 1 with work performed in accordance with Article 593 of the SSRBC. The contractor include venting as needed in order to completely fill the abandoned in place dry well to eliminate voids. Backfill remaining excavation with in-situ site material or bedding as required for proposed site components. The remainder of the stripped dry well vessel shall be filled with controlled low strength material (flowable fill).

D. Other Demolition

1. Remove electrical service meter and emergency cutoff switch. Conductors feeding meter shall also be removed after the new electrical service is energized.
2. Abandon existing data service to dry well.
3. Remove automatic transfer switch, generator, generator housing, and generator pad.
4. Abandon existing 8" force main as shown and quantified elsewhere on the plans.
5. Full depth sawcut and remove sidewalk, curb and gutter, and pavement as shown on the demolition plan.

E. Basic Procedures and Schedule: Carry out demolition so that adjacent structures, which are to remain, are not endangered. Schedule the work so as not to interfere with the day to day operation of the existing facilities. Do not block doorways or passageways in existing facilities.

F. Additional Requirements: Provide dust control for existing and new equipment protection and make provisions for safety.

1.02 SCHEDULING

A. Perform Work in manner which will provide least interference and most protection to public and existing construction. Contractor's operations subject to approval by Owner prior to commencement of Work.

- B. Carefully coordinate time and manner of demolition work with Engineer to assure continued operation of existing facilities and to maintain construction schedule requirements.
- C. Owner's use of premises shall have priority over work in all Contract(s).
- D. Minimize outages of electrical systems.
- E. Coordinate electrical system outages with Owner and service utility. Notify Owner in writing at least 24 hours prior to electrical outage. Indicate system to be disabled, areas affected, proposed date and time of outage, duration, and work to be performed.
- F. Outages of following electrical systems shall be performed only with written permission of Owner.
 - 1. Power distribution.
 - 2. Fire alarm.
 - 3. Telephone.

1.03 SUBMITTALS

- A. The Contractor shall submit to the Owner for review a description of demolition operations and procedures, data and information pertaining to the demolition Work and as herein specified. Submittals shall include product specifications and descriptions, and drawings (when necessary) showing details together with related accessories. All submittals shall comply with the applicable requirements of Section 01 33 00.
- B. The Contractor shall submit a schedule in compliance with Part 1.02 of this Section.
- C. The Contractor shall submit material test reports on samples of all fill and backfill.
- D. The Contractor shall submit a material in-situ compaction test report for backfill required by the demolition operations.
- E. Provide submittals as required during utility identification, relocates and protection. Provide submittals as required by the utility involved and / or having jurisdiction. Submittals shall be directly to the utility involved with copy to the Engineer.

1.04 QUALITY ASSURANCE

A. Utility Identification, Relocate and Protection

1. Perform all Work of this Section in accordance with the applicable requirements of codes and standards of the agency / utilities involved. Comply with IDOT Standard Specifications (Sections 105.07 and 107.31) for Cooperation with Utilities and Contractor Responsibility.

B. Retain services of a qualified professional soils consultant and testing laboratory. Responsibilities of soils consultant will include:

1. Sampling, testing, and approval of fill or backfill materials prior to and during placement.
2. Sampling and testing to determine moisture-density, maximum density and relative density characteristics of materials.
3. Observation of placement, selection of test locations and testing of material during placement to determine that specified compaction requirements are met.
4. Provide reports to Owner giving information on materials and testing performed.
5. Bind all reports and recommendations in one report at end of Project and submit to Owner.
6. Soils consultant shall provide evidence of professional registration in state where Work is performed and Professional Liability Insurance covering its activities in investigation, evaluation and production of reports dealing with subsurface soils investigations.

C. Temporary electrical construction necessary to maintain existing system during construction shall comply with NEC Article 590.

D. Regulatory requirements:

1. Comply with governing EPA notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction. Obtain and pay for all permits required.
2. Conform to applicable requirements of state, and other governmental agencies for demolition work.

1.05 SITE CONDITIONS

- A. Known underground piping, foundations, and other underground obstructions in vicinity of new construction are shown on Drawings.
- B. Protect underground facilities encountered during excavation until it is determined whether they are active or inactive. Repair, without compensation, existing active facilities shown on Drawings damaged during operations.
- C. Notify Engineer and Owner of unexpected subsurface conditions and discontinue Work in area until Owner provides notification to resume Work.

PART 2 – PRODUCTS

2.01 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain property of Owner, demolished materials shall become Contractor's property and shall be removed, recycled, or disposed from Project Site in appropriate and legal manner.

2.02 CONTROLLED LOW STRENGTH MATERIAL

- A. The Contractor shall submit to the Engineer a mix design for the flowable fill used on the project. The mix design shall generally conform to the following mix as designed by Prairie Material Mix #6115811, or as approved by the Engineer:

Cement:	80 Pounds
Fly Ash:	910 Pounds
Sand:	1850 Pounds
Water:	54.7 Gallons
A/E:	1 – 25%
Slump:	10 ± 1"

PART 3 – EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Inspect structures where demolition is required. Inspect existing Drawings of buildings and structures; Drawings are available from Owner.
- B. Perform excavation and dewatering necessary to accomplish Work.
- C. Determine actual Site conditions, extent to which demolition is required, and method of demolition.
- D. Schedule work with Owner and work in other parts of these Contract Documents.

- E. Perform surveys as required prior to demolition and as Work progresses to detect hazards resulting from demolition activities.

3.02 PREPARATION

- A. Conduct demolition operations and remove C&D materials to ensure minimum interference with roads, streets, walks, and other adjacent occupied and utilized facilities.
- B. Do not close or obstruct streets, walks, or other adjacent occupied or utilized facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
- D. Protect existing Site improvements, appurtenances, and landscaping that are designated to remain in place.

3.03 UTILITY IDENTIFICATION, RELOCATES AND PROTECTION

- A. Active utilities which do not interfere with the Work shall be supported and protected from damage. After Engineer review and obtaining the utility's approval, relocate or remove active utilities which will interfere with Work. The Contractor shall pay for all damage to active utilities and for relocation or removal of all interfering utilities which are ascertainable from Drawings, surveys or site inspection, including J.U.L.I.E meet to be scheduled by the Contractor.
- B. Inactive or abandoned utilities and appurtenant structures encountered shall be filled or removed to avoid interference as directed by the Owner's Representative and/or the Utility. Exposed ends of abandoned lines shall be plugged or capped in a water-tight manner.

3.04 EXPOLOSIVES

- A. Explosives: Use of explosives not permitted.

3.05 DEMOLITION – GENERAL

- A. Below-grade construction: Demolish foundation walls and other below-grade construction, as follows:
 - 1. Pipes abandoned in place shall be cut and capped as indicated on drawings.

2. Any below-grade valves demolished shall be removed, and remaining pipe cut and capped.
 3. Below-grade areas: Completely fill below-grade areas and voids resulting from demolition operations to street level with satisfactory soil materials.
- B. Damages: Promptly repair damages to adjacent facilities caused by demolition operations.
 - C. Remove existing construction as specified and shown and as required to permit new construction.
 - D. Perform removal in manner that will minimize dust, noise, and other nuisance. Maintain haul routes for disposal of material clean and free of debris.
 - C. Remove existing construction carefully providing for neat and orderly junctions at construction to remain in place. Final appearance of exposed surfaces shall be similar and equal to that of adjacent existing work. Grind off rough surfaces to remove sharp projections.
 - D. Any portion of existing construction whether structural, or accessory which has become unstable through removal of other parts of construction shall be removed as soon as practicable, and no such unstable part shall be left free-standing or inadequately braced against causes of collapse at end of each day's work.
 - E. No demolition shall be performed on piping, electrical circuits, or equipment until system has been isolated by owner of the utility. Contractor shall verify isolation of system.
 - F. Contractor shall relocate existing active miscellaneous piping, conduit, and electrical circuits and devices not detailed on Drawings but required for installation of equipment and items installed by this Contract.

3.06 DEMOLITION OF MECHANICAL ITEMS

- A. Remove mechanical equipment and materials as shown on Drawings and as specified.
- B. Removal shall include but not limited to piping, valves, equipment, hangers, and associated accessories.

3.07 DEMOLITION OF ELECTRICAL ITEMS

- A. Examination:

1. Verify that abandoned wiring and equipment serve only abandoned facilities.
2. Demolition drawings are based on cursory field observation and existing record documents. Report discrepancies to Owner before disturbing existing installation.

B. Preparation:

1. Before beginning underground demolition, contact Owner, and local utilities locating service JULIE at least 24 hours before digging.
2. Contact Owner to determine equipment items are to be salvaged and delivered to storage area. Other equipment shall become property of Contractor and shall be removed from job site.
3. Coordinate utility service outages with utility company.
4. Provide temporary wiring and connections to maintain existing systems in service during construction.
5. Existing electrical service: maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner at least 24 hours before partially or completely disabling system.

C. Demolition and extension of existing electrical work:

1. Remove, relocate, and extend existing installations to remain to accommodate new construction.
2. Remove abandoned wiring to source of supply.
3. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.
4. Disconnect and remove following:
 - a. Abandoned panelboards and distribution equipment.
 - b. Devices and equipment serving utilization equipment that has been removed.
 - c. Abandoned light fixtures, including brackets, stems, hangers, and other accessories.

5. Repair adjacent construction and finishes damaged during demolition and extension work.
6. Maintain safe access to existing electrical installations which remain active.

3.08 HANDLING OF DEMOLISHED MATERIALS

- A. Salvageable materials, except items specified to remain property of Owner, shall become property of Contractor and shall be removed from Site as Work progresses.
- B. Promptly re-use, salvage, recycle, or dispose of demolished materials. Do not allow demolished materials to accumulate or be stored on-site for more than 5 days.
- C. Certain equipment and material shall be removed and reinstalled as indicated on Drawings and specified herein. Contractor shall remove such items, store if required, and reinstall as indicated. In event of loss or damage to such material or equipment, Contractor shall replace items without additional cost to Owner.
- D. Storage of materials to be removed not permitted to accumulate on site. Promptly remove and dispose of unsalvageable equipment and materials.
- E. Burning: Do not burn demolished materials. F. Debris shall not be allowed to accumulate on roofs, floors, or in areas outside of and around any buildings being removed. Waste materials and debris resulting from Work shall be removed and disposed of daily by Contractor in disposal area obtained by Contractor.
- F. No material, obstructions, or debris shall be placed or allowed to accumulate within 15' of any fire hydrant. Fire hydrants shall be accessible at all times.

3.09 DISPOSAL OF MATERIALS

- A. Transport demolished materials from construction sites and legally recycle or dispose of materials.
- B. Special Waste and Hazardous Materials: If special waste and/or hazardous materials are encountered in areas other than those indicated on the Drawings during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.

3.10 REPAIR AND RESTORATION

- A. Contractor shall be responsible for damage to personnel, public, roadways, streets, structures, utilities, facilities, and equipment caused by operations and shall repair any damage at its own expense or replace items damaged beyond repair.
- B. Do not operate vehicles or equipment on existing construction or roadways that could be damaged.
- C. Backfill applicable excavated areas, open pits, and other depressions as work progresses. Backfill materials shall conform to requirements of Drawings and other specification sections.
- D. Grade areas disturbed by construction to smooth, uniform surfaces sloped to drain.
- E. Replace construction removed to facilitate operations with construction of equal quality to that removed.

3.11 CLEAN-UP

- A. Maintain public streets, alleys, or other thoroughfares used in carrying out disposal free of litter or soil attributable to this operation. Equip and load trucks or other vehicles to prevent leakage, blowing off, or other escape of any portion of whatsoever is being hauled. Cost incurred by Owner in cleaning up such litter will be charged to Contractor and deducted from monies due or to become due it under this contract.
- B. Upon completion of demolition work in each area, thoroughly clean area of materials not to remain.
- C. Remove materials (except paint) adhered to construction to remain.
- D. Leave areas in broom clean and vacuumed condition.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum price for DEMOLITION.

--- END OF SECTION ---

CONCRETE WORK SECTION 03 00 00

PART 1 – GENERAL

1.01 SUMMARY

This Section specifies precast and cast-in-place concrete including formwork, reinforcing steel, and miscellaneous materials. Specific items related to the project include:

- A. Wet well top slab with integrally cast flush mount sleeve for confined space davit, and access hatch.
- B. Wet well.
- C. Valve / meter / bypass vault with integrally cast flush mount sleeves (2) for confined space davit, and access hatches (2).
- D. Concrete traffic box enclosure pad.
- E. Concrete generator pad.

1.02 SUBMITTALS

A. Precast Items:

- 1. Provide cut sheets for wet well flat top slab and wet well conforming generally to standard ASTM C478 manholes. Slab shall be 10" thick and of suitable diameter to match the proposed wet well.
- 2. Provide other cut sheets for any other items listed in Section 1.01 that will be constructed as a precast item.

B. Quality assurance data:

- 1. Tests, or certificates of compliance with standards specified in this Section at least 14 days prior to commencing concrete placement for:
 - a. Cement: From each car from which cement will be used.
 - b. Fly ash: From each separate shipment from which fly ash is being used.
 - c. Aggregates: For each size aggregate from each source of aggregate, for grading, deleterious substances and soundness.

2. List of admixtures, joint fillers, sealants, curing compounds, and other manufactured materials proposed identifying manufacturer and type. Provide data on specific items when requested by Engineer.
3. Testing laboratory reports required at least 14 days prior to commencing concrete placement for each class of concrete and each size aggregate:
 - a. Proposed concrete design mix.
 - b. Tests on concrete cylinders from trial batch of proposed mix.
4. Testing laboratory reports for tests on concrete cylinders taken in field.

1.03 QUALITY ASSURANCE

- A. Contractor shall retain services of qualified independent testing laboratory.
- B. Responsibility of testing laboratory will include:
 1. Obtaining, making samples and trial batches and performing laboratory and field testing specified.
 2. Provide reports to Engineer giving information on materials, concrete design mixes and testing performed.
 3. Reports shall indicate whether or not materials meet specifications.
- C. Perform Work in accordance with ACI 117 and 301.
- D. Tests:
 1. Establish proposed concrete design mix proportions on basis of either field experience and/or trial mixtures in accordance with ACI 318, Chapter 5, except specific requirements shall conform to requirement of these specifications. Determine and submit supporting data, standard deviation, trial batch tests, required average strength, proportions, air content, and slump range for each mix.
 2. Concrete strength tests:
 - a. Comply with ASTM C39 for testing and ASTM C31 or C192 for preparation of cylinders.
 - b. Field tests: Sample in accordance with ASTM C172; make and test 3 cylinders from each sample on basis of not less

than one sample from each day's placement for each class of concrete.

- c. Cylinders shall be laboratory cured. Test one laboratory cured cylinder at 7 days and other two at 28 days for average strength.
- d. If tests indicate deficient strength as defined by ACI 318, immediately adjust mix to increase average of subsequent test results and, when directed, perform drilled core testing, ASTM C42. Testing and remedial work shall be at no additional cost to Owner.

3. Slump tests:

- a. Test each batch as delivered; comply with ASTM C172 and C143.
- b. If slump exceeds Specifications, promptly remove batch from Work and dispose of off-site at location selected by Contractor. Do not add water in excess of specified water-cement ratio to batch to achieve desired slump.

4. Air content tests:

- a. Sample on basis specified above for field strength tests.
- b. Obtain samples from concrete after it has been placed and consolidated.
- d. Determine air content by pressure method; comply with ASTM C231.
- c. If air content does not meet Specifications, remove deficient concrete from Work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Cement: Keep clean, dry, and free from weather damage.
- B. Aggregates: Stockpile each gradation separately on clean, noncontaminating surface.

PART 2 – PRODUCTS

2.01 WET WELL PRECAST CONCRETE FLAT TOP

- A. The pump station wet well flat top shall be a new precast concrete flat top conforming to standard ASTM C478 manholes. Diameter shall be a suitable match for the diameter of the proposed wet well. New flat top shall have the access frame and hatch cast into the top and frame shall be flush with the top of the concrete.

2.02 WET WELL

- A. The wet well base and riser shall conform to Standard ASTM C478 manholes. Base slab thickness shall be a minimum of 12" with a 12" flange extension. Minimum wall thickness of the barrel section shall be 8". Outside surface shall be waterproofed with 2 coats of asphalt emulsion.

2.03 CEMENT

- A. Portland cement: ASTM C150, Type I.
- B. High-early-strength Portland cement: ASTM C150, Type III. May be used instead of Type I cement at Contractor's option, unless specified otherwise, to achieve 28-day strength at 7 days. Do not use in concrete where least dimension of concrete section exceeds 3'-0" (900 mm).
- C. White cement: Nonstaining, ASTM C150, Type I.
- D. Use only one brand of each type of cement.

2.04 AGGREGATE

- A. Regular aggregate: Strong, durable, well-graded minerals conforming to ASTM C33 requirements for grading, deleterious substances and soundness.
- B. Aggregates not conforming exactly to above specifications may be used provided special tests or actual service establish that such aggregates will produce concrete of quality specified.
- C. Coarse aggregate nominal size:
 - 1. 1-1/2" to No. 4: Use for all concrete unless specified otherwise.
 - 2. 3/4" to No. 4: Use for slabs and thin sections and areas where clear spacing between reinforcing bars is less than 3".

2.05 FLY ASH

- A. Conform to ASTM C618.

- B. Fly ash for total Project shall be obtained from single source.
- C. Design concrete mixes to include fly ash in amount of approximately 15% to 20% of cement by weight.
- D. May be used at Contractor's option for all concrete.

2.06 WATER

- A. Clean, fresh, free from injurious amounts of oil, alkali, acid, salts, organic materials, or other substances that may be deleterious to concrete or steel. Mix water shall comply with ASTM C1602.

2.07 ADMIXTURES

- A. Water-reducing and set-controlling admixture, ASTM C494, type as required. Use for all concrete.
- B. Air entraining agent, ASTM C260. Use in accordance with manufacturer's recommendations.

2.08 REINFORCING

- A. Bars: ASTM A615, Grade 60 (420) deformed bars.
- B. Bend bars cold to conform to required details.
- C. Welded wire fabric: ASTM A185 plain wire in coiled rolls.

2.09 FORMS

- A. Acceptable materials:
 - 1. Douglas fir, exterior type, concrete form plywood, 5/8" thick minimum, conforming to DOC PS 1, Grade B-B, Class I or II.
 - 2. Removable metal forms with surfaces equal to Douglas fir, exterior type, concrete form plywood.
 - 3. Fiber tube forms: Cylindrical fiber reinforced forms.
- B. Form ties: Type leaving no metal within 1" of finished surface after removal of forms.
- C. Form coating:

1. Wood forms: Nonstaining mineral oil or commercially produced form-release agent that will not bond with, stain, or adversely affect concrete surfaces and curing, and will not impair bond or adhesion of subsequent treatment of concrete surfaces, "Nox-Crete Form Coating," by Nox-Crete Chemicals, or equal.
2. Metal forms: Treat surfaces as recommended by manufacturer before placing reinforcing.
3. Fiber tube forms: Treat surfaces as specified for wood forms or as recommended by manufacturer.

2.10 CURING MATERIALS

A. Liquid membrane-forming compound:

1. ASTM C309, Type 1 with fugitive dye, except Type 2 with white pigment for surfaces exposed to direct rays of sun.
2. Do not use compounds containing wax, oil, resin, varnish, or other bases that will prevent bonding of finishes such as floor coverings, tile, additional concrete, paint, and similar applied finishes.
3. Use for curing at Contractor's option except where other products are specified for particular application.

B. Plastic film:

1. Polyethylene plastic film, white, nonstaining, conforming to ASTM D2103.
2. Minimum 4-mil thickness.
3. Use for curing at Contractor's option except where other products are specified for particular application.

C. Absorptive mat:

1. Cotton fabric, burlap fabric, or burlap-polyethylene material woven or bonded to prevent separation.
2. Material shall be clean and nondetrimental to concrete or finish.
3. Use for curing at Contractor's option except where other products are specified for particular application.

2.11 GROUT

A. Regular grout:

1. One part Portland cement to three parts fine aggregate with sufficient water to maintain adequate workability. Substitute white cement for normal Portland cement to match color of adjacent concrete.
2. Minimum strength: 4,000 psi at 28 days.
3. Use for patching.

B. Nonshrink grout:

1. Nonmetallic and free of chloride, gypsum or corrosive-type materials; ASTM C1107, Grade A; formulation suitable for application.
2. Minimum strength: 5,000 psi at 28 days.
3. Use for grouting beneath baseplates.

2.12 CONCRETE DESIGN AND USE

A. Each concrete design mix shall be established in strict accordance with ACI 318 by proportioning on basis of either experience and/or trial mixtures.

B. Strength classifications:

1. Class A:

- a. Compressive Strength ($f'c$) = 4,000 psi.
- b. Required Average Compressive Strength ($f'cr$) = 5,200 psi.

C. Required average compressive strengths: Produce concrete of average strengths noted above unless test results substantiate a lower permissible average strength based on standard deviation criteria set forth in ACI 318. Strengths listed above are 7-day strengths for concrete using high-early-strength cement and 28-day strengths for concrete using other type cements.

D. Maximum water-cement ratio: 0.48% by weight. Where pozzolan fly ash is used, water-cement plus pozzolan ratio shall not exceed specified ratio.

E. Air entrainment: Concrete shall contain entrained air within following limits.

1. Nominal Maximum Size of Coarse Aggregate = $\frac{3}{4}$ "

- a. Total Air Content, Percent By Volume = 4 – 8%
- 2. Nominal Maximum Size of Coarse Aggregate = 1-1/2”
 - a. Total Air Content, Percent By Volume = 3 – 6%

F. Workability:

- 1. Proportions of concrete shall produce a mixture, suited to placement methods, which will work readily into corners and angles of forms and around reinforcement and embedded items. Segregation of materials or presence of free water will not be permitted.
- 2. Slump of concrete: Use minimum practical; vary within limits given to suit placement conditions; in no case is slump to be increased by addition of water in excess of design mix quantity:
 - a. Type of Construction
 - i. All concrete unless otherwise noted: Slump = 2 in Min, 5 in Max.
 - ii. Building Columns: Slump = 3 in Min, 5 in Max.

G. Class A concrete: Use for all concrete unless specified otherwise.

2.13 READY MIX CONCRETE

- A. Provide concrete from an established, approved ready-mix plant. Ready-mix plant equipment and facilities shall be certified in accordance with NRMCA QC-3.
- B. Equipment and methods: Conform to ASTM C94.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Construct forms strong, straight, adequately braced and securely fastened.
- B. Remove laitance from previously placed or existing concrete; thoroughly clean surface before placing additional concrete.
- C. Apply form coating on formwork in accordance with manufacturer's instructions. Apply prior to placing reinforcing steel, anchoring devices, and embedded items.

3.02 PLACING CONCRETE

- A. Clean transporting equipment, reinforcing, and embedded items before placing concrete. Remove water and debris from places to be occupied by concrete.
- B. Place no concrete until forms, reinforcing, and embedded items have been verified as adequately supported and accurately placed. Place no concrete over water-covered, muddy, or frozen soil.
- C. Immediately remove concrete where water, soils, or other deleterious substances are permitted to mix with concrete, form or embedded item movement occurs, or inadequate consolidation is obtained.
- D. Hot weather concreting:
 - 1. Applies to concrete placed when ambient temperature exceeds 90° F.
 - 2. Conform to ACI 305R recommendations and requirements.
- E. Cold weather concreting:
 - 1. Applies to concrete placed when ambient temperature is below 40° F.
 - 2. Conform to ACI 306R recommendations and requirements.
 - 3. If temporary heating facilities used are of type which produce an atmospheric condition of high carbon dioxide content, seal off concrete in such manner that no damage will result to concrete surface.
- F. Employ best industry practices to prevent segregation during placing. Do not drop concrete more than 5' (1500 mm). Use tremied or pumped concrete to provide proper placement. Place in layers approximately 18" (450 mm) deep.
- G. Place concrete continuously in each section until completed. Permit not more than 30 minutes between depositing adjacent layers of concrete within each section, unless an acceptable set retarder is used in concrete mix.
- H. Thoroughly compact, puddle, and vibrate concrete into corners and around reinforcing and embedded items. Use internal vibration where size of section permits.
- I. Maintain concrete placing temperature between 50°F and 90°F except as specified for hot and cold weather concreting.

- J. Place sections of concrete in sequence that eliminates shrinkage effects to greatest extent practicable.
- K. Protect concrete from injury due to sun, cold weather, running water, construction operations, and other causes until properly cured.

3.03 REINFORCEMENT PLACEMENT

- A. Remove scale, loose flaky rust, dirt, grease, curing compound, and other coatings that would impair bond.
- B. Install slab-reinforcing bars in correct position by use of preformed bolsters and spacers, except concrete blocks may be used to position bars in concrete placed on grade. Concrete block shall have compressive strength equal to that of surrounding concrete.
- C. Space bars properly, and tie securely in position before placing concrete. Tack welding to keep reinforcing in place is not permitted.
- D. Lap wire fabric not less than 8".
- E. Welding of reinforcing bars: Conform to AWS D1.4.

3.04 CONSTRUCTION JOINTS

- A. Install only where shown or where specifically permitted.
- B. Provide keyway 1-1/2" deep covering approximately 1/3 area of construction joint, unless shown otherwise.
- D. A delay, until concrete is no longer plastic, shall occur after placing concrete for columns or walls before placing concrete for slabs, beams, or girders supported thereon.
- C. Slabs-on-grade: Place concrete in continuous side-by-side strips. Saw-cut control joints as soon as practicable after concrete hardens. Allow initial shrinkage of concrete to take place (ideally 90-120 days) before applying sealant.

3.05 EMBEDDED ITEMS

- A. Install items required under this contract to be embedded in concrete including structure steps at 16" centers. Install items required by others for embedding in concrete, if so instructed before placing concrete.
- B. Fasten embedded items securely in proper position before placing concrete.

C. Conduit or pipe embedded in slabs or walls.

1. Locate in center of slab or wall and space not closer than 3 diameters on center; locate to avoid impairing strength of concrete.
2. Coordinate placing of reinforcing with conduit or pipe location. Do not cut reinforcing to clear conduit or pipe.

D. Valve Vault Ventilation Pipe.

1. Final location shall be determined during the submittal process.
2. Pipe shall be 3" threaded galvanized steel with long radius 90° fitting for gooseneck downward turning outlet and stainless-steel insect screen 2-feet above finished grade. Sand, clean, and apply primer and topcoat of rust prevention black paint.

E. Aluminum pipe shall not be embedded in concrete. Where aluminum projects into or rests against surface of concrete, coat surfaces of aluminum to prevent direct contact with concrete.

3.06 GROUTING

- A. Roughen concrete surfaces by light chipping to remove laitance to approximately 1/2". Do not expose reinforcing steel.
- B. Remove materials which might interfere with bond; prepare surfaces in strict conformance to manufacturer's instructions.
- C. Mix, place, and cure grout in strict accordance to manufacturer's instructions.
- D. Remove shims after grout is placed. Fill shim voids with grout.

3.07 FINISHING

A. Flatwork:

1. Tamp concrete to force coarse aggregate down from surface.
2. Screed with straightedge, eliminate high and low places, bring surface to required finish elevations; slope uniformly to drains.
3. Dusting of surface with dry cement or sand during finishing operations is not permitted.

4. Apply curing compounds and similar materials in accordance with manufacturer's instructions during or after finishing.
5. Finish surfaces within following tolerances as measured with a 10' straightedge:
 - a. Slabs: 3/16".
 - b. Top surfaces of structures other than slabs: In accordance with ACI 117.
6. Float finish:
 - a. Float surface to true, even plane.
 - b. Float second time to uniform finish with wood or cork float; use edger on exposed edges.

B. Formed surfaces:

1. Remove fins, projections, and loose material.
2. Clean surfaces of form oil.
3. Patch honeycomb, aggregate pockets, voids, and holes as follows:
 - a. Chip out until sound concrete is exposed to minimum depth of 1".
 - b. Prepare patching mortar with approximately 2 parts normal portland cement, one part white cement, 9 parts fine aggregate; vary proportions of cement as necessary to match color of adjacent concrete.
 - c. Saturate surfaces with water and fill cavities with patching mortar.
3. Fill holes left by form ties with patching mortar.
4. Cure patches as specified for concrete.

3.08 FORM REMOVAL

- A. Minimum time before removal after placing concrete, unless permitted otherwise:
1. Footings: 24 hours.

2. Walls, piers, and columns: 48 hours (24 hours for metal-lined forms).
 3. Self-supported beams and slabs: 14 days.
 4. Time specified above represents cumulative time during which temperature of concrete is maintained above 50°F and for concrete without set-controlling admixtures.
- B. Reduce removal time by half for high-early-strength cement concrete.
- C. In any event, do not remove supporting forms and shoring until concrete has acquired sufficient strength to safely support own weight plus construction loads.
- D. Take care when removing forms that concrete is not marred or gouged and that corners are true, sharp and unbroken.

3.09 CURING

- A. Cure all concrete; begin curing as soon as possible after placement of concrete.
- B. Use of liquid membrane-forming curing compound permitted for all concrete except where product would impair bond of other applied materials to surface or where other method of curing is specified for particular use.
- C. Plastic film curing:
1. Dampen surface of concrete and lay plastic film with minimum 6" side laps and free of wrinkles; tape side laps.
 2. Hold film in place with lumber or use similar provisions to prevent exposure of concrete for 7 days after placing.
 3. Immediately repair tears in film.
- D. Water curing:
1. Keep concrete continuously wet for seven days after placing.
 2. Use on concrete surfaces not receiving compound or plastic film curing.
 3. Clean, nonstaining absorptive mat may be used with water curing.
 4. Do not use for curing cold weather concrete.

3.10 MANHOLE TESTING

- A. All manholes shall be inspected and leakage tested in accordance with ASTM C1244-93 or C969-94. This work shall be included in the price of the manhole.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the WET WELL TOP SLAB, WET WELL, METER / VALVE / BYPASS VAULT, CONCRETE TRAFFIC BOX ENCLOSURE PAD or CONCRETE GENERATOR PAD.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for:

1. WET WELL TOP SLAB

- a. Includes all work in this specification as well as the spring assist access hatches specified in Section 08 10 00.

2. WET WELL

- a. Includes pouring of concrete fillets in wet well bottom.

3. METER / VALVE / BYPASS VAULT

- a. Includes all work in this specification as well as the spring assist access hatches and bypass connection specified in Section 08 10 00 and the filling of the bottom 1' of the vault with Class A Concrete as shown on the plans.

4. CONCRETE TRAFFIC BOX ENCLOSURE PAD

- a. Includes all work in this specification as well as earthwork and 8" of CA-6 compacted stone base course as shown on the plans.

5. CONCRETE GENERATOR PAD

- a. Includes all work in this specification as well as earthwork and 8" of CA-6 compacted stone base course as shown on the plans.

--- END OF SECTION ---

ACCESS HATCHES SECTION 08 10 10

PART 1 – GENERAL

1.01 SUMMARY

- A. This Section specifies factory fabricated aluminum access hatches for the Cambridge on the Lake Lift Station.

1.02 SUBMITTALS

- A. Provide submittals in accordance with Section 01 33 00.
- B. Product technical data: Manufacturer's data.
- C. Shop Drawings: Include profiles, accessories, location, and dimensions.

PART 2 - PRODUCTS

2.01 MAINTENANCE ACCESS HATCHES

- A. Acceptable Manufacturers

- 1. EJ
- 2. U.S.F Fabrication
- 3. Or approved equal.

- B. PERFORMANCE REQUIREMENTS – CAMBRIDGE ON THE LAKE LIFT STATION

- 1. Wet well vault shall be double leaf. Valve and meter vaults shall be double leaf. Sizes shall be as indicated in the Drawings.
 - a) Hatches shall be lockable to prevent outside entry.
 - b) Wet well hatch shall have odor gaskets and debris gaskets.
 - c) Vault hatch does not require the odor gaskets or debris gaskets.
- 2. Performance characteristics:

- a) Unit designed Heavy Duty, for 16,000 pounds plus 30% impact H-20 wheel loads, over a 10' x 20' contact area. Frame and bearing must be cast into and supported by concrete designed for H-20 wheel loads.
 - b) Operation shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
 - c) Operation shall not be affected by temperature.
 - d) Entire access hatch, including all hardware components, shall be corrosion resistant.
3. Cover: Minimum 1/4-inch thick 5086 aluminum diamond pattern.
4. Frame:
- a) Material shall be 6061-T6 Aluminum with a continuous 1-1/4" anchor flange.
 - b) Dovetail groove shall be extruded into the seat of the frame for a 1/8" silicone gasket.
5. Hinges:
- a) Hinges shall be of heavy duty design. Material shall be Grade 316 Stainless steel. Each hinge shall have a grade 316 stainless steel 3/8" diameter hinge pin.
 - b) Hinge shall be fastened to the channel frame and diamond plate with Grade 316 stainless steel bolts and NY-Lock Nuts.
6. Fall Protection:
- a) Wet Well:
 - i. The access opening shall have a permanently installed fall through protection grate system that provides continuous safety assurance in both its closed and open position. Single or double grate system shall be aluminum with an OSHA safety orange finish. Grates shall smoothly pivot on hinges 90 degrees upward and lock into place by hold open rods.
 - b) Valve Vault: Shall not require fall protection.

7. Gaskets:

- c) Debris gasket: continuous EPDM gasket mechanically fastened to the perimeter of the frame to reduce the amount of dirt and debris that enters the frame.

8. Lifting mechanisms:

- a) Unit shall be supplied with a heavy-duty pneumatic spring, for ease of operation when opening safety grate. Grate shall be counterbalanced, so one person can easily open the safety grate.

9. Hardware:

- a) Each hatch shall be equipped with a stainless steel hold open arm. Door shall lock open in the 90-degree position. Hold open arm shall be fastened to the frame with a ½" grade 316 stainless steel bolt.
- b) Each hatch shall be supplied with a stainless steel slam lock, with the key way protected by a threaded aluminum plug. The plug shall be flush with the top of the ¼" diamond plate. The slam lock shall be fastened with Grade 316 stainless steel bolts and washers.
- c) Each hatch shall be equipped with a recessed padlock clip (padlock provided by others).
- d) Each hatch shall be equipped with a stainless steel lift handle. Lift handle shall be flush with top of ¼" diamond plate.
- e) Each hatch shall be supplied with a 1-1/2" threaded drain coupler on the underside of channel frame, for pipe connection.

10. Finishes:

- a) Factory finish: mill finish aluminum
- b) Bituminous coating: apply to the exterior of the frame.

11. Hatch doors shall mount flush to the frame when in the closed and locked position.

12. Locks shall be provided for all hatches and shall be keyed alike. Four (4) sets of keys shall be provided. Locks provided shall be of the hasp type and keyed alike to the Village's existing code.

13. Signage shall be provided and securely fastened to the interior side of the access hatch advising that proper ventilation must be provided prior to entering; and that the area is considered to be a “confined space” and as such proper precautions must be taken prior to entry. Signage shall be of a corrosion resistant material and shall be held in place by stainless steel fasteners. Signage shall be positioned such that when the hatch is opened the sign shall be in full view and easily legible.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with the construction documents, shop drawings, and manufacturer’s installation instructions.

PART 4 – MEASUREMENT AND PAYMENT

4.01 CAMBRIDGE ON THE LAKE LIFT STATION

Work specified in this Section for the Cambridge on the Lake Lift Station will not be measured or paid for as a separate item. Access hatch for the wet well shall be included in SUBMERSIBLE SOLIDS HANDLING PUMPS AND APPURTENANCES as described in Section 22 13 29. Access hatches for the valve vault, including the bypass coupling connection and access hatch, shall be included in METER / VALVE / BYPASS VAULT as described in Section 03 00 00.

--- END OF SECTION ---

PROCESS PIPING AND APPURTENANCES
SECTION 22 13 19

PART 1 - GENERAL

1.1 DESCRIPTION:

A. Provide and test process pipe, fittings, and appurtenances as indicated and specified, between the pumps and the force-main. The force-main shall be defined as buried main commencing after the meter / valve / bypass vault.

1.2 RELATED WORK:

- A. Section 33 05 19: Ductile-Iron Pipe and Fittings
- B. Section 22 13 29: Submersible Solids Handling Pumps and Appurtenances
- C. Section 22 10 00: Process Valves and Appurtenances

1.3 REFERENCES:

- A. American Welding Society: AWS B3.0
- B. Manufacturer's Standardization Society: MSS SP-69
- C. American Society for Testing and Materials:
 - 1. ASTM A216: Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High Temperature Service
 - 2. ASTM A307: Standard Specification for Carbon Steel Externally Threaded Standard Fasteners
 - 3. ASTM D1330: Standard Specification for Rubber-Sheet Gaskets
- D. American National Standards Institute:
 - 1. ANSI B16.1: AN Standard for Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800
- E. Fluid Sealing Association - Technical Handbook.

1.4 SUBMITTALS:

- A. Submit the following in accordance with Section 01 33 00:

1. Submit manufacturer's certificates of conformance.
2. Submit certified copies of test reports.
3. Piping layouts in full detail.
4. Location of pipe hangers and supports.
5. Location and type of backup block or device to prevent joint separation.
6. Large scale details of wall penetrations and fabricated fittings.
7. Schedules of all pipe, fittings, special castings, flexible connectors, adapters, couplings, expansion joints, and other appurtenances.
8. Reports as required for welding certifications per ANSI B31.1 Paragraph 127.6.
9. Catalog cuts of joints, couplings, harnesses, expansion joints, gaskets, fasteners and other accessories.
10. Brochures and technical data on coatings and linings and proposed method for application and repair.
11. Manufacturer's descriptive literature and technical data on insulation and proposed method of installation.
12. Shop drawing data for accessory items.
13. Manufacturer's literature as needed to supplement certified data.
14. Operating and maintenance instructions and parts lists.
15. Schematic control and power wiring diagrams.
16. Shop and Field inspections reports.
17. List of recommended spare parts other than those specified.
18. Recommendations for short and long term storage.
19. Special tools.
20. Shop and field testing procedures and equipment to be used.
21. Provide a listing of the materials recommended for each service specified and indicated. Provide documentation showing compatibility

with process fluid and service specified and as indicated.

22. The most recent ISO 9000 series certification or quality system plan.

23. Material Certification:

- a. Provide certification from the equipment manufacturer that the materials of construction specified are recommended and suitable for the service conditions specified and as indicated. If materials other than those specified are proposed based on incompatibility with the service conditions, provide technical data and certification that the proposed materials are recommended and suitable for the service conditions specified. And indicated including an installation list of a minimum of five (5) installations in operation for a minimum of five (5) years. Provide proposed materials at no additional cost to the Authority.
- b. Where materials are not specified, provide technical data and certification that the proposed materials are recommended and suitable for the service conditions specified and indicated.

B. A copy of the contract mechanical process, electrical and instrumentation drawings, with addenda that are applicable to the equipment specified in this section, marked to show all changes necessary for the equipment proposed for this specification section. If no changes are required, mark all drawings with "No changes required".

1. Failure to include all drawings applicable to the equipment specified in this section will result in submittal return without review.

C. A copy of this specification section with addenda and all referenced specification sections with addenda, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations and clarifications from the specified requirements.

1. If deviations and clarifications from the specifications are indicated, therefore requested by the Contractor, provide a detailed written justification for each deviation and clarification.

2. Failure to include a copy of the marked-up specification sections and or the detailed justifications for any requested deviation or clarification will result in submittal return without review until marked up specification and justification are resubmitted with the entire package.

1.5 QUALITY ASSURANCE:

A. Provide in accordance with Section 01 43 00 and as specified.

- B. Replace all materials contaminated with gasoline, lubricating oil, liquid or gaseous fuel, aromatic compounds, paint solvent, paint thinner, and acid solder at no additional cost to the Owner.
- C. Coordinate dimensions and drilling of flanges with flanges for valves, pumps and other equipment to be installed in piping systems. Bolt holes in flanges to straddle vertical centerline.
- D. Qualification for Pipe Support Structural Attachment Welders: Provide certification that welders to be employed in work have satisfactorily passed AWS qualification tests. If recertification of welders is required, retesting is the Contractor's responsibility at no additional cost to the Owner.
- E. Protect piping from dirt, dust, oil, grease, and other foreign matter during installation to prevent debris from being left in piping.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Provide in accordance with Section 01 60 00 and as specified.
- B. Shipping:
 - 1. Ship equipment, material and spare parts complete except where partial disassembly is required by transportation regulations or for protection of components.
 - 2. Pack spare parts in containers bearing labels clearly designating contents and pieces of equipment for which intended.
 - 3. The Contractor shall obtain spare parts from the manufacturer at the same time as pertaining equipment. The Contractor shall maintain possession of spare parts until Substantial Completion at which time, all spare parts shall be turned over to the Owner.
- C. Receiving:
 - 1. Inspect and inventory items upon delivery to site.
 - 2. Store and safeguard equipment, material and spare parts in accordance with manufacturer's written recommendations and instructions.

PART 2 - PRODUCTS

2.1 DUCTILE IRON PIPE AND FITTINGS:

A. Provide in accordance with Section 33 05 19.

2.2 PRESSURE AND FLOW INSTRUMENTATION:

A. Provide in accordance with Section 33 09 30.

2.3 BYPASS COUPLING SYSTEM:

A. Acceptable Manufacturers

1. Precision Systems without exception.

B. Description

1. Bypass coupling connection and hatch shall include a 6" Camlock fitting manufactured for an NPT connection to valve vault riser pipe. Camlock fitting shall be integral to a rectangular stainless steel and aluminum assembly for casting in valve vault lid. Hatch shall be aluminum checkplate, with lockable lid and waterproof lock.

2.4 PIPE SUPPORTS:

A. Saddle Stands: Used adjustable saddle stands.

1. Provide each stand with a length of steel pipe fitted at the base with standard threaded cast-iron flange or steel base plat and at the top with an adjustable saddle or roll. Bolt the base flange or plate to the floor, foundation or concrete base.

2. Use stanchions of construction similar to the saddle stand, except fit them at the top with cast-iron pipe saddle supports or with pipe stanchion saddles with yokes and nuts.

2.5 COUPLINGS-SLEEVE TYPE:

B. Manufacturers:

1. Romac

2. Smith Blair

3. Viking Johnson

4. Dresser

- 5. Or acceptable equivalent product.
- C. Provide couplings meeting AWWA C219
- D. Couplings 12-in and smaller:
 - 1. End rings and center rings: ASTM A536 ductile iron, fusion bonded epoxy coated
 - 2. Gaskets: Buna-N, NSF 61 approved
 - 3. Hardware: Type 316 stainless steel
- E. Bridles and tierods: Minimum ¾-in diameter, except where tierods replace flange bolts of smaller size, in which case fit with nut on each side of pair of flanges.
 - 1. Provide as indicated

2.6 EXPANSION JOINTS-STAINLESS STEEL:

- A. Manufacturers:
 - 1. Pathway
 - 2. Flexonic
 - 3. Adsco
 - 4. Or acceptable equivalent product.
- B. Design Criteria:
 - 1. Liquid: Service as indicated in the Process Pump Schedule.
 - 2. Liquid Temperature: As indicated in the Process Pump Schedule.
 - 3. Minimum Pressure Rating: 150 psi minimum or as indicated in the Process Piping Schedule.
 - 4. Minimum Lateral Movement: 0.125-inch.
 - 5. Minimum Axial Movement: 0.4-inch
 - 6. For expansion joints used on pump discharge nozzles the Contractor shall coordinate the rod size and movement allowable with the pump manufacturer and provide a statement from the pump manufacturer that

the expansion joint and rod size is acceptable for the pump provided.

C. Products:

1. Provide bellows of two ply construction formed from concentric tubes having only longitudinal seams.
2. For two ply construction, each ply shall be capable of retaining the rated pressure at the specified temperature independently.
3. For two ply construction, seal weld both plies so that no gas or liquid leaks out at the ends.
4. For two-ply construction, provide a pressure monitoring connection with pressure gauge and pressure switch as specified herein for the annular space.
5. Provide control rods for test pressure.
6. Provide minimum two lifting lugs on each joint. Each lug shall be designed to carry the entire weight of the assembly.
7. Provide each joint with a liner and mark a flow arrow on the outside to indicate direction of flow.
8. Provide each expansion joint with a Type 316 stainless steel nameplate indicating size, bellows material, pressure and temperature rating, lateral and axial limits on movement, date of manufacturer, and the manufacturer.

D. Materials:

1. Bellows:
 - a. Inner Ply: Inconel alloy 625, minimum 0.048-inch thick.
 - b. Outer Ply: Inconel alloy 625, minimum 0.048-inch thick.
2. Liner: Type 316L stainless steel, minimum 0.1875-inch thick.
3. Flanges: Type 316L stainless steel, Class 150.
4. Limit Rods/Nuts and Hardware: Type 316 stainless steel.

E. Install joints in their neutral position.

2.7 WALL SLEEVES:

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A. Materials:

1. Wall Sleeves Between Dry Area or Between Dry Area and Ground
 - a. Flexible boots meeting ASTM C923 Clamp-On Type or “A-Lock” Type.
 - b. Clamp to pipe using minimum of 2 stainless steel clamps.

B. Hardware: Type 316 stainless steel.

PART 3 – EXECUTION

3.1 INSTALLATION:

- A. Install items in accordance with manufacturer's printed instructions and as indicated and specified.
- B. Ensure interior lines parallel to building walls wherever possible. Install piping to accurate lines and grades, and support. Provide pipe supports as specified under Part 2.3 of this section. Where temporary supports are used, ensure rigidity, to prevent shifting or distortion of pipe. Provide for expansion.
- C. Before assembly, remove all dirt and chips from inside pipe and fittings.
- D. Use dielectric bushings or unions when ferrous pipes join nonferrous pipes carrying liquid either underground or elsewhere.
- E. Welding in accordance with AN Standard B31 and AWS B3.0.

3.2 WALL SLEEVE SEALS:

- A. Pack annular spaces with extrudible preformed plastic gasket material to prevent debris from entering space between pipe and flexible boot..

3.3 TEMPORARY PLUGS:

- A. Close open ends of pipe with temporary plugs or caps when pipe installation is not in progress. Use watertight plugs for exterior, buried piping and if water or debris is in trench when work is resumed, do not remove until adequate provision has been made to prevent any water or debris entering pipe even if it necessitates dewatering trench.

3.4 TESTING:

- A. Process piping shall undergo pressure and leakage testing in accordance with

Part 3.5 of Section 33 05 19.

3.5 TOUCH-UP FIELD PAINTING:

- A. Repair or replace damaged or defective coating areas.
- B. Remove damaged or defective coatings by sand-blast cleaning in accordance with SSPC-SP-6, Commercial Grade, immediately prior to priming.
- C. Before priming, provide surfaces dry and free of dust, oil, grease and other foreign material.
- D. Apply approved coating in accordance with valve manufacturer's printed recommendations.
- E. When small areas of coating need touch up, surface preparation may be done with suitable power needle gun to match specified blast cleaning.

3.6 CONTRACT CLOSEOUT:

- A. Provide in accordance with Section 01 77 00.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for PROCESS PIPING AND APPURTENANCES.
 - 1. Price shall exclude the flow meter, which is included in the cost of WASTEWATER PUMPING CONTROL SYSTEM COMPLETE per Section 33 09 30.

--- END OF SECTION ---

PROCESS VALVES AND APPURTENANCES
SECTION 22 10 00

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Provide and test valves and appurtenances as indicated and specified.
 - 1. Provide sizes and capacities as indicated or specified.

1.2 RELATED WORK:

- A. Section 22 13 19: Process Piping and Appurtenances
- B. Section 33 05 19: Ductile Iron Pipe and Fittings

1.3 REFERENCES:

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM A48: Specification for Gray Iron Castings.
 - 2. ASTM A126: Standard Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings.
 - 3. ASTM A536: Specification for Ductile-Iron Castings.
- B. American National Standards Institute (ANSI):
 - 1. ANSI B2.4: Hose Coupling Screw Threads.
 - 2. ANSI B16.1: Cast-Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800.
 - 3. ANSI B16.4: Cast-Iron Threaded Fittings, Class 125 and 250.
 - 4. ANSI B16.10: Face-to-Face and End-to-End Dimensions of Ferrous Valves.

1.4 SUBMITTALS:

- A. Shop Drawings: Submit the following in accordance with Section 01 33 00 - SUBMITTALS:
 - 1. Certified shop and erection drawings.

- a. Electronic files shall conform to the following minimum requirements:
 - (1) Electronic Files: AutoCad R2010 or higher, drawn to scale.
 - (2) Submit electronic files as part of the Shop Drawing submittal.
 - (3) Submit electronic files on CD or DVD
 - (4) Drawings shall include plan views, sectional views, title block, Tag Numbers, serial numbers, Parts List (identifying each component), dimensions, connection sizes and types and all details of all related items. In cases where certain information is proprietary and is omitted, provided a statement indicating that the information is proprietary and is being omitted.
 - b. Drawings shall be in conformance with all other requirements as specified in this specification.
2. Data, regarding valve characteristics and performance.
 3. Shop drawing data for accessory items.
 4. Manufacturer's literature as needed to supplement certified data.
 5. Operating and maintenance instructions and parts lists.
 6. Listing of reference installations as specified with contact names and telephone numbers.
 7. Valve shop test results.
 8. Qualifications of field service technician.
 9. Shop and Field inspections reports.
 10. List of recommended spare parts other than those specified.
 11. Recommendations for short and long term storage.
 12. Special tools.
 13. Shop and field testing procedures and equipment to be used.
 14. Number of service technician days provided and per diem field service rate.

15. Manufacturer's product data and specifications for shop painting.
 16. Provide layout drawing showing orientation of plug, gate, check and ball valves and actuator and nearest obstruction.
 17. Manufacturer's product data and specifications for shop painting.
 18. Provide a listing of the materials recommended for each service specified and indicated. Provide documentation showing compatibility with process fluid and service specified and indicated.
 19. The most recent ISO 9000 series certification or quality system plan.
 20. Material Certification:
 - a. Provide certification from the equipment manufacturer that the materials of construction specified are recommended and suitable for the service conditions specified and indicated. If materials other than those specified are proposed based on incompatibility with the service conditions, provide technical data and certification that the proposed materials are recommended and suitable for the service conditions specified and indicated including an installation list of a minimum of five (5) installations in operation for a minimum of five (5) years. Provide proposed materials at no additional cost to the Owner.
 - b. Where materials are not specified, provide technical data and certification that the proposed materials are recommended and suitable for the service conditions specified and indicated.
- B. A copy of this specification section with addenda and all referenced specification sections with addenda, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations and clarifications from the specified requirements.
1. If deviations and clarifications from the specifications are indicated, therefore requested by the Contractor, provide a detailed written justification for each deviation and clarification.
 2. Failure to include a copy of the marked-up specification sections and or the detailed justifications for any requested deviation or clarification will result in submittal return without review until marked up specification and justification are resubmitted with the entire package.

1.5 QUALITY ASSURANCE:

- A. Provide in accordance with Section 01 43 00 and as specified herein.
- B. Provide enclosures for atmospheres specified and indicated.
- C. Contractor responsible for verifying outside diameter of pipe to be tapped.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Provide in accordance with Section 01 60 00 and as specified herein.
- B. Shipping:
 - 1. Ship equipment, material and spare parts complete except where partial disassembly is required by transportation regulations or for protection of components.
 - 2. Pack spare parts in containers bearing labels clearly designating contents and pieces of equipment for which intended.
 - 3. The Contractor shall obtain spare parts from the manufacturer at the same time as pertaining equipment. The Contractor shall maintain possession of spare parts until Substantial Completion, at which time all spare parts shall be turned over to the Owner.
- C. Receiving:
 - 1. Inspect and inventory items upon delivery to site.
 - 2. Store and safeguard equipment, material and spare parts in accordance with manufacturers written instructions.

PART 2 - PRODUCTS

2.1 ECCENTRIC PLUG VALVES:

- D. Manufacturers:
 - 1. Mueller
 - 2. DeZurik.
 - 3. Or approved equal.
- E. Type: Non-lubricated, eccentric.

F. Body Working Pressure:

1. Cast Iron, ASTM A126 Class B or Ductile Iron, ASTM A536, Grade 64-45-12.
 - a. Valves 4-in. through 12-in: 175 psi.

G. Ends:

1. Grooved: ANSI/AWWA C606 for ductile iron valves.
2. Flanged: ANSI B16.1 125-lb for cast iron valves.
3. Flanged: B16.5 150-lb for carbon steel and stainless steel valves.
4. Buried Valves: Mechanical joint.

H. Valve Ports:

1. Provide rectangular or circular except for pigging services.
2. Valves 20-in and smaller: Not less than 80 percent of pipe area.

F. Valve Seats:

1. Coat plug with seat material or hold by means of Type 316 stainless steel seat ring and attach to the valve with self-locking Type 316 stainless steel screws.
 - a. Seat Material:
 - (1) Neoprene or Buna-N synthetic rubber.
2. Provide valves with coated plugs with mating seats of 90 percent, minimum, pure nickel welded into the body of valves.
3. Provide valves with seats clamped to valve with mating seat of 90 percent, minimum, pure nickel welded to the valve body.

G. Upper and Lower Plug Journal Bearings:

1. Removable, permanently lubricated stainless steel bushings for valves 20-in and smaller.
2. Provide grit seals for upper and lower plug shafts for all valves.

H. Stem Seals:

1. Adjustable multiple V-packing or multiple point contact rubber rings.
 2. Replaceable without valve disassembly.
 3. Provide valves with two sets of packing rated for vacuum service for all pump suction isolation service and for services where a vacuum is specified and indicated.
- I. Operators for Valves 4-in and larger:
1. Manual Operators:
 - a. Gear shall be operated with handwheels. Levers are not acceptable.
 - b. Operators shall be mounted as shown on the plans.
 - c. Provide gear operators rated for bi-directional shutoff at the valve working pressure rating as specified herein.
 - d. Gear operators: Totally enclosed worm gear, traveling nut type is not acceptable. Provide permanently lubrication, watertight and dustproof, with adjustable open and closed stops and plug position indicator.
 - e. Provide all work gears designed and certified to withstand input loads up to 300-ft-lbs minimum at the stops without damage.
 - f. Buried or submerged valves: Provide watertight gear operator with handwheel operated floorstand as indicated. Gear operator to be totally enclosed and gasketed with Type 316 stainless steel hardware.
 - g. Chainwheels: Provide where required as specified herein.
 - h. Where indicated provide Type 316 stainless steel stem extension to operating floor elevation as indicated and provide the bevel gear operator with a fabricated steel floorstand and handwheel.
- J. Shop Testing:
1. Provide all plug valves tested and certified bubble tight in both directions at the full rated working pressure as specified herein.
- K. Shop Painting:
1. Provide fusion bonded epoxy, 12 mils inside and out.

2. For valves installed in glass lined and ceramic epoxy lined piping systems, provide glass lined valves with epoxy paint coating as specified herein.

2.2 RUBBER FLAPPER CHECK VALVES:

A. Manufacturers:

1. Mueller
2. DeZurik
3. APCO
4. Val-Matic
5. Or approved equal.

B. Materials:

1. Body and Cover: Ductile Iron ASTM A536 Grade 65-42-12
2. Removable Body Seat: ASTM A276, Type 304 stainless steel
3. Rubber Flapper: Buna N 70 Durometer ASTM 2000-BG encapsulating an ASTM A36 steel plate.
4. Hinge Pin: AISI 1018

C. Provide valves with a full pipe size flow area.

D. Provide valves 4-in and larger capable of passing a 3 inch sphere.

E. Provide a threaded connection with bronze plug on cover and on the bottom of the valve

F. Working Pressure:

1. 2-in thru 24-in: 250 psi

G. Ends: Flanged ANSI B16.1, 150-lb

H. Provide seating surface at a 45 degree angle such that the flapper travels a maximum of 35 degrees from full closed to full open position.

I. Provide valve with cover designed for removal of the valve internals without

removing the valve from the pipeline.

J. External Backflow Device: Valve shall include a bottom mounted screw type external backflow actuator to manually open disc.

K. Position Indicator:

1. Provide a mechanical indicator to provide disc position for valves 4-in and larger.

2. Provide the indication with continuous contact with the disc

L. Limit Switch: A pre-wired limit switch shall be provided to indicate open/closed position to a remote location. The mechanical type limit switch shall be activated by the external arm and rated for NEMA 4 and shall have U.L. rated 5 amp, 125 VAC contacts.

2.3 BALL VALVES – GENERAL SERVICE:

A. Manufacturers:

1. Jamesbury

2. KF

3. Inline

4. Kitz

5. Or acceptable equivalent product.

B. Valves ½-in thru 4-in

1. Materials:

a. Body and End Cap: Three piece, ASTM A351 Grade CF8M.

b. Body Seal: PTFE.

c. Seat: RTFE.

d. Ball: Type 316 stainless steel.

e. Stem: Type 316 stainless steel.

2. Pressure Rating:

- a. ½-in thru 2-in: 1000 psi at 100 deg F
- 3. Ends:
 - a. 2-in and Smaller: Screwed or flanged.
- C. Actuators:
 - 1. Manual: Provide lever operator

2.4 PAINTING:

- A. Coat internal and external ferrous surfaces of valve with NSF Certified Epoxy in accordance with ANSI/NSF Std. 61, and in conformance to AWWA D102 Inside System No. 1 for all valves not specified to have a fusion bonded epoxy coating.

PART 3 - EXECUTION

3.1 GENERAL:

- A. Prior to installation, protect stored valves and appurtenances from damage due to exposure to sunlight, heat, dirt, debris, freezing and thawing, vandalism, etc.
- B. Clean all debris, dirt, gravel, etc, from inside of piping before placing valves in place.
- C. Erect and support valves in respective positions free from distortion and strain on appurtenances during handling and installation. Inspect material for defects in workmanship and material. Clean out debris and foreign material from valve openings and seats, test operating mechanisms to check functioning, and check nuts and bolts for tightness. Repair, valves and other equipment which do not operate easily or are otherwise defective at no additional cost to the Owner.
- D. Set plumb and support valves in conformance with instructions of manufacturer. Shim valves mounted on face of concrete vertically and grout in place. Install valves in control piping for access.
- E. Provide bolted split sleeve coupling or flexible type grooved coupling on downstream side of buried valves to assist in valve removal.
- F. Where indicated provide Type 316 stainless steel stem extension to operating floor elevation as indicated and provide the bevel gear operator with a fabricated steel floorstand and handwheel.

3.2 GATE VALVES:

- A. Install gate valve stem as indicated or with stems between vertical and 45 degrees above the horizontal. Valves installed with stems below horizontal are not acceptable.

3.3 CHECK VALVES:

- A. Install swing check valves horizontally in pipelines.

3.4 PLUG VALVES:

- A. Install valves in horizontal piping with shaft horizontal such that in open position, plug is located in upper part of valve body. Orient valves so that in closed position, flow is against the face of the plug.

3.5 VALVE BOXES:

- A. Provide valve box for each buried valve and where indicated.
- B. Set box so top is flush with finished surface and so box does not bear on valve, or pipe.

3.6 TOUCH-UP FIELD PAINTING:

- A. Repair or replace damaged or defective coating areas.
- B. Remove damaged or defective coatings by sand-blast cleaning in accordance with SSPC-SP-6, Commercial Grade, immediately prior to priming.
- C. Before priming, provide surfaces dry and free of dust, oil, grease and other foreign material.
- D. Apply approved coating in accordance with valve manufacturer's printed recommendations.
- E. When small areas of coating need touch up, surface preparation may be done with suitable power needle gun to match specified blast cleaning.

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement will not be made for the Work specified in this Section.

4.2 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum price

for PROCESS VALVES AND APPURTENANCES.

--- END OF SECTION ---

**SUBMERSIBLE SOLIDS HANDLING PUMPS AND APPURTENANCES
SECTION 22 13 29**

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Submersible centrifugal non-clog pumps and motor units with necessary lifting accessories.
- B. Access frame and hatch.

1.2 ACTION SUBMITTALS

A. Certification of Coordination:

- 1. **A certification shall be provided that the pumps will fit through the submitted access hatch clear opening; the new precast flat top slab has been structurally designed to allow for the periodic removal of the pumps; should the pumps not fit through the installed access hatch, a new hatch and flat top slab assembly will be re-designed, supplied, and installed at no additional cost to the Village of Buffalo Grove.**

B. Product Data:

- 1. Manufacturer's literature, illustrations, specifications, engineering data, fabrication, assembly, installation and wiring diagrams.
- 2. Manufacturer's warranty.

C. Shop Drawings: Show arrangement, dimensions, and materials.

D. Test and evaluation reports:

- 1. Characteristic performance curves for pumps, showing total dynamic head, efficiency, and brake horsepower plotted against capacity in gpm (lpm) for conditions of head and capacity with required impeller.
- 2. Motor test data and shop test results.
- 3. Certified shop test curves.

E. Submit copy of this Section with addenda and referenced sections with addenda, with each paragraph check-marked to indicate specification

compliance or marked to indicate requested deviations and clarifications from specified requirements.

1. If deviations and clarifications from Specifications are indicated and requested by Contractor, provide detailed written justification for each deviation and clarification.
2. Failure to include copy of marked-up specification sections and or detailed justifications for requested deviation or clarification will result in rejection of submittal with no further review and consideration.

1.3 CLOSEOUT SUBMITTALS

A. Operation and maintenance manuals:

1. Operation manuals:
 - a. Detail step-by-step procedures required for system startup, operation, and shutdown.
 - b. Include manufacturer's name, model number, parts list, and brief description of equipment and basic operating features.
2. Maintenance manuals:
 - a. List routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guides.
 - b. Include piping and equipment layout and simplified wiring and control diagrams of system as installed.
3. Comply with requirements of Section 01 77 00.

1.4 QUALITY ASSURANCE

A. Manufacturer's qualifications:

1. Pumps shall be product of single manufacturer.
2. Manufacturer shall have 5 years' experience producing substantially similar equipment and evidence of at least 5 installations in satisfactory operation for at least 5 years.

B. Regulatory requirements: Comply with applicable provisions and recommendations of HI, NFPA 70 including Village of Buffalo Grove

amendments, IEEE, ANSI, NEMA except as otherwise shown or specified.

1.5 MAINTENANCE MATERIALS

A. Spare parts:

1. Each pump shall be furnished with a manufacturers repair kit that shall include as a minimum, one set of mechanical seals for each pump.
2. Pack spare parts in sturdy containers with clear indelible identification markings.
3. Store in a dry, warm location until transferred to Owner at conclusion of Project.
4. Comply with requirements of Section 01 77 00.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Model XFP 150G-CB1 as manufactured by Sulzer ABS.
- B. Or approved equal.

2.2 SYSTEM REQUIREMENTS

- A. Pumping units shall consist of submersible pumps and motors, guide rails, lifting chains, discharge elbow and mounting plate, anchor bolts, access frame and cover, electric cables, controls, and accessories for a complete, operable system suitable for installation in Class 1, Division 1 Group D conditions.
- B. Pumps shall be suitable for pumping municipal wastewater and shall be capable of passing 3" (75 mm) spheres without clogging.
- C. Pumps shall be suitable for continuous operation at flow conditions stated herein without excessive noise, vibration, heating, cavitation, or damage to pump.
- D. Head characteristics for pumps:
 1. Each pump shall be capable of delivering the following performance

points:

Point	U.S. GPM	TDH
1	255	74
2	950	47
3	1525	24

2. Continuously rising as flow is decreased.
 3. Shutoff head shall be minimum of 1.2 times rated head.
- E. Size pumps to allow increase in rated pump head by as much as 10% by replacement of impellers.
- F. Fit each pump with centered lifting loop and Type 316 stainless steel lifting chain of adequate strength to raise and lower pumping unit. Chain shall be of length required for installation depth shown on Drawings.
- G. Discharge connections shall be permanently installed in wet well with discharge piping. Pump shall automatically connect to discharge connection elbow when lowered into place and shall disengage easily and automatically without removal of fasteners or piping when pump is raised.
- H. Attach sliding guide bracket to pump units which will slide between a minimum of 2 guide rails to properly position pump discharge on discharge connection elbow.
- I. Pump, appurtenances, and cable shall be capable of continuous submergence underwater to depth of 40' (12 m)* without loss of watertight integrity.
- J. Design pump motors to operate continuously at design conditions with 50% of motor unsubmerged without overheating.
- K. Pump shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in waste water.

2.3 PUMP DESIGN AND CONSTRUCTION

- A. Type: Submersible, nonclog, sewage handling, bottom suction, single vane impeller, integral discharge mating with discharge connection elbow, rail guided.
- B. Quantity: See Pump Schedule.
- C. Operating conditions: See Pump Schedule.
- D. Materials:
 - 1. Casing: Cast iron, ASTM A48.
 - 2. Impeller: Cast iron, ASTM A48.
 - 3. Shaft: Type 420 stainless steel.
 - 4. Exposed nuts and bolts: Type 316 stainless steel.
 - 5. Wear ring contact surface: Stainless steel.
 - 6. Anchor bolts: Type 316 stainless steel.
- E. Casing:
 - 1. Volute: Single-piece design with smooth fluid passages.
 - 2. Pump casing shall be of sufficient thickness to withstand a minimum hydrostatic test pressure of 150 psig (1,030 kPa).
 - 3. Provide with replaceable wearing ring.
 - 4. Mating surfaces requiring watertight sealing shall be machined and fitted with nitrile rubber O- rings. Sealing shall be accomplished by metal-to-metal contact and controlled compression of O- ring without specific torque requirement.
 - 5. Cable entry design:
 - a. Ensure a watertight and submersible seal without specific torque requirement.
 - b. Provide close tolerance fit against cable outside diameter and cable entry inside diameter and shall produce compression seal when installed.

- c. Entry body shall provide strain relief separate from sealing function to prevent strain in cable from damaging seal and allowing entry of water.
- d. Cable entry junction chamber and motor shall be separated by stator lead sealing gland or terminal board which shall prevent foreign material from coming in contact with motor interior.
- e. Junction chamber, containing terminal board with permanently affixed connectors between cable conductors and stator leads, shall provide completely leakproof seal from motor.

F. Impeller:

- 1. One-piece, semi-open, single vane, nonclog-type capable of handling solids normally present in sewage.
- 2. Manufactured from gray cast iron, Class 35B.
- 3. Capable of passing minimum of 3.94" solid.
- 4. Statically and dynamically balanced, securely positioned and locked to shaft using key and cap screw. Provide means for impeller clearance adjustment.
- 5. Impellers shall have smooth contours.

G. Shaft:

- 1. Machine and polish over entire length.
- 2. Dynamically balanced with impeller at all operating speeds.
- 3. Shaft shall provide rigid support of impeller and prevent critical vibration at all operating speeds.

H. Bearings:

- 1. Anti-friction ball and/or roller bearings, ABMA L10 life rating of 100,000 hours, designed to carry thrust and radial loads.
- 2. Lubrication: Permanently lubricated with grease or oil specifically suited for high temperature applications.

I. Thermal protection:

1. Provide thermal sensors to monitor stator temperatures. Three thermal switches, 1 in each stator phase, shall be embedded in end coils.
 2. Provide 1 thermal sensor to monitor lower bearing temperatures.
- J. Moisture protection: Provide 1 float-actuated reed switch in motor housing to detect liquid leakage into stator area.
- K. Seals:
1. Provide pump with shaft sealing system utilizing oil chamber.
 - a. Oil chamber shall provide means to compensate for changes in oil pressure.
 - b. Provide oil chamber with easily accessible drain and inspection plug equipped with positive, antileak seal. Access to plug shall not require any disassembly of pump.
 2. Dual independent mechanical rotating shaft seal system running in oil reservoir.
 - a. Lower seal unit, between pump and oil chamber: 1 stationary and 1 positively driven rotating tungsten carbide or carbon ceramic ring. Impeller pump-out vane shall be used in conjunction with carbon ceramic.
 - b. Upper seal unit, between oil chamber and motor housing: 1 stationary tungsten carbide or carbon ceramic ring and 1 positively driven rotating carbon ring.
 - c. Seal faces: Hold in contact by integral springs and hydrodynamically lubricate at constant rate.
 3. Seals shall require neither maintenance nor adjustment and shall be easily inspected and replaceable.
 4. Cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal.

2.4 ACCESS FRAME AND HATCH

- A. Provide double leaf corrosion resistant access frame and hatch for pumps per Section 08 10 10.

2.5 PRECAST CONCRETE FLAT TOP SLAB

- A. Pump installation shall be coordinated with the manufacture of the new wet well top slab as specified in Section 03 00 00.

2.6 GUIDE RAILS AND BRACKETS

- A. Guide rails: Minimum Schedule 40, Type 316 stainless steel pipe of sufficient size to remain rigid and unbending under intended loading conditions.
- B. Guide bars shall not support any portion of weight of pump.
- C. Secure lower end of guide bars to discharge connection. Secure upper ends to frame of access cover.
- D. Provide intermediate guide bar spacer supports when clear span distances between supports will exceed 12' (3.6 m).
- E. Sliding guide brackets: Cast iron or fabricated steel, galvanized after fabrication.

2.7 MOTORS

- A. Standards: Applicable parts of NEMA MG1.
- B. Type: Squirrel cage induction, shell-type design, housed in air-filled, watertight chamber. Oil-filled ball bearing motor acceptable alternate.
- C. Enclosure: Completely submersible, watertight.
- D. Ratings: Continuous duty 240-volt, 3-phase, 60 Hz, 1.3 service factor; capable of sustaining minimum of 15 evenly spaced starts per hour.
- E. Insulation and temperature rating: Class H insulation rated at 180°C (356°F).
- F. Starting: Full-voltage, across-the-line, for constant-speed pumps;.
- G. Nameplate horsepower shall be not less than maximum required pump input for all conditions of head and capacity for full range of impeller furnished, but shall not exceed 20.1 hp.
- H. Equip air-filled type motors with water jacket cooling system encircling

stator housing designed to circulate pumped liquid and sized to be nonclogging.

- I. Monitor stator temperature for pumps using thermal sensors embedded in each stator winding. Sensors shall be used in conjunction with and supplemental to external motor overload protection.
- J. Motors shall be furnished with preassembled power and control cables.

2.8 CONTROLS

- A. System controls shall conform to Section 33 09 30 – Wastewater Pumping Control System

2.9 SHOP FINISHING

- A. Sandblast submerged ferrous surfaces to SSPC SP10 finish and give one shop coat of Tnemec "46H- 413 Hi-Build Tneme-Tar," or equal coal tar epoxy, 8 mdft.
- B. Coat machine finished surfaces with suitable corrosion preventative compound.

2.10 IDENTIFICATION

- A. Permanently attach stainless steel nameplate to pump. Nameplate shall contain following information:
 - 1. Equipment number (see Drawings).
 - 2. Serial number of pump.
 - 3. Capacity in gpm.
 - 4. Pumping head in feet.
 - 5. Speed, rpm.
 - 6. Manufacturer's name.
 - 7. Size and type of pump.
 - 8. Motor horsepower.
 - 9. Design pressure and temperature.

- B. Each pump shall be provided with a cast-in or permanently attached direction-of-rotation arrow.

2.11 SOURCE QUALITY CONTROL

A. Hydraulic performance shop test:

1. Submersible pumps shall be factory-tested at pump manufacturer's plant. Tests shall be in accordance with Test Code of Hydraulic Institute Standards.
2. Test curves shall cover full range of operation from shutoff to maximum capacity, and have capacity plotted as abscissas, and operating head, brake horsepower, net positive suction head required (NPSH_r) and efficiency plotted as ordinates. Each test shall be witnessed by a registered professional engineer, who may be an employee of manufacturer. Registered engineer will sign and seal all copies of pump curves and shall certify that hydrostatic tests were performed.
3. Test points:
 - a. Shut off.
 - b. Maximum run out.
 - c. Design operating condition.
 - d. Two additional points, 1 on each side of design operating condition.
4. Test tolerances:
 - a. Pumps shall be within 1 or other of following tolerance:
 - 1) At rated head: +10% of rated capacity.
 - 2) At rated capacity: +5% of rated head.
 - b. No minus tolerance or margin shall be allowed with respect to capacity or total head at rated or specified condition.
 - c. Pump manufacturer shall provide shop space, tools, equipment, instruments, personnel, and all else required for satisfactory completion of tests. Payment for tests shall be included in Contract amount.

- d. Certified test curves shall be submitted and reviewed prior to pumps being released for shipment.

B. Pump tests:

1. Pump manufacturer shall perform following inspections and tests on pumps prior to shipment:
 - a. Inspect for conformance to Contract Documents with respect to correct model number, motor rating, and electrical connections.
 - b. Test motor and seal housing chambers for moisture content or insulation defects.
 - c. Prior to submergence, allow pump to run dry to establish correct rotation and mechanical integrity.
 - d. Discharge piping attached to pump shall operate submerged under a minimum of 6' (1.8 m) of water for a minimum of 30 minutes.
 - e. After operational test, motor and cable shall be tested again for moisture content or insulation defects.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's recommendations.
- B. Install access frame and cover in wet well concrete cover.

3.2 MANUFACTURER'S FIELD SERVICES

- A. Provide qualified service representative to perform functions described in Section 01 43 00.
- B. Test removal and replacement of pumps to prove the pumps and guiderail systems are properly installed and aligned.
- C. After installation of pumping equipment, and after inspection, operation, testing and adjustment have been completed by manufacturer's field service technician, conduct running test for each pump in presence of the Engineer to determine its ability to deliver its rated capacity under specified conditions.

1. Field testing will not be conducted without an approved procedure and calibration certificates for all testing equipment, gauges and flow meters.
 2. During tests, observe and record head, capacity and motor inputs.
 3. Immediately correct or replace all defects or defective equipment revealed by or noted during tests at no additional cost to the Owner.
 4. Repeat tests until specified results are obtained.
 5. Contractor to provide all labor, piping, equipment, portable flow meters, calibrated gauges or calibrated test gauges, and materials for conducting tests. Tests will not be acceptable if equipment calibration is not within 60 days of the field testing.
- D. Calibrate transmitters and receivers to imposed input values representing 0 percent, 50 percent, 80 percent and 100 percent of full scale. Calibrate all process sensing variables and control signals using test equipment, (such as manometers for process pressure sensing and digital voltmeters for electronic control signals) which is at least five times more accurate than instrument to be calibrated.
- E. Adjust secondary functions such as alarm actuations during initial calibration, and demonstrated after system is placed in service.
- F. Conduct process calibration on all measuring systems. Document for records and submit to Engineer.

3.3 PUMP SCHEDULE

Service	Cambridge o the Lake Lift Station: municipal wastewater, continuous duty
Type	Submersible Non-Clog
No. Req'd	2
Rated Operating Capacity TDH	950 GPM @ 47 TDH
Full Load Synchronous Motor Speed Maximum	1780 RPM
Min. Hydraulic Efficiency at Max. Pump Speed	67%
Min. / Max. Motor HP	20 / 25

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. Measurement will not be made for the Work specified in this Section.

4.2 PAYMENT

A. Payment for the Work specified in this Section will be made at the lump sum price for SUBMERSIBLE SOLIDS HANDLING PUMPS AND APPURTENANCES.

SUMP PUMP SYSTEM SECTION 22 14 29

PART 1 – GENERAL

1.01 SUMMARY

- A. Furnish and install one (1) dry submersible sump pumps.
- B. Work includes: Pumps, motors, discharge piping to outfall, and piping / electrical appurtenances as required.

1.02 RELATED WORK:

- A. Section 01 33 00: Submittals
- B. Section 26 05 00: Electrical Work – General
- C. Section 26 05 33: Electrical Conduit
- D. Section 26 05 16: Electrical Wires and Cables

1.03 SUBMITTALS

- A. Provide submittals in accordance with Section 01 33 00.
- B. Submittals to include pump technical information, materials of construction, head curves, solids handling capabilities, motor data, and data on proposed accessory equipment as specified herein. Submittals also to include operation and maintenance manuals as specified in Division 1.
- C. Additional submittals shall include discharge PVC piping, check valve, ball valves, couplings, fittings and other discharge accessories.

PART 2 - PRODUCTS

2.01 PUMPS

- A. Each sump pump shall be of cast iron construction with anti-clog vortex impeller capable of passing ½ inch solids, 1/3 horsepower motor for 115 V, single phase, 60 HZ service with a 20 foot long power cord and piggyback mounted diaphragm pressure switch.
- B. Model shall be SD33A as manufactured by Hydromatic or approved equal.

2.02 DISCHARGE PIPING AND ACCESSORIES

- A. Discharge piping shall be 1-1/2 inch PVC SDR 26 with fusion welded joints.
- B. Fittings, check valves, ball valves, couplings, and other discharge piping accessories shall be provided by a single supplier.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install pump units in accordance with the manufacturer's recommendations and approved shop drawings.
 - 1. Clean before pump installation.
 - 2. Complete all piping and wiring, make adjustments to equipment to provide complete operating system.
 - 3. Within two feet of the pump discharge, provide and install a flexible connection to reduce transfer of vibration to the piping, one 1-1/2 inch PVC check valve, and one 1-1/2 inch PVC ball valve.
 - 4. Confirm that the sump pump will operate within the manufacturer's recommended operating range without closing the ball valve more than 25% and provide additional vertical piping if needed to meet this requirement.
 - 5. Piping shall extend and discharge to the manhole upstream and adjacent to the lift station wet well.
 - 6. Discharge piping from the two sump pumps shall not combine, but shall discharge independently into the discharge manhole.
 - 7. Outfall into the discharge manhole shall include a turn down 90° bend fitting followed by 2-feet of pvc piping.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum price for SUMP PUMP SYSTEM.

--- END OF SECTION ---

ELECTRICAL WORK - GENERAL
SECTION 26 05 00

PART 1 – GENERAL

1.01 SCOPE

- A. Provide complete and operational power systems, grounding systems and other specified systems, including the installation and wiring of miscellaneous equipment and devices. Perform all work and testing as indicated and specified.
 - 1. Provide conduit, wiring and connections for power, control, instrumentation and alarms for equipment furnished by others unless otherwise specified and indicated.
 - 2. Provide temporary electrical service, power to temporary pumps as required, and circuits, overcurrent devices, conduit and wiring, and other equipment required during construction and change-over from existing to proposed electric system. Perform work at the convenience of the Owner.
 - 3. Raceways supports and equipment anchoring shall be provided as specified in the Division 26 sections which form a part of the Contract Documents.
 - 4. Electrically powered equipment and devices provided under other divisions and sections of the specifications.

- B. Earth and rock excavation, backfill, concrete masonry, concrete reinforcement, and construction joints required for Electrical work shall be provided under other Divisions of Work specified under this contract.

1.02 RELATED WORK:

- A. Division 1: General Requirements
- B. Division 2: Site Work
- C. Division 3: Concrete
- D. Division 22: Plumbing
- E. Division 33: Utilities

- F. Disconnecting, removing, and relocating existing electrical equipment is a part of this Contract and is specified under Section 02 41 00.

1.03 SUBMITTALS:

A. Submit the following in accordance with Section 01 33 00 - Submittals:

1. Shop Drawings and Data: Include manufacturer's drawings, bills of material, panel and equipment layouts, catalog data, schematics diagrams, interconnection diagrams, wiring diagrams and other documentary or descriptive information as required for each assembly submitted in one package insofar as possible.
 - i. Bills of material: Include a numbered list of all components, with manufacturer's name, catalog number, rating, and other identification. Place item number or similar identification on all other drawings where item appears.
 - ii. Where additions and modifications are made to existing equipment, provide drawings which include both retained existing equipment and new work.
 - iii. For informational purposes only, submit equipment installation instructions in separate submittals from other shop drawings.
 - iv. Shop drawings and data are required for the following list:
 1. Circuit Breakers
 2. Conduit and Fittings
 3. Wire and Cable
 4. Wiring Devices
 5. Generator Male Receptacle
 6. Explosion proof pull / terminal Box
 7. Handholes, and Associated Equipment and Devices
 8. Grounding Equipment and Devices
 9. Control Stations
 10. Enclosures

11. Control Panels

12. Double throw fused Safety Switch – service entrance rated

13. Field Acceptance Test Reports

14. Record Drawings

- v. Mark shop drawings and data submitted to indicate items applicable to this specific contract.
- vi. Include one-line diagrams, schematic diagrams, wiring diagrams, control sequence diagrams, relay diagrams, and metering. Submit only completed drawings showing all local and remote devices associated with each item. Submit one complete package of shop drawings. Partial submittals will be returned without action.
- vii. Install permanent nameplates on all devices or pieces of equipment such as starters, relays, contactors, pushbuttons, indicating lights, switches, RTU enclosure, control panel, pull/terminal boxes, and generator receptacle. Ensure position of nameplates readable after equipment installation.
- viii. Submit arc flash calculation for the lift station and provide plastic coated label on control panel with the results of the study.

1.04 QUALITY ASSURANCE:

- A. Provide in accordance with Section 01 43 00 and as specified.
- B. Install electrical work in conformance with latest rules and requirements of National Fire Protection Association Standard No. 70 (National Electrical Code), the Village of Buffalo Grove, IL, and Commonwealth Edison.

1.05 INTERFERENCE AND ERRONEOUS LOCATIONS:

- A. Locations of electrical equipment, devices, outlets, and similar items, as indicated, are approximate only. Exact locations shall be determined during construction.
- B. Verify in field, all data and final locations of work installed under other sections of specifications, required for placing of electrical work.
- C. In case of interference with other work or erroneous locations with respect to equipment or structures, furnish all labor and materials to complete the work.

1.06 APPROVAL AND MARKING EQUIPMENT:

- A. Ensure that devices and materials are listed and/or labeled by Underwriters Laboratories, Inc., wherever standards have been established by that agency. Where Underwriters Laboratories listing is not available for equipment, submit certified test reports of Nationally Recognized Testing Laboratory, approved by the local inspecting authority, indicating that equipment is in conformance with local code requirements or any other applicable requirements. Tests and inspections for approval of equipment shall be performed at no additional cost to Owner.
- B. Clearly mark equipment, devices and material with name or trademark of manufacturer and rating in volts and amperes and other pertinent information on a nameplate.

1.07 ELECTRIC SERVICE:

- A. The existing electrical power system for the Cambridge on the Lake Lift Station is 240V 3- phase.

1.08 EQUIPMENT SPECIFIED ELSEWHERE:

- A. Certain items of control equipment and other equipment are indicated on electrical drawings for connection, but are specified in other sections pertaining to plumbing, mechanical process, instrumentation, etc. Such items are not furnished as part of electrical work.

1.09 ALTERATIONS:

- A. All modifications or alteration to existing electrical facilities required shall be made to successfully install and integrate the new electrical equipment as shown. All modifications to existing manholes, equipment, panels or cabinets shall be made in a professional manner with all coatings repaired to match existing.
- B. Provide temporary wiring as needed for equipment intended to operate during alterations.
- C. Where existing equipment including wiring is in the way of new Work and is required to be relocated, disconnect electrical circuits, relocate equipment as directed, and reestablish circuits.

1.10 ELECTRICAL SHUTDOWN:

- A. When an electrical shutdown is necessary, notify the Owner stating when shutdown is wanted, work planned during shutdown, and estimated shutdown time.

- B. Plan work to minimize shutdown. Before starting, have equipment to be used unpacked, checked for damage, and checked dimensionally to ensure proper fit.

1.11 INCOMING SERVICE:

- A. Contact the following organization for coordinating electric service requirements:

ComEd
New Business Engineering
1500 Franklin Blvd.
Libertyville, IL 60048
Robert Navarrete: (847) 816-5384

- B. The organization identified above will furnish:

- 1. Meter

- C. The Contractor shall provide the following in accordance with the contract documents:

- 1. Meter enclosure including bypass device with 100% bypass capacity.
- 2. Secondary cables of sufficient length for termination at the transformer.

- D. Charges and fees by Power Company for providing the permanent electrical service is a contingency item paid by Owner, and is included in the contract as an allowance. All other charges and fees including but not limited to temporary service and power used will be at no additional cost to the Owner. These other charges shall include provision for temporary service during construction and costs associated with by-pass pumping.

- 1. Perform all work in accordance with power company's requirements and in manner approved by Power Company.
- 2. Notify Power Company, in writing, within two weeks after the contract award date concerning incoming service requirements.

- E. The final, complete installation shall comply with all state and local statutory requirements having jurisdiction. The Contractor shall arrange for all necessary permits, pay all fees and arrange for all required inspections by local authorities. All work shall comply with the requirements of the National Electrical Code, all state codes and the codes and ordinances of the city or town in which the work is to be done.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Standard Products

The equipment furnished shall be standard products in production by reputable companies regularly engaged in the manufacture of high-quality equipment of the type specified. Similar equipment shall have been in satisfactory and successful operation for a period of at least two years. All parts of the specified equipment shall be so designed as to be especially adapted for the service required and shall be proportioned, enclosed, or guarded as to have ample and liberal strength and stability to withstand, without damage, the stresses to which they may be subjected during erection or operation. The component parts of duplicate items shall be fabricated on a principle of interchangeability to facilitate ready replacement.

B. Materials

All material incorporated in the equipment shall be new and of first-class quality, free from injurious defects and imperfections, and of the classifications and grades designated. Materials not specifically designated herein shall be subject to the review of the Owner's Representative and shall be suitable for the purpose intended.

C. Identification Symbols and Nomenclature

Identification symbols and nomenclature where used throughout these Specifications are the same as those shown on the Drawings. Paragraphs of the Specifications describing the requirements of a single item of equipment shall apply equally to all identical items of equipment to be furnished.

D. Power Company: Secondary metering equipment furnished by power company as follows:

1. Meter

E. Electrical Contractor: Secondary metering equipment installed by Electrical contractor as follows:

1. Meter (furnished by Power Company)
2. Meter enclosure (furnished by Electrical Contractor from Power Company approved metering equipment enclosure list.)

2.02 RATINGS

- A. The sizes, ratings, capacities, and performance characteristics of various specified items of equipment and devices are based on currently available standard

products, which are available through United States manufacturers. In no case shall the size, rating, capacity or performance characteristic be less than that specified unless approved in writing by the Owner's Representative. Ratings and performance characteristics, where applicable, of various devices and items of equipment are specified in respective Sections of these Specifications. All electrical equipment shall be UL rated.

2.03 DETAILS OF CONSTRUCTION

- A. Electrical work shall meet requirements of these Specification, product manufacturer's instructions, recommended tolerances and recommended procedures, and as indicated by final reviewed submittals for the Work.
- B. Materials shall be of size and thickness indicated. If not indicated, size and thickness shall be selected to provide strength and durability in finished Work for intended application. Work to dimensions indicated, using proven fabrication details.
- C. Product finishes, surfaces and edges shall be smooth and free of marks, burrs, seams, roughness and like defects or conditions.
- D. Other electrical-mechanical product construction details shall be in accordance with the best engineering practices, applicable code requirements and as specified in other Sections of these Specifications.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Contract Drawings indicate the general details necessary for the complete electrical installation. It shall be the Contractor's responsibility to install all electrical work in a neat and workmanlike manner. The Contractor shall cooperate with others to permit the installation of all of the Work without interferences. If changes become necessary to avoid interference between the Work installed under various Sections, the Contractor shall submit to the Owner's Representative, for review, the proposed changes and upon review by the Owner's Representative, proceed with the installation of such changes without additional cost to the Owners.
- B. The Contractor shall maintain at the site a set of black-line prints on which shall be accurately shown the actual installation of all Work done under Division 16 and any variation from the Contract Drawings as reviewed by the Owner's Representative including changes in sizes, locations, and dimensions shall be indicated thereon. At the conclusion of the Work, the Contractor shall furnish record drawings in accordance with the General Conditions and as specified herein.

3.02 FACTORY TEST AND INSPECTION

- A. All equipment shall be shop-assembled and tested in the manufacturer's shop in accordance with recognized standard practices. Factory tests and inspections shall be conducted to verify that the equipment is operating satisfactorily and in compliance with the Specifications.

3.03 INSTALLATION AND TESTING

- A. General: Examine the areas and conditions under which electrical work is to be installed or performed and remedy any conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.
- B. Existing Facilities: Verify existence, location, and operation of existing electrical facilities to be abandoned, removed, altered, modified and/or temporarily relocated to allow activities during construction of the Work.
- C. Install electrical work. Meet requirements of these Specifications, product manufacturer's instructions, recommended tolerances, and recommended procedures and as indicated by final reviewed submittals for the Work.
- D. Trenching and Backfilling. Unless otherwise specified, trenching and backfilling for conduit, cable, etc. shall be in accordance with IDOT Standard Specifications.
- E. Tests: Comply with the requirements of Section 26 05 00 as a minimum, and as specified in other Sections of these Specifications.

3.04 METERING EQUIPMENT:

- A. Install metering equipment as follows:
 - 1. Ensure that metering equipment installation shall be in accordance with requirements of Power Company by submitting drawings, sketches, catalog information and other appropriate material for power company approval.

3.05 REMOVAL AND RELOCATION OF MATERIAL AND EQUIPMENT:

- A. Carefully dismantle and salvage electrical equipment, switches, fixtures, conduits, cables, wiring, boxes, as necessary to carry out proposed changes.
 - 1. The Owner shall mark any additional equipment that is to be delivered to the Village.
- B. Remove from site and dispose of material and equipment not indicated for reuse.

3.06 WORK AT EXISTING LIFT STATION SITE:

- A. Each bidder or his authorized representative shall, before preparing his proposal, visit all areas in which work under this bid is to be performed and inspect carefully the present installation. The submission of the proposal by this bidder shall be considered evidence that he or his representative has visited the site and noted the location and conditions under which the work will be performed and that he takes full responsibility for a complete knowledge of all factors governing his work.
- B. In the area of the work, disconnect and carefully remove the existing electrical equipment and devices so noted. With the exception of items indicated as having to be re-used, items specifically noted by the Owner before start of work shall be turned over to the Owner. If not required by the Owner, remove them from the premises and site. All existing electrical equipment and devices indicated as not removed or abandoned are to be maintained in operation and any circuits disturbed by the construction shall be restored.
- C. Maintain existing electrical services and systems to the lift station throughout the project and all “down-time” shall be scheduled at least two weeks in advance with the permission of the Engineer and such scheduling shall be rigidly adhered to.

3.07 DEMOLITION:

- A. Survey the existing electrical systems and equipment identified for removal with representative from the other trades prior to performing any demolition work. Identify all conduit and equipment to be removed with tags or paint. The Owner will indicate any equipment to be removed and given to the Owner.
- B. Where a piece of equipment is to be removed all associated ancillary components (e.g. solenoid valves, pressure switches, etc.) and associated wiring and conduit shall also be removed.
- C. Equipment, building or structures scheduled for complete demolition shall be made safe from electrical shock hazard prior to demolition. Disconnect all electrical power, communications, alarm and signal system.
- D. Equipment scheduled to be turned over to the Owner shall be carefully disconnected, removed and delivered to the Owner where indicated. Provide labor, hoisting and transportation of the equipment. All other miscellaneous electrical materials, devices, etc., associated with the equipment being turned over shall be demolished and removed from the site.
- E. Unless otherwise specifically noted, remove unused exposed conduit and support systems back to point of concealment. Remove unused wiring back to source (or nearest point of usage).

- F. Disconnect and remove abandoned panelboards, disconnect switches, control stations, distribution equipment, etc.
- G. Disconnect and remove abandoned luminaries. Remove brackets, stems, hangers and other accessories.
- H. Repair adjacent construction and finishes damaged during demolition and extension work.
- I. Coordinate electrical power outages to the electrical systems and equipment with the Owner. Where duration of proposed outage cannot be allowed by the Owner, phase the retrofit work to allow the system or equipment to be re-connected to the electrical power system within the time frame allowed by the Owner or provide temporary power connections as required to maintain service to the systems or equipment. The temporary power can be from a generator or another part of the facility not affected by the outage provided there is sufficient spare capacity.
- J. Continuous service is required on all circuits and outlets affected by these changes, except where the Owner will permit an outage for a specific time. Obtain Owner's consent before removing any circuit from continuous service.
- K. The electrical and process equipment to be removed or relocated under this contract has been identified on the Drawings. Survey the affected equipment and lift station areas before submitting bid proposal.
- L. Trace out existing wiring that is to be relocated, or removed and perform the relocation or removal work as required for a complete operating and safe system.
- M. All equipment, materials, controls, motor starters, branch and feeder breakers, panelboards, transformers, wiring, raceways, etc. furnished and installed to temporarily bypass the lift stations shall be removed when the permanent installation is fully operational.

3.08 PROTECTION OF ELECTRICAL EQUIPMENT:

- A. Protect electrical equipment from the weather, especially from water dripping or splashing upon it, at all times during shipment, storage, and construction. Do not store equipment outdoors. Where equipment is installed or stored in moist areas, or unheated buildings, provide acceptable means to prevent moisture damage. Provide uniformly distributed source of heat in electrical equipment to prevent condensation and damage to electrical insulation systems.

3.09 DEFECTIVE OR DAMAGED EQUIPMENT:

- A. Do not install equipment or material that was subjected to possible water damage.

3.10 EQUIPMENT ENCLOSURE:

- A. The equipment enclosure classification of the lift station areas are NEMA 4X, Type 316 stainless steel. Provide all equipment, devices and material meeting the requirements of this schedule unless otherwise noted or specified.

3.11 DRAWINGS AND SPECIFICATIONS:

- A. Drawings and specifications are typical of work to be done and of the arrangement desired. Provide accessories and appurtenances which the Engineer deems functionally necessary for a complete installation, whether or not explicitly indicated or described.
 1. A set of red-lined "as-built" electrical drawings shall be carefully maintained at the job site. Actual condition are to be put on the Drawings in red on a daily basis so the drawings will continuously show location and routing of conduits, pull boxes, circuit numbers, and other information as required.
 2. At the completion of the project, provide two sets of drawings that are marked to show the as-installed equipment, devices, duct locations and wiring. These sets are to be provided to the Owner. The markings on the drawings are to be neat, clean and legible.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

ELECTRICAL WIRES AND CABLES
SECTION 26 05 16

PART 1 – GENERAL

1.01 SCOPE

- A. Provide wires and cables for complete electrical systems as indicated and specified.

1.02 RELATED WORK:

- A. Section 26 05 00: Electrical Work – General

1.03 REFERENCES:

- A. American Society for Testing and Materials (ASTM):

- B3: Soft or Annealed Copper Wire.

- B8: Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.

- B33: Tinned Soft or Annealed Copper Wire for Electrical Purposes.

- B. National Fire Protection Association (NFPA):

- NFPA-70: National Electrical Code (NEC).

- C. Underwriters Laboratories, Inc. (UL):

- U.L. 44: Thermoset-Insulated Wires and Cables

- U.L. 83: Thermoplastic-Insulated Wires and Cables

- U.L. 854: Service Entrance Cables

- D. D. Insulated Cables Engineers Association, Inc. (ICEA)/National Electrical Mfg's Association (NEMA):

- ICEA S-61-4021/WC 5: Thermoplastic Insulated Wire & Cable.

- ICEA S-66-524/NEMA WC7; Cross-Linked-Thermosetting-Polyethylene Insulated Wire and Cable

- ICEA S-68-516/WC 8: Ethylene-Propylene-Rubber-Insulated Wire & Cable.

1.04 SUBMITTALS:

- A. Submit the following in accordance with Section 01 33 00 - Submittals: Submit shop drawings and manufacturer's product data in accordance with the requirements of Section 26 05 00.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. 600V Cable:

Okonite Company.

Southwire Company, LLC.

USA Wire & Cable, Inc.

Or acceptable equivalent product.

- B. Control and Metering Wire:

Belden Wire and Cable

Alpha Wire

2.02 MATERIALS AND COMPONENTS:

- A. A. Furnish copper conductors. Material and stranding of conductors to conform to ASTM B3, ASTM B33, and to ASTM B8, for the appropriate class.
- B. All wire shall be brought to the job in unbroken packages and shall bear the date of manufacturing not older than 12 months.
- C. Wires and Cables for Maximum 600-Volt Power Circuits: For #8 and smaller provide type XHHW-2. Where used in lighting or receptacle branch circuits provide No. 12 and No. 10. Provide wire with Class C stranding. Provide No. 6 AWG and larger as XHHW-2 with Class B stranding. Provide wires and cable conforming to UL 83.
- D. Shielded Cable for Instrumentation Wiring: 7 –strand copper conductors, size No. 16 AWG. Insulate conductors individually with color coded polyethylene or polyvinylchloride. Twist pairs with varying lay (if more than one pair) and cover with cable tape and copper or aluminum coated Mylar shielding tape and tinned copper drain wire. Jacket: polyvinylchloride. Cables: rated 600 volts and 90 degrees C, and listed for installation in wet location.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Perform work in accordance with the National Electrical Code.
- B. Provide power cable identification as follows:

System Voltage	Neutral	Phase A	Phase B	Phase C
208/120V	White	Black	Red	Blue
240/120V	White- Gray Stripe	Black- Blue Stripe	Red- Blue Stripe	None
120/240V 3 phase	White Gray Stripe	Black Blue Stripe	Orange Blue Stripe	Red
480/277V	Gray	Brown	Orange	Yellow

- C. Use green to identify insulated ground conductors.

NOTE: Colored insulation, tapes or sleeves may be used to provide color coding. Insulated ground conductors must have green covering.

- D. Permanently identify each grounded and ungrounded conductor for each nominal voltage system at each Pump Control Panel. For 120/240V 3 phase system, the high leg to ground (208V) conductor shall be ORANGE.

3.02 INSTALLATION OF WIRING:

- A. Unless otherwise indicated, use no conductor smaller than No. 12 AWG for power, No. 14 AWG for control, and No. 16 AWG for shielded applications.
- B. Number and sizes of wires and conduits indicated are a guide only and are not necessarily correct for the actual equipment installed. Install as many wires and conduits as necessary for complete electrical system, and provide adequately for the equipment actually installed.
- C. Install conductors continuous from outlet to outlet and make no splices except within outlet or junction boxes.
- D. Install cable in underground raceway system without splices. There shall be no splices between connection points unless otherwise indicated.

- E. Draw all conductors contained within a single conduit at the same time.
- F. Apply wire pulling compound to conductors being drawn through conduits. Use a pulling compound compatible with the conductors being installed.
- G. Use no cable bend with radius of less than eight times its diameter.
- H. Wires and cables installed without prior submittal review are subject to removal at no additional expense.

3.03 CONDUCTOR IDENTIFICATION:

- A. Label each wire at both termination points. Carry individual conductor or circuit identification throughout, with circuit numbers or other identification clearly stamped on terminal boards and printed on directory cards in distribution cabinets and panelboards.
- B. Identify each wire in junction boxes, cabinets, and terminal boxes where total number of control, indicating, and metering wires is three or more and no terminal board is provided, including all power wire. Where no termination is made use a plastic-coated, self-adhesive, wire marker and where termination is made use a, plastic, pre-printed sleeve wire marker.
- C. In cases similar to above where terminal boards are provided for the control, indicating, and metering wires, identify all wires including motor leads and other power wires too large for connection to terminal boards, by sleeve wire markers as specified above.
- D. In manholes and handholes, identify each power wire by laminated plastic tag located so it is easily seen. Control wires to be bundled and marked as listed in conduit and wire schedule.

3.04 CONNECTORS, TERMINAL LUGS AND BOARDS:

- A. For wiring of circuits consisting of No. 10 or No. 12 AWG, such as for lighting branch circuits, use self-insulated pressure type connectors for all splices or joints.
- B. Terminate all wires connected to terminal boards, terminal blocks, or to other similar terminals by means of ring and tongue, nylon self-insulated, tin-plated copper pressure terminals.
- C. Terminal boards shall be 600 volts and rated for 125% of the ampacity of the connected circuit. They shall have screw terminals, with white marking strips for

wire identification. Terminate only one wire on a terminal, including ground wires, unless rated for more.

- D. Wire connections for which terminals are not supplied, for example, at solenoids or motor terminal junction boxes:

10AWG and smaller: Use self insulated pressure-type connectors.

8AWG and larger: Use insulated, mechanical type with set screw or follower bearing directly on the wire. Split bolt connectors are not acceptable.

- E. Clearly and permanently mark terminal strips with ink or indelible pencil. Mark each wire consistently throughout entire system. Use the notation given on manufacturer's wiring diagrams wherever possible.

3.05 TESTING:

- A. Perform tests of all cables prior to energizing in accordance with Section 01 43 00.
- B. Submit results of all cable tests on forms indicating cable size, voltage, time, date, name of tester and witness.

3.06 CONTRACT CLOSEOUT:

- A. Provide in accordance with Section 01 77 00.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for ELECTRICAL WIRES AND CABLES.

--- END OF SECTION ---

**GROUNDING
SECTION 26 05 26**

PART 1 – GENERAL

1.01 SCOPE

- A. Provide a single, complete, integrated grounding system, including conductors, raceways, and connections, indicated and specified, and in accordance with the National Electrical Code Article 250 and the National Electrical Safety Code.
- B. Include grounding of electric equipment enclosures etc., ground electrode systems with ground rod.
- C. Include grounding conductors completely inter-connecting water supply pipe, ground rods, ground grid, other distribution equipment, and other groundable equipment.

1.02 RELATED WORK:

- A. Section 26 05 00: Electrical Work – General
- B. Section 26 05 33: Electrical Conduit

1.03 REFERENCES:

- A. American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE):
 - 1. ANSI-C2-/IEEE: National Electrical Safety Code.
- B. National Fire Protection Association (NFPA):
 - 1. NFPA-70: National Electric Code.

1.04 SUBMITTALS:

- A. Submit the following in accordance with Section 01 33 00 - Submittals:
 - 1. Submit shop drawings and manufacturers' product data in accordance with requirements of Section 26 05 00.
 - 2. Submit information on:
 - i. Ground rods

- ii. Exothermic welding
- iii. Connecting hardware

PART 2 – PRODUCTS

2.01 MANUFACTURER'S COMPLIANCE:

- A. Manufacturer's acceptance contingent upon products' compliance with the specifications.

2.02 MANUFACTURERS:

A. Ground Rods:

- 1. ERICO Products Inc.

B. Exothermic Welding:

- 1. ERICO Products, Inc.
- 2. Or an acceptable equivalent product.

C. Connecting Hardware:

- 1. ERICO Products Inc.
- 2. Thomas and Betts
- 3. Or an acceptable equivalent product.

2.03 MATERIALS AND COMPONENTS:

A. Conductors:

- 1. Provide copper grounding conductors bare or insulated, sized as indicated or as required by the NEC. Minimum bare conductor size shall be No. 2 AWG. Provide protection of conductors if physical damage would result from direct exposure.
- 2. Provide bare conductors where conductors are buried in the earth or where they are embedded in the concrete.

- B. Ground Rods: Provide 5/8-inch diameter, 10-foot long copper-clad steel ground rods where indicated. Where rock is encountered, grounding plates may be used in lieu of grounding rods.

C. Connections:

1. Provide silicon bronze ground clamps for use on copper or brass pipes which are U.L. listed.
2. Provide ground clamps, for use on iron pipes, of galvanized or malleable iron, or of standard noncorrosive material.
3. Furnish ground clamps, for use on pipes, with rigid metal base providing good contact by proper seating on the pipe. Do not use strap type clamps.
4. Provide copper-clad steel ground rods; Make cable to ground rod connection without passing over end of ground rod.

PART 3 - EXECUTION

3.01 EXOTHERMIC WELDING:

- A. Welding shall be by the exothermic process.
- B. Within the welding procedure, include the proper mold and powder charge and conform to the manufacturer's recommendations.
- C. Welding processes shall be the exothermic fusion type that will make a connection without corroding or loosening.
- D. The welding process shall join all strands and not cause the parts to be damaged or weakened.
- E. Completed connection or joint shall be equal or larger in size than the conductors joined and have the same current-carrying capacity as the largest conductor.
- F. Paint buried ground connection with a bitumastic paint.

3.02 INSTALLATION OF GROUNDING CONDUCTORS:

- A. Install grounding conductors so that they will not be exposed to physical damage. Install connections firm and tight. Arrange conductors and connectors so no strain on connections. Grounding conductors for support structures, antenna, pressure transmitter, and light pole shall be installed in PVC conduit passing through the concrete base or slab for each of these pieces of equipment. Conduit shall pass through and extend 6 inches from the side of the concrete to allow for future maintenance and replacement as required.

- B. Run grounding conductors associated with concrete ductbank in common trenches.
- C. Bury equipment grounding conductors 30 inches deep. Bring loops or taps up for connection to equipment or other items to be grounded.
- D. Where raceways are used to contain and protect grounding conductors, install in accordance with Sections 26 05 33.
- E. Where bare grounding conductors are contained within metallic raceways, bond ends of raceways to conductors.
- F. Install loop type, low impedance, grounding system interconnecting all components so at least two grounding connections are provided for each major item of electrical equipment. Ensure that severing of any single grounding conductor in this system does not remove grounding protection on any major item.
- G. Buried and concealed ground connections shall use exothermic welding.
- H. Make accessible connections to structural members by exothermic welding process or by bolted connector. Connections to equipment or ground bus by bolted connectors.

3.02 INSTALLATION OF GROUND RODS:

- A. Install ground rods near equipment as indicated on schematic. Install the top of the rod 12-in. below the ground surface.
- B. Make connection to overall grounding system as indicated.
- C. Ensure that final resistance of interconnected ground system is 5 ohms, or less. Measure ground resistance in normally dry conditions, and not less than 48 hours after rainfall.

3.03 EQUIPMENT GROUNDING:

- A. Ground each piece of electrical equipment by means of a grounding conductor installed in raceway feeding that piece of equipment. Grounding conductors installed in conduit with insulated conductors to be furnished with green, 600-volt insulation. Ground conductors are in addition to and not to be considered as the neutral wire of the system.
- B. Connect power transformer cases and neutrals to grounding system. Connect neutral ground connection at transformer terminal. Provide two separate,

independent, diagonally opposite, connections for power transformers so removal of one connection will not impair continuity of other.

- C. Connect a grounding conductor between panelboard and grounding system. Where a grounding bar is furnished with panelboard, connect grounding conductor to bar.
- D. Where conduits are not effectively grounded by firm contact with a grounded enclosure, apply grounding bushings on at least one end of conduit run.
- E. Ground wire fences when used to enclose electrical equipment or when overhead electrical lines cross fence. Unless otherwise indicated, provide grounding by buried outside peripheral ground loop; connections to each corner fence post and nearby ground rod; flexible connections to each gate; and at least two connections to grounding system from approximately opposite positions on fence.

3.04 SIGNAL GROUNDING:

- A. Ground signal surge protection and shields of twisted, shielded cable using a signal bonding conductor. The signal bonding conductor shall be a continuous path from the instrument surge protection or shield to the grounding electrode conductor. The signal bonding conductor shall be isolated from the equipment grounding conductor for its entire path.
- B. Where convenient several signal bonding conductors may be combined, providing that all the following conditions are met:
 - 1. The combined signal bonding conductor shall have the equivalent cross section of the conductors that it was combined from or three times the cross section of the largest conductor that it was combined from, whichever is less.
 - 2. The combined signal bonding conductor shall be isolated from the equipment grounding conductor.
 - 3. Where two signal bonding conductors are combined use a three port insulated splice.
 - 4. Where three or more signal bonding conductors are combined, use a copper bus mounted on 600V insulators. Attach each conductor to the bus using an insulated ring tongue lug and screw terminal.

3.05 TESTS AND CHECKOUTS:

A. Testing shall not be performed within 48 hours of rainfall. Dry season resistance of each electrode(s) shall not exceed 5 ohms. If such resistance cannot be obtained with the system as installed, additional grounding rods shall be provided as required.

B. Furnish copies of test reports on ground system.

3.06 CONTRACT CLOSEOUT:

A. Provide in accordance with Section 01 77 00.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

A. Payment for the Work specified in this Section will be made at the lump sum prices for GROUNDING.

--- END OF SECTION ---

**ELECTRICAL CONDUIT
SECTION 26 05 33**

PART 1 – GENERAL

1.01 SCOPE

This Section covers the general provision for furnishing and installing all conduits, related boxes and fittings, and associated accessories as required for the electrical power, control, annunciation, instrumentation, communication, and lighting systems as shown on the Drawings and as specified herein. All necessary hardware including, but not limited to screws, bolts, hangers, concrete inserts, clamps, locknuts, bushings, sealing bushings, couplings, pulling-in irons, identification tags, etc. shall be included.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers

Shall include but not be limited to Allied Tube & Conduit, Republic Conduit and Wheatland Tube Company.

B. Applicable Standards

All Work shall conform to the applicable provisions of the codes, standards, and Specifications, as specified herein, and the following:

Name	Abbreviation
Specifications for Rigid Steel Conduit, Zinc Coated	ANSI C80.1
Specifications for Fittings for Rigid Metal Conduit and Electrical Metallic Tubing	ANSI C80.6
Conduit Fittings and Accessories	NEMA FB-1
Outlet Boxes and Fittings	UL-514
National Electrical Code	NEC

1.03 SUBMITTALS

- A. The Contractor shall submit to the Owner's Representative for review drawings, product specifications and descriptions, together with operating and maintenance instructions, specified in Section 01 33 00 of all equipment furnished.

- B. As part of the Record Drawings submitted, the Contractor shall submit a conduit schedule at the completion of the Project.

The conduit schedule shall contain, as a minimum, the following information for each run of conduit.

1. Conduit designation.
2. Conduit type and size.
3. Routing: the routing shall identify the equipment (from-to) connected at the conduit termination.
4. Description of cables installed in the conduit including function of cables.

PART 2 - PRODUCTS

2.01 GENERAL

Electrical conduit and related fittings shall be U.L. listed. The conduit inside diameter shall have a smooth finish to facilitate fishing and/or pulling of wires and cables. Where flexible conduits are used they shall be of the liquid tight type.

2.02 SIZE REQUIREMENTS

Conduit smaller than 3/4-inch in diameter shall not be allowed. Conduit sizes shall be as shown on the Drawings. In cases where conduit sizes are not shown on the Drawings, the minimum size shall be in accordance with the applicable provisions of NEC.

2.03 DETAILS OF CONSTRUCTION

A. Rigid Metal Conduit and Fittings

1. Rigid metal conduit shall be heavy wall, hot-dip galvanized steel. Thin wall conduits and metallic tubing are not acceptable unless specifically shown on the Drawing or specified for use in other Sections of these Specifications.
2. Metal conduit fittings and covers shall be galvanized or sherardized iron or malleable iron castings with gaskets as required. Composition or rubber gaskets shall be provided where required to prevent entrance of moisture.
3. Rigid metal conduit expansion joint fittings shall consist of standard manufactured products, designed so as to prevent damage to the cables

and equipped with approved means of providing electrical continuity of the conduit run. Expansion joint fittings shall permit a small amount of transverse movement as well as longitudinal movement. All couplings and fitting joints shall be of the threaded type.

4. Aluminum shall not be used either for conduits, fittings, pullboxes, junction boxes, or any other electrical device, unless otherwise specifically shown on the Drawings.

B. Flexible Liquid-Tight Conduit

1. Flexible liquid-tight conduit shall be "Sealtite Type UA".
2. The conduit shall consist of an interlocked galvanized steel core and a liquid tight cover made of polyvinyl chloride synthetic resin. A ground bonding conductor shall be included.

C. Electrical Metallic Tubing (EMT) and Related Fittings Electrical metallic tubing shall comply with FS WW-C-563 and ANSI C80.3. EMT fittings shall comply with FS W-F-408. EMT shall be provided only as shown on the Drawings or as otherwise specified in other Sections of these Specifications. Couplings, connectors and other fittings for EMT shall be cadmium or zinc plated steel, or cadmium plated malleable iron and shall be rain tight, compression type.

D. Rigid Nonmetallic Conduit

1. Rigid nonmetallic conduit shall be of the polyvinyl chloride (PVC) type, schedule 80 as shown on the Drawings, and shall be in accordance with the applicable requirements of NEC.
2. The conduit, fittings and accessories shall be manufactured from polyvinyl chloride complying with ASTM D1784 and shall comply with all the applicable requirements of NEMA Publication No. TC2, UL 651 for EPC-80-PVC and N.E.C. Article 347.
3. Fittings and accessories for the electrical plastic conduit shall comply with all applicable requirements of NEMA Publication No. TC3.
4. The solvent cement used to join the conduit and fittings shall meet the requirements of ASTM D2564.

E. Outlet, Terminal, and Pullboxes and Covers

Outlet, and pullboxes and covers shall be made of stainless steel. Covers shall be secured with screws. Gaskets shall be provided for all boxes. Terminal boxes

shall be furnished with terminal blocks as required and as indicated on the Drawings.

F. Stainless Steel Junction Boxes

1. Junction boxes shall be mounted on the surface of a structure or embedded in a structure as shown on the plans. The junction box shall be furnished with a cover, gasket, and hardware. Hardware furnished for the cover shall be stainless steel.
2. A grounding lug shall be provided in every junction box. A stainless steel conduit fitting shall be used to connect conduit to a stainless steel junction box.
3. Box covers shall have a continuous formed, seamless, urethane, oil-resistant gasket. The gasket shall be placed directly onto the junction box cover. The gasket shall adhere to the cover without the use of adhesives.
4. Junction box covers shall be attached to the box with un-slotted hex head screws unless otherwise specified.
5. The box shall be made of Type 304 stainless steel, not less than 14 gauge, with all seams continuously welded with stainless steel weld wire and ground smooth. Exterior surfaces shall have a smooth polished finish. The box shall be according to NEMA Type 4X and be UL 50 "Junction and Pull Box", "Junction Box", or "Pull Box".
6. When specified for attachment to a structure, the box shall be suitable for surface mounting, complete with external stainless steel mounting lugs or brackets welded to the box. The box shall have an overlapping stainless steel cover that is secured to the box with a continuous stainless steel hinge and a minimum of four captive stainless steel clamps utilizing captive stainless steel hex-head bolts or deep slotted stainless steel screws.
7. When specified for embedment in structure, the box shall be constructed with the cover arranged to fit flush with the structure surface. The cover shall be attached with stainless steel unslotted hex-head screws.

PART 3 - EXECUTION

3.01 FACTORY TEST AND INSPECTION

Routine factory testing and inspection shall be performed in accordance with the requirements of the applicable standard.

3.02 INSTALLATION AND TESTING

A. General

Any and all excavation, trenching, coring, backfilling, incidental concreting (not part of a structure in which conduits are embedded) and/or concreting required for duct banks, etc. as required for the installation of Electrical Conduit shall be performed by the Contractor at the Contractor's expense. Installation of all raceway conduits and fittings shall be in accordance with these Specifications, manufacturers' recommendations, applicable standards, codes and regulations, and best engineering practices.

B. Installation of Rigid Steel Conduit

1. Installation of all conduits, boxed fittings, and accessories shall conform to the requirements of the "National Electrical Code", insofar as this is applicable. During installation, precaution shall be taken to protect the conduits and conduit threads from mechanical injury. The ends of conduits shall be sealed in an approved manner during installation whenever the work is interrupted. Runs shall be sealed upon completion by the use of caps and discs or plugs. The seals shall be maintained, except during inspection and tests, until the conductors are pulled in. Conduits shall be inspected before conductors are installed and thoroughly cleaned of water and dirt by means of compressed air, swabs or other approved methods. Conduits shall be checked for freedom from obstructions by pulling a wooded mandrel of the proper size through the conduit. All boxes and fittings shall be kept closed and free from dirt, moisture, and debris.
2. Each run of conduit between boxes or equipment shall be electrically continuous. Threads shall conform to ANSI-B2.1 standards for taper pipe threads. Conduits shall be cut square, ends reamed and threads cut with approved dies. Running or non-tapered threads will not be permitted. Conduits entering slip holes in boxes shall be secured with a locknut on each side at the box wall and terminated with bushings.
3. Threaded conduit joints shall be made watertight by use of red lead and oil, white lead and oil, or other approved compounds. Threaded joint compound shall be electrically conductive.
4. Exposed conduit shall be 3/4 inch IPS or larger and shall run in straight lines parallel to walls, beams or columns. Required offsets shall be accomplished by use of uniform offsets, bends, conduit fittings, or standard boxes. Where conduits are grouped, the offsets shall be made in a manner which will present a uniform and symmetrical appearance.

5. Conduits shall be supported as required by NEC. Capped conduit and conduit terminating in boxes or fittings shall be supported as close to the terminal as possible but in no case farther than 3 feet from the terminal. Galvanized clamps, U-bolts, and J-bolts shall be used to fasten conduits. Boxes and equipment housings shall be supported independently of the conduits. Conduits and boxes shall not be fastened directly to concrete but shall be spaced away by means of one inch galvanized metal channels or spacers. Machine screws or bolts set in concrete inserts or cinch anchors shall be used for securing clamps and boxes to concrete or to steel supporting channels. The use of explosive-driven anchors for securing clamps, supports, and boxes to concrete will not be permitted, except in such cases where special permission has been obtained in writing from the Owner.
6. Exposed conduits inside building shall run supported on walls or on trapezes away from wall.
7. Conduit embedded in concrete shall be one inch or larger, unless otherwise shown on the Drawings. Embedded conduit shall be sloped towards drain points and shall be rigidly supported and braced to avoid shifting during placement of concrete. Embedded conduit runs parallel to concrete surfaces shall be located behind the reinforcing steel except at terminal connections to outlets or junction boxes. Conduit extending out of concrete walls, floors, or beams shall be at right angles to the surface.
8. Minimum spacing of conduits embedded in concrete shall be as required by N.E.C. for proper conductor heat dissipation. The minimum spacing shall be maintained except where approaching and entering a box or panel. Conduit spacing shall also permit the flow of concrete between them.
9. Conduits embedded in concrete and terminating at motors or other equipment mounted on concrete bases shall be brought up to the equipment within the concrete base wherever possible.
10. All conduit boxes shall be so located that covers and openings are easily accessible. They shall be installed parallel with building lines, and where embedded shall be flush with the surface of the finished floor, wall, or ceiling. The Contractor shall remove and reset all boxes not properly installed or shifted out of line during concreting, whenever required or directed.
11. Conduits shall have long-sweep field bends wherever possible, but shall in no case have smaller radii bends than are allowed by NEC or as recommended by the manufacturer whichever is the most stringent. All field bends shall be manufactured bends or made with a bending machine

or other approved device. Field bends shall not reduce the internal diameter of the conduit or injure the protective coatings. The bend shall be free of kinks, indentations, or flattened surfaces. Heat shall not be applied. Standard bends shall be used where conduits turn out of the concrete, at the conduit terminations, and at electrical equipment. Where conduits enter switchgear cubicles or other enclosures, they shall be located by template.

12. Where conduits cross expansion joints or contraction joints, they shall be installed perpendicular to the plane of the joint and shall have expansion fittings.

Expansion fittings shall be as follows:

- i. Expansion fittings for exposed conduit shall have external bonding jumpers for ground continuity and shall be O.Z. Electrical Mfg. Co. Type Ex, Crouse-Hinds Type XJ, or equal.
 - ii. Expansion fittings embedded in concrete shall be expansion deflection type consisting of molded neoprene sleeves with bonding jumpers passing through separate waterproof compartments, and two silicon bronze couplings. They shall permit a 3/4-inch expansion and contraction and a 3/4-inch deflection without deformation.
13. All conduits shall be installed as shown on the Drawings, with the exact location and routing to be determined in the field as required.
14. Cable runs shall be segregated so that no two of the following types of cable occupy the same conduit:
 - i. 480/277V power cable.
 - ii. 240/120-V, AC, miscellaneous lighting and receptacle circuit cable; plug-in type.
 - iii. Low voltage or current, DC, control cable.
 - iv. Instrumentation cable.
15. Conduits penetrating walls, ceilings and floors of buildings and/or structures shall be sealed as shown on the Drawings. Sealing of conduit ID shall be by combination seal/drain fittings where shown on the Drawings. Sealing of conduit OD shall be by means of conduit sleeve and sealing compound. Sealing compound shall be of a type approved for the conditions and use.

C. Installation of Flexible Liquid-Tight Conduits

1. Flexible liquid-tight conduits shall be used for connection to motors and to any other equipment subject to vibration. Liquid-tight fittings and connectors shall be used in conjunction with the liquid-tight flexible conduit installation.
2. Flexible liquid-tight conduit lengths shall not exceed 6 feet.

D. Installation of EMT Conduits and Fittings

1. Installation of EMT shall conform to the applicable requirements of rigid steel conduits as previously specified.
2. EMT conduits shall be connected to the outlet boxes and panelboards by means of "gland" type connectors. Couplings between conduits shall be "gland" couplings. Conduits shall enter all couplings and connectors the full distance required and shall be securely held in place by a tightening of a "Locking Nut".
3. EMT shall not be embedded in concrete, used in hazardous locations where explosion-proof equipment is required, or buried in earth. Indentor or set screw type fittings shall not be used.

E. Installation of Rigid Nonmetallic (PVC) Conduits

1. Installation of rigid nonmetallic (PVC) conduit shall conform to applicable requirements of installation of rigid steel conduits as previously specified. Installation of rigid nonmetallic (PVC) conduit shall be as shown on the Drawings and shall be in accordance with the manufacturer's recommended procedures.
2. Installation shall meet the requirements of N.E.C. Article 347 Part A.
3. The conduit shall be cut square. All burrs shall be removed from the inside and outside of the conduit.
4. Bending:
 - i. Bending of the conduit shall be made so that the conduit will not be injured and the internal diameter of the conduit will not be effectively reduced. Bends shall be made with a standard PVC pipe bending equipment.
 - ii. The conduit section shall be heated evenly over the entire length of the bend. The use of torches or other flame-type devices will not be

allowed. Sections showing evidence of scorching or discoloration shall not be acceptable for use on the project.

- iii. The radius of the bend shall not be less than that shown in Table 346-10 of the National Electric Code.

5. Joints:

- i. All joints shall be test mated without forcing. The socket depth of the fitting shall be marked on the outside of the conduit without scratching or damaging the surface. The conduit should enter the fitting for the full depth of the socket depth.
- ii. Before applying cement, the surfaces to be joined shall be wiped clean and free of dirt, oil, grease or moisture. The solvent cement shall be applied to the conduit and fittings quickly, consistent with good workmanship. Under conditions of high humidity, a second full coating of cement shall be applied to the conduit before insertion.
- iii. Immediately after applying the coat of cement to the conduit and fittings, the conduit shall be inserted into the fitting socket until it bottoms at the fitting shoulder. The conduit shall be turned 1/4 turn during insertion to distribute the cement evenly. Excess cement shall be wiped away from the outside of the joint.
- iv. Newly assembled joints shall be handled carefully until the cement has gone through the set period. The recommended set periods are related to temperature as follows:

60 to 100 degrees F:	30 minutes
40 to 60 degrees F:	1 hour
20 to 40 degrees F:	2 hours
0 to 20 degrees F:	4 hours

6. Conduit Encased in Concrete:

- i. Underground concrete-encased conduit shall be supported on plastic spacers specifically designed for the purpose spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common duct bank shall be not less than 2 inches. Concrete cover overall shall not be less than 3 inches all around the encased run. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. When pouring concrete the concrete shall be deflected

or diverted during placement to minimize the possible damage to or movement of the conduits.

- ii. Conduit encased in concrete shall have steel reinforcing where installed below roadway or other paved vehicle areas (including shoulder) and the reinforcement shall extend not less than 5 feet additional from the edge of pavement unless otherwise indicated. Steel reinforcement shall not be less than No. 4 bars at corners and otherwise spaced on 12-inch centers, tied with No. 4 bars on 12-inch centers.

7. Expansion Fittings

- i. Expansion fittings shall be provided for all runs crossing structural expansion joints.
- ii. Expansion fittings, as specified herein, shall be installed in all raceway runs crossing structural expansion joints. Unless otherwise indicated or approved by the Owner's Representative expansion fittings shall include an 8-inch expansion fitting plus a deflection fitting allowing not less than a 3/4-inch deflection in any direction. The drawings shall be examined to determine complete extent of expansion joints.
- iii. Concrete shall be formed around the expansion fittings in a manner to permit their movement as specified.

F. Stainless Steel Junction Boxes

1. Exposed junction boxes on structures shall be installed on 1/2 in. (13 mm) long stainless steel or brass spacers with the hinge on the side of the box and the cover lying in the vertical plane when closed. The exact orientation shall be as shown on the plans or as directed by the Engineer. Care shall be taken to assure proper orientation of mounting lugs.

Field cut conduit openings shall be uniform and smooth. All burrs and rough edges shall be filed smooth prior to the installation of conduit(s) into the junction box. Field cut conduit openings shall be fitted with the appropriate conduit fittings and accessories.

3.03 PAINTING

(Not applicable in this Section).

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for ELECTRICAL CONDUIT.

--- END OF SECTION ---

SERVICE AND DISTRIBUTION SECTION 26 20 00

PART 1 – GENERAL

1.01 SCOPE

This Section covers the requirements for the disconnection, revising, relocating and reconnecting of a complete working installation of the electrical service and distribution system as outlined in Section 26 05 00, specified in detail in other parts of this Section, other related Sections and/or as shown on the Drawings. The Contractor shall coordinate the requirements of the various parts of this Section of the Specifications with the Drawings when ordering materials or performing Work in conformance with the applicable provisions of this Section.

1.02 RELATED WORK

- A. Section 26 05 00: Electrical Work - General

PART 2 – PRODUCTS

2.01 ELECTRICAL SERVICES

The Commonwealth Edison Company will furnish, install and energize a new 240V, three (3) phase, four (4) wire, 60 Hertz service at the location shown in the plans. The Contractor's responsibility shall be to provide and install the materials identified in Section 26 05 00 to facilitate the new service. Upon switchover to the new service, the existing service shall be disconnected by ComEd and removed and disposed of by the Contractor. Removal shall include existing cables, meter enclosure, disconnect switch, conduit, wood pole and all other appurtenances. ComEd may also provide services to relocate existing primary distribution cables.

PART 3 - EXECUTION

3.01 GENERAL

- A. The methods of installation of Contractor furnished equipment and materials are described in related Sections of these Specifications and as shown on the Drawings, and shall be in accordance with the manufacturer and/or Commonwealth Edison standard procedures and recognized engineering practices.
- B. The intent of these Specifications is to provide underground electrical service for the pumping facility. The underground electrical service shall be installed in accordance with Commonwealth Edison requirements.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

A. Payment for the Work specified in this Section will be made at the lump sum prices for:

1. ELECTRIC SERVICE AND DISTRIBUTION

2. ELECTRIC SERVICE UTILITY FEE

- a. Includes an allowance of \$55,000 for the cost of work by Commonwealth Edison Company to provide the electrical service disconnect and reconnect and any other unforeseen expenses related to utility relocation. The final contract amount will be adjusted up or down in direct relation to the complete and final billing from Commonwealth Edison Company for their work. At the discretion of the Owner, this fee may be paid directly to the utility company by the Owner in which case the Allowance shall be rebated to the Owner.

--- END OF SECTION ---

**WIRING DEVICES AND LIGHTING FIXTURES
SECTION 26 27 26**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section specifies the furnishing, installation and connection of wiring devices and lighting fixtures.

1.02 RELATED WORK:

- A. Section 26 05 00: Electrical Work – General
- B. Section 26 05 16: Electrical Wires and Cables
- C. Section 26 05 26: Grounding
- D. Section 26 05 33: Electrical Conduit
- E. Section 33 09 30: Wastewater Pumping Control System

PART 2 - PRODUCTS

2.01 RECEPTACLES:

- A. General: All receptacles shall be listed by Underwriters Laboratories, Inc.
 - 1. Mounting straps shall be plated steel, with break-off plaster ears and shall include a self-grounding feature (this feature does not substitute for a grounding conductor terminated on grounding strap of device). Terminal screws shall be brass, brass plated or a copper alloy metal.
 - 2. Receptacles shall be of a screw terminal type, “pressure type quick wire” terminations are not allowed.
- B. Duplex receptacles shall be single phase, 20 ampere, 120 volts, 2-pole, 3-wire, and conform to the NEMA 5-20R configuration in NEMA WD 6. The duplex type shall have bussing break-off feature for two-circuit operation. The ungrounded pole of each receptacle shall be provided with a separate terminal.
 - 1. Bodies shall be gray in color or as directed by Owner.
 - 2. Ground Fault Interrupter Duplex Receptacles: Shall be an integral unit suitable for mounting in a standard outlet box.

- a. Ground fault interrupter shall be commercial grade and consist of a differential current transformer, solid state sensing circuitry and a circuit interrupter switch. It shall be rated for operation on a 60 Hz, 120 volt, 20-ampere branch circuit. Device shall meet NEC requirements. Device shall have a minimum nominal tripping time of 1/30th of a second. Devices shall meet UL 943.

C. Weatherproof Receptacles: Shall consist of a duplex receptacle, mounted in box with a gasketed, weatherproof, cast metal cover plate and cap over each receptacle opening. The cap shall be permanently attached to the cover plate by a spring-hinged flap. The weatherproof integrity shall not be affected when heavy duty specification or plug caps are inserted. Cover plates on outlet boxes mounted flush in the wall shall be gasketed to the wall in a watertight manner.

2.02 TOGGLE SWITCHES

- A. Toggle switches shall be totally enclosed tumbler type with bodies of phenolic compound. Toggle handles shall be gray in color or as directed by Owner.
 1. Switches installed in hazardous areas shall be explosion proof type in accordance with the NEC and as shown on the drawings.
 2. Shall be single unit toggle, butt contact, quiet AC type, heavy-duty general-purpose use with an integral self grounding mounting strap with break-off plaster ears and be of a screw terminal type.
 3. Shall be color coded for current rating, listed by Underwriters Laboratories, Inc., and meet the requirements of NEMA WD 1, Heavy-Duty and UL 20.
 4. Ratings:
 - a. 120 volt circuits: 20 amperes at 120-277 volts AC.
 5. The switches shall be mounted on the strike plate side of doors or as shown on plans.
 6. Incorporate barriers between switches with multi-gang outlet boxes where required by the NEC.
 7. All toggle switches shall be of the same manufacturer.

2.03 WALL PLATES:

- A. Wall plates for switches and receptacles shall be type 302 stainless steel or as directed by Owner.
- B. Standard NEMA design, so that products of different manufacturers will be interchangeable. Dimensions for openings in wall plates shall be accordance with NEMA WD1.
- C. For receptacles or switches mounted adjacent to each other, wall plates shall be common for each group of receptacles or switches.
- D. Wall plates for data, telephone or other communication outlets shall be as specified in the associated specification.
- E. Surface mounted boxes, NEMA1, shall be industrial grade raised galvanized steel covers. In shop areas all receptacles shall be dust proof and or waterproof where applicable.
- F. Waterproof device covers shall be cast iron, 4-corner screw type, for FS and FD type mounting. Device covers shall be zinc galvanized finish. Weatherproof covers shall be lockable.

2.03 LIGHT FIXTURES

- A. Valve vault light fixture shall be of LED type, classified for hazardous locations.
- B. The LED unit shall be corrosion-resistant.
- C. The fixture shall be an enclosed and gasketed type designed to exclude dirt, moisture and corrosive vapors from the interior of the luminaires and conduit system. A fluted globe and guard assembly shall be designed for installation or removal as a unit for ease of relamping.
- D. The finish shall be epoxy powder coated bodies and guards.
- E. The LED lighting engine and driver shall be high output LEDs, 45 watts, 50k hours to 70% initial lumens, 5000K color temperature, CRI 69 or greater, power factor greater than 0.90, THD <20% at full load, FCC 47CFR Part 15 Class B Compliant, thermal range 40°C to 55°C.
- F. Input voltage shall be 120 V.
- G. Fixture shall be ceiling or wall mounted with cast junction box and globe guard.
- H. Manufacturer shall be Hubbell HLEML series, or approved equal.

PART 3 - EXECUTION

3.01 WIRING DEVICES INSTALLATION

- A. Ground terminal of each receptacle shall be bonded to the outlet box with an approved green bonding jumper, and also connected to the green equipment grounding conductor.
- B. General: Devices shall be of the type specified herein. All devices shall be installed with “pigtailed” leads from the outlet box. No device shall be used in the “feed through” application. Screw terminals shall be used to connect all devices to the circuit and shall be grounded by means of a ground wire where grounding terminals are provided in the device.
- C. Installation: Devices and plates shall be installed in a “plumb” condition and must be flush with the finish surface of the wall where boxes are recessed.
- D. Mounting heights: All control and convenience devices shall be mounted between 36 and 48 inches above finish floor; mounting heights indicated on plans shall have precedence.

3.01 LIGHTING FIXTURES INSTALLATION

- A. Installation shall be in accordance with the NEC and as shown as on the drawings.
- B. Plan and layout work to avoid interferences with other Contract work. If unavoidable conflict, notify the Owners Representative.
- C. Conduit and wire from the fixtures, switches, and receptacles to the lighting panel shall be in accordance with the NEC.
- D. Connect fixture to junction box using conduit with a temperature rating equal to that of the fixture.
- E. Remove labels and marks, except the UL label, from exposed parts of the fixtures.
- F. Clean fixtures.
- G. Align and direct fixture to illuminate entire valve vault floor.
- H. Directly and rigidly mount on support structures.
- I. Unless otherwise noted, do not use fixtures to support conduit system.
- A. Treat weld area with rust-resistant primer and finish paint where brackets or supports for lighting fixtures are welded to steel members.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the lump sum unit price for ELECTRICAL WIRES AND CABLES.

--- END OF SECTION ---

ENGINE GENERATOR SECTION 26 36 20

PART 1 – GENERAL

1.01 SCOPE

A. Description

This Section covers the engine generator set to be furnished, installed and tested as shown in the Drawings and as specified herein. All related accessories where required, but not specifically provided for in these Specifications, shall be included under this Section of Work.

1.02 RELATED WORK

- A. Section 26 05 00: Electrical Work – General
- B. Section 26 05 16: Electric Wires and Cables
- C. Section 26 05 26: Grounding
- D. Section 26 05 33: Electrical Conduit
- E. Section 26 20 00: Electric Service Installation
- F. Section 26 36 20: Automatic Transfer Switch
- G. Section 33 09 30: Wastewater Pumping Control System

1.03 QUALITY ASSURANCE

- A. The power system shall be furnished by a single manufacturer who shall be responsible for the design, coordination, and testing of the complete system. The entire system shall be installed as shown on the plans, drawings, and specifications herein.

B. Acceptable Manufacturers

ATS is to be supplied by the manufacturer of the existing on-site generator. Acceptable generator manufacturers are:

- 1. Kohler
- 2. Approved Equal

C. Qualifications

- 1. The equipment shall be produced by a manufacturer who is ISO 9001 certified for the design, development, production and service of its complete product line.
- 2. The power system shall be produced by a manufacturer who has produced this type of equipment for a period of at least 10 years and who maintains

a service organization available twenty-four hours a day throughout the year.

D. Applicable Standards

The generator set shall conform to the requirements of the following codes and standards:

1. IEEE446 Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications.
2. NFPA 37 (Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines).
3. NFPA 70, National Electrical Code, Equipment shall be suitable for use in systems in compliance to Article 700, 701, and 702.
4. NFPA 110, Emergency and Standby Power Systems. The generator set shall meet all requirements for Level 1 systems. Level 1 prototype tests required by this standard shall have been performed on a complete and functional unit. Component level type tests will not substitute for this requirement.

1.04 SITE CONDITIONS

A. Ambient Conditions:

1. Engine- generator set shall operate in the following conditions without any damage to the unit or its loads.
 - i. Ambient Temperature: 77 °F
 - ii. Altitude: 689 ft
 - iii. Relative Humidity: 0-95%

1.05 SUBMITTALS

The Contractor shall submit to the Owner's Representative for review drawings, product specifications and descriptions including control schematic diagrams, wiring connection diagrams, complete ratings, short circuit ratings together with certified test performed on similar equipment; installation instructions, operating and maintenance manuals, and field check-out, start-up and testing procedures specified in 01 33 00 for all equipment furnished.

PART 2 - PRODUCT

2.01 MANUFACTURERS

- A. Manufacturers: The basis for this specification is Kohler Power Systems, approved equals may be considered if equipment performance is shown to meet the requirements herein.

2.02 ENGINE-GENERATOR SET

- A. Factory-assembled and tested, diesel engine-generator set, Kohler model 80REOZJF with a 4R9X alternator.

- B. Mounting Frame: Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.

- 1. Rigging Information: Indicate location of each lifting attachment, generator-set center of gravity, and total package weight in submittal drawings.

- C. Capacities and Characteristics:

- 1. Power Output Ratings: Electrical output power rating for Standby operation of not less than 103.75 kVA and 83 kW when operating at 120/240 volts, 60 Hz, 0.80 power factor. The generator set shall be capable of a 130°C Standby rating while operating in an ambient condition of less than or equal to 77 °F and a maximum elevation of 689 ft above sea level. The standby rating shall be available for the duration of the outage.

- 2. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component. The engine-generator nameplate shall include information of the power output rating of the equipment.

- D. Generator-Set Performance:

- 1. Steady-State Voltage Operational Bandwidth: 1.0 percent of rated output voltage from no load to full load.

- 2. Transient Voltage Performance: Not more than 8 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within 3 seconds. On application of a 100% load step the generator set shall recover to stable voltage within 10 seconds.

- 3. Steady-State Frequency Operational Bandwidth: 0.5 percent of rated frequency from no load to full load.

4. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
5. Transient Frequency Performance: Not more than 4 percent variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within 5 seconds. On application of a 100% load step the generator set shall recover to stable frequency within 10 seconds.
6. Output Waveform: At full load, harmonic content measured line to line or line to neutral shall not exceed 5 percent total and 3 percent for any single harmonic. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50.
7. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 300 percent of rated full-load current for not less than 8 seconds without damage to generator system components. For a 1-phase, bolted short circuit at system output terminals, system shall regulate both voltage and current to prevent over-voltage conditions on the non-faulted phases.
8. Start Time: Comply with NFPA 110, Level 1, Type 10, system requirements.
9. Ambient Condition Performance: Engine generator shall be designed to allow operation at full rated load in an ambient temperature under site conditions, based on highest ambient condition. Ambient temperature shall be as measured at the air inlet to the engine generator for enclosed units, and at the control of the engine generator for machines installed in equipment rooms.

2.03 ENGINE

A. Fuel: Diesel

B. Rated Engine Speed: 1800RPM.

C. Lubrication System: The following items are mounted on engine or skid:

1. Lube oil pump: shall be positive displacement, mechanical, full pressure pump.

2. Filter and Strainer: Provided by the engine manufacturer of record to provide adequate filtration for the prime mover to be used.
 3. Crankcase Drain: Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.
- D. Engine Fuel System: The engine fuel system shall be installed in strict compliance to the engine manufacturer's instructions
- E. Governor: Adjustable isochronous, with speed sensing. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions. The control system shall actively control the fuel rate as appropriate to the state of the engine generator. Fuel rate shall be regulated as a function of starting, accelerating to start disconnect speed, accelerating to rated speed, and operating in various isochronous states.
- F. Cooling System: Closed loop, liquid cooled
1. The generator set manufacturer shall provide prototype test data for the specific hardware proposed demonstrating that the machine will operate at rated standby load in an outdoor ambient condition of 40 deg C.
 2. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
 3. Size of Radiator overflow tank: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.
 4. Expansion Tank: Constructed of welded steel plate and rated to withstand maximum closed-loop coolant system pressure for engine used. Equip with gage glass and petcock.
 5. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
 6. Duct Flange: Generator sets installed indoors shall be provided with a flexible radiator duct adapter flange.
- G. Muffler/Silencer: Selected with performance as required to meet sound requirements of the application, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine

manufacturer's engine backpressure requirements. For generator sets with outdoor enclosures the silencer shall be inside the enclosure.

- H. Air-Intake Filter: Engine-mounted air cleaner with replaceable dry-filter element and restriction indicator.
- I. Starting System: 12 or 24V, as recommended by the engine manufacturer; electric, with negative ground.
 - 1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
 - 2. Cranking Cycle: As required by NFPA 110 for level 1 systems.
 - 3. Battery Cable: Size as recommended by engine manufacturer for cable length as required. Include required interconnecting conductors and connection accessories.
 - 4. Battery Compartment: Factory fabricated of metal with acid-resistant finish.
 - 5. Battery-Charging Alternator: Factory mounted on engine with solid-state voltage regulation. The battery charging alternator shall have sufficient capacity to recharge the batteries with all parasitic loads connected within 4 hours after a normal engine starting sequence.
 - 6. Battery Chargers: Unit shall comply with UL 1236, provide fully regulated, constant voltage, current limited, battery charger for each battery bank. It will include the following features:
 - a. Operation: Equalizing-charging rate based on generator set manufacturer's recommendations shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
 - b. Automatic Temperature Compensation: Adjust float and equalize voltages for variations in ambient temperature from minus 20 deg C to plus 40 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.
 - c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.

- d. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
- e. Provide LED indication of general charger condition, including charging, faults, and modes. Provide a LCD display to indicate charge rate and battery voltage. Charger shall provide relay contacts for fault conditions as required by NFPA110.
- f. Enclosure and Mounting: NEMA, Type 1, wall-mounted cabinet.

2.04 FUEL OIL STORAGE

- A. Comply with NFPA 30.
- B. Sub Base-Mounted Fuel Oil Tank: Provide a double wall secondary containment type sub base fuel storage tank. The tank shall be constructed of corrosion resistant steel and shall be UL 142, UL 2085, CSA listed and labeled. The fuel tank shall include the following features:
 - 1. Capacity: Sized as necessary to provide 24 hours of run time at nominal capacity.
 - 2. Tank rails and lifting eyes shall be rated for the full dry weight of the tank, genset, and enclosure.
 - 3. Electrical stub up(s)
 - 4. Normal & emergency vents
 - 5. Lockable fuel fill
 - 6. Mechanical fuel level gauge
 - 7. High and low level switches to indicate fuel level
 - 8. Leak detector switch
 - 9. Sub base tank shall include a welded steel containment basin, sized at a minimum of 130% of the tank capacity to prevent escape of fuel into the environment in the event of a tank rupture.
 - 10. Fill port with overfill prevention valve (OFPV)

11.5 gallon fill/spill dam or bucket

12. Tank design shall meet the regional requirements for the Project location

2.04 CONTROL AND MONITORING

- C. Engine generator control shall be microprocessor based and provide automatic starting, monitoring, protection and control functions for the unit.
- D. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. (Switches with different configurations but equal functions are acceptable.) When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of the local (generator set-mounted) and/or remote emergency-stop switch also shuts down generator set.
- E. Manual Starting System Sequence of Operation: Switching on-off switch on the generator control panel to the on position starts generator set. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of the local (generator set-mounted) and/or remote emergency-stop switch also shuts down generator set.
- F. Configuration: Operating and safety indications, protective devices, system controls, engine gages and associated equipment shall be grouped in a common control and monitoring panel. Mounting method shall isolate the control panel from generator-set vibration. AC output power circuit breakers and other output power equipment shall not be mounted in the control enclosure.
- G. Indicating and Protective Devices and Controls: As required by NFPA 110 for Level 1 system, and the following:
 - 1. AC voltmeter (3-phase, line to line and line to neutral values).
 - 2. AC ammeter (3-phases).
 - 3. AC frequency meter.

4. AC kVA output (total and for each phase). Display shall indicate power flow direction.
5. Ammeter-voltmeter displays shall simultaneously display conditions for all three phases.
6. Emergency Stop Switch: Switch shall be a red “mushroom head” pushbutton device complete with lock-out/tag-out provisions. Depressing switch shall cause the generator set to immediately stop the generator set and prevent it from operating.
7. Fault Reset Switch: Supply a dedicated control switch to reset/clear fault conditions.
8. DC voltmeter (alternator battery charging).
9. Engine-coolant temperature gage.
10. Engine lubricating-oil pressure gage.
11. Running-time meter.
12. Generator-voltage and frequency digital raise/lower switches. Rheostats for these functions are not acceptable. The control shall adjustment of these parameters in a range of plus or minus 5% of the voltage and frequency operating set point (not nominal voltage and frequency values.)
13. AC Protective Equipment: The control system shall include over/under voltage, over current, short circuit, loss of voltage reference, and over excitation shut down protection. There shall be an overload warning, and overcurrent warning alarm.
14. Status LED indicating lamps to indicate remote start signal present at the control, existing alarm condition, not in auto, and generator set running.
15. A graphical display panel with appropriate navigation devices shall be provided to view all information noted above, as well as all engine status and alarm/shutdown conditions (including those from an integrated engine emission control system). The display shall also include integrated provisions for adjustment of the gain and stability settings for the governing and voltage regulation systems.
16. Panel lighting system to allow viewing and operation of the control when the generator room or enclosure is not lighted.

17. DC control Power Monitoring: The control system shall continuously monitor DC power supply to the control, and annunciate low or high voltage conditions. It shall also provide an alarm indicating imminent failure of the battery bank based on degraded voltage recover on loading (engine cranking).
- H. Remote Emergency-Stop Switch: Flush; wall mounted, unless otherwise indicated; and labeled. Push button shall be protected from accidental operation.
- I. Common Remote Audible Alarm: Comply with NFPA 110 requirements for Level 1 systems. Include necessary contacts and terminals in control and monitoring panel.
1. Overcrank shutdown.
 2. Coolant low-temperature alarm.
 3. Control switch not in auto position.
 4. Battery-charger malfunction alarm.
 5. Battery low-voltage alarm.
- J. Remote Alarm Annunciator: Comply with NFPA 110. An LED labeled with proper alarm conditions shall identify each alarm event and a common audible signal shall sound for each alarm condition.

2.05 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

- A. Comply with NEMA MG 1.
- B. Drive: Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.
- C. Electrical Insulation: Class H
- D. Temperature Rise: 130°C Standby @ 40°C
- E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, over speed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.
- F. Permanent Magnet Generator (PMG) shall provide excitation power for optimum motor starting and short circuit performance.

- G. Enclosure: Drip-proof.
- H. Voltage Regulator: SCR type, Separate from exciter, providing performance as specified. The voltage regulation system shall be microprocessor-controlled, full wave rectified, and provide a pulse-width modulated signal to the exciter. No exceptions or deviations to these requirements will be permitted.
- I. Windings: Two-thirds pitch stator winding and fully linked amortisseur winding.
- J. Subtransient Reactance: 15 percent maximum, based on the rating of the engine generator set.

2.06 OUTDOOR GENERATOR-SET ENCLOSURE

- A. Description: Weather Steel housing. Multiple panels shall be lockable and provide adequate access to components requiring maintenance. Instruments, control, and battery system shall be mounted within enclosure.
- B. Construction:
 - 1. Hinged Doors: With padlocking provisions. Restraint/Hold back hardware to prevent door to keep door open at 180 degrees during maintenance. Rain lips over all doors.
 - 2. Exhaust System:
 - a. Muffler Location: Within enclosure.
 - 3. Hardware: All hardware and hinges shall be stainless steel.
 - 4. Mounting Base: Suitable for mounting on sub-base fuel tank.
 - 5. A weather protective enclosure shall be provided which allows the generator set to operate at full rated load with a static pressure drop equal to or less than 0.5 inches of water.
- C. Engine Cooling Airflow through Enclosure: Housing shall provide ample airflow for engine generator operation at rated load in an ambient temperature of 40 deg C.
 - 1. Louvers: Fixed-engine, cooling-air inlet and discharge.
- D. Sound Performance: Reduce the sound level of the engine generator while operating at full rated load to a maximum of 69 dBA measured at any location 23 ft from the engine generator in a free field environment.

E. Site Provisions:

1. Lifting: Complete assembly of engine generator, enclosure, and sub base fuel tank (when used) shall be designed to be lifted into place as a single unit, using spreader bars.

2.07 VIBRATION ISOLATION DEVICES

- A. Vibration Isolation: Generators installed on grade shall be provided with elastomeric isolator pads integral to the generator, unless the engine manufacturer requires use of spring isolation.

2.08 FINISHES

- A. Components: Powder-coated and baked over corrosion-resistant pretreatment and compatible primer. Manufacturer's standard color or as directed on the drawings.

PART 3 - EXECUTION

3.01 FACTORY TEST AND INSPECTION

- A. Each item of equipment shall be shop-assembled and tested in accordance with the manufacturer's standard procedure. Monitor and control devices shall be functionally tested to verify correct operation and that all parts function properly.

3.02 INSTALLATION AND TESTING

- A. The Contractor shall install the equipment as shown on the Drawings in accordance with the manufacturer's recommendations. The Contractor shall adjust and calibrate the equipment after all connections are made.
- B. All equipment and components shall be tested by operating them a reasonable number of times to demonstrate their proper and safe installation and operation. To determine what constitutes a safe and proper installation, these Specifications, manufacturer's recommendations, guidelines set by NEC, IEEE, ANSI, OSHA, etc. shall be the norm.
- C. Operational tests shall be performed to verify correctness of operation, connections, and interconnections with other equipment.
- D. After the equipment has been made ready for operation, the Contractor shall perform field test of the engine generator. The Contractor shall furnish the services

of a factory representative who shall provide final checkout of the entire installation covered by these Contract Documents and supervise the initial start-up and test of the engine generator. The tests shall include load, phase sequence, and utility power tests. Field testing shall include a simulated power failure and load transfer.

- E. The loads shall be operated continuously for a period of not less than 30 minutes or as otherwise mutually agreed upon between Owner, Owner's Representative and Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for DIESEL ENGINE GENERATOR.

--- END OF SECTION ---

**AUTOMATIC TRANSFER SWITCH
SECTION 26 36 23**

PART 1 – GENERAL

1.01 SCOPE

A. Description

This Section covers the automatic transfer switches (ATS) to be furnished, installed and tested as shown in the Drawings and as specified herein. All related accessories where required, but not specifically provided for in these Specifications, shall be included under this Section of Work.

1.02 RELATED WORK

- A. Section 26 05 00: Electrical Work – General
- B. Section 26 05 16: Electric Wires and Cables
- C. Section 26 05 26: Grounding
- D. Section 26 05 33: Electrical Conduit
- E. Section 26 20 00: Service and Distribution
- F. Section 33 09 30: Wastewater Pumping Control System

1.03 QUALITY ASSURANCE

A. Acceptable Manufacturers

ATS is to be supplied by the manufacturer of the existing on-site generator. Acceptable generator manufacturers are:

- 1. Kohler
- 2. Approved Equal

B. Applicable Standards

All Work shall conform to the applicable provision of the codes, standards and Specifications, as specified herein and the following:

Name	Abbreviation
National Electrical Code	NEC
National Electrical Manufacturers Assoc.	NEMA
Underwriters Laboratories	UL

1.04 SUBMITTALS

The Contractor shall submit to the Owner's Representative for review drawings, product specifications and descriptions including control schematic diagrams, wiring connection diagrams, complete ratings, short circuit ratings together with certified test performed on similar equipment; installation instructions, operating and maintenance manuals, and field check-out, start-up and testing procedures specified in 01 33 00 for all equipment furnished.

PART 2 - PRODUCT

2.01 GENERAL

- A. The automatic transfer switch shall be furnished complete with all necessary sensing relays for each phase of the normal power sources and the standby power source plus all necessary control relays and contacts to transfer the load from the normal power source to the emergency standby power source. Sensing and control logic shall be solid state and mounted on plug-in printed circuit boards. Printed circuit boards shall be keyed to prevent incorrect installation. Interfacing relays shall be industrial control grade plug in type with dust covers. The ATS shall be provided with normal and emergency switch position contacts for use in signaling "normal" or "emergency" status.
- B. The automatic transfer switch shall be listed by Underwriters Laboratory, Standard 1008.
- C. The ATS shall be of open construction, suitable for mounting by the Wastewater Pumping Control System supplier in the Wastewater Pumping Control System specified in Section 33 09 30 and as shown on the Drawings.

2.02 RATING AND OPERATION

The automatic transfer switch designated ATS shall be rated for normal and emergency sources and shall have full 600V insulation on all main contacts and current carrying parts. The automatic transfer switch shall be a 3-pole, 4-wire type with solid neutral and shall be rated 200A continuous current for use on a 120/240V, 60Hz system, and shall be capable of withstanding 22,000A, interrupting/fault close RMS, symmetrical three phase short circuit current for 3 cycles without contact damage or contact separation.

2.03 DETAILS OF CONSTRUCTION

A. Construction

Automatic transfer switch shall be 3-pole, 4-wire unit with solid neutral. Normal and emergency contacts shall be mechanically interlocked by the operating linkage when in the open or closed position. All parts of the mechanical driving

system and mechanical interlocks shall be electrically isolated and at ground potential.

B. Load Transfer

There shall be three normal line voltage sensing relays and sequencing controls such that a loss of power in the normal incoming power line below 75% of rated voltage, loss of phase, or voltage imbalance condition of the normal feed will initiate change over to the alternative (secondary) power source, after an adjustable time delay to ignore momentary outages. Upon proper voltage level from the alternative (secondary) power source, the load shall be transferred to the secondary power source. Upon restoration of normal voltage on the utility incoming power line, the transfer panel, after an adjustable time delay, shall transfer load back to Normal Line.

C. Current Carrying Contacts, Coils and Relays

Current carrying contacts, coils and relays shall be readily accessible from the front for maintenance and inspection as individual units. Replacement of any part shall not require removal of the switch panel from the enclosure, or disconnecting the operating linkage or power conductors.

D. Indicating Lights

Indicating lights shall be identified with nameplates mounted on the front of the cabinet door.

E. Test Switch

Test switch shall be provided to simulate normal power failure.

F. Inphase Monitoring

Bidirectional Inphase Transfer System to control transfer operation between live sources. Shall provide variable transfer initiation which limits motor inrush current to magnitude or normal starting current ignoring unequal source voltages and wave shape distortion from solid state controlled loads. Operation shall be over a frequency difference range of +/-2.0 Hz. If voltage of the source carrying load drops below 70%, the inphase function shall be automatically bypassed.

G. Accessories

Accessories shall be provided as follows:

1. Mounted green and red pilot lights for indicating switch in normal and emergency positions, including fuses and auxiliary contacts, rated 10 amps 250 VAC.
2. Individually mounted amber pilot lights for indicating when normal and emergency source voltages are available, including fuses and auxiliary contacts.
3. One normally open auxiliary contact which closes when an abnormal condition is detected on the normal source feed and/or the normal source is de-energized.
4. Ground Bus.
5. Two position test switch. Maintained contact for auto and momentary contact for test.
6. Adjustable close differential relays.
7. Adjustable time delay to emergency to delay transfer to emergency for 0-5 minutes.
8. Adjustable time delay on restoration to delay retransfer to normal for 0-30 minutes.
9. Adjustable time delay to override momentary normal source outages to delay all transfer switch signals for 0.5 to 10 seconds.
10. Normally open auxiliary contact for initiating change over to alternative (secondary) power source. Contact shall close upon loss of normal power. The contact shall remain closed until such time as normal power is restored and the automatic transfer switch has transferred back to the normal position.
11. Terminal boards for control wiring connection.
12. Exercise timer with minimum 30 minutes (adjustable) once per week.

PART 3 - EXECUTION

3.01 FACTORY TEST AND INSPECTION

Each item of equipment shall be shop-assembled and tested in accordance with the manufacturer's standard procedure. Monitor and control devices shall be functionally tested to verify correct operation and that all parts function properly.

3.02 INSTALLATION AND TESTING

- A. The Contractor shall install the equipment as shown on the Drawings in accordance with the manufacturer's recommendations. The Contractor shall adjust and calibrate the equipment after all connections are made.
- B. All equipment and components shall be tested by operating them a reasonable number of times to demonstrate their proper and safe installation and operation. To determine what constitutes a safe and proper installation, these Specifications, manufacturer's recommendations, guidelines set by NEC, IEEE, ANSI, OSHA, etc. shall be the norm.
- C. Operational tests shall be performed to verify correctness of operation, connections, and interconnections with other equipment.
- D. After the equipment has been made ready for operation, the Contractor shall perform field test on the automatic transfer switch. The Contractor shall furnish the services of a factory representative who shall provide final checkout of the entire installation covered by these Contract Documents and supervise the initial start-up and test of the automatic transfer switch. The tests shall include load, phase sequence, and utility power tests. Field testing shall include a simulated power failure and load transfer.
- E. The loads shall be operated continuously for a period of not less than 30 minutes or as otherwise mutually agreed upon between Owner, Owner's Representative and Contractor.

3.03 PAINTING

- A. All equipment specified in this Section shall be shop-painted with the manufacturer's standard finish. All equipment specified in this Section shall be field-painted as directed by the Owner.
- B. The Contractor shall be responsible for coordination of the compatibility between the manufacturer's standard finish and the field-paint specified.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Work specified in this Section will not be paid for as a separate item, but shall be considered as included in lump sum unit price for WASTEWATER PUMPING CONTROL SYSTEM in Section 33 09 30.

--- END OF SECTION ---

**EARTH EXCAVATION, BACKFILL, FILL AND GRADING
SECTION 31 23 16**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Perform the following earth excavation, backfill, fill and grading as indicated or specified:
1. Make excavations to accommodate piping, conduits, foundations and other structures.
 2. Provide materials for backfilling excavations and constructing embankments and fills as indicated and specified.
 3. Construct embankments of compacted materials.
 4. Grade surfaces to meet finished grades indicated.
 5. Immediately notify the Engineer if suspected hazardous materials are encountered and cease operations in that part of work.
 6. Remove boulders within the excavation limits.

1.02 RELATED WORK

- A. Section 01 57 00: Erosion and Sediment Control.
- B. Section 02 01 00: Site Preparation.
- C. Section 03 30 00: Concrete Work

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM) Publications:
1. C33: Specification for Concrete Aggregates.
 2. C136: Sieve Analysis of Fine and Coarse Aggregates.
 3. D421: Practice for Dry Preparation of Soil Samples for Particle Size Analysis and Determination of Soil Constants.
 4. D422: Test Method for Particle-Size Analysis of Soils.
 5. D1140: Test Method for Amount of Material in Soils Finer than the No. 200 (75 Fm) Sieve.
 6. D1556: Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.

7. D1557: Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft³ (600 kN-m/m³)).
8. D2167: Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.)).
9. D2922: Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods. (Shallow Depth).
10. D3017: Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
11. D4318: Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
12. D4718: Practice for Correction of Unit Weight and Water Content for Soils Containing Oversized Particles.
13. D4944: Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Pressure Tester Method.
14. D4959: Test Method for Field Determination of Water (Moisture) Content of Soil by Direct Heating Method.
15. Test Method for Rapid Determination of Percent Compaction.

- B. Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29: Subpart P - Excavations, Trenching and Shoring.

1.04 DEFINITIONS

- A. Percentage of compaction is defined as the ratio of the field dry density, as determined by ASTM D1556 to the maximum dry density determined by ASTM D1557 Procedure C, multiplied by 100.
- B. Proof Roll: Compaction with a minimum of 4 passes of a vibratory steel drum or rubber tire roller. Vibratory plate compactors shall be used in small areas where vibratory steel drum or rubber tire roller cannot be used.
- C. Acceptable Material: Material which does not contain organic silt or organic clay, peat, vegetation, wood or roots, stones or rock fragments over 6-inch [15 cm] in diameter, porous biodegradable matter, loose or soft fill, excavated pavement, construction debris, or refuse. Stones or rock fragments shall not exceed 40 percent by weight of the backfill material.
- D. Unacceptable Materials: Materials does not comply with the requirements for the acceptable material or which cannot be compacted to the specified or indicated density.

1.05 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 - Submittals:

1. Qualifications of the Contractor's Independent Testing Laboratory as specified in Paragraph 1.06 I, four (4) weeks prior to the execution of any earth excavation, backfilling, filling, or compaction process.
2. Submit an excavation, backfilling, and filling plan at least two weeks prior to start of any earth moving activities. The review will be only for the information of the Owner and third parties for an overall understanding of the project relating to access, maintenance of existing facilities and proper utilization of the site. The Contractor shall remain responsible for the adequacy and safety of the means, methods and sequencing of construction. The plan shall include, but not be limited to the following items:
 - a. Detailed sequence of work.
 - b. General description of construction methods.
 - c. Numbers, types, and sizes of equipment proposed to perform excavation and compaction.
 - d. Details of dust control measures.
 - e. Proposed locations of stockpiled excavation and/or backfill materials.
 - f. Proposed surplus excavated material off-site disposal areas and required permits.
 - g. Details of erosion and sedimentation control measures which will prevent erosion and sedimentation during the earth moving activities.
3. Laboratory testing results of gradation and moisture-density relationship. Submittal shall include specific location of the source and the date when sample was taken.
4. During Construction, submit written confirmation of fill lift thickness, in-place soil moisture content, and percentage of compaction to the Engineer before placing the next lift or constructing foundations.

1.06 QUALITY ASSURANCE AND CONTROL

- A. Provide in accordance with Section 01 43 00 and as specified.
- B. The Contractor shall be solely responsible for making all excavations in a safe manner. All excavation, trenching, and related sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926 Subpart P) and State requirements. Where conflict between OSHA and State regulations exists, the more stringent requirements shall apply.
- C. Do not excavate, construct embankments, or fill until all the required submittals have been reviewed by the Engineer.

D. Formulate excavation, backfilling, and filling schedule and procedures to eliminate possibility of undermining or disturbing foundations of partially and completed structures, pipelines and embankments or existing structures and pipelines.

E. Field Testing and Inspections:

1. By Contractor's independent testing laboratory, acceptable to the Engineer, at Contractor's expense as specified in Paragraph 1.06 G.
2. Location of tests mutually acceptable to testing laboratory and the Engineer or as directed by the Engineer.
3. In the event compacted material does not meet specified in-place density, re-compact material and retest this area until specified results are obtained at no additional to the Owner.
4. Contractor's testing laboratory to perform inspection at least once daily to confirm lift thickness and compaction effort for entire fill area.
5. Owner will retain the services of an independent testing laboratory to conduct confirmatory testing and inspection.

F. Methods of Field Testing:

1. In-Place Density: ASTM D1556, ASTM D2167, or ASTM D2922.
2. In-Place Moisture Content: ASTM D3017, ASTM D4944, or ASTM D4959.

G. Material Testing Frequency: The following testing frequencies are minimum required or all structural and non-structural fill, grading and embankment.

1. Field In-Place Density and Moisture Content - Aggregate shall be compacted as specified and indicated. For other backfill and fill materials, minimum test frequency shall be as follows, and no less than one test per:
 - a. Trenches under structures foundation preparation or roadways subbase: Every 1000 lin. ft. [300 m.] per lift.
 - b. Trenches in areas without structures or roadways: Every 1000 lin. ft. [300 m.] per alternate lift.
 - c. Paved Roadways: Every 200 lin. ft. [60 m.] per lift.
 - d. Paved Areas: 3,500 sq. ft. [350 sq. m.] per lift.

- e. Under Structure: 1,000 sq. ft. [100 sq. m.] per lift.
 - f. Around Structures: 1,500 sq. ft. [150 sq. m.] per lift.
 - h. Embankment Fills: 10,000 sq. ft. [1000 sq. m.] per lift.
2. Moisture Density - One per source, except for aggregate. Repeat the moisture density test for every 5,000 cubic yard of material use, and whenever visual inspection indicates a change in material gradation as determined by the Engineer.
 3. Gradation Analysis - A minimum of one per source and for each moisture density test and whenever visual inspection indicates a change in material gradation.
 4. Owner's testing laboratory to conduct confirmatory testing at a minimum frequency of 25% of the specified frequencies in paragraph 1.06.H, or as directed by Owner's Engineer.

H. Construction Tolerances:

1. Construct finished surfaces to plus or minus 1 inch [2.5 cm] of the elevations indicated.
 2. Grade cut and fill areas to plus or minus 0.20 foot [6.0 cm] of the grades indicated.
 3. Complete embankment edges to plus or minus 6 inches [15 cm] of the slope lines indicated.
 4. Provide the Engineer with adequate survey information to verify compliance with above tolerances.
- I. Cut pavement with a saw or pneumatic tools to prevent damage to remaining pavement without extra compensation. Where pavement is removed in large pieces, dispose of pieces before proceeding with excavation.
- J. Pipes, drains, and other utilities may exist in certain locations not indicated on drawings. No attempt has been made to show all services. Completeness or accuracy of information given is not guaranteed.
- K. Dig test pits considered as incidental to the normal excavation as indicated and specified in this Section, at no additional compensation.

- L. Carefully support and protect from damage, existing pipes, poles, wires, fences, curbs, property line markers, and other structures, which the Engineer determines must be preserved in place without being temporarily or permanently relocated. Should such items be damaged, restore without compensation therefore, to at least as good condition as that in which they were found immediately before the work was begun.
- M. Whenever certain existing structures, as described below, are encountered, and the Engineer so directs, change the location, remove and later restore, or replace such structures, or assist the Owner in doing so.
- N. In removing existing pipes or other structures, include for payment only those new materials which are necessary to replace those unavoidably damaged as determined by the Engineer.
- O. The preceding two paragraphs apply to pipes, wires, and other structures which meet the following: (a) are not indicated on the drawings or otherwise provided for, (b) encroach upon or are encountered near and substantially parallel to the edge of the excavation, and (c) in the opinion of the Engineer, will impede progress to such an extent that satisfactory construction cannot proceed until they have been changed in location, removed (to be later restored), or replaced.
- P. Restore existing property or structures as promptly as practicable.
- Q. If material unacceptable for foundation (in the opinion of the Engineer) is found at or below the grade to which excavation would normally be carried in accordance with the drawings and/or specifications, remove such material to the required width and depth as directed by the Engineer and replace it with aggregate, select borrow, or concrete.
- R. Do not remove excavation materials from the site of the work or dispose of except as directed or permitted by the Engineer.
- S. Haul away and dispose of surplus excavated materials at locations directed by the Engineer at no additional cost to the Owner.
- T. During progress of work, conduct earth moving operations and maintain work site so as to minimize the creation and dispersion of dust. Furnish and spread calcium chloride if the Engineer decides that it is necessary for more effective dust control.
- U. Provide suitable and safe bridges and other crossings where required for accommodation of travel, and to provide access to private property during construction, and remove said structures thereafter.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Use only acceptable materials from excavations or borrows.
- B. Provide 1,500 psi [10 MPa] concrete.
- C. Aggregate Base Course: CA-6 per SSRBC, Section 1004.
- D. Bridging Base Course: CA-1 per SSRBC Section 1001.
- E. Geotextile Fabric: Woven or nonwoven filaments of polypropylene, polyester, or polyethylene per SSRBC Section 1080.02.

2.02 EQUIPMENT

- A. The compaction equipment shall be selected by the Contractor, and shall be capable of consistently achieving the specified compaction requirements. The selected compaction equipment shall meet the following minimum requirements:
 - 1. Manually operated vibratory plate compactors weighing no less than 200 pounds [90 kg] with vibration frequency no less than 1600 cycles per minute.
 - 2. Vibratory steel drum or rubber tire roller weighing at least 12,000 pounds [5450 kg].

PART 3 – EXECUTION

3.01 SITE MAINTENANCE

- A. Site Leveling: Grade site as to maintain it in a level unrutted condition and to eliminate puddling of surface and subsurface water.

3.02 EXCAVATION

- A. Execution of any earth excavation shall not commence until the related excavation support systems, and backfill and fill materials submittals are reviewed by the Engineer and all Engineer's comments satisfactorily addressed.
- B. Carry out program of excavation, and excavation support systems to eliminate possibility of undermining or disturbing foundations of existing structures or of work previously completed under this contract.

- C. Excavate to widths that give suitable room for building structures or laying and jointing piping.
- D. Do not plow, scrape or dig by machinery near to finished subgrade in a manner that would result in disturbance of subgrade.
- E. Excavate to lines and grades indicated in an orderly and continuous program.
- F. Establish limits of excavation to allow adequate working space for installing forms and for safety of personnel.
- G. Excavate to elevations indicated, or deeper, as directed by the Engineer, to remove unacceptable bottom material.
- H. Exercise care to preserve material below and beyond the lines of excavations.
- I. Place excavated material at the approved stockpile locations and in no case closer than 3 feet [90 cm] from edge of excavations to prevent cave-ins of bank slides.
- J. Regard small, less than one cubic yard, boulders, rock fragments, and concrete encountered during excavation as a normal part of in-place soils and not included for payment as rock.

3.03 SEPARATION OF EXCAVATED MATERIALS FOR REUSE:

- A. Remove only existing pavement that is necessary for prosecution of work.
- B. Carefully remove loam and topsoil from excavated areas. Store separately for further use or furnish equivalent loam and topsoil as directed.
- C. Carefully remove acceptable material from excavated areas and store separately for further use as backfill material.

3.04 TRENCH EXCAVATION

- A. When pipe is to be laid in gravel bedding or concrete cradle, excavate trench by machinery to, or just below designated subgrade. If material remaining at bottom of trench is disturbed, recompaction shall be required.
- B. When pipe is to be laid directly on bottom of trench, do not excavate lower part of trenches by machinery to subgrade. Remove remainder of material to be excavated just before placing of pipe by use of hand tools. Form a flat or shaped bottom, true to grade, so pipe will have a uniform and continuous bearing. Support on firm and undisturbed material between joints, except for limited areas where use of pipe slings have disturbed bottom.

3.05 DEPTH OF TRENCH

- A. Excavate trenches to depths so as to permit pipe to be laid at elevations, slopes, or depths of cover indicated on drawings, and at uniform slopes between indicated elevations.

3.06 WIDTH OF TRENCH

- A. Make pipe trenches as narrow as practicable and do not widen by scraping or loosening materials from the sides. Make every effort to maintain sides of trenches firm and undisturbed until backfilling has been placed and compacted.
- B. Excavate trenches with approximately vertical sides between springline of pipe and elevation 1 ft. [30 cm] above top of pipe.

3.07 TRENCH EXCAVATION IN FILL

- A. Place and compact material to top of fill or to a minimum height of 1 ft. [30 cm] above top of pipe, whichever is less, when pipe is to be laid in embankment or other recently filled material. Take particular care to ensure maximum consolidation of material under pipe location. Excavate pipe trench as though in undisturbed material.

3.08 EXCAVATION NEAR EXISTING STRUCTURES

- A. Discontinue digging by machinery when excavation approaches pipes, conduits, or other underground structures. Continue excavation by use of hand tools. Include such manual excavation in work to be done when incidental to normal excavation and under items involving normal excavation.
- B. Excavate test pits when determination of exact location of pipe or other underground structure is necessary for doing work properly.

3.09 REMOVAL OF SUBSURFACE OBSTRUCTIONS

- A. Discontinue digging by machinery when excavation approaches pipes, conduits, or other underground structures. Continue excavation by use of hand tools. Include such manual excavation in work to be done when incidental to normal excavation and under items involving normal excavation.
- B. Excavate test pits when determination of exact location of pipe or other underground structure is necessary for doing work properly.

3.10 UNAUTHORIZED EXCAVATION

- A. When the bottom of any excavation for structures is taken out beyond limits indicated or specified, backfill, with Aggregate Base Course compacted to 95% maximum dry density.

3.11 REUSE AND DISPOSAL OF SURPLUS EXCAVATED MATERIALS

- A. Reuse surplus acceptable excavated materials for backfill; deposit neatly and grade so as to make or widen fills, flatten side slopes, or fill depressions; or legally dispose off-site; all as directed or permitted and without additional compensation.

3.12 SUBGRADE PREPARATION AND PROTECTION

- A. Remove loam and topsoil, loose vegetative matter, stumps and large roots from areas upon which embankments will be built or material will be placed for grading. Shape subgrade as indicated on drawings, and prepare by forking, furrowing, or plowing so that the first layer of new material placed thereon will be well bonded to it.
- B. As directed by the Engineer, overexcavate unacceptable materials below the foundation subgrade. Backfill the overexcavation with compacted Aggregate Base Course.
- C. Proof roll the foundation subgrade prior to backfilling and filling operation, or placing foundation concrete.
- D. Proof roll the pipe trench foundation subgrade prior to backfilling and filling operation, or placing soil-supported pipeline.
- E. Utilize excavating equipment equipped with a toothless or smooth edged, excavating bucket to expose the pipe trench foundation subgrade to avoid disturbance of the bearing surface. Tamp the exposed subgrade with the excavating bucket prior to backfilling and filling operation, or placing soil-supported pipeline.

3.13 CARE AND RESTORATION OF PROPERTY

- A. Enclose uncut tree trunks adjacent to work in wooden boxes of such height as may be necessary for protection from injury from piled material, equipment, operations, or otherwise due to work. Operate excavating machinery and cranes of suitable type with care to prevent injury to trees not to be cut and particularly to overhanging branches and limbs.
- B. Cut all branches, limbs, and roots smoothly and neatly without splitting or crushing. Neatly trim, cut the injured portions and cover with an application of grafting wax or tree healing paint as directed.

- C. Protect cultivated hedges, shrubs, and plants which might be injured by the Contractor's operations by suitable means or dig up and temporarily replant and maintain. After construction operations have been substantially completed, replant in original positions and care for until growth is reestablished. If cultivated hedges, shrubs, and plants are injured to such a degree as to effect their growth or diminish in their beauty or usefulness, replace by items of equal kind and quality existing at the start of the work.
- D. Do not use or operate tractors, bulldozers, or other power-operated equipment on paved surfaces when their treads or wheels of which are so shaped as to cut or otherwise damage such surfaces.
- E. Restore surfaces damaged by the Contractor's operations to a condition at least equal to that in which they were found immediately before work commenced. Use suitable materials and methods for such restoration.

3.14 BACKFILLING - GENERAL

- A. Do not place, spread, roll or compact fill material during unfavorable weather conditions. If interrupted by heavy rain or other unfavorable conditions, do not resume until ascertaining that the moisture content and density of the previously placed soil are as specified.
- B. Do not use water jetting or flooding as a means of compaction.

3.15 MATERIAL PLACEMENT AND COMPACTION REQUIREMENTS

A. Select Borrow, and Fine Aggregate:

1. Dump and spread in layers not to exceed 8-in. [20 cm] uncompacted thickness.
2. Compact, fill and backfill under structure and bedding for pipes (from below pipe to spring line) as indicated but to not less than 95 percent. Compact to not less than 90 percent in other areas unless otherwise indicated.

B. Aggregate Base Course:

1. Dump and spread in layers not to exceed 8-in. [20 cm] uncompacted thickness.
2. Compact using self propelled vibratory steel drum or rubber tire rollers with a minimum of 4 passes in directions perpendicular to one another in

open areas. In small areas, use manually operated vibratory plate compactors with a minimum of 4 passes.

3. Compact to 95% maximum dry density.

C. Bank-run Gravel and Acceptable materials for use as non-structural fill:

1. Dump and spread in layers not to exceed 12-in. [30 cm] uncompacted thickness.
2. Compact to not less than 90 percent unless otherwise indicated.

D. Backfilling and filling operation shall be suspended in areas where tests are being made until tests are completed and the testing laboratory has advised the Engineer that adequate densities are obtained.

3.16 STRUCTURAL FILL AND BACKFILL UNDER STRUCTURES

A. Compact fill and backfill under structures and pavements with Aggregate Base Course.

3.17 NON-STRUCTURAL BACKFILL AROUND STRUCTURES

A. Use acceptable materials for non-structural backfill around structures and compacted as specified and indicated.

B. Conduct hydraulic testing as soon as practicable after structures are constructed and other necessary work has been done. Start backfilling promptly after completion of tests.

C. Deposit material evenly around structure to avoid unequal soil pressure.

D. Do not place backfill against or on structures until they have attained sufficient strength to support the loads (including construction loads) to which they will be subjected, without distortion, cracking, or other damage.

3.18 BACKFILLING PIPE TRENCHES

A. General:

1. Begin backfilling and proceed until completed after: the pipes and conduits have been laid, joints have acquired maximum degree of hardness, pipelines and conduits have successfully passed tests and inspections as required in the Specifications, and concrete or masonry structures within the trench have reached their design strength to support all loads.

2. Backfill and compact indicated material under, around, and above pipes, conduits, and other structures to the indicated or specified compaction density requirement. Utilize compaction devices which will not damage the pipe, conduit, or structure within the trench.
3. Do not drop backfill material into trench from a height of more than 5 ft. [150 cm], or in a manner which will damage the pipe, conduit, or other structure within trench.

B. Pipe Trenches:

1. Materials:

- a. From below pipe to 1 ft. [30 cm] above top of pipe: Use screened gravel, or crushed stone, unless otherwise indicated.
 - b. One foot [30 cm] above top of pipe to finished grade or to pavement subbase: Use bank-run gravel or acceptable materials, unless otherwise indicated.
2. Compacting Around Pipes: Compact material around circumference of pipe and the area between the trench wall and the pipe by hand tamping in 6 inches [15 cm] layers.
 3. Compacting Above Pipe: Compact material by hand tamping. If trench width is wide enough to accommodate power tools and the compacted material over the pipe will support the load of the power tools without damage to the pipe, use rollers or other powered compaction equipment able to more readily achieve compaction requirements.

3.19 MATERIAL FOR FILLING AND EMBANKMENTS

- A. Use acceptable materials for filling and building embankments unless otherwise indicated.

3.20 PLACING AND COMPACTING EMBANKMENT MATERIAL

- A. Compact fill material as specified and indicated.
- B. Perform fill operation in an orderly and systematic manner using equipment in proper sequence to meet the specified compaction requirements.
- C. Place fill on surfaces which are free of unacceptable materials.

- D. Begin filling in lowest section of work area. Grade surface of fill approximately horizontal but provide with sufficient longitudinal and transverse slope to allow for runoff of surface water from every point.
- E. Conduct filling so that no obstruction to drainage from other sections of fill area is created at any time.
- F. Reduce moisture content of fill material, if necessary, in source area by working it over under warm and dry atmospheric conditions. A large disc harrow with two to three foot diameter disks may be required for working soil in a drying operation.
- G. Compact uniformly throughout. Keep surfaces of fill reasonably smooth and free from humps and hollows which would prevent proper and uniform compaction. Do not permit hauling equipment to follow a single track on the same layer but direct equipment to spread out to prevent overcompaction in localized areas. Take care in obtaining thorough compaction at edges of fill.
- H. Slightly slope surface of fill to ensure drainage during periods of wet weather. Do not place fill while rain is falling or after a rain-storm until the Engineer considers conditions satisfactory. During such periods and upon suspension of filling operations for any period in excess of 12 hours, roll smooth the surface of fill using a smooth wheel static roller to prevent excessive absorption of rainfall and surface moisture. Prior to resuming compaction operations, remove muddy material off surface to expose firm, compacted material, as determined by the Engineer.
- I. When fill is placed against an earlier fill or against in-situ material under and around structures, including around piping beneath structures or embankments, slope junction between two sections of fill, 1 vertical to 1.5 horizontal. Bench edge of existing fill 24- in. [60 cm] to form a serrated edge of compact stable material against which to place the new fill. Ensure that rolling extends over junction between fills.
- J. When fill is placed directly upon another older fill, clean surface thoroughly of debris and remove any loose material. Then proof roll the entire old surface.
- K. After spreading each loose lift to the required thickness and adjusting its moisture content as necessary, roll with sufficient number of passes to obtain the required compaction. One pass is defined as the required number of successive trips which by means of sufficient overlap will insure complete coverage and uniform compaction of an entire lift. Do not make additional passes until previous pass has been completed.
- L. In case material of any fill sinks and weaves under roller or under hauling units and other equipment, required degree of compaction is not being obtained. Reduce the moisture content. If such sinking and weaving produces surface

cracks, suspend operations on that part of the embankment until it becomes sufficiently stabilized. Ideal condition in fill is that attained when the entire fill below the surface being rolled is so firm and hard as to show only the slightest weaving and deflection as roller passes. Spread out rolling operations over the maximum practicable area to minimize condition of sinking and weaving.

- M. If because of defective workmanship, compaction obtained over any area is less than that required, remedy condition at no cost to Owner. If additional rolling or other means fail to produce satisfactory results, remove material in that area down to a level of satisfactory density. Perform removal, replacement, and rerolling without additional compensation.

3.21 COMPACTION CONTROL OF BACKFILL, FILL, AND EMBANKMENT

- A. Compact to density specified and indicated for various types of material. Control moisture content of material being placed as specified or if not specified, at a level slightly lower than optimum.
- B. The soil testing laboratory shall provide inspection during filling or backfilling operations to ensure compaction of aggregate and record compaction equipment in use.
- C. Moisture control may be required either at the stockpile area, pits, or on embankment or backfill. Increase moisture content when material is too dry by sprinkling or other means of wetting uniformly. Reduce moisture content when material is too wet by using ditches, pumps, drainage wells, or other devices and by exposing the greatest possible area to sun and air in conjunction with harrowing, plowing, spreading of material or any other effective methods.

3.22 ALLOWANCE FOR SHRINKAGE

- A. Build embankments or backfill to a height above finished grade which will, in the opinion of the Engineer, allow for the shrinkage or consolidation of material. Initially, provide at all points, an excess of at least one percent of total height of backfill measured from stripped surface to top of finished surface.
- B. Supply specified materials and build up low places as directed, without additional cost if embankment or backfilling settles so as to be below the indicated level for proposed finished surface at any time before final acceptance of the work.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

A. Payment for the Work specified in this Section will be made at the lump sum prices for:

1. EARTHWORK

- a. Includes all work in this section with exception of 4.02.A.2 - 3 below.

2. COMPACTED CA-6 SUBGRADE

- a. Under wet well, traffic box enclosure, generator, and valve vault / meter / bypass vault.

3. COMPACTED CA-1 SUBGRADE

- a. Under valve vault / meter / bypass vault.

--- END OF SECTION ---

**DEWATERING
SECTION 31 23 19**

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Section includes specifications for temporary dewatering systems.
- B. Refer to Section 02 06 14 – Geotechnical Data Report and the Proposed Lift Station plan and details for soil groundwater elevations.

1.02 SYSTEM DESCRIPTION

- A. Remove water which accumulates in excavations during the progress of work so that all work can be done in the dry, unless otherwise approved by the Engineer. Keep excavated areas free from water while underground utilities or structures are constructed, while concrete is setting and until backfill or elements of the structure have been placed to a sufficient height to anchor the work against possible leakage or buoyant uplift forces. A height to anchor the work against buoyant uplift forces shall be considered sufficient when the dead load weight of the backfill or elements of the structure exceeds the uplift forces by a minimum factor-of-safety of 1.5.
- B. In addition to the other requirements specified herein, design the dewatering systems to perform as follows:
 - 1. Prevent damage to adjacent properties, buildings, structures, utilities, and other work as a result of settlement or other groundwater-related effects.
 - 2. At all times, maintain groundwater levels over the entire excavation a minimum of 2 feet below the excavation grade.
- C. At all times, have on the work site sufficient pumping equipment for immediate use, including standby pumps for use in case other pumps become inoperable. Dispose of water in accordance with the detailed requirements specified herein and so as to cause no injury to personnel or the public, damage to public or private property, nor menace to the public health.
- D. Design dewatering system to prevent pumping fines from below grade or disturbing materials exposed at the excavation bottom. Wells shall be cased, and filter(s) shall be provided to prevent such pumping of fines.
- E. Provide a sufficient number of monitoring wells to confirm the following:

1. The dewatering system is performing as intended and is achieving the specified reduction in groundwater levels.
 2. Construction site groundwater levels inside and outside dewatered excavations to determine the acceptability of removing the dewatering system from operation.
- F. Furnish container for construction dewatering complete with baffles for the purpose of filtering silt prior to discharge of water. Size container or containers to suit dewatering and storage demands. Alternatively, provide filter bags of sufficient size for dewatering.
- G. If the approved methods include displacing groundwater as concrete or other work is placed in excavations, the dewatering system shall capture groundwater as it is displaced and follow the procedures herein for its containment, analysis, and discharge.
- H. Obtain jurisdictional authority's specific discharge requirements prior to commencement of dewatering.

1.03 SUBMITTALS

- A. Submit dewatering plan including shop drawings and design data including the following elements:
1. The proposed type of dewatering system.
 2. Arrangement, location, and depths of system components.
 3. Complete description of equipment and instrumentation to be used, with installation, operation and maintenance procedures.
 4. Types and sizes of filters.
 5. Design calculations demonstrating adequacy of the proposed system and equipment.
 6. Methods of disposal of pumped water.
 7. Method of water quality monitoring.
 8. Type of filtration and chemical treatment of contaminated water, as applicable.
 9. Well point system design, if proposed: Submit design complete with calculations and shop drawings.

10. Method for establishing and monitoring construction site groundwater levels.

11. Criteria for determining the acceptability of removing the dewatering system from operation.

B. Prior to removing the dewatering system from operation, submit documentation and calculations verifying that the approved criteria for determining the acceptability of removing the system from operation have been met.

1.04 DELIVERABLES

A. Submit copies of permits required for work of this Section.

1.05 QUALITY ASSURANCE

A. Well point design, if applicable, shall be prepared, signed, and sealed by a geotechnical engineer registered by the State of Illinois and qualified and experienced to perform such design.

PART 3 – EXECUTION

3.01 DEWATERING

A. Except as otherwise indicated in the Contract Documents, perform dewatering to accomplish a lowering of measured static ground water level to an elevation which is suitable for the construction of structures below grade.

B. When pumping is required to reduce groundwater levels, accomplish pumping in a manner that will not disrupt the surrounding environment.

C. The Contractor may, during the daylight hours of 8:30 AM to 4:30 PM, use generators to operate the dewatering pumps. During all other hours, power to run the pumps shall be electric and obtained from the electric power utility in accordance with Section 01 50 00, Construction Facilities, unless otherwise authorized by the Engineer and jurisdictional authorities.

D. If any dewatering well pumps fines, terminate pumping and construct new well at a different location with a revised design which eliminates the pumping of fines.

E. Do not turn off the dewatering system in a manner that the upsurge in water weakens the subgrade for completed excavation and structure foundation work.

F. Remove storage containers, including those cleaned, and other dewatering facilities from the site at the completion of dewatering operations.

3.02 CONTAINMENT, ANALYSIS, AND DISCHARGE OF GROUNDWATER EXTRACTED

- A. Containment: Upon extraction, store groundwater extracted in the process of construction dewatering in containers prior to discharge or disposal of water, as applicable. Keep containers locked to prevent accidental or purposeful discharge of the water. Contain and store the water on-site and in such a manner that it will not interfere with the Contractor's existing or continued construction operations.
- B. Analysis: Collect and analyze water samples taken directly from each storage container to verify that the extracted groundwater meets applicable discharge requirements. Number of samples taken per container shall be at the sole discretion of the Engineer.
- C. Discharge Requirements: Discharge no water which exceeds regulatory requirements or the jurisdictional authority's discharge requirements.
- D. Use: Extracted groundwater of sufficient quality as shown by test data may be used on site with Engineer's written approval for those purposes approved by the Engineer.

PART 4 – MEASUREMENT AND PAYMENT

Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the prices bid for the various pay items of work involved.

--- END OF SECTION ---

SHORING, SHEETING, AND BRACING
SECTION 31 41 00

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Work required for protection of an excavation or structure through shoring, sheeting, and bracing.

1.02 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in Section 01 33 00.
- B. Contractor's Submittals: Submit a Certificate only, signed and sealed by a Licensed Professional Engineer experienced in Structural Engineering and registered in the State of Illinois, that certifies that the Licensed Professional Engineer has evaluated and approved the Contractor's excavation plan and has prepared complete design calculations and working drawings for the shoring, sheeting and bracing, not specifically shown on the Contract Drawings, which will be used for excavation support.

1.03 REFERENCES

- A. Codes and standards referred to in this Section are:
 - 1. All Federal, State and local laws and regulations applying to the design and construction of shoring, sheeting and bracing.
 - 2. National Bureau of Standards Building Science Series 127 "Recommended Technical Provisions for Construction Practice in Shoring and Sloping Trenches and Excavations."

PART 2 – PRODUCTS

2.01 MANUFACTURERS AND MATERIALS

- A. Use manufacturers and materials for shoring, sheet and bracing as recommended by the Contractor's Licensed Professional Engineer who designed the shoring, sheeting, and bracing. Products shall be subject to the review of the Owner's Representative.
- B. Fabrication of sheeting / shoring / bracing shall be in accordance with applicable requirements of IDOT Standard Specification Article 505.04.

PART 3 – EXECUTION

3.01 SHORING, SHEETING AND BRACING INSTALLATION

- A. General: Provide safe working conditions, prevent shifting of material, prevent damage to structures or other work, and avoid delay to the work, all in accordance with applicable laws and regulations. Properly shore, sheet, and brace all excavations that are not cut back to the proper slope, as determined by the Contractor's Licensed Professional Engineer.
 - 1. Take sole responsibility for the design and adequacy of shoring, sheeting and bracing not shown on the Contract Drawings.
 - 2. Take sole responsibility for the methods of installation of the shoring, sheeting and bracing.
- B. Arrange shoring, sheeting and bracing so as not to place any strain on portions of completed work until the general construction has proceeded far enough to provide ample strength.
- C. If the Contractor or its Licensed Professional Engineer is of the opinion that at any time the Contractor's excavation plan, shoring, sheeting or bracing is inadequate or unsuited for the purpose, take immediate and appropriate action. Provide a new Certificate if the Contractor's excavation plans, shoring, sheeting or bracing require modifications.
- D. Monitoring: Periodically monitor horizontal and vertical deflections of sheeting, shoring and bracing.
- E. Accurately locate all underground utilities and take the required measures necessary to protect them from damage. All underground utilities shall be kept in service at all times as specified in Division 1.
- F. Remove shoring, sheeting and bracing as the excavation is refilled in a manner to avoid the caving in of the bank or disturbance to adjacent areas or structures or pipe bedding.
 - 1. Carefully fill voids left by the withdrawal of the shore, sheeting and bracing. No separate payment will be made for the filling of such voids.
 - 2. If pipe bedding is disturbed, re-compact it to meet specified density requirements.
- G. Permission for Removal: Obtain permission from the Contractor's Licensed Professional Engineer before the removal of any shoring, sheeting or bracing.

Retain the responsibility for injury to structures or to other property or persons for failure to leave such shoring, sheeting and bracing in place even though permission for removal has been obtained.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT:

- A. Payment for the Work specified in this Section will be made at the lump sum prices for TEMPORARY SOIL RETENTION SYSTEMS.

--- END OF SECTION ---

DUCTILE-IRON PIPE AND FITTINGS
SECTION 33 05 19

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Provide and test ductile-iron pipe and fittings, as indicated and specified.
- B. Options:
 - 1. For buried exterior pipelines provide push-on joint pipe.
 - a. Provide restrained push-on pipe as indicated and specified.
 - b. Provide either restrained push-on joint fittings as specified and indicated or provide mechanical joint fittings with restraint system as specified herein.
 - 2. For piping exposed as in buildings and galleries, provide flanged or rigid-joint, grooved-coupled pipe and fittings.
 - 3. Cast iron pipe and fittings are not acceptable.

1.2 RELATED WORK:

- A. Section 31 23 16: Earth Excavation, Backfill, Fill and Grading
- B. Section 22 10 00: Process Valves and Appurtenances
- C. Section 22 13 19: Process Piping and Appurtenances

1.3 REFERENCES:

- A. American National Standards Institute, Inc. (ANSI) Standards:
 - 1. A21.4: Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

2. A21.10: Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and Other Liquids.
 3. A21.11: Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe Fittings.
 4. A21.15: Flanged Ductile-Iron Pipe with Threaded Flanges.
 5. A21.50: Thickness Design of Ductile-Iron Pipe.
 6. A21.51: Ductile-Iron Pipe, Centrifugally Cast in Metal Molds, or Sand-Lined Molds, for Water or Other Liquids.
 7. A21.53: Ductile-Iron Compact Fittings, 3-in through 16-in. for Water and Other Liquids.
 8. B16.1: Cast-Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800.
 9. B16.21: Nonmetallic Flat Gaskets for Pipe Flanges.
 10. B16.42: Ductile Iron Pipe Flanges and Flanged Fittings.
- B. American Society for Testing and Materials (ASTM) Publications:
1. A307: Carbon Steel Bolts and Studs, 60,000 psi Tensile.
- C. American Water Works Association (AWWA) Standards:
1. C606: Grooved and Shoulder Joints.
- 1.4 SUBMITTALS:
- A. Submit the following in accordance with Section 01 33 00:
1. Piping layouts in full detail.
 2. Location of pipe hangers and supports.
 3. Location and type of thrust blocks.
 4. Large scale details of wall penetrations and special castings.
 5. Schedules of all pipe, fittings, special castings, couplings, expansion joints, and other appurtenances.

- B. Certificates: Sworn and notarized certificates in duplicate of shop tests showing compliance with appropriate standard.
- C. Manufacturer's Literature:
 - 1. Catalog cuts of joints, couplings, harnesses, expansion joints, gaskets, fasteners and other accessories.
 - 2. Brochures and technical data on coatings and lining's and proposed method of application.

1.5 QUALITY ASSURANCE:

- A. Provide in accordance with Section 01 43 00 and as specified.
- B. Inspect and test at foundry according to applicable standard specifications.
- C. Owner reserves right to inspect and test by independent service at manufacturer's plant or elsewhere at his own expense.
- D. Visually inspect before installation.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Provide in accordance with Section 01 60 00 and as specified.

PART 2 - PRODUCTS

2.1 PIPE:

- A. Ductile Iron:
 - 1. Design conforming to ANSI A21.50.
 - 2. Manufacture conforming to ANSI A21.15 or ANSI A21.51.
 - 3. Thickness class, unless otherwise indicated or specified:
 - a. Minimum Thickness Class 52.
 - b. Minimum thickness Class 53 for use with threaded flanges.
 - c. Minimum thickness Class 53 for use with flanged pipe.
 - d. Minimum thickness for use with grooved couplings conforming to AWWA C606.

2.2 PIPE FOR USE WITH COUPLINGS:

- A. As specified above except ends shall be plain.
- B. With bolted split sleeve couplings, ends cast or machined at right angles to axis.
- C. With grooved type coupling:
 - 1. Ductile-Iron of thickness class specified above.
 - 2. Grooved End dimensions conforming to AWWA C606 for flexible or rigid joints to suit joint requirements.

2.3 FITTINGS:

- A. Provide fittings conforming to ANSI A21.10 or ANSI A21.53, at least Class 150.
- B. Provide all bell push-on or mechanical-joint fittings unless otherwise indicated or specified.
- C. Face and drill flanged fittings conforming to ANSI A21.10 except special drilling or tapping as necessary for correct alignment and bolting.
- D. If flanged fittings are not available under ANSI A21.10 provide fittings conforming to ANSI B16.1 in 125 lb. pressure class.
- E. Provide standard base fittings where indicated.
- F. Provide grooved-end fittings ductile-iron conforming to ANSI A21.10 (AWWA C110) for center-to-face dimensions.
 - 1. End preparation for grooved-ends conforming to AWWA C606 for flexible or rigid joints as required by type of joint.

2.4 NONSTANDARD FITTINGS:

- A. Acceptable design.
- B. Same diameter and thickness as standard fittings.
- C. Manufactured to meet requirements of same specifications as standard fittings except for laying length and types of ends.

2.5 ADAPTERS:

- A. Furnish and install for joining pipe of different types, unless solid sleeves indicated.
 - 1. Provide ends conforming to above specifications for appropriate type of joint, to receive adjoining pipe.
 - 2. Joining two classes of pipe may be of lighter class provided annular space in bell- and-spigot type joints sufficient for jointing.

2.6 JOINTS:

- A. Provide push-on joint and mechanical joint pipe as indicated with necessary accessories, conforming to ANSI A21.11.
 - 1. Provide gasket composition suitable for exposure to liquid within pipe.
- B. Provide pipe flanges and accessories conforming to ANSI A21.15.
 - 1. Provide flat faced flanges.
 - 2. Provide 1/8 in. thick, full faced gaskets suitable for exposure to liquid within pipe.
- C. Provide restrained joint on pipe and fittings where indicated. Provide restrained joint which is:
 - 1. Boltless
 - 2. Capable of being deflected after assembly
 - 3. Designs using set screws or requiring field welding are not acceptable.
 - 4. Manufacturers:
 - a. American Cast Iron Pipe Co. Flex-Ring.
 - b. U.S. Pipe TR FLEX.
 - c. Clow Super-Lock.
 - d. Or acceptable equivalent.

2.7 MECHANICAL JOINT FITTINGS – RESTRAINT SYSTEM

- A. Provide restraint devices for pipe consisting of multiple gripping wedges

incorporated into a follower gland meeting requirements of ANSI/AWWA C110/A21.10.

1. Mechanical joint restraint shall require conventional tools and installation procedures per AWWA C600, retaining full mechanical joint deflection during assembly and allowing joint deflection after assembly.
2. Provide actuation of the gripping wedges ensured with torque limiting twist off nuts.
3. Provide restraint devices Listed by Underwriters Laboratories (3" through 24" inch size) and Approved by Factory Mutual (3" through 12" inch size).

B. Working Pressure Rating:

1. 16-in and Smaller: 350 psi
2. 18-in and Larger: 250 psi
3. Minimum safety factor of 2 to 1.

C. Materials:

1. Gland body, wedges and wedge actuating components: Grade 65-45-12 ductile iron in accordance with ASTM A536.
2. Ductile iron gripping wedges: Heat treated, 370 to 470 BHN.
3. Provide three (3) test bars incrementally poured per production shift as per Underwriter's Laboratory (U.L.) specifications and ASTM A536. Testing for tensile, yield and elongation in accordance with ASTM E8.
4. Provide chemical and nodularity tests performed as recommended by the Ductile Iron Society, on a per ladle basis.
5. Provide an identification number consisting of year, day, plant and shift (YYDDD)(plant designation)(Shift number) cast into each gland body.
6. Record all physical and chemical test results such that they can be accessed via the identification number on the casting. Provide the Material Traceability Records (MTR's) available, in hard copy.

D. Manufacturer:

1. EBAA Iron MegaLug Series 1100 or acceptable equivalent product

2.8 FLANGE ADAPTORS:

- A. Provide restrained flange adaptors for pipe consisting of multiple individual gripping wedges incorporated into a follower gland meeting requirements of ANSI/AWWA C110/A21.10.
 - 1. Provide actuation of the gripping wedges ensured with torque limiting twist off nuts.
 - 2. Provide restraint devices Listed by Underwriters Laboratories (3-in through 12 in size) and Approved by Factory Mutual (4-in through 12-in size).
- B. Joint Deflection capability:
 - 1. 3-in thru 8-in: 5 degrees
 - 2. 10-in and 12-in: 3 degrees
 - 3. 14-in and 16-in: 2 degrees
- C. Provide flange adaptor to maintain seal with and 0.6 inch gap between end of pipe and mating flange
- D. Working Pressure Rating:
 - 1. 16-in and Smaller: 350 psi
 - 2. 18-in: 300 psi
 - 3. Minimum safety factor of 2 to 1.
- E. Materials:
 - 1. Gland body, wedges and wedge actuating components: Grade 65-45-12 ductile iron in accordance with ASTM A536.
 - 2. Ductile iron gripping wedges: Heat treated, 370 to 470 BHN.
 - 3. Provide three (3) test bars incrementally poured per production shift as per Underwriter's Laboratory (U.L.) specifications and ASTM A536. Testing for tensile, yield and elongation in accordance with ASTM E8.
 - 4. Provide chemical and nodularity tests performed as recommended by the Ductile Iron Society, on a per ladle basis.

5. Provide an identification number consisting of year, day, plant and shift (YYDDD)(plant designation)(Shift number) cast into each gland body.
6. Record all physical and chemical test results such that they can be accessed via the identification number on the casting. Provide the Material Traceability Records (MTR's) available, in hard copy.

F. Manufacturer:

1. EBAA Iron MegaFlange Series 2100 or acceptable equivalent product

2.9 FLEXIBLE CONNECTIONS:

A. Provide double-ball flexible expansion joint.

1. Flexible expansion joints shall be manufactured of ductile iron in accordance with ASTM A536 Grade 65-45-12.
2. Each flexible expansion joint shall be capable of deflecting and expanding at the same time.
3. Each ball joint shall possess an external rubber boot to prevent penetration of outside debris.
4. All hardware nuts, bolts and straps shall be type 304 stainless steel.
5. All ductile iron components shall be coated internally and externally with 15 mils of fusion bonded epoxy and shall be holiday tested with a 1500 volt spark test, both of which conform to the requirements of ANSI/AWWA C213.
6. Every flexible joint unit shall be cycled and pressure tested at 350 PSI for 3"-24" and 250 PSI for 30" and above prior to shipment. Flexible expansion joints shall be Star Pipe Products, Starflex Series 5000 or approved equal.

2.10 BOLTED SPLIT SLEEVE COUPLINGS:

- A. Provide in accordance with Section 22 13 19.
- B. Pressure rating at least equal to that of related pipeline.
- C. Provide with gaskets of composition suitable for exposure to liquid within pipe.

2.11 GROOVED COUPLINGS:

- A. Conform to AWWA C606.

- B. Minimum pipe wall thickness specified under "Pipe For Use With Couplings."
- C. Where grooved couplings are indicated to provide for expansion or flexibility, cut pipe grooves to provide necessary expansion or flexibility.
- D. Where grooved couplings are used instead of flanged joints, joint to be of rigid type with pipe grooves cut to bring pipe ends together. Beam strength of joint shall be equal to or greater than that of flanged joint.
- E. Hardware: Type 316 Stainless Steel
- F. Manufacturer:
 - 1. Victaulic Company or acceptable equivalent product.

2.12 FILLING RINGS:

- A. Provide where necessary.
- B. Materials, workmanship, facing, and drilling, conforming to 125-lb. ANSI Standard.
- C. Suitable length with nonparallel faces and corresponding drilling, if necessary, for correct assembly of adjoining piping or equipment.

2.13 CONNECTIONS - TAPPED:

- A. Provide service saddles for all taps for lines 24-inch and smaller.
 - 1. Body: Ductile iron ASTM A395 or Bronze.
 - 2. Straps and Hardware: Type 316 stainless steel.

2.14 GASKETS, BOLTS, AND NUTS:

- A. Provide ring or full face synthetic rubber gaskets for flanged joints and neoprene faced phenolic for insulating gaskets.
 - 1. 1/8 in. thick.
- B. Make flanged joints with:
 - 1. Bolts.
 - 2. Bolt studs with nut on each end.
 - 3. Studs with nuts where flange is tapped.

- 4. Plastic bolt sleeves and washers for insulating joints.
- C. Number and size of bolts conform to same ANS as flanges.
- D. Provide bolts and nuts, except as specified or indicated, Grade B, ASTM A307.
- E. Provide bolt studs and studs of same quality as machine bolts.
- F. Provide Type 316 stainless steel bolts, washers and nuts in the following areas:
 - 1. Submerged
 - 2. Wet Wells
 - 3. Chemical Area

2.15 COATINGS:

A. Flanged Pipe and Fittings:

- 1. Flanged pipe in the wet well and valve vault shall have an exterior Polyamidoamine Epoxy Coating.
- 2. Coating shall be Themec Pota-Pox Plus, Series N140T, or approved equal.

B. Valves:

- 1. Valves in wet well and valve vault shall have a high solids epoxy coating, similar to that stated in 2.15.A.

C. Non-Flanged Pipe and Fittings:

- 1. Non-flange pipe in the wet well and valve vault shall be coated in the field with a high solids epoxy coating similar to that stated in 2.15.A.

PART 3 - EXECUTION

3.1 INSPECTION BEFORE INSTALLATION:

- A. Visually inspect.

3.2 HANDLING AND CUTTING:

- A. Mark pipe and fittings "Rejected" and remove from site when cracked or has

received a severe blow.

- B. If permitted, cut on sound barrel at a point at least 12 in. from visible limit of crack, at Contractor's expense.
- C. Machine cut with milling type cutters, knives, or saws. Snap cutters, torch, or hammer and chisel NOT ALLOWED. Examine for possible cracks.
- D. Chamfer cut ends if used for push-on joints.
- E. Do not cut polyethelene lined pipes.
- F. Do not cut glass lined pipes.

3.3 INSTALLATION:

- A. Piping Support: Provide in accordance with Section 22 13 13.
- B. Pipe and Fittings:
 - 1. Remove and replace defective pieces.
 - 2. Clear of all debris and dirt before installing and keep clean until accepted.
 - 3. Lay accurately to lines and grades indicated or required. Provide accurate alignment, both horizontally and vertically.
 - 4. Provide firm bearing along entire length of buried pipelines.
- C. No deflection of pipe will be allowed unless specified on the plans or approved by the Engineer.

3.4 JOINTS AND COUPLINGS:

- A. Push-on Joints:
 - 1. Insert gasket into groove bell. Apply thin film of nontoxic gasket lubricant over inner surface of gasket in contact with spigot end.
 - 2. Insert chamfered end into gasket. Force pipe past it until it seats against socket bottom.
- B. Flanged Joint:
 - 1. Make up tight.
 - 2. Do not put strain on nozzles, valves, and other equipment.

C. Mechanical Joints:

1. Wire brush surfaces in contact with gasket and clean gasket.
2. Lubricate gasket, bell, and spigot with soapy water.
3. Slip gland and gasket over spigot, and insert spigot into bell until seated.
4. Seat gasket and press gland firmly against gasket.
5. After bolts inserted and nuts made finger-tight, tighten diametrically opposite nuts progressively and uniformly around joint by torque wrench. Torque bolts to values specified above.

D. Flexible Connections:

1. Flexible connections shall not be used to correct mis-alignments made during construction, but shall be installed with minimal alignment change between flanged ends..

E. Grooved Couplings:

1. Clean grooves and other parts.
2. Coat ends of pipe and outside of gasket with soft soap or silicone and slip gasket over one pipe end.
3. Bring pipes to correct position and center gasket over pipe ends with lips against pipe.
4. Place housing sections, insert bolts and tighten nuts until housing sections in metal- to-metal contact.
5. After assembly and inspection and before backfilling, coat exterior surfaces of buried couplings, including bolts and nuts, with heavy-bodied bituminous mastic.

F. Tapped Connection:

1. Drill and tap normal to longitudinal axis.
2. Drilled by skilled mechanics using proper tools.
3. Use only tapered threads.

3.5 TESTING:

- A. Clean of all dirt, dust, oil, grease and other foreign material, before conducting pressure and leakage tests.
- B. Pressure and Leakage Tests:
 - 1. Conduct combined pressure and leakage test in pipelines in accordance with Section 41-2.14 of the Standard Specification for Water and Sewer Main Construction in Illinois.
 - 2. Furnish and install temporary testing plugs or caps; pressure pumps, pipe connections, meters, gages, equipment, and labor.
 - 3. Test when desired and comply with specifications.
 - 4. Test pipelines in excavation or embedded in concrete before backfill or placing of concrete and test exposed piping before field painting.
 - 5. Fill section of pipe with water and expel air. If hydrants or blowoffs are not available at high points for releasing air, make necessary taps and plug after test completion.
 - 6. Maintain section full of water for 24 hours before conducting combined pressure and leakage test.
 - 7. Conduct pressure and leakage test consisting of first raising water pressure (based on elevation of lowest point of section under test and corrected to gage location) to pressure in psi numerically equal to pipe pressure rating, but not more than 150 psi.
 - 8. If unable to achieve and maintain specified pressure for two hours with no additional pumping, section fails test. If specified pressure is maintained, the Contractor shall proceed immediately with the leakage test.
 - 9. If section fails pressure and leakage test, locate, uncover, and repair or replace defective pipe, fitting, or joint, at no additional expense. Conduct additional tests and repairs until section passes test.
 - 10. Modify test procedure only if permitted by Engineer.

3.6 TOUCH-UP FIELD PAINTING:

- A. Repair or replace damaged or defective coating areas.
- B. Remove damaged or defective coatings by sand-blast cleaning in accordance with

SSPC-SP-6, Commercial Grade, immediately prior to priming.

- C. Before priming, provide surfaces dry and free of dust, oil, grease and other foreign material. Apply approved coating in accordance with valve manufacturer's printed recommendations.
- D. When small areas of coating need touch up, surface preparation may be done with suitable power needle gun to match specified blast cleaning.

PART 4 – MEASUREMENT AND PAYMENT

- A. Work specified in this Section will not be measured or paid for as a separate item, but shall be considered as included in the price for PROCESS PIPING AND APPURTENANCES.

--- END OF SECTION ---

WASTEWATER PUMPING CONTROL SYSTEM SECTION 33 09 30

PART 1 – GENERAL

1.01 GENERAL SPECIFICATIONS

- A. The intent of this specification is to provide a complete, integrated Pump Control System as described herein. It shall be factory assembled, wired and tested. The manufacturer shall supply AutoCAD schematic drawings complete with a bill-of-materials and catalog cut sheets for submittal purposes. AutoCAD as-wired drawings shall be supplied upon completion of construction. Two (2) copies of these drawings shall be provided inside the pump control panel for installation assistance. An equipment data tag shall be permanently affixed on the inside of the exterior door with the station designation, power source, pump horsepower, pump full load amps and the sizes of all fuses utilized in the system. In addition to the label requirements of UL 508A, an engraved legend plate shall be permanently affixed on the inside of the exterior door with the name, address and telephone number of the service representative for the control panel.

The wet well is classified as a Class I, Division 1, and Group D hazardous location per NFPA Article 820. All applicable installation procedures per NEC, ANSI, EPA, and all other codes and laws for this installation requirement shall be followed. Intrinsically safe barriers shall be provided for the level sensors located in the wet well. All pump and control conduits entering or exiting the pump control panel shall terminate in a vented termination enclosure.

The pump power and level sensor cables will run through conduit and shall terminate in a junction box mounted adjacent to the pump control panel. The conduit between the junction box and control panel will be sealed. The conduit between the wet well and junction box will be sealing with “re-enterable” conduit seal. In this way the control panel and junction box are protected by conduit seal and the pump can be removed and electrically disconnected (at the junction box) without disturbing the control panel seal.

1.02 QUALITY ASSURANCE

- A. The pump control panel shall be supplied and fabricated by a current UL508A listed industrial control panel manufacturer. The panel manufacturer shall show its UL follow-up service procedure file number on submittals. All devices within the panel shall be UL listed and/or recognized where applicable and shall be mounted and wired in accordance with the most current edition of UL508, UL698A and NFPA.

The panel manufacturer shall have a minimum of ten (10) years of experience manufacturing systems specifically for water and wastewater applications. The

Pump Control System shall be fully tested by the factory prior to shipment. It shall include testing of both power and control devices as well as for all control functions. A final inspection shall be performed prior to shipment and a copy of this form shall be provided with the panel.

The Pump Control System described is manufactured by Wunderlich Malec Environmental, Inc., 937 National Avenue, Addison, IL 60101 without substitution.

1.03 SUBMITTALS

A. Compliance Submittals:

1. Submit as specified in Section 01 33 00.
2. Includes, but not limited to, the following:
 - a. Fabrication drawings, front elevation, wiring diagrams, and bills of material for pump control panel.
 - b. Engraving schedule and physical dimensions for nameplates and phenolic overlays.
 - c. Electrical and mechanical connection diagrams for all separately mounted instruments.
 - d. Individual specification or descriptive sheets for instruments and similar major system components to conform to ISA S20.
 - e. Instruction Books:
 - 1) For all instruments, transducers, and similar major system equipment.
 - 2) In addition to the requirements as specified in Section 01 33 00, submit single-page specification sheets for each instrument which lists the type, model number, function, scale, input, actuation, output and other specific features of that instrument.
 - f. Programming and Configuration Records
 - 1) The contractor shall provide complete and thoroughly documented records of the programming and configuration of the PLC and the OIT. PLC documentation shall include a searchable label and a plain-English description of the function of each bit or word of logic used and a description of each

ladder logic rung or equivalent unit of the program. These records shall be furnished in both PDF document format and in the application files used by the software package used to program and configure these PLC and OIT. The software product name, revision number, and vendor shall be specified for each PLC and OIT. The Contractor shall furnish four identical CD-ROMs for each location containing this information and labeled to clearly identify the contents of the CD-ROM and the facility for which it is prepared.

- 2) Records of the adjustable hardware settings such as selector and DIP switches shall be provided. Records of field configurable software settings for instrumentation shall also be provided, which shall include all settings which differ from the factory default settings. These records may consist of PDF images of the instrumentation manual pages that describe these hardware and software settings with the switch positions and software settings clearly marked. These shall be submitted as PDF images on four identical CD-ROMs for each location containing this information and labeled to clearly identify the contents of the CD ROM and the facility for which it is prepared.

3. The panel layout shall be approved by the Owner.

1.04 Basic Operation

- A. The pumps shall be operated automatically or manually as a pump down, lead/lag, common off system. Each pump shall be controlled primarily through a "Hand-Off-Auto" three position selector switch. Control function requirements are further defined in the control section of these specifications.

1. Position Commands

- a. OFF - In this position the applicable pump will not run under any circumstance.
- b. HAND - In this position the applicable pump shall run without regard for the level sensing commands and will rely on operator discipline to run and stop. The over temperature lock out will be active in this mode.
- c. AUTO - In this position both pumps shall be controlled by level sensing commands. The level sensing equipment will sense the appropriate level in the wet well and initiate start and stop

commands to the pump. The over temperature lock out will be active in this mode.

2. Pump Sequence

- a. LEVEL 5 - High Level Alarm
- b. LEVEL 4 - Start lag pump
- c. LEVEL 3 - Start lead pump; pumps shall alternate on each call
- d. LEVEL 2 - Off; all pumps stop
- e. LEVEL 1 – Low Level Alarm; redundant pump stop

3. Utility Power

- a. Utility power to the panel shall be 120V/240 volts, 4-wire, 3 phase, 60 Hz.

4. Wet Well

- a. The wet well is classified as a Class I, Division 1, and Group D hazardous location as per NFPA Article 820.

PART 2 - PRODUCTS

2.01 CONTROL PANEL

A. Enclosure

A U.L. Listed and NEMA Type 3R rated enclosure properly sized to contain the required components of the control system(s) shall be applied as per the following specifications:

1. The enclosure shall be constructed of 14 gauge 304 stainless steel body and door(s) with continuous stainless steel piano hinge. A drip shield shall be welded on the top of the enclosure; screws to secure the drip shield shall not be allowed. The enclosure shall be suitable for pad mounting as shown on the drawings and shall consist of three separate compartments. Electrical service entrance equipment shall be located in one compartment, high voltage power and control equipment in the second and low voltage control in the third. All hardware shall be corrosion resistant. A 3-point latch with nylon rollers and padlock provisions on handle shall be provided on each compartment. Oil-resistant door

gasketing around all four sides of each opening shall be applied. Painted white enamel steel mounting panel(s) shall be provided for mounting of components.

2. Voltage identification labels and comprehensive Arc Flash Hazard warning labels shall be provided. To maintain the environmental rating of the specified equipment and enclosure, install in the openings only certified or recognized devices with the same integrity as the enclosure, in compliance with the installation instructions of the device.

B. Enclosure Accessories

The enclosure shall also provide for and include the following mechanical and electrical facilities.

1. Inner Swing Panel - Provision of a "dead front" feature shall be provided using a full size hinged inner door to mount all operator devices. Material shall be painted steel with turned down flanges on all four sides for added rigidity. The inner door(s) shall be large enough to fill the entire opening of the enclosure, the screw used to secure the inner swing door mounting hardware to the enclosure shall be UL and NEMA Type 4X rated/listed and shall not violate the environmental integrity of the enclosure. Mounting hardware which penetrates the enclosure and violates the environmental rating of the enclosure shall not be allowed. Quarter-turn latches shall be provided for securing the inner door in the closed position; captive screws are not acceptable. In addition, an inner door handle shall be provided for operator convenience.
2. Condensation Heater - A 200 watt (minimum), 120VAC heater shall be provided to protect the enclosure from the harmful effects of condensation corrosion and low temperatures. The heater shall be complete with an adjustable thermostat. Branch protection shall be provided.

C. High Voltage Section

1. Main Circuit Breaker - A service entrance rated main circuit breaker sized for the incoming power conductors shall be provided for the main power connection. Breaker shall be a molder case, thermal magnetic design with fixed trip and 25kA interrupting rating at 240VAC. Main breaker shall be Square D.
2. Surge Protector - The system shall be protected by a surge protector for the electrical service and shall be capable of handling up to 40kA (8/20us) transient amps per phase. It shall be parallel MOV design and provide protection for transient surges as defined in ANS/IEEE C62.41 and UL1449 without degradation of components. The enclosure shall be

molded UV resistant polycarbonate or equal material. All electrical connections shall be sealed in a UL component recognized epoxy to exclude moisture, dirt and corrosion. Leads shall be color coded and a minimum of 18 inches long. Surge protector shall be Citel M40-600.

3. Lugs - Lugs shall be provided for both incoming service neutral and ground. Lugs shall be suitable for copper and/or aluminum wire.
4. Manual Transfer Switch - A manual transfer switch sized for the incoming service shall be provided. The switch shall consist of two molded case circuit breakers and a mechanical interlock to prevent both breakers from being simultaneously closed. The normal breaker shall be connected to the load side of the automatic transfer switch. The emergency breaker shall be connected to the portable generator receptacle. Manual transfer switch shall be Square D.
5. Generator Receptacle - A portable generator receptacle shall be provided to allow emergency connection of the Owner's portable generator. The units shall be a heavy duty circuit breaking receptacle assembly suitable for three phase, four wire service. Receptacle shall be Crouse Hinds AR2041-S22 with AJ78 back box for compatibility with Owner's existing generator.
6. Automatic Transfer Switch - Provide space in the control panel to install an automatic transfer switch provided by the Generator Manufacturer. See Section 26 36 23 – Automatic Transfer Switch for more information.

D. Motor Control Section

1. Branch Disconnect and Short Circuit Protection - Each pump shall have a thermal magnetic circuit breaker and starter sized for the pump motor to be supplied. The starter shall be single speed, NEMA rated and UL Listed, full voltage non-reversing type complete with a solid state overload relay providing Class 10 overload and ground fault protection. The relay shall be set based on the actual pump full load amps and service factor, and not NEC Table 430-150. Auxiliary contacts shall be provided as required by the system.
2. Power Distribution System - Associated with this installation will require the individual branch disconnect and short-circuit protection to have a U.L. interrupting rating of 25 kA at 240 VAC.
3. Control Power - The 120 VAC, single-phase power shall be derived from one leg of the power to neutral.

- a. Control power shall have an overcurrent protection device suitable for the interrupting requirements of the system. Fuses and branch circuit breakers shall be provided in accordance with NEC and the system requirements. UL489 applications shall be met utilizing circuit breakers. Fuses are acceptable as supplementary protection.
 - b. Provide branch protection for the sump pump receptacle, a cabinet mounted GFCI receptacle and lights, power for the controls, generator block heater power, generator battery charger power, flow transmitter power, valve vault lights, valve vault receptacle power, meter vault receptacle power, and two spare breakers.
4. Three Phase Power Monitor – A U.L. recognized three-phase power monitor shall interrupt the control power in the event of phase loss, phase reversal, low voltage and phase unbalance. It shall have primary fuse protection. Contacts shall be rated for 15A resistive at 120VAC. The three-phase power monitor shall automatically reset when proper power is re-applied.

E. Control Section

1. Components - Operator control devices shall be 30mm, NEMA and U.L. listed for Types 12, 3R, 4 and 4X. Contact blocks shall be self-wiping and color coded bridge type rated at 10A and must have a rated insulation of 600V. Pilot lights shall be full voltage, push-to-test type with LED lamps. Terminal connections shall be suitable for two 14 AWG control wires. All control and time delay relays shall be DPDT minimum, rated 10A @ 120VAC, socket mount type. Sockets shall have pressure plate terminals that accept two 14AWG wires and shall be rated a minimum of 300V. All terminal blocks supplied shall be box lug type rated at the proper voltage/ampereage and shall accept two 14AWG wires.

All control wiring shall be minimum 16 AWG, MTW and shall be color coded in accordance with all applicable codes and laws, spiral wrap, tie wrap, fasteners and wire duct shall be provided as required for aesthetics and safety.

All components mounted on the door shall be wired with insulated connectors (where "finger proof" terminals are not provided) to prevent accidental shock hazards. All components on the back panel shall be mounted on DIN rail or fastened via drilled and tapped screws to facilitate easy component replacement. Pop rivets shall not be allowed. Ammeter loops shall be provided between the disconnect switch and combination starter for better heat dissipation and an easy means of meter readings.

2. Mode Select - Method of operation shall be by a three position maintained "Hand-Off-Auto" selector switch for each pump which shall provide for mode selection. A running and overload trip pilot light shall be provided for each pump.
3. Pump Thermal Trip and Seal Leak Detection - Seal leak and over temperature monitoring relays specifically designed to interface with the pump monitoring system shall be supplied by the pump manufacturer for mounting in the control panel. One relay shall be provided for each pump. The relays shall monitor the shaft seal and stator temperature of the pump motor. Over temperature shall be detected by a low temperature switch mounted on the stator. An over temperature condition will cause immediate shutdown and the pump shall remain locked out until manually reset. The over temperature function shall incorporate a bistable relay that retains its position during power failures. Detection of a seal leak occurring within the motor chamber shall not shutdown or lockout the pump. Pilot lights (two each pump) shall indicate a thermal trip or seal leak condition.
4. Elapsed Time Meter - Digital non-resettable type hour meters shall be provided for each pump to record hours of operation and labeled accordingly. These shall be wired with insulated connectors to prevent accidental shock hazards.
5. Pump Current - The wiring circuits for each pump shall include a module to indicate the ampere draw of the pump, NK Technologies AT Series, AT0-420. The current transmitter shall provide a 4-20 mAdc output to the PLC that will indicate the pump ampere draw. The PLC logic shall compare the pump ampere draws with an operator adjustable set point and provide an alarm if the current is outside normal conditions. It is the intention of the current monitoring to alarm a pump problem prior to failure of the pump.
6. Intrinsically Safe Barrier - Intrinsically Safe Barriers will be provided per Article 504 of the N.E.C. and ANSI/ISA-RP12.6. Barriers shall be interfaced with each float switch and the submersible level transmitter. Intrinsically safe relays for each wet well float shall be PR Electronics, Part No. 5202B2. Intrinsic Safety Barriers for the wet well level transducer shall be PR Electronics Part No. 5104BB2B to match Owner's existing equipment.
7. Convenience Outlet - A 15A GFI duplex outlet shall be provided. It shall be mounted on the inner swing door. A dedicated 15A circuit breaker shall be provided for this outlet.
8. Level Controls

- a. Controller - The pump controller shall consist of a Programmable Logic Controller (PLC) and Operator Interface Terminal (OIT) to control normal operation of the lift station. Acceptable products for the PLC processor, power supply, input / output modules, and communication modules are Allen Bradley CompactLogix 5370-L3 1769-L30ER Series and related accessories, no substitutions allowed. The PLC shall be furnished fully programmed by the controls supplier. Programming shall utilize the designated software, Version V21 or higher. The programming and configuration files specific to the pump station shall be furnished, fully documented to the satisfaction of the Owner, on two CD-R. Acceptable manufacturer for the OIT are Automation Direct C-more EA7-T8CCCFL-Full with compatible power supply, no substitutions allowed.

The operator interface shall display wet well level, operating status of the pumps, lift station discharge flow rate, and all active alarm conditions. The OIT shall also be able to support the following:

- 1) Display trends of level, flow, and on/off status for each pump on a single screen.
 - 2) Display history of run time for each pump and total flow for most recent 7-day period
 - 3) Have a first screen PIN-number entry screen to disable lift station entry alarms with 1-minute time delay.
- b. Float Backup Controller - A float backup controller shall be provided to control the pumps in event of failure of the primary level controller. The control system shall be relay/timer based to allow ease of maintenance. A selector switch shall be provided to enable the operator to select float or transducer control. Float-based automatic pump control shall be activated when the high alarm float is tripped or the "heartbeat" pulse output from the PLC is lost for more than 1 minute. When backup control is active, a pilot light shall indicate the condition.

The float controller shall include a selector switch which will allow the operator to select either pump as the lead pump or allow automatic alternation of the pumps each pumping cycle. An override circuit to start the second pump should the first pump fail shall be provided.

- 1) Alarms - A weatherproof red flashing incandescent alarm light and a horn rated 90dB at ten feet shall be provided to indicate a high level alarm condition. Alarm power shall be derived from the 120V control power. They shall be mounted on the exterior of the Pump Control Panel and shall be UL recognized for NEMA 4 to maintain the environmental rating of the enclosure. The horn shall be furnished with a disconnecting means.

9. Ethernet switch, Hirschmann Spyder 5 port.

10. Alarms – The following alarm conditions shall be indicated on the OIT and transmitted to the SCADA system. Other station alarms are transmitted to the SCADA system independent of the pump control panel.

- a. Pump 1 fail (motor starter overload and pump protection relay overload and seal failure conditions)
- b. Pump 1 fail (motor starter overload and pump protection relay overload and seal failure conditions)
- c. High wet well level alarm
- d. Low wet well level alarm
- e. Float control system activated
- f. Power failure
- g. Pump chamber lid opened - Hard-wired sensing switch shall be installed
- h. TBE panel door(s) opened, Hard-wired sensing switches shall be installed
- i. Valve vault chamber lid(s) opened – Hard-wired sensing switch shall be installed
- j. Meter vault chamber lid opened – Hard-wired sensing switch shall be installed
- k. Valve vault flooding, float to be installed
- l. Meter vault flooding, float to be installed
- m. On-off status of all pumps

- n. Check valve flow confirmation by counterweight arm movement – Hard-wired switches shall be installed.
 - o. Generator alarms: The control panel shall be designed and the OIT shall be capable of indicating the following alarm conditions of the possible existing, or potential future generator:
 - 1) Generator enclosure opened, Hard-wired sensing switch shall be installed
 - 2) Generator running
 - 3) Generator general failure
 - 4) Generator ready to run
 - 5) Generator fuel level (as a 4-20mA signal)
 - 6) Generator fuel tank containment failure
11. SCADA and Modem. Local controls shall be set up to provide SCADA communication and data set equivalent to the existing SCADA link, plus transmitting the wet well level and discharge flow rate real-time data. Integration of the pump station local controls and supply of the cable modem shall be by the Village's system integrator under a separate contract. The following list of integer value data shall be calculated by the PLC for reading by the public works master SCADA system:
- a. Scale Station Flow 0-1000 GPM
 - b. Gen Runtime
 - c. Pump 1 Run time Divide value by 12 to get Minutes
 - d. Pump 2 Run time Divide value by 12 to get Minutes
 - e. Scaled Wet Well Level 0-30' (0-300)
 - f. Pump 1 ampere draw
 - g. Pump 2 ampere draw
 - h. Scaled Fuel Level 0-15"

- i. Scaled Station Temperature 0-120 F
- j. Total Flow Scaled in 1000's of Gallons
- k. From HMI: High Level Alarm Setpoint
- l. Trend Value for Level
- m. Trend Value for Pump 1 Run
- n. Trend Value for Pump 2 Run
- o. Pump 1 Vibration Warning
- p. Pump 1 Vibration Excessive
- q. Pump 2 Vibration Warning
- r. Pump 2 Vibration Excessive

F. Instrumentation

1. Submersible Level Transmitter - The level transmitter shall be a hydrostatic pressure unit immersed in the wet well. The housing and the diaphragm shall be of 316 stainless steel. The transmitter shall be supplied with 40 feet of oil resistant steel-reinforced PVC cable. The transmitter shall be 12-30 V DC loop powered providing a 4-20 mA output proportional to level. The transmitter shall be barometrically compensated via a rigid breather tube connected to a panel mounted sealed breather system. Measuring range shall be 0-30 ft. Accuracy shall be 0.5% of full scale. The level transmitter shall be Measurement Specialties 750 to match Owner's existing equipment. The support wire shall be 304 stainless steel aircraft cable and a 15# PVC coated weight shall be attached to cable to hold the switches in place in sump.
2. Float Switches - Sealed non-mercury float switches shall be provided and installed. Floats shall be installed as shown on the plans. The float switches shall be sealed in a corrosion-resistant, Teflon coated, stainless steel housing having a minimum 5" diameter. The support wire shall be 304 stainless steel aircraft cable and a 15# PVC coated weight shall be attached to cable to hold the switches in place in sump. The assembly shall be designed so that levels can be changed without entering the wet well. The float switches shall hang in the sump supported only by the cord that is held to the NEMA 4 junction box or the control panel pedestal.

Three float switches shall be used to control level. Two for pump turn-on and one for pump turn-off. Two float switches shall be provided for alarm.

3. Electromagnetic Flow Meter - Electromagnetic flow meter shall be installed on the discharge piping in the meter pit as shown on the drawings.
 - a. Flow meter shall be 6-inch diameter to match the size of the discharge piping. The flow meter sensor shall be mounted to the meter tube. Flow meter shall be Siemens Sitrans FM MAG 5100 W 7ME6520. Meter shall be suitable for operation under continuous submergence conditions. Flow meter transmitter shall be Siemens Sitrans FM MAG 5000 and shall be mounted in the Traffic Box Enclosure in the same TEE compartment as the Pump Control Panel. Accuracy shall be 0.4%. Transmitter shall have alphanumeric display in English and shall indicate station flow rate in gallons per minute and totalized flow in 1000 gallons. Transmitter shall provide a 4-20mA output signal to the PLC for station flow rate and totalized flow. Provide sufficient length of meter manufacturer recommended cable to connect meter sensor to the pump control panel and potting kit for terminal box.
 - b. Furnish space flanged end spool (length to match length of flow meter) to be installed when meter is removed for service. Contractor shall set pipe spool in place to verify fit, then replace with the flow meter as the final installation.

G. Accessories

1. Mounting Pad - The pump control panel shall be arranged for mounting on a reinforced concrete equipment pad. The overall dimensions of the equipment pad shall be as shown on the Drawings and provide a minimum of approximately 6 inches larger than the base of the panel. Concrete for the equipment pad shall be in accordance with the applicable requirements Specified in Section 03 00 00 and as shown on the Drawings. The concrete pad shall be arranged for electrical conduit entry to the panel as required.
2. Terminal Box and Cable Protector - A terminal box shall be provided adjacent to the control panel for connection of the level sensors and pumps. It shall contain tubular screw type terminal blocks for level sensor, float switches, pump power and control leads. In addition, it shall include a barrier to separate the power and intrinsically safe circuit provisions per NEC Article 504 of and ANS/ISA-RP12.6. The terminal box shall be sized for the application, fabricated of 304 stainless steel, rated NEMA 4X and include a padlockable handle.

The terminal box shall be mounted atop a cable protector. The cable protector shall be fabricated of 304 stainless steel and shall be a minimum of 20" height with width and depth matching the terminal box. The door and sides of the cable protector shall be diamond pattern, expanded 304 stainless steel with 75% open area. The door shall include a padlockable handle. Contractor shall provide Kellums type cord grips to support all cables entering the terminal box.

3. Cable Modem - Each panel shall be supplied with a power supply for remote SCADA communications and space for installation of a cable modem supplied by the Owner's SCADA supplier. All SCADA work remote from the pump station will be supplied by the Owner's SCADA supplier under a separate contract with the Owner. Contractor shall coordinate with SCADA supplier to allow access into panel and confirmation of lift station monitoring with central SCADA at Village Public Works.

PART 3 - EXECUTION

A. Installation

1. Cleaning - The control panel shall be cleaned of accumulated debris or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

B. Testing - Submit a complete testing protocol for the control of the lift station. Protocol shall include:

1. Verification of all I/O points
2. Calibration of all transmitters
3. Demonstration of transducer based control.
4. Demonstration of float backup control.
5. Validation of all SCADA communications

C. As Installed Drawings - Five (5) sets of as-installed drawings of all system components shall be submitted to the Engineer after startup and acceptance of the system. Four sets of drawings shall be included in the O&M instructions described below. One set shall be placed inside the control panel.

D. Supervisory Services - The equipment manufacturer shall provide supervisory personnel as follows: one 8 hour day during installation of the pumps, one eight

hour day for equipment start-up and operator training, one 8 hour day for validation of SCADA communications and one 4 hour period after pumps have been operating approximately 30 days for equipment adjustment and additional operator training. The field supervisor shall be a trained employee of the controls integrator.

Personnel shall make the necessary test and adjustments to place the equipment into proper operation. The instructions shall include demonstrations, assistance, and review of the operation and maintenance manual.

- E. Operation and Maintenance Instructions The manufacturer shall provide four complete sets of "Operation and Maintenance Instructions" which shall be bound in hard cover. The instructions shall define the sequence and timing of the necessary controls, valves, pumps, and meters.
- F. Guarantee - All equipment shall be guaranteed for a period of one year from the date of acceptance of the project by the Engineer. During this period of time the pump station shall pump at or above the design flow rate and function in accordance with these plans and specifications.

All adjustments necessary to comply with this guarantee shall be made at the Contractor's expense.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for:

1. WASTEWATER PUMPING CONTROL SYSTEM COMPLETE

- a. Includes all work in this Section including the Automatic Transfer Switch specified in Section 26 36 23.

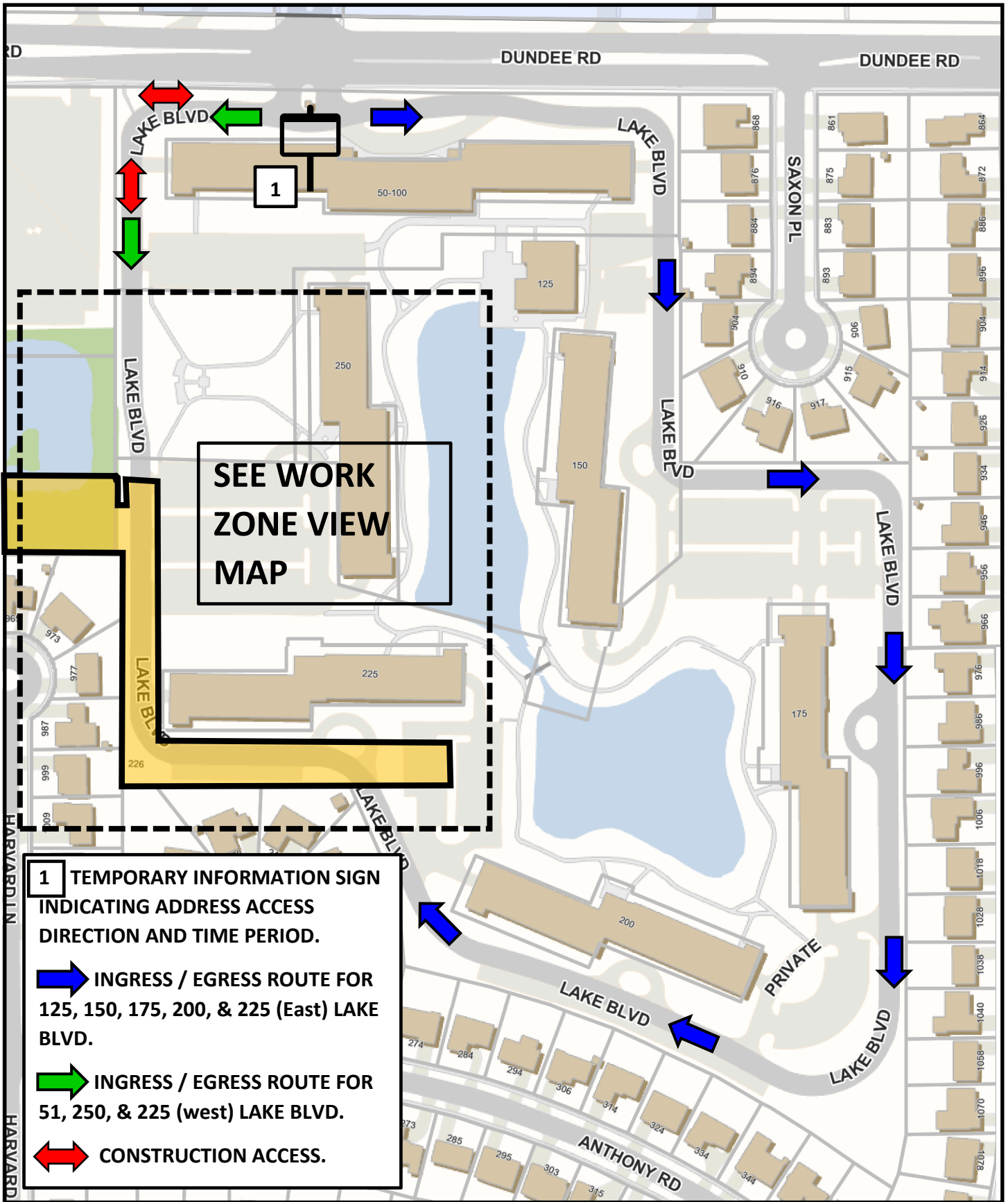
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Village of Buffalo Grove

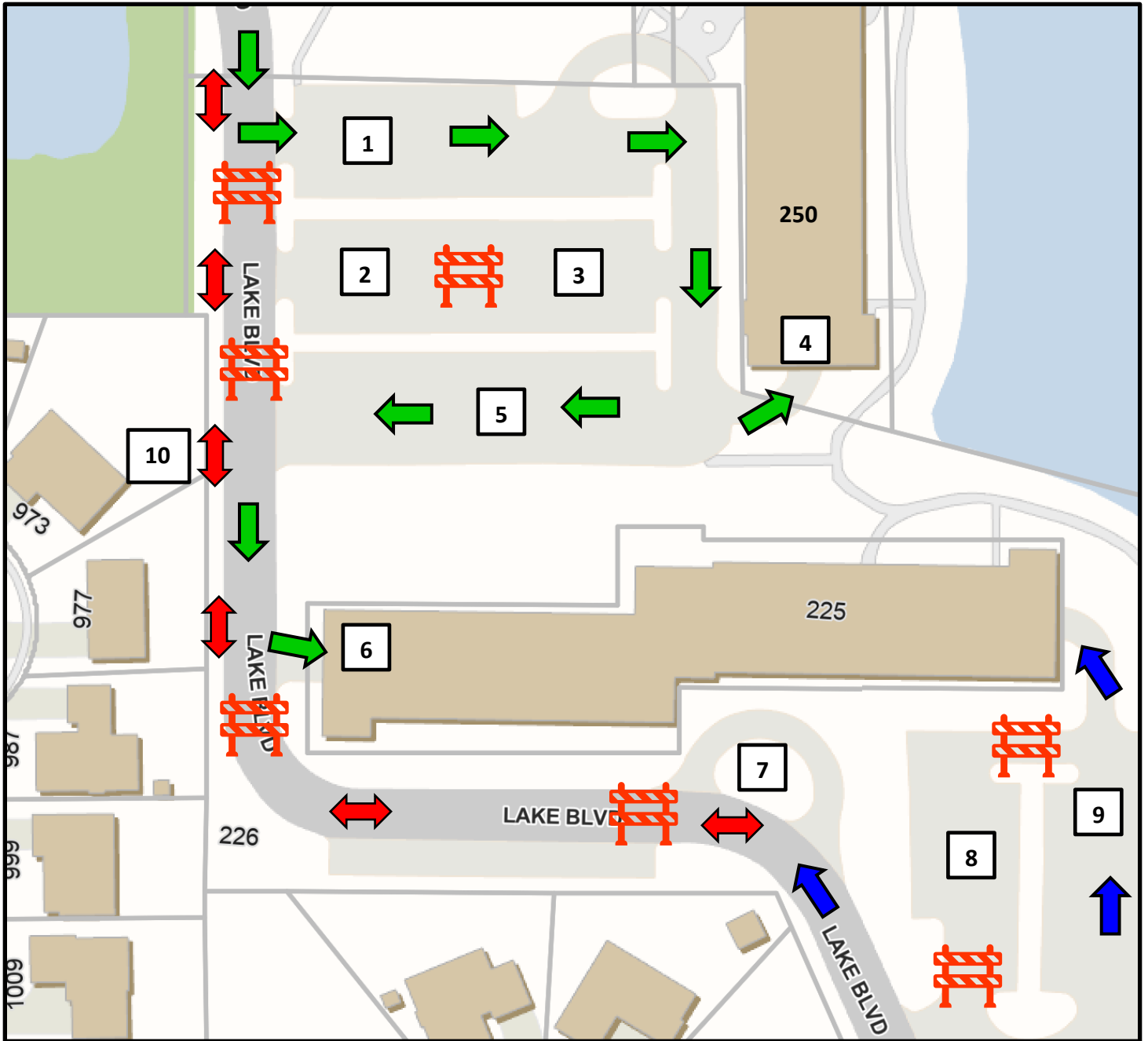
**VILLAGE OF BUFFALO GROVE
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
VoBG-2021-03**

APPENDIX A



LAKE BLVD TRAFFIC CONTROL – OVERALL VIEW

PHASE 1 (12 WEEKS)



- 1 VEHICLE ACCESS TO REMAIN AVAILABLE AT ALL TIMES THROUGH NORTH LOT.
- 2 CONTRACTOR TO UTILIZE WEST HALF OF MIDDLE LOT FOR STAGING EQUIPMENT AND MATERIAL.
- 3 CONTRACTOR TO KEEP EAST HALF OF MIDDLE LOT CLEAR FOR RESIDENT PARKING.
- 4 VEHICLE ACCESS TO SOUTH ENTRANCE OF BUILDING 250 TO REMAIN OPEN AT ALL TIMES.
- 5 VEHICLE ACCESS TO REMAIN AVAILABLE AT ALL TIMES THROUGH SOUTH LOT.
- 6 VEHICLE ACCESS TO WEST ENTRANCE OF BUILDING 225 TO REMAIN ACCESSIBLE AT ALL TIMES.
- 7 TURNAROUND FOR BUILDING 225 TO REMAIN OPEN AT ALL TIMES.
- 8 CONTRACTOR TO UTILIZE WEST HALF OF PARKING LOT FOR STAGING EQUIPMENT AND MATERIAL.
- 9 VEHICLE ACCESS TO EAST ENTRANCE OF BUILDING 225 TO REMAIN ACCESSIBLE AT ALL TIMES.
- 10 CONSTRUCTION ACCESS SHALL ONLY BE FROM WEST HALF OF LAKE BLVD LOOP.

LAKE BLVD TRAFFIC CONTROL – WORK ZONE VIEW

PHASE 1 (12 WEEKS)

ABC Construction

123 Main St., Chicago, IL 60001

1/1/2017

Pay Estimate #1 – Clarifying Statement

Kyle Johnson
Civil Engineer II
Village of Buffalo Grove
51 Raupp Blvd.
Buffalo Grove, IL 60089

ABC Construction has submitted all necessary certified payroll documentation for Pay Estimate #1 through January 1st, 2017. Payrolls included in this period are:

ABC Construction Week Ending 12/24/16 #1

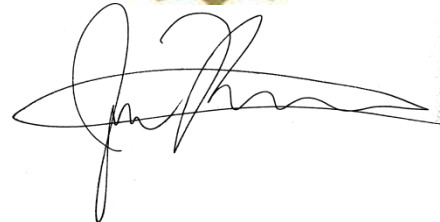
Week Ending 1/1/17 #2

Subcontractor 1 Week Ending 1/1/17 #1

Sincerely,



Joe Smith, Vice President



ABC Construction

123 Main St., Chicago, IL 60001

1/1/2017

Week of January 1st, 2017 – Weekly Update

Kyle Johnson
Civil Engineer II
Village of Buffalo Grove
51 Raupp Blvd.
Buffalo Grove, IL 60089

Here is the weekly update for the week of January 1 (weather permitting)
Monday, January 1 – Curb and concrete driveway removal on West side of Lauren and North side of Mohawk. Access made temporary after removal but before pour.

Tuesday, January 2 – Curb and concrete driveway removal continues on North side Mohawk and East side of Gregg. Access made temporary after removal but before pour.

Wednesday, January 3 – Curb poured on West side of Lauren, North Side of Mohawk and East side of Gregg.

Thursday, January 4 – Concrete driveways and sidewalks poured Lauren, Mohawk, and Gregg.

Friday, January 5 – Structure adjustments and any remaining concrete poured.

ABC Construction will pass out notices the day before notifying residents of this closing and will also knock on door the day of removal to avoid trapping any vehicles in. Concrete curb and aprons are scheduled to be poured starting Wednesday January 3 and there will be no access to driveways for seven days. ABC Construction will distribute a notification of this closure and explain your overnight parking options. Thank you for your patience throughout the ongoing project.

All streets in construction zone will be open but you will encounter delays as we load and unload materials. All driveways will be open during construction except for when we are installing water services directly adjacent to a driveway there will be a time where access will be limited. ABC will notify residents and make arrangements to ensure you have use of your vehicles during this time. Thank you again for your patience and understanding during construction.

Sincerely,



Joe Smith, Vice President

ABC Construction

123 Main St., Chicago, IL 60001
123-123-1234

1/1/2017

Driveway Closure Notice

Resident
Buffalo Grove, IL 60089

As part of the road rehabilitation process a portion of curb, and possibly a portion of your driveway apron, will be replaced. Please have all vehicles out of your driveway by 7 AM on;

_____, _____, 2017
(day) (date)

During the rehabilitation process you will lose access to your driveway for a maximum of 7 working days from this date regardless of weather. If access is prior to the 7 days it will be recognizable by the removal of the barricades.

Parking: You may park on either side of the street as long as you are not inhibiting curb/driveway removal, consequential replacement of either or as otherwise noted by law. The Police Department has been notified and overnight parking restrictions have been lifted for all roadways under construction and the adjacent streets. For everyone’s safety please do not park on the roadways under construction during working hours (7 AM to 6 PM, Monday thru Friday).

Notice: You have received this notice at least 1 day in advance of construction. As a courtesy, we will knock on your door one time the morning of the removal process. It is still up to you to have your car out by 7AM on the noted day. Thank you in advance for your cooperation.

This notice has been hand-delivered to you by the construction contractor, ABC Construction.

Any questions regarding this notice can be directed to the Project Manager Joe Smith at 321-765-4321.

Sincerely,



Joe Smith, Project Manager

3/31/2014
#100302
7/14/2016
#669681

SAMPLE LETTER OF CREDIT

ABC Bank
123 Main Street
Anywhere, Illinois

Irrevocable Standby Letter of Credit No. 1

Beneficiary:
Village of Buffalo Grove
Fifty Raupp Road
Buffalo Grove, IL 60089-219

Applicant:
Developer Company
Lake Cook Road
Buffalo Grove, IL 60089

Issue Date: October 18, 2012
Expiration Date: October 18, 2012

Gentlemen:

We hereby issue in your favor our Irrevocable Standby Letter of Credit No. 1 (“Letter of Credit”) in favor of the Village of Buffalo Grove (“Beneficiary”) on behalf of Developer Company (“Applicant”), up to the aggregate amount of \$171,026.94 (One Hundred Seventy One Thousand Two Hundred Fifty Nine and 94/100 United States Dollars) to be available by draft(s) at sight. This credit is issued presentable and payable at the offices of our ABC Bank 123 Main Street, Anywhere, Illinois Attn: Letter of Credit Department and expires at 5:00 PM Chicago time on October 18, 2013 (subject to extension of such expiry date, as provided below).

This Credit is available against presentation of draft(s) drawn at sight on ABC Bank, Anywhere, Illinois. All draft(s) drawn under this Letter of Credit must bear the clause “Drawn under ABC Bank Irrevocable Letter of Credit No. 1 dated October 18, 2012”, and be accompanied by this original Letter of Credit (and amendments, if any) and a dated certificate of an authorized official agent of the Village of Buffalo Grove (signed as such), certifying that either:

- 1) Said Letter of Credit is about to expire and has not been extended; or
- 2) Work has not been completed and formally accepted by the President and Board of Trustees of the Village of Buffalo Grove, in accordance with the plans specification, and agreements (including amendments thereof) for the project commonly known as Residential Development on Main Street.

This Letter of Credit shall be automatically extended for an additional period of one year from the present and each future expiration date unless we have notified the Beneficiary in writing, no more than one hundred twenty (120) calendar days nor less than sixty (60) calendar days before such expiration date, that we elect not to extend this Letter of Credit. Our notice of such election shall be sent by certified mail overnight courier service to the above Beneficiary address Attention: Village Clerk. Drafts must be

presented to drawee bank no later than 5:00 PM Central Time on or before the expiry day. Upon receipt by you of our notice of election not to extend this Letter of Credit, you may draw hereunder prior to the then current expiration date of this Letter of Credit.

We hereby agree with you that drafts drawn under and in compliance with the terms of this Letter of Credit shall be honored no later than the close of the third banking day following the presentment. If we fail to honor same, we agree to pay all attorneys fees, court costs and other expenses incurred by the Village of Buffalo Grove in enforcing the terms of this Letter of Credit.

Cancellation of Letter of Credit prior to expiration: This Letter of Credit (and amendments, if any) must be returned to us for cancellation with a statement signed by the Beneficiary stating that the Letter of Credit is no longer required and is being returned to the issuing bank for cancellation.

Jurisdiction of this letter of Credit shall be in the State of Illinois and venue shall be Cook County.

Please address all correspondence regarding this Letter of Credit to the attention of our Letter of Credit Department mentioning our Letter of Credit as it appears above.

Very Truly Yours,
ABC Bank

By:
Its: Vice President

TEMPORARY NO PARKING

TIME:

DATE:

CONSTRUCTION ZONE

Note – Hand written information must be dark, legible and large. Sign shall be printed on more than paper, unless laminated. Must withstand winds and stay on stake/lath.

**EXHIBIT NO.109
MATERIALS LIST**

Date of revision: 1/1/16

Water Distribution Material Specifications:

Water main pipe.	Ductile Iron Pipe. Pipe class thickness—AWWA C150, minimum thickness, Class 52. Pipe—AWWA C151. Pipe lining—AWWA C104. Fittings—AWWA C153. Joints—mechanical and push-on, AWWA C111. Wrap—4 mil. X-Lam conforming to AWWA C105.A21.5 and AWWA C600. No 90 degree bends allowed. All stainless steel trim.
Valves.	American Flow Control, Series 2500 resilient wedge gate valve, All sizes two inch to fourteen inch, counter clockwise to open, AWWA C500., AWWA C504. Clow AWWA C-504 Butterfly Valve for sixteen inch and above. Joint end—mechanical, AWWA C111. All stainless steel trim.
Valve Vault.	All structures shall be monolithically precast with designed openings or mechanically cored in the field and shall have rubber boots conforming to ASTM C-923. Dog house vaults are excluded from these requirements when permitted by Village Engineer. Size: For six and eight inch diameter valves, valve vaults shall have a forty-eight inch inside diameter; for pressure connections and valves ten inches and larger in diameter, valve vaults shall have a sixty inch inside diameter. All valve vault cones must be eccentric centers with valve properly aligned.
Castings.	East Jordan Iron Works 1022 Frame and Lid or Neenah R-1713, embossed per Exhibit No. 401 of Buffalo Grove Numerical Code Title 16.
Fire Hydrant.	Waterous Pacer Model WB67-250, AWWA C502, painted fire engine red above ground, with resilient wedge auxiliary gate valve. Nozzles, two at two and one half inch, one at four and one half inch, with threads conforming to National Standard Specifications. Frangible section (breakaway type) with the break line flange located one inch above finished grade. Joint end, six inch, mechanical or push-on. All stainless steel trim. Auxiliary boxes and hydrants shall be a direct flange-to-flange connection.
Fire hydrant extension	Fire hydrant extensions and parts to be manufactured by Waterous only. All stainless steel trim.
Hydrant Valve Box \ Valve boxes	Hydrant Valve Box Tyler 664-S. Lid embossed "WATER." Rubber valve box stabilizer required.
Service Pipe.	Copper tube, two inches and smaller, ASTM B88, Type K (1" minimum). Ductile iron, larger than two inches. Conform to Water main section above. Service upgrade for existing water main requires a stainless steel tap repair clamp. Ford model FS1-CC, minimum length 15" long.
Corporation Stop.	Mueller H15000, 1" minimum, AWWA C800. 1" Direct tap or 1 1/4" and larger shall use Ford FC202 stainless steel band, epoxy coated saddle.
Curb Stop.	Copper service, Mueller H-15154. Ductile iron service, Resilient wedge counter clockwise to open, AWWA C500. Joint end—mechanical, AWWA C111.
Curb box	Copper service, Mueller H-10302. Ductile iron service, conform to Hydrant Valve Box section above. Ductile iron service, 6" and larger, conform to Valve Vault section above.
Copper to Copper Fittings	Mueller Company Model #H-15400. An all flared coupling is required, no sweat joint or compression allowed.
Pressure Connections	Ford FTSS style tapping sleeve. American Flow Control Series 2500 tapping valve four inch minimum. All stainless steel trim.

Sanitary Sewer Material Specifications:

Sewer and Service Connection Pipe	Reinforced concrete pipe—circular reinforcement, minimum Class 3, ASTM C76, with epoxy lining. PVC solid wall (SDR-26H) pipe—ASTM D-3034 for six to fifteen inches in diameter.
Sewer and Service Connection Pipe Joints.	Reinforced concrete pipe—ASTM C443. PVC solid wall (SDR-26H) pipe—ASTM D-3212 for six to eighteen inches in diameter.
Sewer and Service Connection Pipe Fittings	PVC solid wall (SDR-26H) pipe—ASTM D3034 for six to fifteen inches in diameter.
Casing Pipes.	Steel pipe—ASTM A120, three-eighths inch minimum thickness.
Manholes	Size: For sewer eighteen inch diameter or less, manhole shall have a forty-eight inch inside diameter. For sewer twenty-one inch to thirty-six inch diameter, manhole shall have a sixty inch inside diameter. For sewer greater than thirty-six inch diameter, manhole shall have an offset riser pipe of forty-eight inch inside diameter. All structures shall be monolithically precast including bases and invert flow lines.
Castings.	East Jordan Iron Works Frame 1022 or Neenah R-1713, with self-sealing lid and recessed pick hole, embossed per Exhibit No. 301 of Buffalo Grove Numerical Code Title 16.

Storm Sewer System Material Specifications:

Structures.	All structures shall be precast with designed openings or mechanically cored in the field.
Castings.	Closed Lid, East Jordan Iron Works 1022 or Neenah R-1713, embossed per Exhibit No. 201., Open Lid, East Jordan Iron Works 1022 or Neenah R-1713, Standard B4.12 or any other barrier curb, Type 11— East Jordan Iron Works 7210 or Neenah 3281-A or Neenah 3170 on existing structures where required. Box height must be 6" minimum with 5' tapers to match curb height., Depressed barrier curb, Type M3 Grate, Yard inlet, Type 8— East Jordan Iron Works 6517 or Neenah R-4340-B
Sewer Pipe Joints.	Reinforced concrete pipe—ASTM C443 or C361. PVC solid wall (SDR-26H) pipe—ASTM D-3212 for six to eighteen inches in diameter.
Sump pump service connection pipe/sub surface drain pipe.	4" PVC solid wall sewer pipe SDR-35. Blind connections must be cored in storm sewer and pipe connection shall be made with a rubber boot and stainless steel band. Sump pump per Exhibit No. 202 of Buffalo Grove Numerical Code Title 16 and underdrain per Exhibit No. 203.

Material Specifications For All Utilities:

Bedding	CA-11, Class B or better. All stone shall be crushed; rounded aggregate will not be permitted. The stone shall be compacted to 90% modified proctor density as required by ASTM D1557 or AASHTO T-180. Recycled materials permitted from IDOT approved sources meeting the correct gradations.
Trench Backfill	CA-11, Class B or better. This item shall meet the requirements of Class B CA-11, per the IDOT Standard Specifications for Road and Bridge Construction. All stone shall be crushed; rounded aggregate will not be permitted. The stone shall be compacted to 95% modified proctor density as required by ASTM D1557 or AASHTO T-180. Jetting of trenches is not permitted. Recycled materials permitted from IDOT approved sources meeting the correct gradations.
Adjustments	No more than two precast concrete adjusting rings with six inch maximum height adjustment shall be allowed, minimum one 2" ring installed on new structures. All adjustment rings less than 2" shall be HDPE rings. Only one HDPE may be used within the precast tolerances. Only precast concrete or

	HDPE adjustment rings permitted. 1/2" x 3.5" mastic to be used between all frames, rings and structures. Mortar around rings, but none between. Bed of mortar can be used on cone or flat top of structure.
--	---

Miscellaneous Material Specifications:

Detectable Warnings	East Jordan Iron Works or Neenah cast iron detectable warnings. Color shall be brick red.
Concrete	In accordance with IDOT Standard Specifications for Road and Bridge Construction
Asphalt	In accordance with IDOT Standard Specifications for Road and Bridge Construction and Section 16.50.070 of the Village of Buffalo Grove Municipal Code

* The Village Engineer shall have the authority to approve the use of alternative materials than those specifically required by Exhibit 109 in the manner provided for in Title 16 of the Village of Buffalo Grove Numerical Code. The Village Engineer may approve alternative materials that are not specifically required by this title when:

1. The materials or their components required by this title are no longer manufactured and available for purchase; and
2. The alternative materials are generally consistent with requirements of this title, including but not limited to those standards relating to production, composition, safety and aesthetics.

Testing Specifications:

(In addition to the requirements of IDOT's Standard Specifications for Road and Bridge Construction or the Standard Specifications for Water and Sewer Construction in Illinois)

Storm Sewer	Cleaning and televising, with reporting, as directed by the Village Engineer
Sanitary Sewer	Cleaning and televising, with reporting, as directed by the Village Engineer

*When conflicting information exists between the plans specifications and this exhibit number 109 the information listed in exhibit number 109 shall govern. All castings on a project or development shall come from a single manufacturer.



Office: 847-870-0544
Fax: 847-870-0661
us@soilandmaterialconsultants.com
www.soilandmaterialconsultants.com

September 15, 2021
File No. 26080

Mr. Kyle Johnson, P.E., CFM
Village of Buffalo Grove
51 Raupp Boulevard
Buffalo Grove, IL 60089

Re: Geotechnical Investigation
Cambridge Park
Buffalo Grove, Illinois

Dear Mr. Johnson:

The following is our report of findings for the geotechnical investigation completed at Cambridge Park in the Village of Buffalo Grove, Illinois.

The investigation was requested to determine current subsurface soil and water conditions at select boring locations. The findings of the field investigation and the results of laboratory testing are intended to assist in the planning, design and construction of proposed site improvements. We understand it is proposed to reconstruct the Cambridge Lift Station, install associated sanitary force main, construct an access road to the lift station and regrade the existing Cambridge Park detention pond.

SCOPE OF THE INVESTIGATION

The field investigation included obtaining 9 borings at the locations requested and as indicated on the enclosed location sketches. The boring locations were established using field taping methods and accuracy. Surface elevations were estimated to the nearest 0.5 ft. using data presented on the topographic survey.

We auger drilled the borings to depths of 10.0 feet to 40.0 feet below existing surface elevations. Soil samples were obtained using a split barrel sampler advanced utilizing an automatic SPT hammer. Soil profiles were determined in the field and soil samples returned to our laboratory for additional testing including determination of moisture content. Cohesive soils obtained by split barrel sampling were tested further to determine dry unit weight and unconfined compressive strength.

The results of all field determinations and laboratory testing are included in summary with this report.

8 W. COLLEGE DR. ● SUITE C ● ARLINGTON HEIGHTS, IL 60004

SOIL BORINGS ● SITE INVESTIGATIONS ● PAVEMENT INVESTIGATIONS ● GEOTECHNICAL ENGINEERING
TESTING OF ● SOIL ● ASPHALT ● CONCRETE ● MORTAR ● STEEL

RESULTS OF THE INVESTIGATION

Enclosed are boring logs indicating soil conditions encountered at each location. Site surface conditions include vegetation, topsoil, pavement materials, and fill soil conditions. The topsoil is classified as dark brown to black silt/clay mixtures with traces of roots.

Fill soil conditions were encountered at borings B-4 to B-7 and B-9. Composition of the fill includes the presence of topsoil, clay/silt, sand, and silt/clay mixtures extending to depths of 3.0 feet to 6.0 feet at these boring locations. The limits of fill placement were not determined within the scope of this investigation. Larger debris may also be present within the fill but was not encountered during the investigation. The fill soil conditions are found to overlie the apparent natural topsoil at boring B-4 which extended to a depth of 6.5 feet.

Underlying natural soil conditions include the presence of cohesive soils. These are classified as tough to very hard clay/silt mixtures with lesser portions of sand and gravel. A thin deposit of lower-strength and higher moisture content cohesive soil was encountered towards the bottom of boring B-7.

Non-cohesive soils were also encountered as indicated. These include very loose to very dense silt/clay, silt/clay/sand, sand/gravel, sand, and sand/silt mixtures. The non-cohesive granular soils are often in a very damp to saturated condition. Cobbles and/or boulders were encountered within boring B-5 and may be present within the site soils at other areas of the site.

The following table summarizes depth ranges below existing grade, the magnitude of soil strength within these ranges and other information:

<u>Boring</u>	<u>Surface Elevation (feet)</u>	<u>Depth Range Below Existing Surface (feet)</u>	<u>Soil Strength (lbs./sq.ft.)</u>	<u>Recorded Water Levels, W.D./A.D. (feet)</u>
<u>Jackinig/Receiving Pits, Sanitary Sewer & Force Main</u>				
1	689.5	1.5 to 4.0 4.0 to 12.0	3,000 6,000	dry/dry
2	687.0	1.5 to 3.0 3.0 to 12.0	3,000 8,000	dry/dry
3	679.0	3.0 to 6.5 6.5 to 7.0	3,000 8,000	dry/dry
4	674.0	0.5 to 7.0 7.0 to 9.5 9.5 to 12.0 12.0 to 27.0	*500 *1,000 3,000 4,000	8.5/19.0
<u>Lift Station</u>				
5	675.0	0.5 to 3.5 3.5 to 7.0 7.0 to 13.5 13.5 to 37.0	*3,000 8,000 3,000 4,000	11.5/9.5
<u>Access Road</u>				
6	675.0	0.5 to 1.5 1.5 to 6.5 6.5 to 7.0	*1,000 *500 8,000	3.5/9.0
7	677.0	2.0 to 3.5 3.5 to 6.5 6.5 to 7.0	*2,000 *3,000 1,000	8.5/9.0
<u>Detention Pond</u>				
8	675.5	2.0 to 5.0 5.0 to 9.0 9.0 to 12.0	8,000 3,000 5,000	13.0/12.0
9	675.5	1.5 to 6.5 6.5 to 12.0	*2,000 5,000	11.5/10.5

* Not recommended for support of foundations.

It is expected that foundations can be supported on undisturbed natural soils located at any elevation within the depth ranges indicated in the above table, except as noted. Above these

depth ranges the soils are not considered able to support foundations, even at reduced design bearing values, due to long-term settlement considerations.

SUBSURFACE WATER

The boring logs and the above table indicate the depth at which subsurface water was encountered in the bore holes at the time of the drilling operations and during the period of these readings. It is expected that fluctuations from the water levels recorded will occur over a period of time due to variations in rainfall, temperature, subsurface soil conditions, soil permeability and other factors not evident at the time of the water level measurements.

LIFT STATION

Based on the results of this investigation it is our opinion that continuous and isolated footing foundations may be considered for support of new structures. These foundations can be supported on undisturbed natural soils located below all topsoil, unsuitable fill soils, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design. This value can be used to size foundations for support of structure dead and live loads. Increased bearing values may be available at some locations and elevations. The feasibility of using a higher value is best determined after our review of proposed foundation details and elevations.

Foundations for unprotected improvements should extend at least 48.0 inches below exposed surface elevations to provide adequate protection against uplift due to freezing of the supporting soils. We recommend providing adequate reinforcing steel in foundation walls and piers to minimize the effects of long-term differential settlement.

SANITARY SEWERS

The sanitary sewer pipes can be supported on the undisturbed natural soils located below all topsoil, unsuitable fill soils, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at each boring location are indicated in the above table. When the pipe is placed in an open cut excavation, a granular bedding, CA07/CA11, should be used to support the pipe on the undisturbed natural soils.

In the unimproved areas, the trench excavation can be backfilled with the suitable non-organic soils from the trench. In the improved areas, such as under pavements and sidewalks, the trench should be backfilled with compacted crushed granular fill (CA06). The backfill should be placed in lifts not to exceed 12.0 inches when uncompacted. Each lift should exceed the minimum compaction requirement prior to the placement of the next lift. We would recommend a minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved in the pavement and sidewalk areas and a minimum of 85% in the unimproved areas.

DEWATERING

Excavations will require dewatering due to subsurface water seepage and/or surface precipitation. This water can likely be removed to depths of several feet by standard sump and pump operations. Soils exposed at foundation, slab or undercut elevations should not be permitted to become saturated. Loss of bearing strength and stability may occur, requiring additional soil excavation.

Fill soils, non-cohesive soils and others can be unstable when saturated. These soils tend to cave or run when submerged or disturbed. The stability of exposed embankments is minimal to non-existent as confining soil pressures are removed. Proper drainage within excavations is necessary at all times, particularly when excavations extend below anticipated water levels and below saturated soils.

The contractor should be made responsible for designing and constructing stable temporary excavations. Also, the contractor should shore, slope, bench or restrain the sides of the excavations as required to maintain stability of both the excavation sides and bottom. In no case, should the slope, slope heights, or excavation depth exceed those in the local, state, and federal safety regulations.

ACCESS ROAD

Subgrade soil preparation should be performed in the area of all new pavements. The subgrade soil preparation procedure should include the removal of unsuitable surface conditions including vegetation, topsoil, unsuitable fill soils, significant debris, weak or unstable soils, and other deleterious conditions which may be encountered. Above grade areas should be cut to design subgrade elevations. Exposed subgrade soils should be leveled, compacted and proof-rolled in the presence of the Soil Engineer.

Proof-rolling is expected to reveal areas of unstable soil conditions due to the presence of fill at borings B-6 and B-7. Discing and aeration of high moisture content soils can be effective to depths of up to 1.0 foot, depending upon the equipment utilized. Removal of unstable soils may be necessary if high moisture content conditions extend to depths greater than the effective depth of discing.

Soft or unstable soil conditions in pavement areas can often be bridged by use of an effective depth of crushed granular material. The placement of the crushed granular bridging material, possibly in conjunction with the use of an appropriate geotextile fabric, should only proceed after review of the proof-roll conditions by the Soil Engineer. Long-term settlement of pavement surfaces may occur locally as the bridged soils desiccate.

Structural fill can be placed on soils prepared to the satisfaction of the Soil Engineer. The fill should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed minimum compaction requirements prior to placement of the next lift. We recommend a minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved within building areas. A minimum of 90% compaction should be achieved beneath exterior improvements such as pavements and sidewalks. Compaction requirements also apply to

backfill placement around foundations and within trench excavations located below subgrade supported improvements.

FILL SOURCES

The onsite non-organic soils are generally suitable for reuse as fill. Offsite sources may also be used provided they are approved in advance by the Soil Engineer. Aeration may be necessary to reduce soil moisture content prior to compaction. Soil borrowed from near the surface where seasonal fluctuations in soil moisture content occur may require particular attention. The moisture content of fill soils should be within approximately 3.0% of optimum moisture content as determined by the modified Proctor test for the soils to meet or exceed minimum compaction requirements.

CONCLUSION

The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present between boring locations due to naturally changing and filled soil conditions.

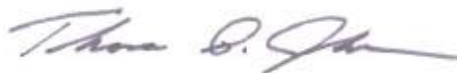
Our understanding of the proposed improvements is based on limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed utility, foundation, pavement and grading plans be reviewed by our office to determine if additional considerations are necessary to address anticipated subsurface conditions.

The soils exposed in soil undercut areas should be evaluated for suitability prior to placement of structural fill, as previously indicated in this report. Soils and aggregates placed as structural fill should be tested as the work progresses to verify that minimum compaction requirements have been met. We recommend that soil conditions encountered at foundation elevations be tested to verify the presence of design soil strength prior to concrete placement.

If you have any questions concerning the findings or recommendations presented in this report, please let me know.

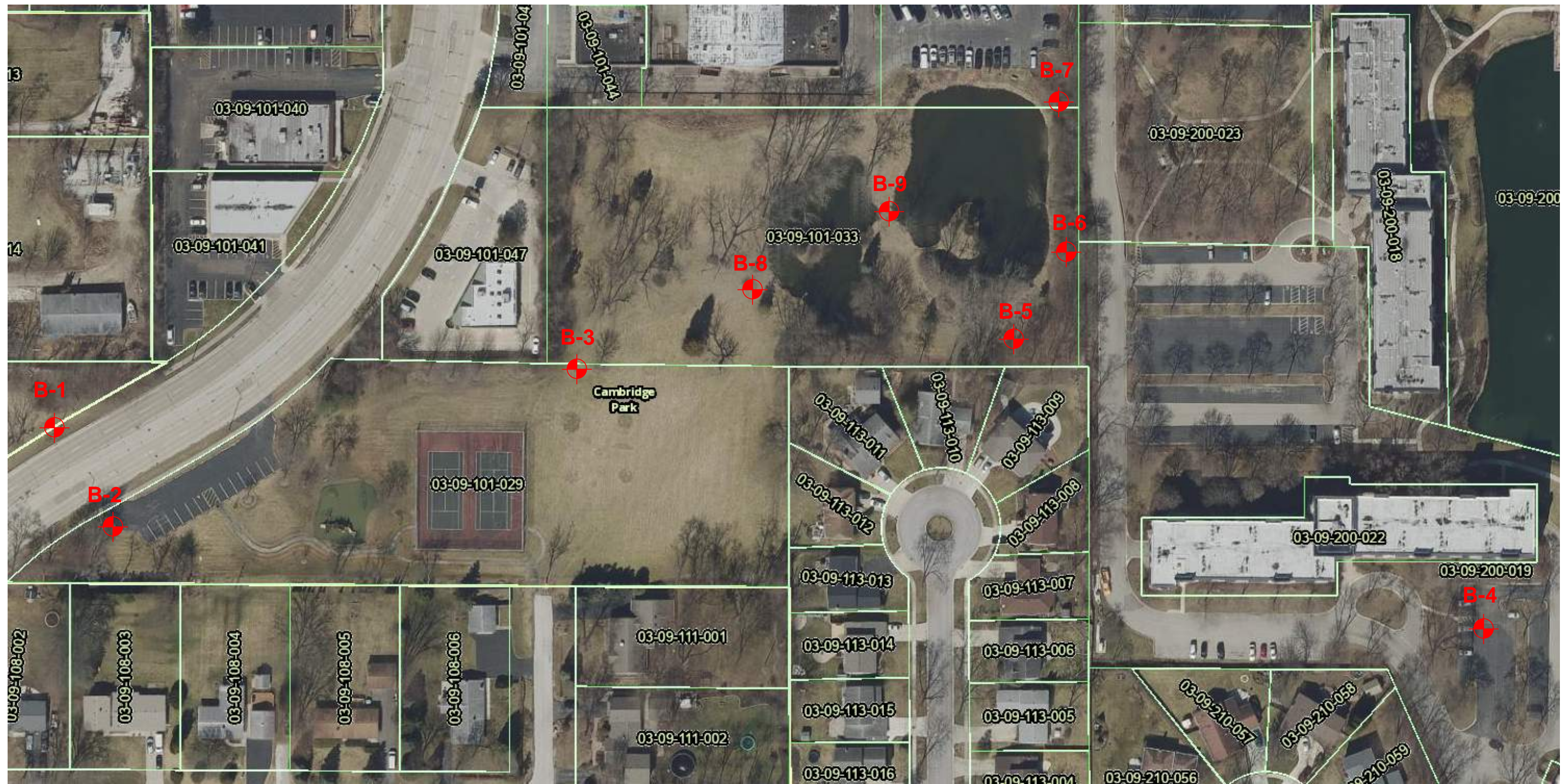
Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.

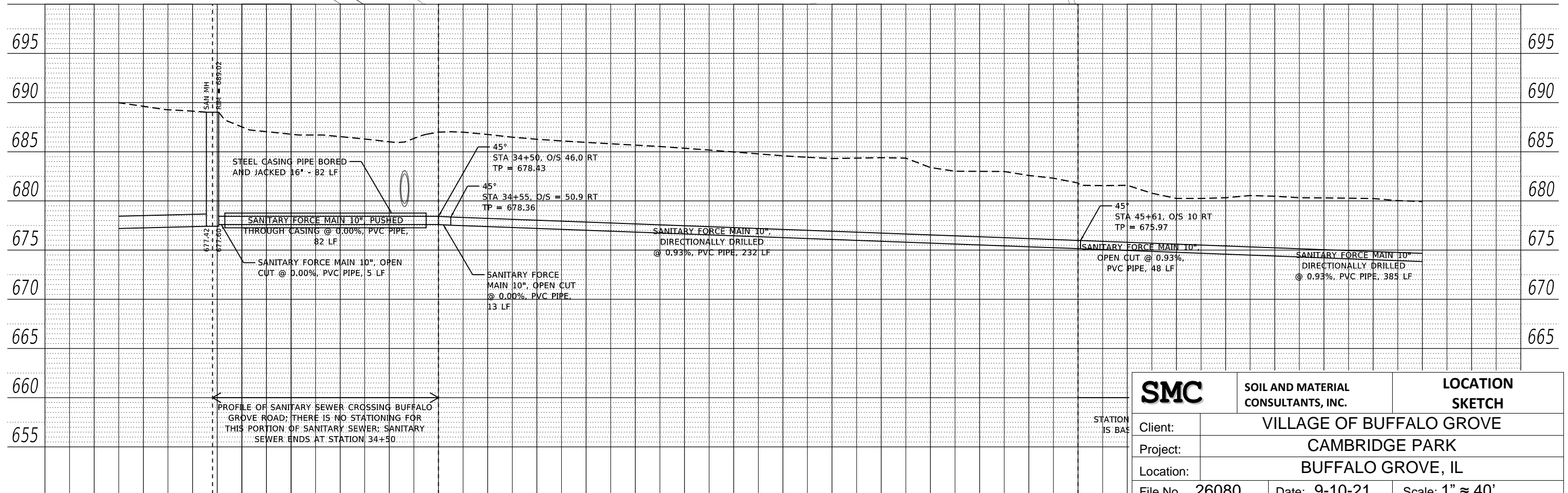
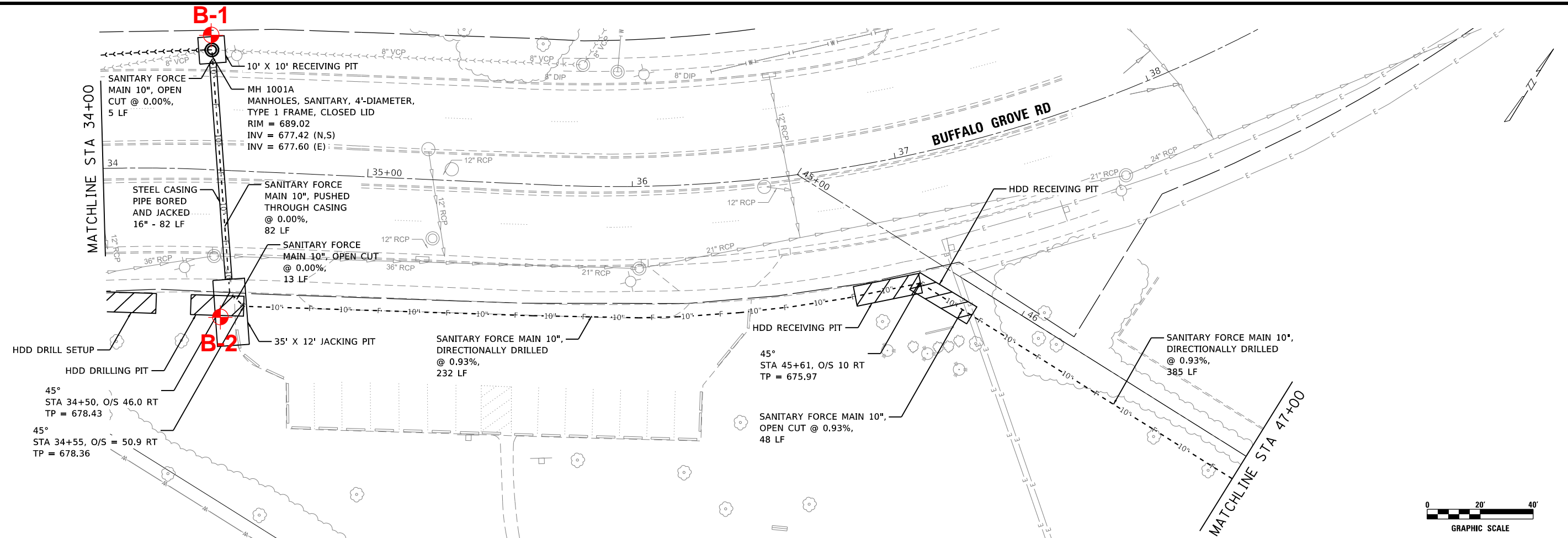


Thomas P. Johnson, P.E.
President

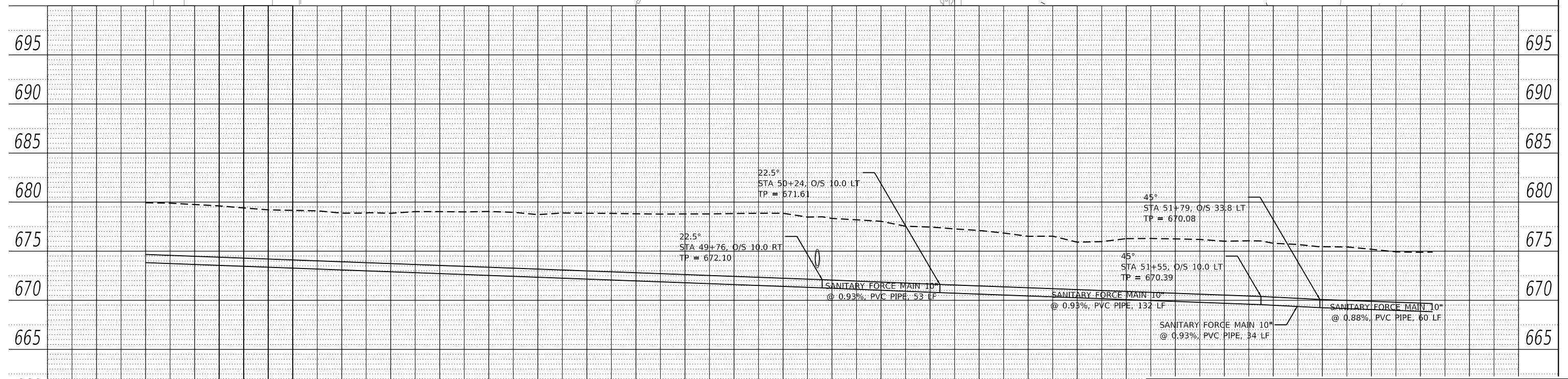
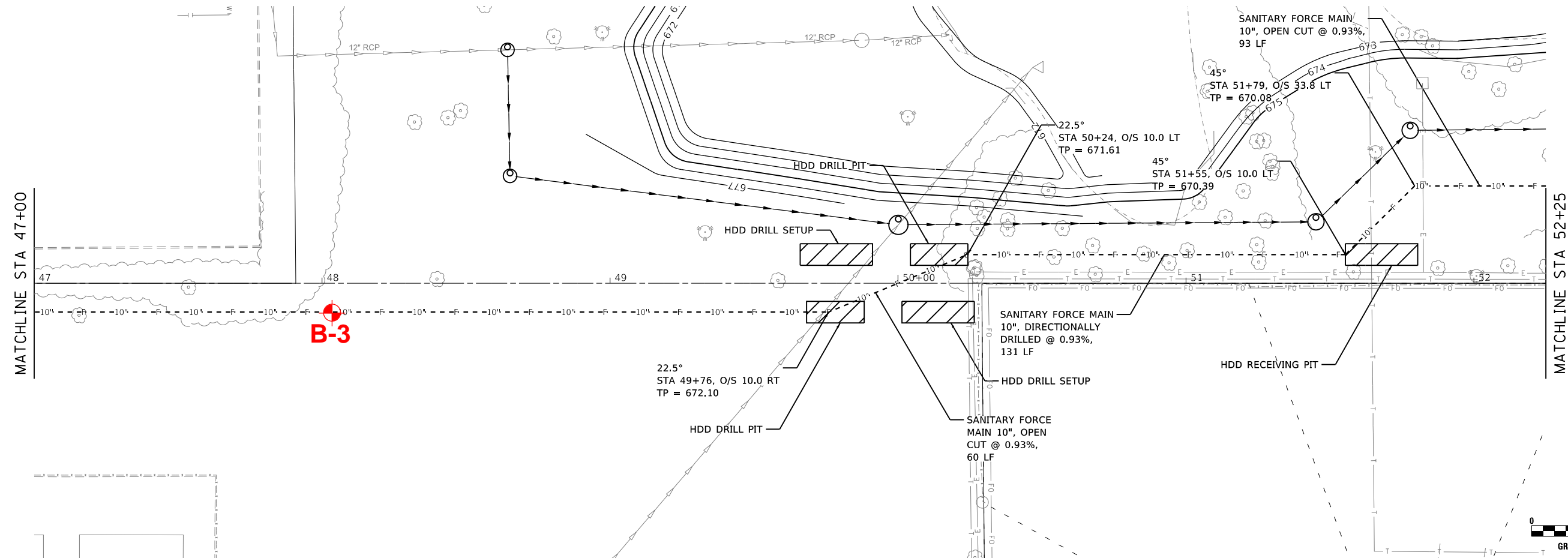
TPJ:ek
Enc.
cc: Mr. Luke Mattson, P.E. – Ciorba Group



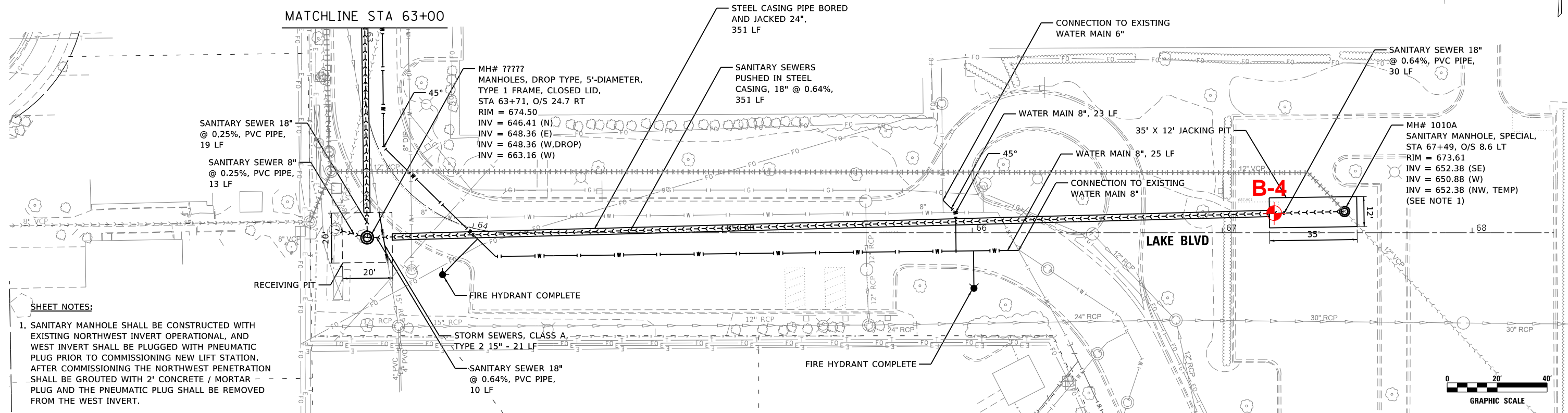
SMC		SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	VILLAGE OF BUFFALO GROVE		
Project:	CAMBRIDGE PARK		
Location:	BUFFALO GROVE, IL		
File No. 26080	Date: 9-10-21	Scale: 1" ≈ NONE	



SMC	SOIL AND MATERIAL CONSULTANTS, INC.		LOCATION SKETCH	
	VILLAGE OF BUFFALO GROVE			
Client:		CAMBRIDGE PARK		
Project:		BUFFALO GROVE, IL		
Location:				
File No.	26080	Date:	9-10-21	Scale: 1" ≈ 40'

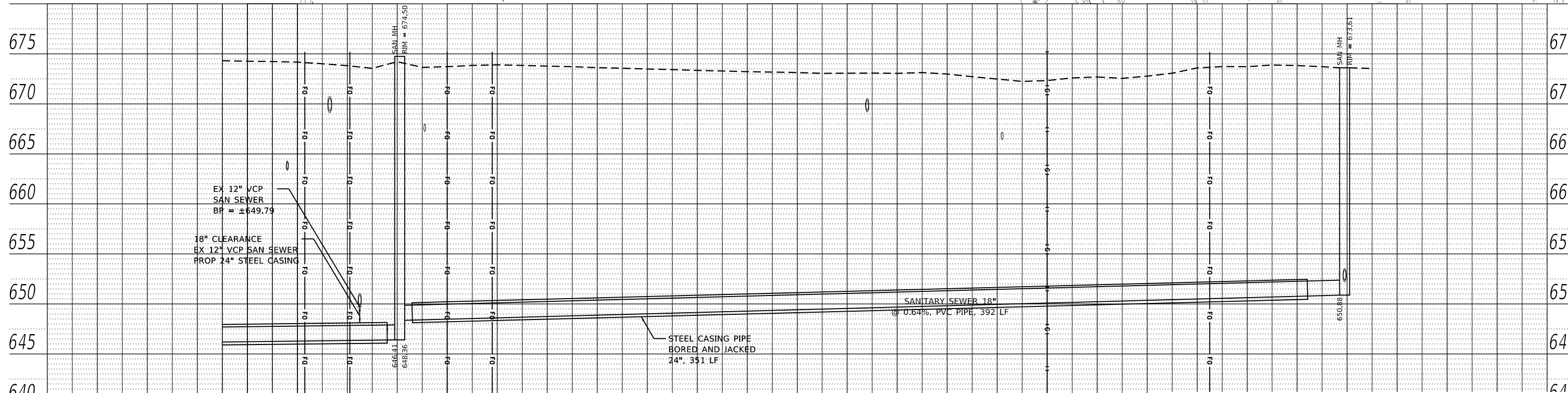


SMC		SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	VILLAGE OF BUFFALO GROVE		
Project:	CAMBRIDGE PARK		
Location:	BUFFALO GROVE, IL		
File No.	26080	Date:	9-10-21
		Scale:	1" ≈ 40'



SHEET NOTES:

- SANITARY MANHOLE SHALL BE CONSTRUCTED WITH EXISTING NORTHWEST INVERT OPERATIONAL, AND WEST INVERT SHALL BE PLUGGED WITH PNEUMATIC PLUG PRIOR TO COMMISSIONING NEW LIFT STATION. AFTER COMMISSIONING THE NORTHWEST PENETRATION SHALL BE GROUTED WITH 2" CONCRETE / MORTAR - PLUG AND THE PNEUMATIC PLUG SHALL BE REMOVED FROM THE WEST INVERT.



SMC	SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
	VILLAGE OF BUFFALO GROVE	
Client:	CAMBRIDGE PARK	
Project:	BUFFALO GROVE, IL	
Location:	File No. 26080	Date: 9-10-21
Scale: 1" ≈ 40'		



SOIL AND MATERIAL
CONSULTANTS, INC.

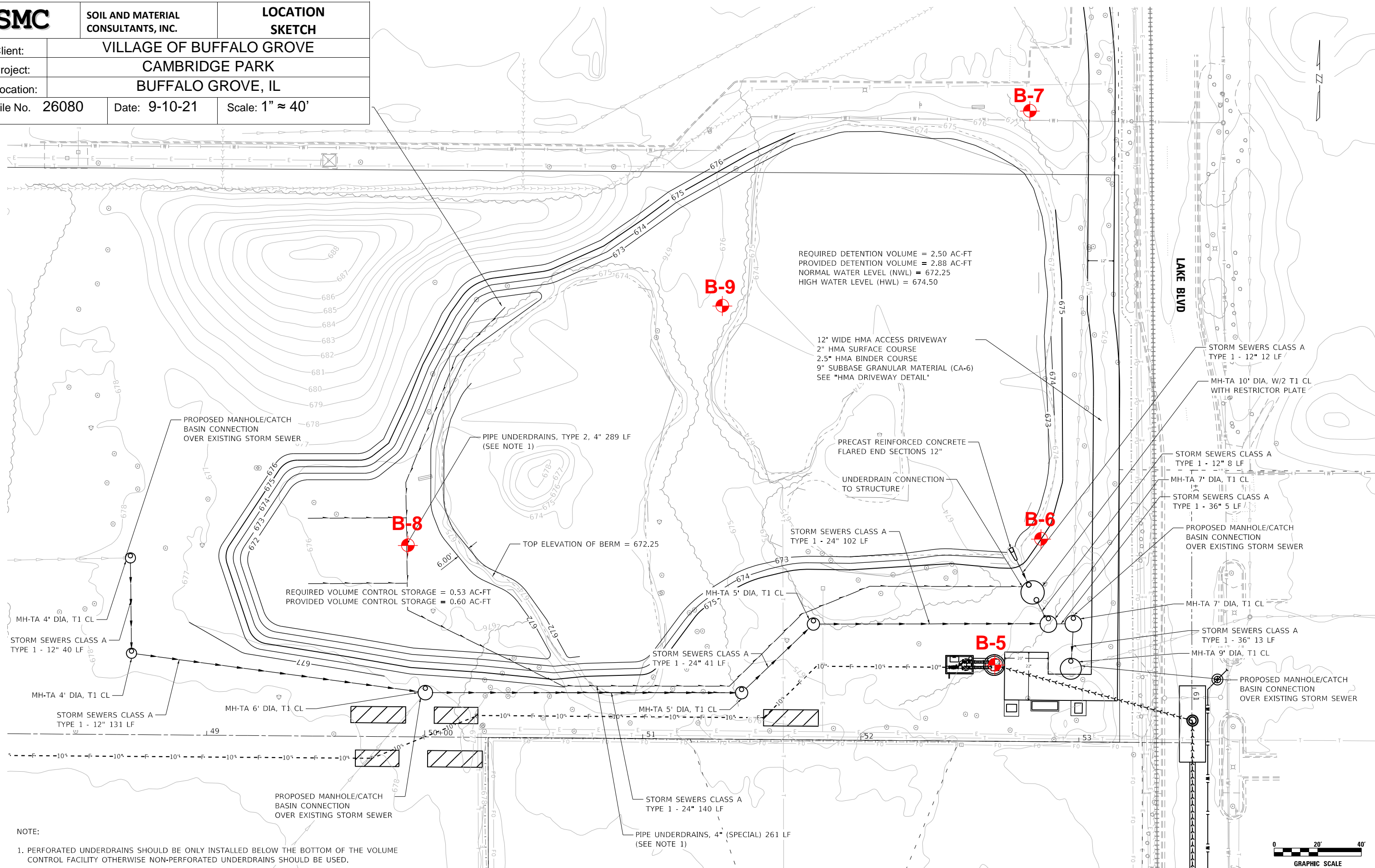
LOCATION
SKETCH

Client: VILLAGE OF BUFFALO GROVE

Project: CAMBRIDGE PARK

Location: BUFFALO GROVE, IL

File No. 26080 Date: 9-10-21 Scale: 1" ≈ 40'



NOTE:
 1. PERFORATED UNDERDRAINS SHOULD BE ONLY INSTALLED BELOW THE BOTTOM OF THE VOLUME CONTROL FACILITY OTHERWISE NON-PERFORATED UNDERDRAINS SHOULD BE USED.



Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/9/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

depth, ft.	Equipment: <input type="checkbox"/> CME 45B <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other
	CLASSIFICATION
	Elevation 689.5' Existing Surface
	(a) see below
	Brown silt, some clay, trace fine sand, dry medium dense
5	Brown-gray to brown clay, some silt, trace sand & gravel, damp, hard to very hard
10	Brown silt, some clay & sand, trace gravel damp, medium dense
	Brown clay, some silt, trace sand & gravel damp, hard
15	End of Boring
20	(a) Dark brown silt, some clay, trace sand & roots, dry (topsoil) - 10.0"
25	
30	
35	
40	

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	
×	△	γ	○	○ unconfined compressive strength, tons/sq. ft. ● penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 × standard penetration "N", blows/ft. △ moisture content, % 10 20 30 40
	14.5			
12	10.2			
23	15.5			4.5
16	17.8	115.2	9.6	9.6
20	11.5			
18	14.4 23.3	108.1	6.4	6.4
17	20.2	108.7	7.8	7.8

Water encountered at _____ feet during drilling operations (W.D.)
 Water recorded at _____ feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/9/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

depth, ft.	Equipment: <input type="checkbox"/> CME 45B <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other
	CLASSIFICATION
	Elevation 687.0' Existing Surface
	(a) see below
	Brown silt, some clay, trace sand & gravel damp, medium dense
5	Brown-gray to brown clay, some silt, trace sand & gravel, damp, very hard
	Brown-gray to brown clay, some silt, trace sand & gravel, damp, hard to very hard
10	
	Gray clay, some silt, trace sand & gravel, damp, hard
15	
	End of Boring
20	(a) Black silt, some clay, trace sand & roots, damp (topsoil) - 10.0"
25	
30	
35	
40	

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<input type="checkbox"/> unconfined compressive strength, tons/sq. ft. <input checked="" type="checkbox"/> penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 <input checked="" type="checkbox"/> standard penetration "N", blows/ft. <input type="checkbox"/> moisture content, % 10 20 30 40			
×	△	γ	○	10	20	30	40
	19.1				△		
11	6.7			△	X		
24	15.4	114.9	9.4		△	X	9.4 ○
20	16.7	111.9	6.0		△	X	6.0 ○
20	18.0	116.9	9.5		△	X	9.5 ○
17	17.9	116.2	5.2		X		5.2 ○
15	19.0	113.8	6.7		X	△	6.7 ○

Water encountered at dry feet during drilling operations (W.D.)
 Water recorded at dry feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/9/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

Equipment: CME 45B D - 50 Hand Auger Other

CLASSIFICATION

Elevation 679.0' Existing Surface

depth, ft.	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	Strength & Penetration Data				
					unconfined compressive strength, tons/sq. ft.	penetrometer reading, tons/sq. ft.	standard penetration "N", blows/ft.	moisture content, %	
1-2		27.2							
3	10	22.0			X		△		
5	6	26.5	98.5	1.9	X	●	△		
8	9	19.4	111.7	5.6	X		△		5.6 ○
10	26	17.2	117.0	9.5			△	X	9.5 ○

End of Boring

Water encountered at dry feet during drilling operations (W.D.)
 Water recorded at dry feet on completion of drilling operations (A.D.)
 Water recorded at feet hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/9/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

depth, ft.	Equipment: <input type="checkbox"/> CME 45B <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other <p style="text-align: center;">CLASSIFICATION</p> Elevation 674.0' Existing Surface (a & b) see below Black silt, some clay, trace sand & roots, damp, loose (topsoil) - Fill Dark brown-gray-black clay & silt, trace sand & gravel, damp, very tough - Fill 5 Black silt, some clay, trace sand & roots, damp, loose (topsoil) (c) see below (d) see below ▽ 10 Brown clay, some silt, trace sand & gravel damp, tough Gray clay, some silt, trace sand & gravel, damp, very tough 15 20 25 30 End of Boring (a) Bituminous concrete - 3.0" (b) Brown sand & gravel, damp - Fill-9.0" 35 (c) Brown-gray clay, some silt, trace sand & gravel, damp, tough (d) Brown-gray silt, some clay & fine sand, very damp-saturated 40
------------	--

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	○ unconfined compressive strength, tons/sq. ft. ● penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 × standard penetration "N", blows/ft. △ moisture content, % 10 20 30 40
×	△	⋈	○	
6	24.1			X △
7	24.4 33.3	102.5	2.1	X ● △ △
5	29.8 27.0	91.2	1.5	X ● ○ △ △
6	27.2	99.0	1.8	X ● ○ △
14	19.6	95.1	3.5	X △ ○ ●
8	18.0	118.4	2.0	X △ ● ○
12	18.2	120.8	2.7	X △ ● ○
12	17.2	120.1	2.1	X △ ●
14	16.9			X △ ●

Water encountered at 8.5 feet during drilling operations (W.D.)
 Water recorded at 19.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/10/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

Equipment: CME 45B D - 50 Hand Auger Other

CLASSIFICATION

Elevation 675.0' Existing Surface

depth, ft.	Brown fine sand,damp,medium dense - Fill
	Brown-black-gray clay,some silt,trace sand & gravel,damp,hard - Fill
5	Brown gray to brown clay,some silt,trace sand & gravel,damp,very hard to hard
10	(a) see page 2 of 2
	(b) see page 2 of 2
15	Gray clay,some silt,trace sand & gravel,damp,very tough
20	
25	
30	
	Gray fine sand,very damp-saturated,medium dense
35	Gray clay,some silt,trace sand & gravel,damp,hard
	(large rock encountered at 40.0')
40	End of Boring

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	
×	△	⋈	○	○ unconfined compressive strength, tons/sq. ft. ● penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 × standard penetration "N", blows/ft. △ moisture content, % 10 20 30 40
	4.3			△
12	19.0	99.2	5.4	× △
18	15.5	114.7	8.6	△ ×
21	16.8	112.6	8.2	△ ×
17	20.1	107.8	6.9	× △
20.6	20.6	106.6	1.8	○ ●
50+	16.6			△ ● ×
11	18.2	120.1	2.2	× △ ● ○
12	18.7	120.2	2.7	× △ ● ○
14	18.8	117.9	2.0	× △ ● ○
16	20.0	118.3	3.8	× △ ● ○
	18.2			△
21	20.9	118.8	7.7	△ ×
				○ 4.1
9	20.2			× △

Water encountered at 11.5 feet during drilling operations (W.D.)
 Water recorded at 9.5 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)



8 W. COLLEGE DR. • SUITE C • ARLINGTON HEIGHTS, IL 60004

SOIL BORING LOG 5

Logged By: **CS** Page: **1 of 2**

Client: **Village of Buffalo Grove**

File No. **26080** Date Drilled: **9/10/21**

Reference: **Cambridge Park
Buffalo Grove, IL**

Comments:

Equipment: CME 45B D - 50 Hand Auger Other

CLASSIFICATION

Elevation Existing Surface

depth, ft.	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	unconfined compressive strength, tons/sq. ft.				
					1.0	2.0	3.0	4.0	
	×	△	∞	○	standard penetration "N", blows/ft.				
					△ moisture content, %				
					10	20	30	40	
5									
10									
15									
20									
25									
30									
35									
40									

(a) Gray clay, some silt, trace sand & gravel, damp, tough
 (b) Gray fine-medium sand & gravel, some coarse sand, saturated, very dense
 (large rock encountered at 11.5')

Water encountered at **11.5** feet during drilling operations (W.D.)
 Water recorded at **9.5** feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/10/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

Equipment: CME 45B D - 50 Hand Auger Other

CLASSIFICATION

Elevation 675.0' Existing Surface

depth, ft.	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	unconfined compressive strength, tons/sq. ft.			
					1.0	2.0	3.0	4.0
	X	Δ	∞	○				
1		21.2					Δ	
2								
3	9	19.8			X		Δ	
4								
5	3	19.7			X		Δ	
6								
7								
8	9	19.4	110.7	5.2	X		Δ	○
9								
10	18	18.2	114.5	6.9			Δ	○

End of Boring

Water encountered at 3.5 feet during drilling operations (W.D.)
 Water recorded at 9.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/10/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

Equipment: CME 45B D - 50 Hand Auger Other

CLASSIFICATION

Elevation 677.0' Existing Surface

depth, ft.	soil description	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	unconfined compressive strength (tons/sq. ft.)	penetrometer reading (tons/sq. ft.)	standard penetration "N", blows/ft.	moisture content, %
1	Black silt, some clay, trace sand & roots, damp (topsoil) - Fill		22.2						
2	Black-brown-gray silt, some clay & gravel trace sand, damp, medium dense - Fill	11	18.9						
3									
4	Brown-gray-black clay & silt, trace sand & gravel, damp, hard - Fill								
5		10	18.9						
6									
7	Brown-gray clay, some silt, trace sand & gravel, damp, very tough	6	25.2	98.1	2.0				
8									
9	Brown-gray clay, some silt, trace sand & gravel, damp, stiff		29.9	99.7	0.8				
	Brown clay, some silt, trace sand & gravel damp, hard								
10	End of Boring	11	19.8	120.4	5.4				

Water encountered at 8.5 feet during drilling operations (W.D.)
 Water recorded at 9.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

SOIL BORING LOG 8

Logged By: **CS** Page: 1 of 1

Client: **Village of Buffalo Grove**

File No. **26080** Date Drilled: **9/10/21**

Reference: **Cambridge Park
Buffalo Grove, IL**

Comments:

depth, ft.	Equipment: <input type="checkbox"/> CME 45B <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other <p style="text-align: center;">CLASSIFICATION</p> Elevation 675.5' Existing Surface
5	Black silt, some clay, trace sand & roots, damp (topsoil) Dark brown to brown clay, some silt, trace sand & gravel, damp, very hard to hard (a) see below
10	Gray clay, some silt, trace sand & gravel, damp, hard Gray clay, some silt, trace sand & gravel, damp, very tough (encountered small saturated sand layers between 13.0'-15.0')
15	End of Boring
20	(a) Brown fine sand, some silt, trace medium-coarse sand, very damp
25	
30	
35	
40	

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<input type="checkbox"/> unconfined compressive strength, tons/sq. ft. <input checked="" type="checkbox"/> penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0
X	Δ	γ	○	X standard penetration "N", blows/ft. Δ moisture content, % 10 20 30 40
	21.8			Δ
10	20.2	105.6	10.0+	X Δ ○
8	21.8	103.1	4.6	X Δ ○
9	26.1 23.9	112.4	5.7	X Δ ○
17	19.9	115.6	5.7	X Δ ○
13	22.0	110.6	3.2	X Δ ○ ●
11	22.2			X Δ ●

Water encountered at **13.0** feet during drilling operations (W.D.)
 Water recorded at **12.0** feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

Client: Village of Buffalo Grove

File No. 26080 Date Drilled: 9/10/21

Reference: Cambridge Park
Buffalo Grove, IL

Comments:

depth, ft.	Equipment: <input type="checkbox"/> CME 45B <input checked="" type="checkbox"/> D - 50 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other
	CLASSIFICATION
	Elevation 675.5' Existing Surface
	(a) see below
	Brown-gray-black clay, some silt, trace sand & gravel, damp, hard - Fill
5	Brown-gray to brown clay, some silt, trace sand & gravel, damp, tough to hard
10	(b) see below
	Gray clay, some silt, trace sand & gravel, damp, hard
15	End of Boring
	(a) Black silt, some clay, trace sand, roots & gravel, damp (topsoil) - Fill
20	(b) Gray fine sand & gravel, some medium coarse sand, saturated, medium dense
25	
30	
35	
40	

standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	<input type="checkbox"/> unconfined compressive strength, tons/sq. ft. <input checked="" type="checkbox"/> penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0 <input checked="" type="checkbox"/> standard penetration "N", blows/ft. <input type="checkbox"/> moisture content, % 10 20 30 40			
×	△	⊗	○				
	17.3						
11	20.3	105.4	7.3				1.3
5	30.0	91.8	1.4				
7	22.6	106.1	2.8				
11	19.6	112.9	7.8				4.6
19	9.9						
17	15.8	123.0	4.4				4.4

Water encountered at 11.5 feet during drilling operations (W.D.)
 Water recorded at 10.5 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

GENERAL NOTES

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487 (when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu-tons.sq.ft.	N (unreliable)
Very soft	0.00 – 0.25	0 – 2
Soft	0.26 – 0.49	3 – 4
Stiff	0.50 – 0.99	5 – 8
Tough	1.00 – 1.99	9 – 15
Very Tough	2.00 – 3.99	16 – 30
Hard	4.00 – 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N – blows/foot
Very Loose	0 – 4
Loose	5 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term	Size Range
Boulder	over 8 in.
Cobble	3 in. to 8 in.
Gravel - coarse	1 in. to 3 in.
- medium	3/8 in. to 1 in.
- fine	#4 sieve to 3/8 in.
Sand - coarse	#10 sieve to #4 sieve
- medium	#40 sieve to #10 sieve
- fine	#200 sieve to #40 sieve
Silt	0.002 mm to #200 sieve
Clay	smaller than 0.002mm

Modifying Term Percent by Weight

Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Moisture Content

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF	- Continuous Flight Auger
HS	- Hollow Stem Auger
HA	- Hand Auger
RD	- Rotary Drilling
AX	- Rock Core, 1-3/16 in. diameter
BX	- Rock Core, 1-5/8 in. diameter
NX	- Rock Core, 2-1/8 in. diameter
S	- Sample Number
T	- Type of Sample
J	- Jar
AS	- Auger Sample
SS	- Split Spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST	- Shelby Tube (2 in. O.D. w/ith 1-7/8 in. I. D.)
R	- Recovery Length, in.
B	- Blows/6 in. interval, Standard Penetration Test (SPT)
N	- Blows/foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen.	- Pocket Penetrometer readings, tons/sq.ft.
W	- Water Content, % dry weight
Uw	- Dry Unit Weight of soil, lbs./cu.ft.
Qu	- Unconfined Compressive Strength, tons/sq.ft.
Str	- % Strain at Qu.
WL	- Water Level
WD	- While Drilling
AD	- After Drilling
DCI	- Dry Cave-in.
WCI	- Wet Cave-in.
LL	- Liquid Limit, %
PL	- Plastic Limit, %
PI	- Plasticity Index (LL-PL)
LI	- Liquidity Index [(W-PL)/PI]



Office: 847-870-0544
Fax: 847-870-0661
us@soilandmaterialconsultants.com
www.soilandmaterialconsultants.com

September 14, 2021
File No. 26080

Mr. Kyle Johnson, P.E., CFM
Village of Buffalo Grove
51 Raupp Boulevard
Buffalo Grove, IL 60089

Re: Geotechnical Investigation
Cambridge Park
Buffalo Grove, Illinois

Dear Mr. Johnson:

Soil samples from each of the 9 soil borings were tested for pH levels in accordance with ASTM D 4972-01 with the results shown in the below table:

<u>Boring</u>	<u>Depth (ft.)</u>	<u>pH</u>
1	3.5 - 5.0	8.8
2	3.5 - 5.0	8.7
3	3.5 - 5.0	8.4
4	9.0 - 10.0	8.5
5	13.5 - 15.0	8.2
6	3.5 - 5.0	8.6
7	3.5 - 5.0	8.4
8	3.5 - 5.0	7.9
9	6.0 - 7.5	8.1

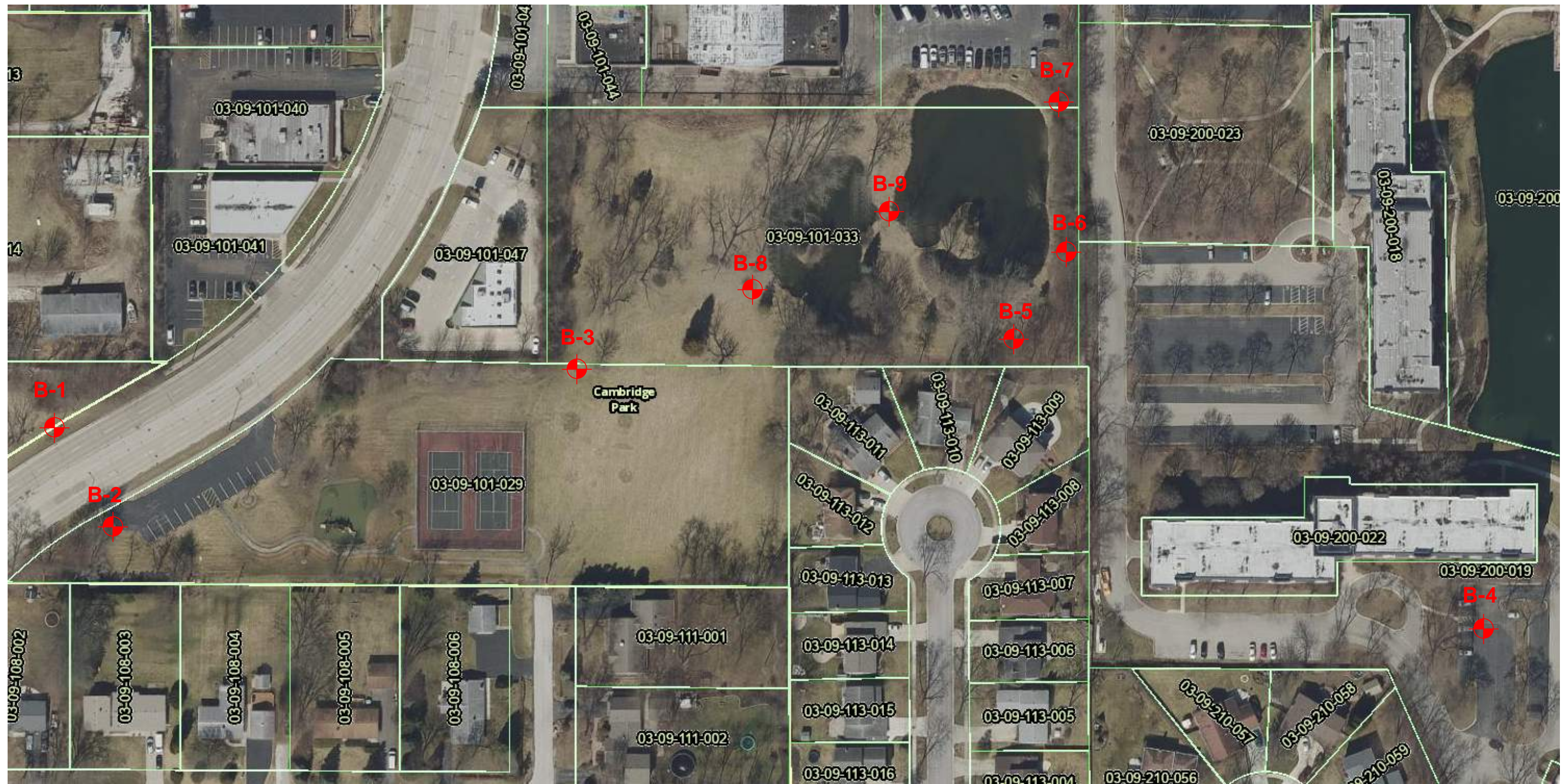
If you have any questions do not hesitate to contact us.

Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.

Thomas P. Johnson, P.E.
President

TPJ
Enc.



SMC		SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	VILLAGE OF BUFFALO GROVE		
Project:	CAMBRIDGE PARK		
Location:	BUFFALO GROVE, IL		
File No. 26080	Date: 9-10-21	Scale: 1" ≈ NONE	



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March 31, 2020
File No. 25051

Mr. Kyle E. Johnson, P.E., CFM
Village of Buffalo Grove
51 Raupp Boulevard
Buffalo Grove, IL 60089

Re: Geotechnical Investigation
2021 Cambridge Water & Street Improvements
Buffalo Grove, Illinois

Dear Mr. Johnson:

The following is our report of findings for the geotechnical investigation completed for the 2021 Cambridge Water & Street Improvements in the Village of Buffalo Grove, Illinois.

The investigation was requested to determine current pavement and subsurface conditions at select boring locations. The findings of the field investigation and the results of laboratory testing are intended to assist in pavement rehabilitation, water main installation and construction of proposed lift station.

SCOPE OF THE INVESTIGATION

The field investigation included obtaining 8 pavement cores and 4 soil borings at the locations requested and as indicated on the enclosed location sketch. The boring locations were established using field taping methods and accuracy.

We auger drilled the borings to depths of 7.5 feet to 35.0 feet below existing surface elevations. Soil samples were obtained using a split barrel sampler advanced utilizing an automatic SPT hammer. Soil profiles were determined in the field and soil samples returned to our laboratory for additional testing including determination of moisture content. Cohesive soils obtained by split barrel sampling were tested further to determine dry unit weight and unconfined compressive strength.

The results of all field determinations and laboratory testing are included in summary with this report.

RESULTS OF THE INVESTIGATION

Enclosed are core and boring logs indicating the pavement and soil conditions encountered at each location. The summary table below indicates pavement materials and thicknesses encountered at each location. Please refer to the individual core logs and pictures for more detailed information.

8 W. COLLEGE DR. • SUITE C • ARLINGTON HEIGHTS, IL 60004

SOIL BORINGS • SITE INVESTIGATIONS • PAVEMENT INVESTIGATIONS • GEOTECHNICAL ENGINEERING
TESTING OF • SOIL • ASPHALT • CONCRETE • MORTAR • STEEL

<u>Core</u>	<u>HMA Surface (in.)</u>	<u>HMA Binder (in.)</u>	<u>Total HMA (in.)</u>	<u>Portland Cement Concrete (in.)</u>	<u>Granular Base (in.)</u>	<u>Total Pavement (in.)</u>
<u>Cambridge Drive</u>						
1	3.25*	3.0	6.25	---	8.0	14.25
2	3.5*	2.25	5.75	---	6.75	12.5
3	3.25*	6.25	9.5	---	4.0	13.5
4	4.75*	2.75	7.5	---	6.0	13.5
<u>Anthony Road</u>						
5	6.75*	0.75	7.5	7.5	8.0+	23.0+
6	3.5*	1.25	4.75	---	9.5	14.25
<u>Cambridge Court</u>						
7	6.5*	1.5	8.0	---	3.25	11.25
<u>University Court</u>						
8	3.5*	2.5	6.0	---	7.5	13.5

Note: Failures noted in the pavement layers have the thicknesses shown in **bold**.
 Granular base contaminated with clay have the thicknesses shown in **bold**.
 The presence of reflective crack control fabric is indicated by (*).

Soil borings were performed at locations C/B-2, C/B-6, C-B-7 and B-9. A significant depth of uncontrolled fill soils was encountered at boring B-9. Composition of the fill includes the presence of silt/clay/sand, clay/silt, and silt/clay mixtures extending to a depth of 22.5 feet. The limits of fill placement were not determined within the scope of this investigation. Larger debris may also be present within the fill but was not encountered during the investigation.

Underlying natural soil conditions include the presence of cohesive soils. These are classified as very tough to hard clay/silt mixtures with lesser portions of sand and gravel.

Non-cohesive soils were also encountered as indicated at borings B-7 and B-9. These include medium dense to dense silt/clay, sand/gravel, and silt/sand/clay mixtures. The non-cohesive granular soils are often in a very damp to saturated condition. Cobbles and boulders may be present within the site soils at any elevation, although none were encountered while drilling.

The following table summarizes depth ranges below existing grade, the magnitude of soil strength within these ranges and other information:

<u>Boring</u>	<u>Depth Range Below Existing Surface (feet)</u>	<u>Soil Strength (lbs./sq.ft.)</u>	<u>Recorded Water Levels, W.D./A.D. (feet)</u>
2	1.5 to 6.0	8,000	dry/dry
6	1.5 to 6.0	8,000	dry/dry
7	1.5 to 3.5	3,000	16.0/16.0
	3.5 to 13.0	8,000	
	13.0 to 19.0	5,000	
	19.0 to 27.0	3,000	
9	1.0 to 23.0	*500	0.75/24/17.0
	23.0 to 24.5	3,000	
	24.5 to 25.5	5,000	
	25.5 to 32.0	8,000	

* Not recommended for support of foundations.

It is expected that the water main and foundations can be supported on undisturbed natural soils located at any elevation within the depth ranges indicated in the above table, except as noted. Above these depth ranges the soils are not considered able to support foundations, even at reduced design bearing values, due to long-term settlement considerations.

SUBSURFACE WATER

The boring logs and the above table indicate the depth at which subsurface water was encountered in the bore hole at the time of the drilling operations and during the period of these readings. It is expected that fluctuations from the water levels recorded will occur over a period of time due to variations in rainfall, temperature, subsurface soil conditions, soil permeability and other factors not evident at the time of the water level measurements.

The initial level recorded at boring B-9 indicates a perched water condition. Perched water is primarily surface precipitation falling on this site or adjacent properties and which becomes trapped in pervious soil that is underlaid by relatively impervious soil. This water often flows laterally along a path of least resistance such as granular base, non-cohesive soil strata, or other permeable medium. This water will also drain from the embankments of open excavations.

WATER MAIN

We understand new water main is planned to be installed as part of this project. The water main pipe can be supported on undisturbed natural soils located below all pavement materials, fill soils, low strength soils and other unsuitable conditions which may be encountered. Soils encountered at typical water main depths are expected to be suitable for support of the new

water main. When the pipe is placed in an open cut excavation, a granular bedding, CA07/CA11, should be used to support the pipe on the undisturbed natural soils.

In the unimproved areas, the trench excavation can be backfilled with the suitable non-organic soils from the trench. In the improved areas, such as under pavements and sidewalks, the trench should be backfilled with compacted crushed granular fill (CA06). The backfill should be placed in lifts not to exceed 12.0 inches when uncompacted. Each lift should exceed the minimum compaction requirement prior to the placement of the next lift. We would recommend a minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved in the pavement and sidewalk areas and a minimum of 85% in the unimproved areas.

FOUNDATIONS

Based on the results of this investigation it is our opinion that continuous and isolated footing foundations may be considered for support of new structure loads. These foundations can be supported on undisturbed natural soils located below all fill soils, low-strength soils, and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design. This value can be used to size foundations for support of structure dead and live loads.

All exterior foundations should extend at least 48.0 inches below exposed surface elevations to provide adequate protection against uplift due to freezing of the supporting soils. We recommend providing adequate reinforcing steel in foundation walls and piers to minimize the effects of long-term differential settlement.

DEWATERING

Shallow excavations may require dewatering due to subsurface water seepage and/or surface precipitation. This water can be removed to depths of several feet by standard sump and pump operations. Soils exposed at pipe bedding, foundation, slab or undercut elevations should not be permitted to become saturated. Loss of bearing strength and stability may occur, requiring additional soil excavation.

Aggressive dewatering efforts will be necessary for deeper excavations extending to the saturated granular materials. Well-points or deep sumps can be utilized to collect the water for pumping in an effort to lower the water level below the bottom elevation of proposed excavations. The dewatering should be accomplished prior to soil excavation when possible.

The uncontrolled fill and non-cohesive soils will be unstable. These soils tend to cave or run when submerged or disturbed. The stability of exposed embankments is minimal to non-existent as confining soil pressures are removed. Proper drainage within excavations is necessary at all times, particularly when excavations extend below anticipated water levels and below saturated soils.

The contractor should be made responsible for designing and constructing stable temporary excavations. Also, the contractor should shore, slope, bench or restrain the sides of the

excavations as required to maintain stability of both the excavation sides and bottom. In no case, should the slope, slope heights, or excavation depth exceed those in the local, state, and federal safety regulations.

SUBGRADE SOIL PREPARATION

The procedure in all areas of subgrade supported improvements should include the removal of unsuitable surface conditions including vegetation, significant debris, weak or unstable soils, and other deleterious conditions which may be encountered. Above grade areas should be cut to design subgrade elevations. Exposed subgrade soils should be leveled, compacted and proof-rolled in the presence of the Soil Engineer.

Proof-rolling may reveal areas of unstable soil conditions, requiring additional removal. Soft or unstable soil conditions in pavement areas can often be bridged by use of an effective depth of crushed granular material. The placement of the crushed granular bridging material, possibly in conjunction with the use of an appropriate geotextile fabric, should only proceed after review of the proof-roll conditions by the Soil Engineer. Long-term settlement of pavement surfaces may occur locally as the bridged soils desiccate.

Structural fill can be placed on soils prepared to the satisfaction of the Soil Engineer. The fill should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed minimum compaction requirements prior to placement of the next lift. We recommend a minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved within building areas. A minimum of 90% compaction should be achieved beneath exterior improvements such as pavements and sidewalks. Compaction requirements also apply to backfill placement around foundations and within trench excavations located below subgrade supported improvements.

CONCLUSION

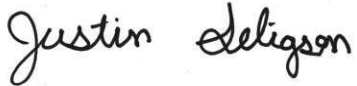
The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present due to naturally changing and disturbed soil conditions.

Our understanding of the proposed improvements is based on limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed foundation, pavement and grading plans be reviewed by our office to determine if additional considerations are necessary to address anticipated subsurface conditions. Soil conditions encountered at foundation elevations are recommended to be tested to verify the presence of design soil strength prior to concrete placement.

If you have any questions concerning the findings or recommendations presented in this report, please let us know.

Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.

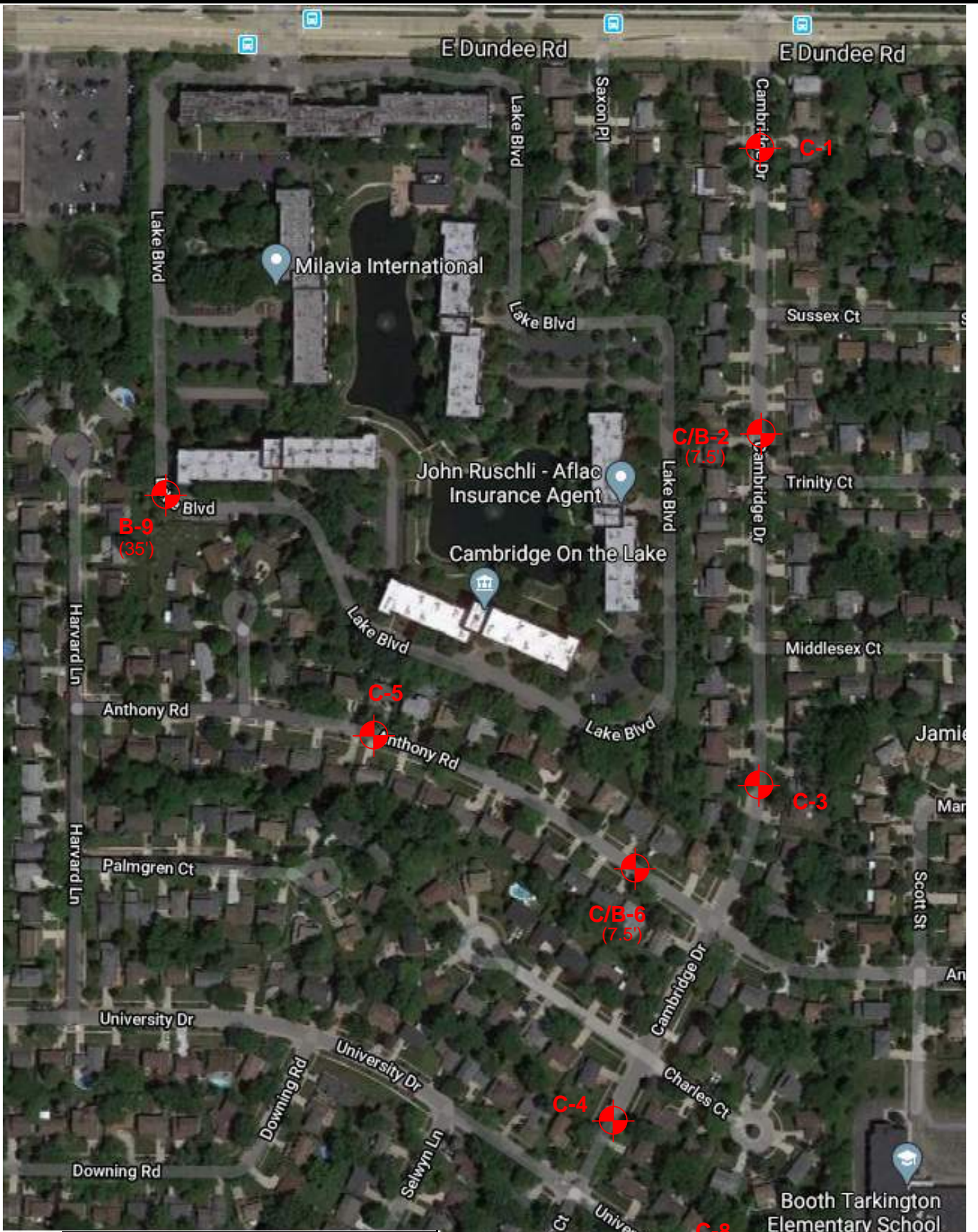


Justin Seligson, E.I.T.
Project Engineer



Thomas P. Johnson, P.E.
President

JMS:TPJ
Enc.



SMC		SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	VILLAGE OF BUFFALO GROVE		
Project:	2021 CAMBRIDGE WATER & STREET IMPROVEMENTS		
Location:	BUFFALO GROVE, ILLINOIS		
File No.	25051	Date: 3-24-20	Scale: NONE

Client: Village of Buffalo Grove

File No. 25051 Date Drilled: 3/27/20

Reference: 2021 Cambridge
Water & Street Improvements

Comments: 225 Lake Boulevard

depth, ft.	Equipment: <input checked="" type="checkbox"/> CME 45B <input type="checkbox"/> CME 55 <input type="checkbox"/> Hand Auger <input type="checkbox"/> Other	standard penetration	moisture content	dry unit weight lbs./cu.ft.	unconfined compressive strength	○ unconfined compressive strength, tons/sq. ft. ● penetrometer reading, tons/sq. ft. 1.0 2.0 3.0 4.0				
	CLASSIFICATION					× standard penetration "N", blows/ft. △ moisture content, % 10 20 30 40				
	Elevation Existing Surface	×	△	γ	○					
	(a) + (b) See Below ▽									
	Black to brown/gray silt, some clay and sand, trace gravel, damp, medium dense - Fill	11	22.9							
5	Dark brown/gray clay, some silt, trace sand & gravel, damp, tough - Fill	7	20.5	107.7	2.4					
	Dark brown/black/gray silt & clay, trace sand, gravel & wood chips, damp to very damp, loose - Fill	4	25.2							
10		4	27.0							
	Dark brown/black/gray clay & silt, trace sand & gravel, damp to very damp, stiff to tough - Fill ▽	5	24.1	98.0	0.7					
15		5	26.2	85.5	0.8					
20		7	26.7	92.8	0.8					
	Gray silt, some clay, trace sand & gravel, damp, medium dense ▽		22.5							
25	(c) See Below	20	13.7							
	Gray clay, some silt, trace sand & gravel, damp, hard	29	16.2	124.2	10.0+					10.0+
35	End of Boring	19	19.7							4.5+
40	(a) Bituminous Concrete - 3.0" (b) Black sand & gravel, very damp to saturated (c) Gray medium to coarse sand, some fine sand & gravel, saturated, medium dense									

Water encountered at 0.75/24 feet during drilling operations (W.D.)
 Water recorded at 17.0 feet on completion of drilling operations (A.D.)
 Water recorded at _____ feet _____ hours after completion of drilling operations (A.D.)

GENERAL NOTES

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487 (when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu-tons/sq.ft.	N (unreliable)
Very soft	0.00 – 0.25	0 – 2
Soft	0.26 – 0.49	3 – 4
Stiff	0.50 – 0.99	5 – 8
Tough	1.00 – 1.99	9 – 15
Very Tough	2.00 – 3.99	16 – 30
Hard	4.00 – 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N – blows/foot
Very Loose	0 – 4
Loose	5 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term	Size Range
Boulder	over 8 in.
Cobble	3 in. to 8 in.
Gravel - coarse	1 in. to 3 in.
- medium	3/8 in. to 1 in.
- fine	#4 sieve to 3/8 in.
Sand - coarse	#10 sieve to #4 sieve
- medium	#40 sieve to #10 sieve
- fine	#200 sieve to #40 sieve
Silt	0.002 mm to #200 sieve
Clay	smaller than 0.002mm
Modifying Term	Percent by Weight
Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Moisture Content

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF	- Continuous Flight Auger
HS	- Hollow Stem Auger
HA	- Hand Auger
RD	- Rotary Drilling
AX	- Rock Core, 1-3/16 in. diameter
BX	- Rock Core, 1-5/8 in. diameter
NX	- Rock Core, 2-1/8 in. diameter
S	- Sample Number
T	- Type of Sample
J	- Jar
AS	- Auger Sample
SS	- Split Spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST	- Shelby Tube (2 in. O.D. w/ith1-7/8 in. I. D.)
R	- Recovery Length, in.
B	- Blows/6 in. interval, Standard Penetration Test (SPT)
N	- Blows/foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen.	- Pocket Penetrometer readings, tons/sq.ft.
W	- Water Content, % dry weight
Uw	- Dry Unit Weight of soil, lbs./cu.ft.
Qu	- Unconfined Compressive Strength, tons/sq.ft.
Str	- % Strain at Qu.
WL	- Water Level
WD	- While Drilling
AD	- After Drilling
DCI	- Dry Cave-in.
WCI	- Wet Cave-in.
LL	- Liquid Limit, %
PL	- Plastic Limit, %
PI	- Plasticity Index (LL-PL)
LI	- Liquidity Index [(W-PL)/PI]

Cook County Prevailing Wage Rates posted on 3/3/2020

Trade Title	Rg	Type	C	Base	Foreman	Overtime				H/W	Pension	Vac	Trng	Other Ins
						M-F	Sa	Su	Hol					
ASBESTOS ABT-GEN	AII	ALL		43.72	44.72	1.5	1.5	2.0	2.0	14.99	13.61	0.00	0.90	
ASBESTOS ABT-MEC	AII	BLD		37.88	40.38	1.5	1.5	2.0	2.0	13.42	12.20	0.00	0.72	
BOILERMAKER	AII	BLD		50.51	55.05	2.0	2.0	2.0	2.0	6.97	14.65	0.00	1.10	
BRICK MASON	AII	BLD		46.88	51.57	1.5	1.5	2.0	2.0	10.85	19.31	0.00	0.95	
CARPENTER	AII	ALL		48.55	50.55	1.5	1.5	2.0	2.0	11.79	21.84	0.00	0.73	
CEMENT MASON	AII	ALL		46.25	48.25	2.0	1.5	2.0	2.0	14.50	19.04	0.00	1.25	
CERAMIC TILE FINISHER	AII	BLD		40.56	40.56	1.5	1.5	2.0	2.0	11.00	12.80	0.00	0.86	
COMMUNICATION ELECTRICIAN	AII	BLD		44.86	47.66	1.5	1.5	2.0	2.0	10.22	13.48	1.25	1.15	0.07
ELECTRIC PWR EQMT OP	AII	ALL		53.40	58.40	1.5	1.5	2.0	2.0	12.36	17.72	0.00	3.39	
ELECTRIC PWR GRNDMAN	AII	ALL		41.65	58.40	1.5	1.5	2.0	2.0	9.64	13.82	0.00	2.65	
ELECTRIC PWR LINEMAN	AII	ALL		53.40	58.40	1.5	1.5	2.0	2.0	12.36	17.72	0.00	3.39	
ELECTRICIAN	AII	ALL		49.35	52.35	1.5	1.5	2.0	2.0	15.69	17.02	1.25	1.48	0.40
ELEVATOR CONSTRUCTOR	AII	BLD		56.61	63.69	2.0	2.0	2.0	2.0	15.58	17.51	4.53	0.62	
FENCE ERECTOR	AII	ALL		42.88	44.88	1.5	1.5	2.0	2.0	13.64	14.89	0.00	0.65	
GLAZIER	AII	BLD		44.85	46.35	1.5	2.0	2.0	2.0	14.49	22.29	0.00	0.94	
HEAT/FROST INSULATOR	AII	BLD		50.50	53.00	1.5	1.5	2.0	2.0	13.42	13.66	0.00	0.72	
IRON WORKER	AII	ALL		50.63	52.63	2.0	2.0	2.0	2.0	14.65	23.78	0.00	0.44	
LABORER	AII	ALL		43.72	44.47	1.5	1.5	2.0	2.0	14.99	13.61	0.00	0.90	
LATHER	AII	ALL		48.55	50.55	1.5	1.5	2.0	2.0	11.79	21.84	0.00	0.73	
MACHINIST	AII	BLD		48.93	51.43	1.5	1.5	2.0	2.0	7.68	8.95	1.85	1.32	
MARBLE FINISHER	AII	ALL		35.15	48.33	1.5	1.5	2.0	2.0	10.85	17.66	0.00	0.52	
MARBLE MASON	AII	BLD		46.03	50.63	1.5	1.5	2.0	2.0	10.85	18.78	0.00	0.64	
MATERIAL TESTER I	AII	ALL		33.72		1.5	1.5	2.0	2.0	14.99	13.61	0.00	0.90	
MATERIALS TESTER II	AII	ALL		38.72		1.5	1.5	2.0	2.0	14.99	13.61	0.00	0.90	
MILLWRIGHT	AII	ALL		48.55	50.55	1.5	1.5	2.0	2.0	11.79	21.84	0.00	0.73	
OPERATING ENGINEER	AII	BLD	1	51.10	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	BLD	2	49.80	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	BLD	3	47.25	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	BLD	4	45.50	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	BLD	5	54.85	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	BLD	6	52.10	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	

Cook County Prevailing Wage Rates posted on 3/3/2020

Trade Title	Rg	Type	C	Base	Foreman	Overtime				H/W	Penslon	Vac	Trng	Other Ins
						M-F	Sa	Su	Hol					
OPERATING ENGINEER	AII	BLD	7	54.10	55.10	2.0	2.0	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	FLT	1	58.20	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	FLT	2	56.70	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	FLT	3	50.45	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	FLT	4	41.95	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	FLT	5	59.70	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	FLT	6	38.00	58.20	1.5	1.5	2.0	2.0	19.65	15.10	2.00	1.40	
OPERATING ENGINEER	AII	HWY	1	49.30	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	2	48.75	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	3	46.70	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	4	45.30	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	5	44.10	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	6	52.30	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
OPERATING ENGINEER	AII	HWY	7	50.30	53.30	1.5	1.5	2.0	2.0	20.50	16.85	2.00	1.65	
ORNAMENTAL IRON WORKER	AII	ALL		50.05	52.55	2.0	2.0	2.0	2.0	14.14	21.13	0.00	1.25	
PAINTER	AII	ALL		47.30	53.21	1.5	1.5	1.5	2.0	12.01	12.74	0.00	1.87	
PAINTER - SIGNS	AII	BLD		39.84	44.74	1.5	1.5	2.0	2.0	2.73	3.39	0.00	0.00	
PILEDRIIVER	AII	ALL		48.55	50.55	1.5	1.5	2.0	2.0	11.79	21.84	0.00	0.73	
PIPEFITTER	AII	BLD		49.60	52.60	1.5	1.5	2.0	2.0	10.75	19.85	0.00	2.67	
PLASTERER	AII	BLD		44.50	47.17	1.5	1.5	2.0	2.0	14.50	17.29	0.00	1.50	
PLUMBER	AII	BLD		51.00	54.05	1.5	1.5	2.0	2.0	15.37	14.75	0.00	1.35	
ROOFER	AII	BLD		44.60	48.60	1.5	1.5	2.0	2.0	10.58	13.31	0.00	0.70	
SHEETMETAL WORKER	AII	BLD		45.50	49.14	1.5	1.5	2.0	2.0	11.70	25.58	0.00	0.86	
SIGN HANGER	AII	BLD		32.68	35.29	1.5	1.5	2.0	2.0	5.40	3.75	0.00	0.00	
SPRINKLER FITTER	AII	BLD		50.15	52.65	1.5	1.5	2.0	2.0	13.50	16.60	0.00	0.65	
STEEL ERECTOR	AII	ALL		42.07	44.07	2.0	2.0	2.0	2.0	13.45	19.59	0.00	0.35	
STONE MASON	AII	BLD		46.88	51.57	1.5	1.5	2.0	2.0	10.85	19.31	0.00	0.95	
TERRAZZO FINISHER	AII	BLD		42.54	42.54	1.5	1.5	2.0	2.0	11.00	14.64	0.00	0.88	
TERRAZZO MASON	AII	BLD		46.38	49.88	1.5	1.5	2.0	2.0	11.00	16.09	0.00	0.93	
TILE MASON	AII	BLD		47.50	51.50	1.5	1.5	2.0	2.0	11.00	16.06	0.00	0.93	
TRAFFIC SAFETY WORKER	AII	HWY		37.75	39.35	1.5	1.5	2.0	2.0	9.30	9.87	0.00	0.30	
TRUCK DRIVER	E	ALL	1	36.45	37.10	1.5	1.5	2.0	2.0	9.68	13.25	0.00	0.15	
TRUCK DRIVER	E	ALL	2	36.70	37.10	1.5	1.5	2.0	2.0	9.68	13.25	0.00	0.15	
TRUCK DRIVER	E	ALL	3	36.90	37.10	1.5	1.5	2.0	2.0	9.68	13.25	0.00	0.15	
TRUCK DRIVER	E	ALL	4	37.10	37.10	1.5	1.5	2.0	2.0	9.68	13.25	0.00	0.15	
TRUCK DRIVER	W	ALL	1	37.36	37.91	1.5	1.5	2.0	2.0	9.00	11.64	0.00	0.15	

Cook County Prevailing Wage Rates posted on 3/3/2020

Trade Title	Rg	Type	C	Base	Foreman	Overtime				H/W	Pension	Vac	Trng	Other Ins
						M-F	Sa	Su	Hol					
TRUCK DRIVER	W	ALL	2	37.51	37.91	1.5	1.5	2.0	2.0	9.00	11.64	0.00	0.15	
TRUCK DRIVER	W	ALL	3	37.71	37.91	1.5	1.5	2.0	2.0	9.00	11.64	0.00	0.15	
TRUCK DRIVER	W	ALL	4	37.91	37.91	1.5	1.5	2.0	2.0	9.00	11.64	0.00	0.15	
TUCKPOINTER	All	BLD		46.50	47.50	1.5	1.5	2.0	2.0	8.34	18.40	0.00	0.93	

Legend

Rg Region

Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers

C Class

Base Base Wage Rate

OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

OT Sa Overtime pay required for every hour worked on Saturdays

OT Su Overtime pay required for every hour worked on Sundays

OT Hol Overtime pay required for every hour worked on Holidays

H/W Health/Welfare benefit

Vac Vacation

Trng Training

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations COOK COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date. ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all

sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician;

Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin

Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY

Effective November 30, 2018, the description of the traffic safety worker trade in this County is as follows: Work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary, non-temporary or permanent lane, pavement or roadway markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turntrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turntrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

--END OF SECTION--



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Source Site Certification by Owner or Operator for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-662

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by source site owners and operators to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1) (A), that soil (i) was removed from a site that is not potentially impacted property and is presumed to be uncontaminated soil and (ii) is within a pH range of 6.25 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Buffalo Grove 3 Year CIPs Office Phone Number, if available: _____

Physical Site Location (Street, Road): Portions of Lake Blvd, Cambridge Dr, Anthony Rd, and University Ct - See Figures

City: Buffalo Grove State: IL Zip Code: 60089 County: Cook

Township: Wheeling

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

Latitude: 42.13269 Longitude: - 87.95325

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

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

Approximate Start Date (mm/dd/yyyy): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Village of Buffalo Grove

Name: _____

Street Address: 50 Raupp Blvd

Street Address: _____

PO Box: _____

PO Box: _____

City: Buffalo Grove State: IL

City: _____ State: _____

Zip Code: 60089 Phone: 847-459-2500

Zip Code: _____ Phone: _____

Contact: _____

Contact: _____

Email, if available: _____

Email, if available: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Source Site Certification

III. Descriptions of Current and Past Uses of Source Site

Describe the current and past uses of the site and nearby properties.* Attach additional information as needed. The description must take into account, at a minimum, the following for the source site and for nearby property: (1) use of the properties for commercial or industrial purposes; (2) the use, storage or disposal of chemical or petroleum products in individual containers greater than 5 gallons or collectively more than 50 gallons; (3) the current or past presence of any storage tanks (above ground or underground); (4) any waste storage, treatment or disposal at the properties; (5) any reported releases or any environmental cleanup or removal of contaminants; (6) any environmental liens or governmental notification of environmental violations; (7) any contamination in a well that exceeds the Board's groundwater quality standards; (8) the use, storage, or disposal of transformers or capacitors manufactured before 1979; and (9) any fill dirt brought to the properties from an unknown source or site.

Number of pages attached: 166

The Site is currently and historically always been adjoined by residential properties. No potentially impacted properties (PIPs) were identified through the historical and regulatory review of the Site (see attached ERIS). True North collected four (4) soil samples for pH analysis which supports this certification that no PIPs exist. Figures, laboratory analysis report and laboratory certification are attached.

*The description must be sufficient to demonstrate that the source site is not potentially impacted property, thereby allowing the source site owner or operator to provide this certification.

IV. Soil pH Testing Results

Describe the results of soil pH testing showing that the soil pH is within the range of 6.25 to 9.0 and attach any supporting documentation.

Number of pages attached: 20

See attached laboratory reports and associated NELAC certification. The soil pH of all samples was within the acceptable range of 6.25 to 9.0 units. Figure 2 identifies the location of the soil that is covered by this certification.

V. Source Site Owner, Operator or Authorized Representative's Certification Statement and Signature

In accordance with the Illinois Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I _____ (owner, operator or authorized representative of source site) certify that this site is not a potentially impacted property and the soil is presumed to be uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. I further certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. Additionally, I certify that I am either the site owner or operator or a duly authorized representative of the site owner or site operator and am authorized to sign this form. Furthermore, I certify that all information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete.

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

Owner

Operator

Owner's Duly Authorized Representative

Operator's Duly Authorized Representative

Printed Name

Date

Signature



LEGEND
 — PROJECT AREA



CLIENT
 SOIL AND MATERIAL CONSULTANTS, INC.
 8 WEST COLLEGE DRIVE, SUITE C
 ARLINGTON HEIGHTS, ILLINOIS

SITE
 PORTIONS OF CAMBRIDGE DR, LAKE BLVD,
 ANTHONY RD, AND UNIVERSITY CT
 BUFFALO GROVE, ILLINOIS





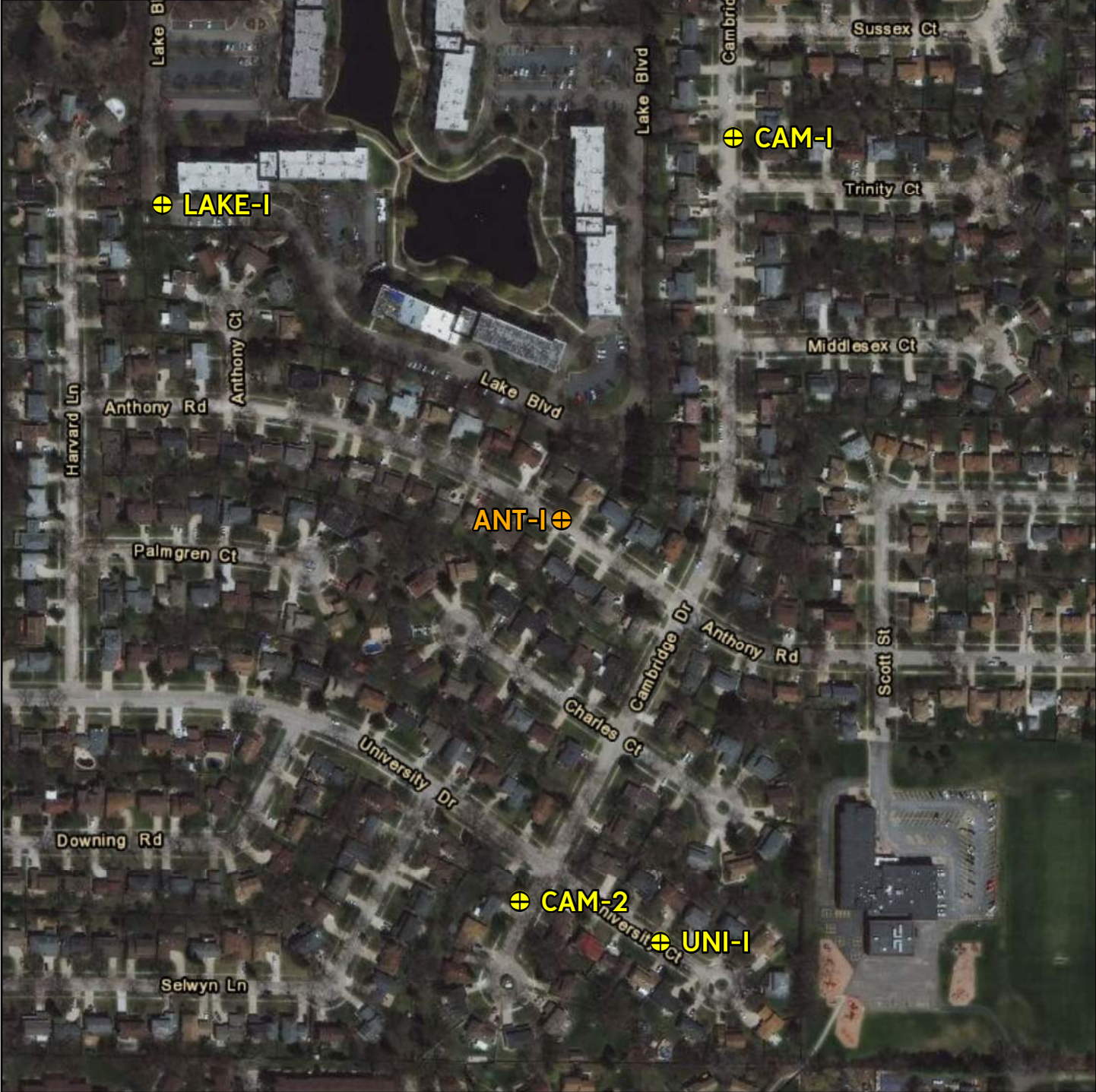
PROJECT	T120108
DATE	4/10/2020
SCALE	1 inch=1,000 feet

FIGURE
 I



LEGEND

-  SOIL SAMPLE LOCATION
-  SOIL BORING VOC SCREENING



CLIENT
 SOIL AND MATERIAL CONSULTANTS, INC.
 8 WEST COLLEGE DRIVE, SUITE C
 ARLINGTON HEIGHTS, ILLINOIS

SITE
 PORTIONS OF CAMBRIDGE DR, LAKE BLVD,
 ANTHONY RD, AND UNIVERSITY CT
 BUFFALO GROVE, ILLINOIS



PROJECT	T120108
DATE	4/13/2020
SCALE	1 inch=400 feet

FIGURE
2



March 30, 2020

Marjory Bredrup
True North Consultants
1000 East Warrenville Rd. #140
Naperville, IL 60563

RE: Buffalo Grove 2021 CIP:Cambridge Area

Dear Marjory Bredrup:

Please find enclosed the analytical results for the **1** sample(s) the laboratory received on **3/27/20 5:00 pm** and logged in under work order **0034735**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Austin'.

Michael Austin
Project Manager
lsmla





ANALYTICAL RESULTS

Sample: 0034735-01
Name: UNI-1
Matrix: Solid - Grab

Sampled: 03/25/20 14:45
Received: 03/27/20 17:00
PO #: T120108

Parameter	Result	Unit	Qualifier	Dilution	MDL	MRL	Analyzed	Analyst	Method
General Chemistry - STL									
pH	8.01	pH Units	FP	1		0.0100	03/30/20 13:48	BCH	EPA 9045D



QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B007475 - 04-No Prep WC Solid - EPA 9045D</u>									
Duplicate (B007475-DUP1)	Sample: 0034731-01			Prepared & Analyzed: 03/30/20					
pH	8.43	pH Units	FP		8.43			0.07	20



NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capitol Airport Drive, Springfield, IL 62707

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17592

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - Pending

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

FP Per analytical methodology this analyte is a field parameter that must be analyzed at time of sample collection to meet hold time requirements. The sample was analyzed in the laboratory as soon as possible after receipt. Data is to be viewed with caution.

Chain of Custody Record

Phone: (847) 651-2604
 FAX: (847) 458-9680

0834735



Analysis and/or Method Requested

Reporting

Client		True North Consultants				Analysis and/or Method Requested					Reporting					
Address		1000 East Warrenville Road, Suite 140				Hd					<input checked="" type="checkbox"/> MAC <input type="checkbox"/> CCDD					
City, State, Zip Code		Naperville, Illinois 60563									<input type="checkbox"/> A <input type="checkbox"/> D <input type="checkbox"/> B <input type="checkbox"/> E <input type="checkbox"/> C <input type="checkbox"/> F					
Phone / Facsimile		630.717.2880/630.689.5881									<input type="checkbox"/> Resid <input type="checkbox"/> Indust					
Project Name / Number		Buffalo Grove 2021 CIP														
Project Location		Cambridge Area									RISC <input type="checkbox"/> Resid <input type="checkbox"/> Indust					
P.O. # or Invoice To		T120108									CALM <input type="checkbox"/> Resid <input type="checkbox"/> Indust					
Contact Person		M. Bredrup, B. Mihelich, L. Schroeder, J. Reed, M. Kupczyk, M. Jawad									CCDD <input type="checkbox"/> A <input type="checkbox"/> D <input type="checkbox"/> B <input type="checkbox"/> E <input type="checkbox"/> C <input type="checkbox"/> F					
Sample Description		Date		Sampling Time		Matrix Code		Preserv Code		No. of Containers		Sample Type		Sampler Comments		
UNI-1		3/25/2020		1445		S 0		0		1		X				
Matrix Code		A - Aqueous		DW - Drinking Water		GW - Ground Water		NA - Non-Aqueous Liquid		S - Solid		O - Oil		X - Other (Specify) X - Other (Specify)		
Preserv Code		0 - None		1 - HCl		2 - H2SO4		3 - HNO3		4 - NaOH		5 - 5035 Kit				
Relinquished By		Date		Time		Received By		Date		Time		Method of Shipment				
Blair H. Reed		3/27/20		1500		Blair H. Reed		3/27/20		1530		X - Other (Specify)				
Special Instructions:		Date Required:		Turnaround Time: Standard		Rush		QC Level		On wet ice?		Temperature (°C)				
		3/28/20		Standard		<input type="checkbox"/>		1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		<input checked="" type="radio"/> Yes <input type="radio"/> No		L-1				



March 30, 2020

Marjory Bredrup
True North Consultants
1000 East Warrenville Rd. #140
Naperville, IL 60563

RE: Buffalo Grove 2021 CIP:Cambridge Area

Dear Marjory Bredrup:

Please find enclosed the analytical results for the **1** sample(s) the laboratory received on **3/27/20 5:00 pm** and logged in under work order **0034736**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

Michael Austin
Project Manager
lsmla





ANALYTICAL RESULTS

Sample: 0034736-01
Name: CAM-1
Matrix: Solid - Grab

Sampled: 03/27/20 08:58
Received: 03/27/20 17:00
PO #: T120108

Parameter	Result	Unit	Qualifier	Dilution	MDL	MRL	Analyzed	Analyst	Method
General Chemistry - STL									
pH	8.22	pH Units	FP	1		0.0100	03/30/20 13:48	BCH	EPA 9045D



QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B007475 - 04-No Prep WC Solid - EPA 9045D</u>									
Duplicate (B007475-DUP1)		Sample: 0034731-01			Prepared & Analyzed: 03/30/20				
pH	8.43	pH Units	FP		8.43			0.07	20



NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capitol Airport Drive, Springfield, IL 62707

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17592

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - Pending

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

FP Per analytical methodology this analyte is a field parameter that must be analyzed at time of sample collection to meet hold time requirements. The sample was analyzed in the laboratory as soon as possible after receipt. Data is to be viewed with caution.

Chain of Custody Record

Phone: (847) 651-2604
 FAX: (847) 458-9680

0634734



Client		True North Consultants				Analysis and/or Method Requested						Reporting				
Address		1000 East Warrenville Road, Suite 140				pH						<input checked="" type="checkbox"/> MAC <input type="checkbox"/> CCDD				
City, State, Zip Code		Naperville, Illinois 60563														
Phone / Facsimile		630.717.2880/630.689.5881														
Project Name / Number		Buffalo Grove 2021 CIP														
Project Location		Cambridge Area														
P.O. # or Invoice To		T120108										<input type="checkbox"/> RISC <input type="checkbox"/> Resid <input type="checkbox"/> Indust				
Contact Person		M. Bredrup, B. Mihalich, L. Schroeder, J. Reed, M. Kupczyk, M. Jawad										<input type="checkbox"/> CALM <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F				
Sample Description		Date		Sampling Time		Matrix Code		Preserv Code		No. of Containers		Sample Type		Sampler Comments		
CAM-1		3/27/2020		858		S		0		1		X				
Matrix Code		A - Aqueous		DW - Drinking Water		GW - Ground Water		NA - Non-Aqueous Liquid		S - Solid		O - Oil		X - Other (Specify)		
Preserv Code		0 - None		1 - HCl		2 - H2SO4		3 - HNO3		4 - NaOH		5 - 5035 Kit		X - Other (Specify)		
Relinquished By		Date		Time		Received By		Date		Time		Method of Shipment				
Albert Witt		3-27-20		1500		M. Bredrup		3/25/20		1530		L-1				
Special Instructions:																
Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Date Required:		QC Level		On wet ice?		Temperature (°C)								
				1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		L-1								



March 30, 2020

Marjory Bredrup
True North Consultants
1000 East Warrenville Rd. #140
Naperville, IL 60563

RE: Buffalo Grove 2021 CIP:Cambridge Area

Dear Marjory Bredrup:

Please find enclosed the analytical results for the **1** sample(s) the laboratory received on **3/27/20 5:00 pm** and logged in under work order **0034737**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

Michael Austin
Project Manager
lsmla





ANALYTICAL RESULTS

Sample: 0034737-01
Name: CAM-2
Matrix: Solid - Grab

Sampled: 03/27/20 11:50
Received: 03/27/20 17:00
PO #: T120108

Parameter	Result	Unit	Qualifier	Dilution	MDL	MRL	Analyzed	Analyst	Method
General Chemistry - STL									
pH	7.79	pH Units	FP	1		0.0100	03/30/20 13:48	BCH	EPA 9045D



QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B007475 - 04-No Prep WC Solid - EPA 9045D</u>									
Duplicate (B007475-DUP1)	Sample: 0034731-01			Prepared & Analyzed: 03/30/20					
pH	8.43	pH Units	FP		8.43			0.07	20



NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capitol Airport Drive, Springfield, IL 62707

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17592

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - Pending

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

FP Per analytical methodology this analyte is a field parameter that must be analyzed at time of sample collection to meet hold time requirements. The sample was analyzed in the laboratory as soon as possible after receipt. Data is to be viewed with caution.



March 30, 2020

Marjory Bredrup
True North Consultants
1000 East Warrenville Rd. #140
Naperville, IL 60563

RE: Buffalo Grove 2021 CIP:Cambridge Area

Dear Marjory Bredrup:

Please find enclosed the analytical results for the **1** sample(s) the laboratory received on **3/27/20 5:00 pm** and logged in under work order **0034738**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

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Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Austin'.

Michael Austin
Project Manager
lsmla





ANALYTICAL RESULTS

Sample: 0034738-01
Name: LAKE-1
Matrix: Solid - Grab

Sampled: 03/27/20 10:40
Received: 03/27/20 17:00
PO #: T120108

Parameter	Result	Unit	Qualifier	Dilution	MDL	MRL	Analyzed	Analyst	Method
General Chemistry - STL									
pH	8.37	pH Units	FP	1		0.0100	03/30/20 13:48	BCH	EPA 9045D



QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B007475 - 04-No Prep WC Solid - EPA 9045D</u>									
Duplicate (B007475-DUP1)	Sample: 0034731-01			Prepared & Analyzed: 03/30/20					
pH	8.43	pH Units	FP		8.43			0.07	20



NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

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Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capitol Airport Drive, Springfield, IL 62707

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17592

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - Pending

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

FP Per analytical methodology this analyte is a field parameter that must be analyzed at time of sample collection to meet hold time requirements. The sample was analyzed in the laboratory as soon as possible after receipt. Data is to be viewed with caution.

Chain of Custody Record

Phone: (847) 651-2604
 FAX: (847) 458-9680

0634738



Client		True North Consultants				Analysis and/or Method Requested						Reporting								
Address		1000 East Warrenville Road, Suite 140				Hg						<input checked="" type="checkbox"/> MAC <input type="checkbox"/> CCDD <input type="checkbox"/> A <input type="checkbox"/> D <input type="checkbox"/> B <input type="checkbox"/> E <input type="checkbox"/> C <input type="checkbox"/> F								
City, State, Zip Code		Naperville, Illinois 60563																		
Phone / Facsimile		630.717.2880/630.689.5881																		
Project Name / Number		Buffalo Grove 2021 CIP																		
Project Location		Cambridge Area																		
P.O. # or Invoice To		T120108				<input type="checkbox"/> RISC <input type="checkbox"/> Resid <input type="checkbox"/> Indust														
Contact Person		M. Bredrup, B. Michelich, L. Schroeder, J. Reed, M. Kupczyk, M. Jawad																		
Sample Description		Date		Sampling Time		Matrix Code	Preserv Code	No. of Containers		Sample Type	Sampler Comments									
LAKE-1		3/27/2020		1040		S	0	1		X	X									
Matrix Code		A - Aqueous		DW - Drinking Water		GW - Ground Water		NA - Non-Aqueous Liquid		S - Solid		O - Oil		X - Other (Specify)						
Preserv Code		0 - None		1 - HCl		2 - H2SO4		3 - HNO3		4 - NaOH		5 - 5035 Kit		X - Other (Specify)						
Relinquished By		Date		Time		Received By		Date		Time		Method of Shipment								
<i>[Signature]</i>		3/27/20		1500		<i>[Signature]</i>		3/27/20		1530		Method of Shipment								
<i>[Signature]</i>		3/27/20		1700		<i>[Signature]</i>		3/27/20		0930		Method of Shipment								
Special Instructions:													Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		QC Level 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		On wet ice? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Temperature (°C) 1.1	



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
NELAP - RECOGNIZED
ENVIRONMENTAL LABORATORY ACCREDITATION

is hereby granted to

PDC Laboratories, Inc, Hazelwood
944 Anglum Road
Hazelwood, MO 63042

NELAP ACCREDITED

Accreditation Number #200080



According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Primary Accrediting Authority: Kansas

Celeste M. Crowley
Supervisor
Environmental Laboratory Accreditation Program

Certificate No: 2000802020-1

Expiration Date: 8/5/2020

Issued On: 3/26/2020

**State of Illinois
Environmental Protection Agency**

Certificate No.: 2000802020-1

Awards the Certificate of Approval to:

PDC Laboratories, Inc, Hazelwood
944 Anglum Road
Hazelwood, MO 63042

Accreditation Start: 8/5/2019 Accreditation End: 8/5/2020

The Illinois Environmental Laboratory Accreditation Program encourages all clients and data users to verify the most current scope of accreditation for PDC Laboratories, Inc, Hazelwood.

Primary AB

Field of Testing /Matrix: CWA (Non Potable Water)

Method EPA 150.2

pH KS

Method EPA 1664A Rev: 1

Oil & Grease KS

Method EPA 200.7 Rev: 4.4

Aluminum KS

Antimony KS

Arsenic KS

Barium KS

Beryllium KS

Cadmium KS

Calcium KS

Chromium KS

Cobalt KS

Copper KS

Hardness (calc.) KS

Iron KS

Lead KS

Magnesium KS

Manganese KS

Molybdenum KS

Nickel KS

Potassium KS

Selenium KS

Silver KS

Sodium KS

Thallium KS

Zinc KS

Method EPA 245.1 Rev: 3

Mercury KS

Method EPA 300.0 Rev: 2.1

Chloride KS

Nitrate KS

Nitrate plus Nitrite as N KS

Nitrite KS

Sulfate KS

Method EPA 350.1 Rev: 2

Ammonia KS

Field of Testing /Matrix: CWA (Non Potable Water)**Method EPA 420.1**

Total phenolics	KS
-----------------	----

Method EPA 625

1,2,4-Trichlorobenzene	KS
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	KS
2,4,6-Trichlorophenol	KS
2,4-Dichlorophenol	KS
2,4-Dimethylphenol	KS
2,4-Dinitrophenol	KS
2,4-Dinitrotoluene (2,4-DNT)	KS
2,6-Dinitrotoluene (2,6-DNT)	KS
2-Chloronaphthalene	KS
2-Chlorophenol	KS
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	KS
2-Nitrophenol	KS
3,3'-Dichlorobenzidine	KS
4-Bromophenyl phenyl ether	KS
4-Chloro-3-methylphenol	KS
4-Chlorophenyl phenylether	KS
4-Nitrophenol	KS
Acenaphthene	KS
Acenaphthylene	KS
Anthracene	KS
Benzo(a)anthracene	KS
Benzo(a)pyrene	KS
Benzo(b)fluoranthene	KS
Benzo(g,h,i)perylene	KS
Benzo(k)fluoranthene	KS
bis(2-Chloroethoxy)methane	KS
bis(2-Chloroethyl) ether	KS
bis(2-Ethylhexyl) phthalate (DEHP)	KS
Butyl benzyl phthalate	KS
Chrysene	KS
Dibenz(a,h) anthracene	KS
Diethyl phthalate	KS
Dimethyl phthalate	KS
Di-n-butyl phthalate	KS
Di-n-octyl phthalate	KS
Fluoranthene	KS
Fluorene	KS
Hexachlorobenzene	KS
Hexachlorobutadiene	KS
Hexachlorocyclopentadiene	KS
Hexachloroethane	KS
Indeno(1,2,3-cd) pyrene	KS
Isophorone	KS
Naphthalene	KS
Nitrobenzene	KS
n-Nitrosodimethylamine	KS
n-Nitrosodi-n-propylamine	KS
n-Nitrosodiphenylamine	KS
Pentachlorophenol	KS

Field of Testing /Matrix: CWA (Non Potable Water)

Phenanthrene	KS
Phenol	KS
Pyrene	KS
Method SM 2320 B-2011	
Alkalinity as CaCO ₃	KS
Method SM 2540 B-2011	
Residue-total	KS
Method SM 2540 C-2011	
Residue-filterable (TDS)	KS
Method SM 2540 D-2011	
Residue-nonfilterable (TSS)	KS
Method SM 3500-Cr B-2011	
Chromium VI	KS
Method SM 4500-CN⁻ E-2011	
Cyanide	KS
Method SM 4500-H⁺ B-2011	
pH	KS
Method SM 4500-P E-2011	
Orthophosphate as P	KS
Phosphorus	KS
Method SM 5210 B-2011	
Biochemical oxygen demand	KS
Carbonaceous BOD, CBOD	KS
Method SM 5220 D-2011	
Chemical oxygen demand	KS

Field of Testing /Matrix: RCRA (Non Potable Water)**Method EPA 1020B**

Ignitability KS

Method EPA 1311 Rev: 0

Toxicity Characteristic Leaching Procedure (TCLP) KS

Method EPA 6010B Rev: 2

Aluminum KS

Antimony KS

Arsenic KS

Barium KS

Beryllium KS

Cadmium KS

Calcium KS

Chromium KS

Cobalt KS

Copper KS

Iron KS

Lead KS

Magnesium KS

Manganese KS

Molybdenum KS

Nickel KS

Phosphorus KS

Potassium KS

Selenium KS

Silver KS

Sodium KS

Thallium KS

Vanadium KS

Zinc KS

Method EPA 7470A Rev: 1

Mercury KS

Method EPA 8015C

Diesel range organics (DRO) KS

Method EPA 8270C Rev: 3

1,2,4-Trichlorobenzene KS

1,2-Dichlorobenzene (o-Dichlorobenzene) KS

1,2-Diphenylhydrazine KS

1,3-Dichlorobenzene KS

1,4-Dichlorobenzene KS

2,4,5-Trichlorophenol KS

2,4,6-Trichlorophenol KS

2,4-Dichlorophenol KS

2,4-Dimethylphenol KS

2,4-Dinitrophenol KS

2,4-Dinitrotoluene (2,4-DNT) KS

2,6-Dichlorophenol KS

2,6-Dinitrotoluene (2,6-DNT) KS

2-Chloronaphthalene KS

2-Chlorophenol KS

2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol) KS

2-Methylnaphthalene KS

Field of Testing /Matrix: RCRA (Non Potable Water)

2-Methylphenol (o-Cresol)	KS
2-Nitroaniline	KS
2-Nitrophenol	KS
3,3'-Dichlorobenzidine	KS
3-Methylphenol (m-Cresol)	KS
3-Nitroaniline	KS
4-Bromophenyl phenyl ether	KS
4-Chloro-3-methylphenol	KS
4-Chloroaniline	KS
4-Chlorophenyl phenylether	KS
4-Methylphenol (p-Cresol)	KS
4-Nitroaniline	KS
4-Nitrophenol	KS
Acenaphthene	KS
Acenaphthylene	KS
Aniline	KS
Anthracene	KS
Benzo(a)anthracene	KS
Benzo(a)pyrene	KS
Benzo(b)fluoranthene	KS
Benzo(g,h,i)perylene	KS
Benzo(k)fluoranthene	KS
Benzoic acid	KS
Benzyl alcohol	KS
bis(2-Chloroethoxy)methane	KS
bis(2-Chloroethyl) ether	KS
bis(2-Ethylhexyl) phthalate (DEHP)	KS
Butyl benzyl phthalate	KS
Chrysene	KS
Dibenz(a,h) anthracene	KS
Dibenzofuran	KS
Diethyl phthalate	KS
Dimethyl phthalate	KS
Di-n-butyl phthalate	KS
Di-n-octyl phthalate	KS
Diphenylamine	KS
Fluoranthene	KS
Fluorene	KS
Hexachlorobenzene	KS
Hexachlorobutadiene	KS
Hexachlorocyclopentadiene	KS
Hexachloroethane	KS
Indeno(1,2,3-cd) pyrene	KS
Isophorone	KS
Naphthalene	KS
Nitrobenzene	KS
n-Nitrosodimethylamine	KS
n-Nitrosodi-n-propylamine	KS
n-Nitrosodiphenylamine	KS
Pentachlorophenol	KS
Phenanthrene	KS
Phenol	KS

Field of Testing /Matrix: RCRA (Non Potable Water)

Pyrene

KS

Pyridine

KS

Method EPA 9040

pH

KS

Method EPA 9056 Rev: 0

Sulfate

KS

Method EPA 9065 Rev: 0

Total phenolics

KS

Method EPA 9095A

Paint Filter Test

KS

Field of Testing /Matrix: RCRA (Solid & Hazardous Material)**Method EPA 1020B**

Ignitability KS

Method EPA 1311 Rev: 0

Toxicity Characteristic Leaching Procedure (TCLP) KS

Method EPA 6010B Rev: 2

Aluminum KS

Antimony KS

Arsenic KS

Barium KS

Beryllium KS

Cadmium KS

Calcium KS

Chromium KS

Cobalt KS

Copper KS

Iron KS

Lead KS

Magnesium KS

Manganese KS

Molybdenum KS

Nickel KS

Phosphorus KS

Potassium KS

Selenium KS

Silver KS

Sodium KS

Thallium KS

Vanadium KS

Zinc KS

Method EPA 7471A

Mercury KS

Method EPA 8015C

Diesel range organics (DRO) KS

Method EPA 8260B

1,1,1,2-Tetrachloroethane KS

1,1,1-Trichloroethane KS

1,1,2,2-Tetrachloroethane KS

1,1,2-Trichloroethane KS

1,1-Dichloroethane KS

1,1-Dichloroethylene KS

1,1-Dichloropropene KS

1,2,3-Trichlorobenzene KS

1,2,3-Trichloropropane KS

1,2,4-Trichlorobenzene KS

1,2,4-Trimethylbenzene KS

1,2-Dibromo-3-chloropropane (DBCP) KS

1,2-Dibromoethane (EDB, Ethylene dibromide) KS

1,2-Dichlorobenzene (o-Dichlorobenzene) KS

1,2-Dichloroethane (Ethylene dichloride) KS

1,2-Dichloropropane KS

1,3,5-Trimethylbenzene KS

Field of Testing /Matrix: RCRA (Solid & Hazardous Material)

1,3-Dichlorobenzene	KS
1,3-Dichloropropane	KS
1,4-Dichlorobenzene	KS
2,2-Dichloropropane	KS
2-Butanone (Methyl ethyl ketone, MEK)	KS
2-Chlorotoluene	KS
2-Hexanone	KS
2-Nitropropane	KS
4-Chlorotoluene	KS
4-Isopropyltoluene (p-Cymene,p-Isopropyltoluene)	KS
4-Methyl-2-pentanone (MIBK)	KS
Acetone	KS
Acetonitrile	KS
Acrolein (Propenal)	KS
Acrylonitrile	KS
Allyl chloride (3-Chloropropene)	KS
Benzene	KS
Bromobenzene	KS
Bromochloromethane	KS
Bromodichloromethane	KS
Bromoform	KS
Carbon disulfide	KS
Carbon tetrachloride	KS
Chlorobenzene	KS
Chlorodibromomethane	KS
Chloroethane (Ethyl chloride)	KS
Chloroform	KS
cis-1,2-Dichloroethylene	KS
cis-1,3-Dichloropropene	KS
Dibromomethane (Methylene bromide)	KS
Dichlorodifluoromethane (Freon-12)	KS
Ethylbenzene	KS
Hexachlorobutadiene	KS
Isopropylbenzene	KS
Methyl bromide (Bromomethane)	KS
Methyl chloride (Chloromethane)	KS
Methyl methacrylate	KS
Methyl tert-butyl ether (MTBE)	KS
Methylene chloride (Dichloromethane)	KS
m-Xylene	KS
Naphthalene	KS
n-Butylbenzene	KS
n-Propylbenzene	KS
o-Xylene	KS
Propionitrile (Ethyl cyanide)	KS
p-Xylene	KS
sec-Butylbenzene	KS
Styrene	KS
tert-Butylbenzene	KS
Tetrachloroethylene (Perchloroethylene)	KS
Toluene	KS
trans-1,2-Dichloroethylene	KS

Field of Testing /Matrix: RCRA (Solid & Hazardous Material)

trans-1,3-Dichloropropylene	KS
Trichloroethene (Trichloroethylene)	KS
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	KS
Vinyl acetate	KS
Vinyl chloride	KS

Method EPA 8270C Rev: 3

1,2,4-Trichlorobenzene	KS
1,2-Dichlorobenzene (o-Dichlorobenzene)	KS
1,2-Diphenylhydrazine	KS
1,3-Dichlorobenzene	KS
1,4-Dichlorobenzene	KS
2,4,5-Trichlorophenol	KS
2,4,6-Trichlorophenol	KS
2,4-Dichlorophenol	KS
2,4-Dimethylphenol	KS
2,4-Dinitrophenol	KS
2,4-Dinitrotoluene (2,4-DNT)	KS
2,6-Dichlorophenol	KS
2,6-Dinitrotoluene (2,6-DNT)	KS
2-Chloronaphthalene	KS
2-Chlorophenol	KS
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	KS
2-Methylnaphthalene	KS
2-Methylphenol (o-Cresol)	KS
2-Nitroaniline	KS
2-Nitrophenol	KS
3,3'-Dichlorobenzidine	KS
3-Methylphenol (m-Cresol)	KS
3-Nitroaniline	KS
4-Bromophenyl phenyl ether	KS
4-Chloro-3-methylphenol	KS
4-Chloroaniline	KS
4-Chlorophenyl phenylether	KS
4-Methylphenol (p-Cresol)	KS
4-Nitroaniline	KS
4-Nitrophenol	KS
Acenaphthene	KS
Acenaphthylene	KS
Aniline	KS
Anthracene	KS
Benzo(a)anthracene	KS
Benzo(a)pyrene	KS
Benzo(b)fluoranthene	KS
Benzo(g,h,i)perylene	KS
Benzo(k)fluoranthene	KS
Benzoic acid	KS
Benzyl alcohol	KS
bis(2-Chloroethoxy)methane	KS
bis(2-Chloroethyl) ether	KS
bis(2-Ethylhexyl) phthalate (DEHP)	KS
Butyl benzyl phthalate	KS
Chrysene	KS

Field of Testing /Matrix: RCRA (Solid & Hazardous Material)

Dibenz(a,h) anthracene	KS
Dibenzofuran	KS
Diethyl phthalate	KS
Dimethyl phthalate	KS
Di-n-butyl phthalate	KS
Di-n-octyl phthalate	KS
Diphenylamine	KS
Fluoranthene	KS
Fluorene	KS
Hexachlorobenzene	KS
Hexachlorobutadiene	KS
Hexachlorocyclopentadiene	KS
Hexachloroethane	KS
Indeno(1,2,3-cd) pyrene	KS
Isophorone	KS
Naphthalene	KS
Nitrobenzene	KS
n-Nitrosodimethylamine	KS
n-Nitrosodi-n-propylamine	KS
n-Nitrosodiphenylamine	KS
Pentachlorophenol	KS
Phenanthrene	KS
Phenol	KS
Pyrene	KS
Pyridine	KS
Method EPA 9045C Rev: 3	
pH	KS
Method EPA 9065 Rev: 0	
Total phenolics	KS
Method EPA 9095A	
Paint Filter Test	KS

End of Scope of Accreditation



DATABASE REPORT

Project Property: *Downing/ Saxon 1
Downing/ Saxon 1
Buffalo Grove IL 60089*

Project No: *T20-039*

Report Type: *Screen Report Plus*

Order No: *20200113264*

Requested by: *Bluff City Materials, Inc*

Date Completed: *January 13, 2020*

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Executive Summary

Property Information:

Project Property: *Downing/ Saxon 1
Downing/ Saxon 1 Buffalo Grove IL 60089*

Project No: *T20-039*

Coordinates:

Latitude: *42.132473*
Longitude: *-87.956116*
UTM Northing: *4,664,927.04*
UTM Easting: *420,980.82*
UTM Zone: *16T*

Elevation: *676 FT*

Order Information:

Order No: *20200113264*
Date Requested: *January 13, 2020*
Requested by: *Bluff City Materials, Inc*
Report Type: *Screen Report Plus*

Historicals/Products:

ERIS Xplorer [*ERIS Xplorer*](#)
Excel Add-On *Excel Add-On*

Executive Summary: Report Summary

<i>Database</i>	<i>Searched</i>	<i>Project Property</i>	<i>Within 0.250mi</i>	<i>Total</i>
<u>Standard Environmental Records</u>				
Federal				
NPL	Y	0	0	0
PROPOSED NPL	Y	0	0	0
DELETED NPL	Y	0	0	0
SEMS	Y	0	0	0
ODI	Y	0	0	0
SEMS ARCHIVE	Y	0	0	0
CERCLIS	Y	0	0	0
IODI	Y	0	0	0
CERCLIS NFRAP	Y	0	0	0
CERCLIS LIENS	Y	0	0	0
RCRA CORRACTS	Y	0	0	0
RCRA TSD	Y	0	0	0
RCRA LQG	Y	0	0	0
RCRA SQG	Y	0	0	0
RCRA CESQG	Y	0	0	0
RCRA NON GEN	Y	0	0	0
FED ENG	Y	0	0	0
FED INST	Y	0	0	0
ERNS 1982 TO 1986	Y	0	0	0
ERNS 1987 TO 1989	Y	0	0	0
ERNS	Y	0	0	0
FED BROWNFIELDS	Y	0	0	0
FEMA UST	Y	0	0	0
REFN	Y	0	0	0
BULK TERMINAL	Y	0	0	0
SEMS LIEN	Y	0	0	0

Database	Searched	Project Property	Within 0.250mi	Total
SUPERFUND ROD	Y	0	0	0
State				
SSU	Y	0	0	0
DELISTED SSU	Y	0	0	0
SWF/LF	Y	0	0	0
SWF/LF SPECIAL	Y	0	0	0
NIPC	Y	0	0	0
CCDD	Y	0	0	0
LUST	Y	0	0	0
LUST DOCUMENT	Y	0	0	0
DELISTED LUST	Y	0	0	0
LUST TRUST	Y	0	0	0
UST	Y	0	0	0
AST	Y	0	0	0
DELISTED TANK	Y	0	0	0
ENG	Y	0	0	0
INST	Y	0	0	0
SRP	Y	0	0	0
BROWNFIELDS	Y	0	0	0
BROWN MBRGP	Y	0	0	0
Tribal				
INDIAN LUST	Y	0	0	0
INDIAN UST	Y	0	0	0
DELISTED ILST	Y	0	0	0
DELISTED IUST	Y	0	0	0
County				
TANKS CHICAGO	Y	0	0	0
PERMITS CHICAGO	Y	0	0	0
<u>Additional Environmental Records</u>				
Federal				
PFAS NPL	Y	0	0	0
FINDS/FRS	Y	0	1	1
TRIS	Y	0	0	0
PFAS TRI	Y	0	0	0
HMIRS	Y	0	0	0
NCDL	Y	0	0	0
TSCA	Y	0	0	0

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
----------------	-----------	--------------------------	----------------	------------------	-------------------------	-----------------------	--------------------

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
1	FINDS/FRS	SANTRONICS LABORATORIES INC	223 PALMGRON CT BUFFALO GROVE IL 60089- 4328	N	0.14 / 716.42	2	13

Executive Summary: Summary by Data Source

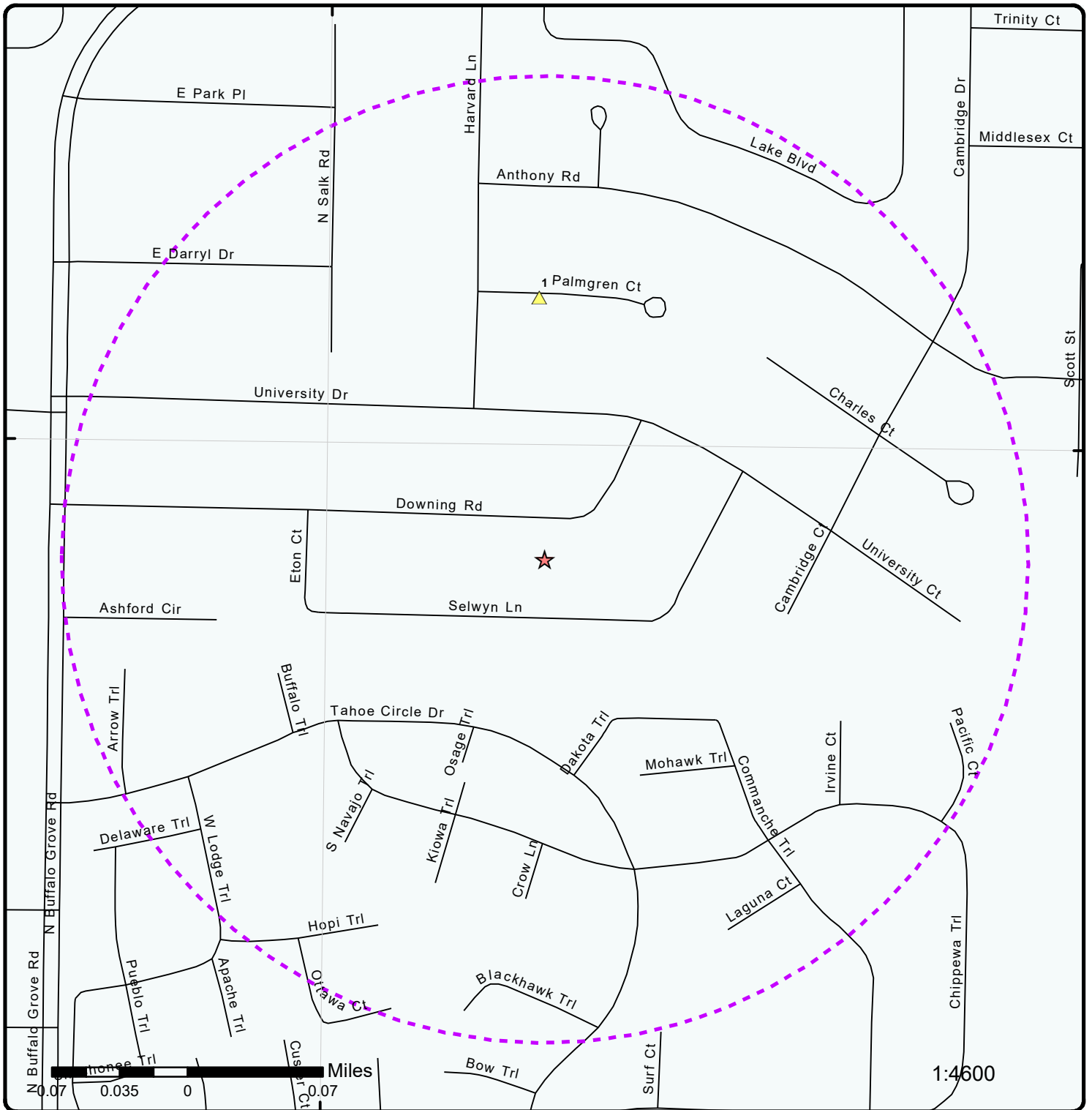
Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Nov 6, 2019 has found that there are 1 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
SANTRONICS LABORATORIES INC	223 PALMGRON CT BUFFALO GROVE IL 60089-4328	N	0.14 / 716.42	<u>1</u>



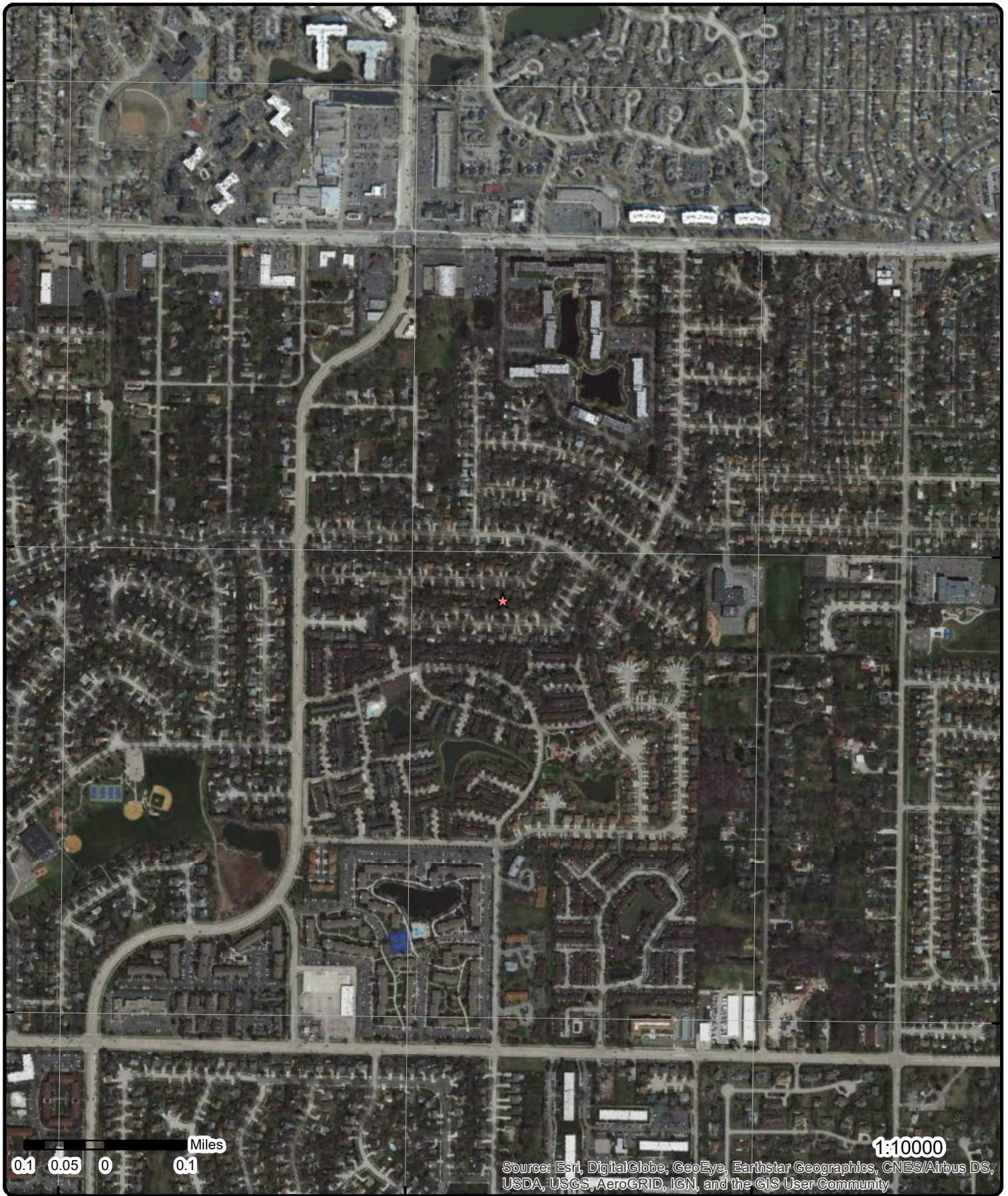
Map : 0.25 Mile Radius

Order Number: 20200113264

Address: Downing/ Saxon 1, Buffalo Grove, IL



	Project Property		Rails		State Boundary		FWS Special Designation Areas
	Buffer Outline		Major Highways		National Priority List Sites		State Brownfield Sites
	Eris Sites with Higher Elevation		Major Highways Ramps		National Wetland		State Brownfield Areas
	Eris Sites with Same Elevation		Major Roads		Indian Reserve Land		State Superfund Areas:Dept. of Defense
	Eris Sites with Lower Elevation		Major Roads Ramps		Historic Fill		State Superfund Areas:NPL
	Eris Sites with Unknown Elevation		Secondary Roads		100 Year Flood Zone		WQARF Areas
	County Boundary		Secondary Roads Ramps		500 Year Flood Zone		Federal Lands: Dept. of Defense (owned/administered areas)
			Local Roads and Ramps				



Aerial Year: 2018

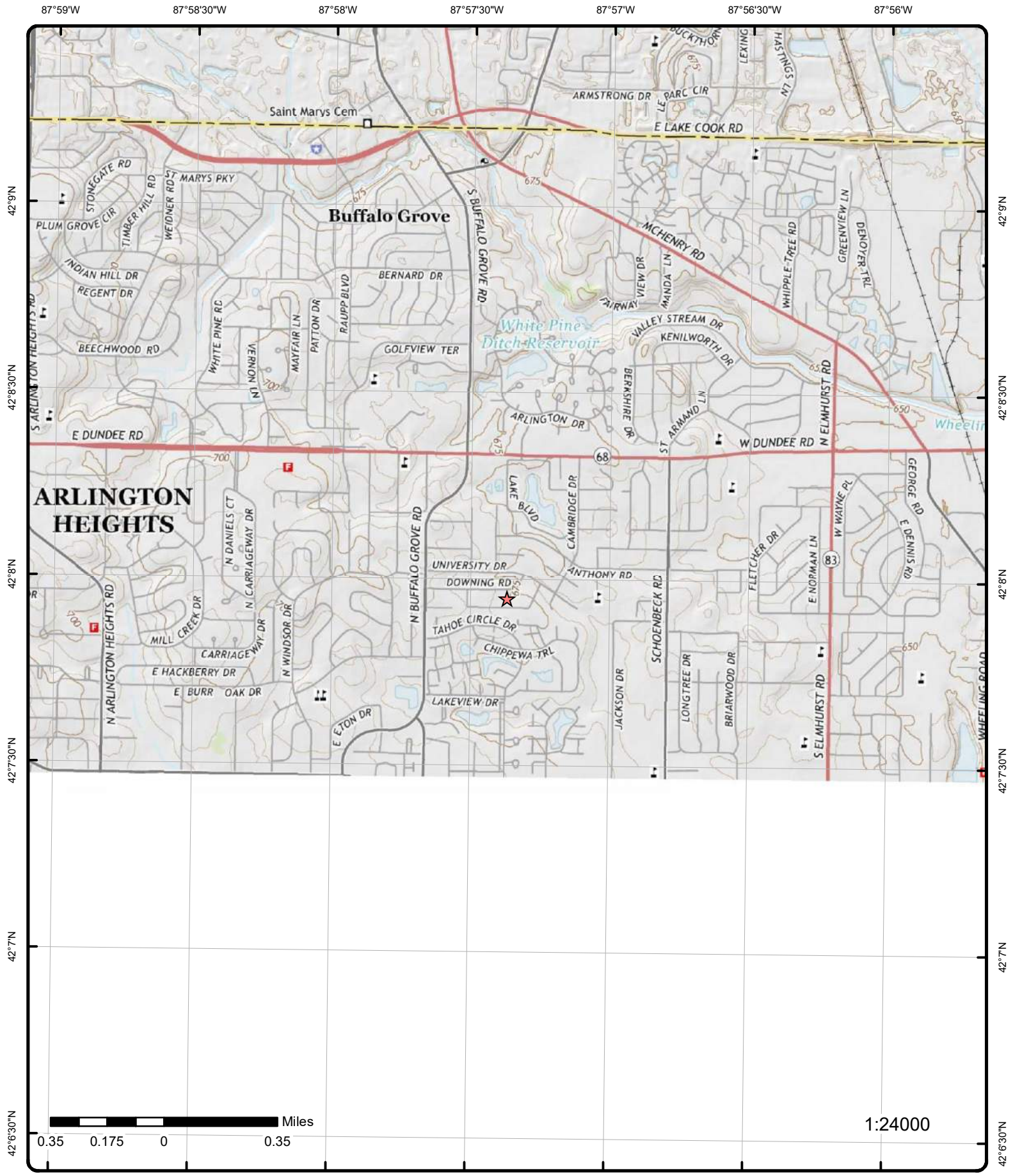
Address: Downing/ Saxon 1, Buffalo Grove, IL

Source: ESRI World Imagery

Order Number: 20200113264



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Topographic Map

Year: 2015

Order Number: 20200113264

Address: Downing/ Saxon 1, IL



Quadrangle(s): Wheeling, IL

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Source: USGS Topographic Map

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	N	0.14 / 716.42	678.18 / 2	SANTRONICS LABORATORIES INC 223 PALMGRON CT BUFFALO GROVE IL 60089-4328	FINDS/FRS

Registry ID: 110013760377
FIPS Code: 17097
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 07-MAR-2003 17:19:30
Update Date: 25-MAR-2003 10:07:44
Interest Types: COMPLIANCE ACTIVITY
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318025032016
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude: 42.13446
Longitude: -87.95608
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110013760377
Program Acronyms:

Unplottable Summary

Total: 30 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
AIR PERMITS	Northrop Corp	600 University	Arlington Heights IL	60004	878668725
ERNS		MP: 23.08 SD: HARVARD	ARLINGTON HEIGHTS IL		858630727
ERNS		645 WEST UNIVERSITY DRIVE	ARLINGTON HEIGHTS IL		807061426
ERNS		LAKE-COOK ROAD BETWEEN MILWAUKEE AVE & NORTH GATE ROAD	WHEELING IL		806542632
ERNS		LAKE MICHAGAN	IL		806555904
ERNS		OFF OF LAKE STREET	IL		807096877
ERNS		1573/1575 TAHOE CIRCLE	WHEELING IL		806699936
ERNS		MILWAUKEE AVE NORTH OF LAKE COOK RD	BUFFALO GROVE IL		806764021
ERNS		LAKE COOK RD NEAR MILWAUKEE AVE	BUFFALO GROVE IL		807176120
FINDS/FRS	FREUND INTERNATIONAL	BUFFALO GROVE RD	BUFFALO GROVE IL	60089	817477513
FINDS/FRS	ROSEGLLEN SUBDIVISION	BUFFALO GROVE RD	BUFFALO GROVE IL	60089	825510240
FINDS/FRS	BRIDGE	W JEFFERY OVER BUFFALO CREEK	WHEELING IL	60090	825814971

FINDS/FRS	CHEVY CHASE SEWER & WATER CO	RTE 21, .5 M N OF LAKE-COOK RD	WHEELING IL	60090	817565205
FINDS/FRS	PLOTE INC.	LAKE-COOK RD. W. OF PORTWINE	WHEELING IL	60090	817561712
FINDS/FRS	COOK COUNTY BRIDGE	LAKE COOK RD	WHEELING IL	60090	817560271
FINDS/FRS	COOK COUNTY HWY DEPT	LAKE COOK RD & WI CENTRAL RR	WHEELING IL	60090	817560967
HMIRS		EAST LAKE/COOK RD	BUFFALO GROVE IL		818292439
PRP	PROFILE PRODUCTS LLC	750 LAKE COOK ROAD SUITE 440	BUFFALO GROVE IL	60089	860591156
RCRA NON GEN	MOTOROLA INC	852 TO 890 HASTINGS LAKE	BUFFALO GROVE IL	60089	810107211
RCRA NON GEN	COOK COUNTY BRIDGE	LAKE COOK RD OVR WI CENTRAL RR	WHEELING IL	60090	810113792
SPILLS	Ahmet Tuzik	2737 W Glenlake	Chicago IL		878608759
SPILLS2	VILLAGE OF ARLINGTON HEIGHTS	LAKE COOK ROAD [CREEK ON N. END NEAR TERRAMERE SUBDIVISION]	ARLINGTON HEIGHTS IL		822437756
SPILLS2	RAIN-RD CONSTRUCTION	LAKE SIDE CIRCLE TOWN HOUSE COMPLEX	WHEELING IL		822437988
SPILLS2	MOBILE OIL	NEAR BUFFALO GROVE	BUFFALO GROVE IL		825138687
SPILLS2	TEMPO 2 CO.	DEER VALLEY RD 1 MI N OF LAKE-COOK RD	WHEELING IL		813051456

SPILLS2	RAIN-RD CONSTRUCTION	LAKE SIDE CIRCLE TOWN HOUSE COMPLEX	WHEELING IL	825139302
SPILLS2	MOBILE OIL	NEAR BUFFALO GROVE	BUFFALO GROVE IL	822438504
UST	True North Energy LLC	185 Milwaukee Avenue Buffalo Grove, IL 60089	IL	876206648
UST	Powernail Company, Inc.	301 East Half Day Road Buffalo Grove, IL 60089	IL	813446714
UST	Construction Site	20194 Buffalo Grove Road Buffalo Grove, IL 60089	IL	813460754

Unplottable Report

Site: Northrop Corp
600 University Arlington Heights IL 60004

AIR PERMITS

Site ID: 170000012527
Program ID: 031009ADT
Interest Type: PERMIT
Media Code: AIR
Category:

Document Count:
Total Pages:
Collection Date:
Latitude Measure: 42.05123
Longitude Measure: -87.678159

Originating Bureau:
Name (Doc Search):
Addr (Doc Search):
City (Doc Search):
State (Doc Search):
Zip Code (Doc Search):
Name (Geo Search): Northrop Corp
Address (Geo Search): 600 University
City (Geo Search): Arlington Heights
State (Geo Search): IL
Postal (Geo Search): 60004
Category URL:
Data Source: IEPA Document Explorer - Geographic Search

Site: MP: 23.08 SD: HARVARD ARLINGTON HEIGHTS IL

ERNS

NRC Report No: 1138640
Type of Incident: RAILROAD NON-RELEASE
Incident Cause: OTHER
Incident Date: 1/21/2016 2:33:00 PM
Incident Location: PASSENGER ROUTE
Incident Dtg: DISCOVERED
Distance from City:
Distance Units:
Potential Flag: No
Year: Year 2016 Reports
Direction from City:
Location County: COOK
Description of Incident:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

THE CALLER IS REPORTING A COMMUTER TRAIN VERSUS PASSENGER VEHICLE (UNKNOWN TYPE) AT A GRADE CROSSING. THE CALLER STATED THAT THERE IS ONE REPORTED FATALITY TO THE OCCUPANT OF THE VEHICLE. CALLER STATED THAT CONFIRMATION OF THE FATALITY WAS AT 444 CDT/1644 LOCAL TIME.

Calls Information

Date Time Received: 1/21/2016 5:53:29 PM
Date Time Complete: 1/21/2016 6:00:16 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN

Responsible City:
Responsible State: XX
Responsible Zip:
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:

Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type:
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:

Type of Fuel:
DOT Crossing No: 176927M
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost: 23.08
Grade Crossing: Y
Crossing Device Ty: GATES
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: U
Airbag Deployed: U
Transport Contain: U
Location Subdiv: HARVARD
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling: CALLER STATED IT IS UNKNOWN HOW THE PASSENGERS WILL BE HANDLED.
Passenger Route: YES
Passenger Delay: YES
Sub Part C Test Req: UNK
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: INVESTIGATION UNDERWAY.
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities: 1
Any Fatalities: Y
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:

State Agen Report No: RC20160010
State Agen on Scene: LOCAL RESPONDERS
State Agen Notified: OEM
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: UNKNOWN
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact:
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality: 1
Sheen Size:

Closure Direction:
Major Artery: No
Track Closed: Y
Track Desc: TRIPLE MAIN
Track Closure Time: 2.5
Track Closure Units:
Track Close Dir: ALL
Media Interest: UNKNOWN
Medium Desc: RAIL REPORT (N/A)
Addl Medium Info: /GRADE CROSSING INCIDENT

Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info:

Site: 645 WEST UNIVERSITY DRIVE ARLINGTON HEIGHTS IL ERNS

NRC Report No: 507233
Type of Incident: FIXED
Incident Cause: DUMPING
Incident Date: 11/23/1999 12:00:00 PM
Incident Location:
Incident Dtg: DISCOVERED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 1999 Reports
Direction from City:
Location County: COOK
Description of Incident:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:
THE CALLER STATES THAT THE COMPANY DUMPS THEIR WASTE MATERIALS DOWN THEDRAIN

Material Spill Information

Chris Code: UNK
CAS No:
UN No:
Name of Material: MISC. PRINTING WASTE MATERIALS
Amount of Material: 0

Unit of Measure: UNKNOWN AMOUNT
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Calls Information

Date Time Received: 11/30/1999 11:16:09 AM
Date Time Complete: 11/30/1999 11:19:33 AM
Call Type: INC
Resp Company: TPM GRAPHICS
Resp Org Type: PRIVATE ENTERPRISE

Responsible City: ARLINGTON HEIGHTS
Responsible State: IL
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:

Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: UNKNOWN
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: U
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: WATER
Addl Medium Info: DRAIN

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit: U
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: THE CALLER HAD NO OTHER INFORMATION

Site: LAKE-COOK ROAD BETWEEN MILWAUKEE AVE & NORTH GATE ROAD WHEELING IL ERNS

NRC Report No: 608460 **Latitude Degrees:**
Type of Incident: UNKNOWN SHEEN **Latitude Minutes:**

Incident Cause: UNKNOWN
Incident Date: 6/4/2002 6:30:00 PM
Incident Location: UNMARKED LAKE < LAKE
Incident Dtg: DISCOVERED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 2002 Reports
Direction from City:
Location County: LAKE
Description of Incident: THE CALLER REPORTED UNKNOWN SHEEN IN THE WATER

Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: OUN
CAS No: 000000-00-0
UN No:
Name of Material: UNKNOWN OIL
Amount of Material: 0
Unit of Measure: UNKNOWN AMOUNT
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Calls Information

Date Time Received: 6/4/2002 9:53:36 PM
Date Time Complete: 6/4/2002 10:00:46 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN
Responsible City:
Responsible State: XX
Responsible Zip:
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost:
Grade Crossing: N
Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OOSP No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:

Crossing Device Ty:
 Ty Vehicle Involved:
 Device Operational: Y

Signalman Test:
 Oth Employee Test:
 Unknown Test:

Incident Details Information

Release Secured: U
 Release Rate:
 Release Rate Unit:
 Release Rate Rate:
 Est Duration of Rel:
 Desc Remedial Act: NONE
 Fire Involved: N
 Fire Extinguished: U
 Any Evacuations: N
 No Evacuated:
 Who Evacuated:
 Radius of Evacu:
 Any Injuries: N
 No. Injured:
 No. Hospitalized:
 No. Fatalities:
 Any Fatalities: N
 Any Damages: N
 Damage Amount:
 Air Corridor Closed: N
 Air Corridor Desc:
 Air Closure Time:
 Waterway Closed: N
 Waterway Desc:
 Waterway Close Time:
 Road Closed: N
 Road Desc:
 Road Closure Time:
 Road Closure Units:
 Closure Direction:
 Major Artery: No
 Track Closed: N
 Track Desc:
 Track Closure Time:
 Track Closure Units:
 Track Close Dir:
 Media Interest: NONE
 Medium Desc: WATER
 Addl Medium Info: LAKE < LAKE

State Agen Report No:
 State Agen on Scene:
 State Agen Notified:
 Fed Agency Notified:
 Oth Agency Notified:
 Body of Water: LAKE < LAKE
 Tributary of:
 Near River Mile Make:
 Near River Mile Mark:
 Offshore: N
 Weather Conditions:
 Air Temperature:
 Wind Direction:
 Wind Speed:
 Wind Speed Unit:
 Water Supp Contam: U
 Water Temperature:
 Wave Condition:
 Current Speed:
 Current Direction:
 Current Speed Unit:
 EMPL Fatality:
 Pass Fatality:
 Community Impact: N
 Passengers Transfer: UNK
 Passenger Injuries:
 Employee Injuries:
 Occupant Fatality:
 Sheen Size:
 Sheen Size Units:
 Sheen Size Length:
 Sheen Size Length U:
 Sheen Size Width:
 Sheen Size Width U:
 Sheen Color: RAINBOW
 Dir of Sheen Travel:
 Sheen Odor Desc: KEROSENE
 Duration Unit:
 Additional Info: THE CALLER STATED RELEASE GOES FROM ONE LAKE TO ANOTHER LAKE AND IS LOCATED IN BETWEEN LAKE AND COOK COUNTY. THE CALLER STATED IT LOOKS LIKE SOMEONE DUMPED KEROSENE INTO WATER.

Site: LAKE MICHAGAN IL ERNS

NRC Report No:	760921	Latitude Degrees:	42
Type of Incident:	AIRCRAFT	Latitude Minutes:	5
Incident Cause:	UNKNOWN	Latitude Seconds:	
Incident Date:	6/3/2005 2:15:00 PM	Longitude Degrees:	87
Incident Location:		Longitude Minutes:	15
Incident Dtg:	OCCURRED	Longitude Seconds:	
Distance from City:		Lat Quad:	N
Distance Units:		Long Quad:	W
Potential Flag:		Location Section:	
Year:	Year 2005 Reports	Location Township:	
Direction from City:		Location Range:	
Location County:	COOK		
Description of Incident:	CALLER FROM THE CITY OF CHICAGO OEM STATED AN AIRLINER HAD TO DUMP ITS FUEL INTO LAKE MICHIGAN DUE TO THE PLANE HITTING RUBBER AND METAL ON THE RUNWAY DUE TO UNKNOWN CAUSES DURING TAKE OFF. PLANE RETURNED TO THE RUNWAY AND DUMPED FUEL AS A		

PRECAUTION INTO LAKE MICHIGAN.

Material Spill Information

Chris Code:	JPO	Unit of Measure:	POUND(S)
CAS No:	000000-00-0	If Reached Water:	YES
UN No:		Amount in Water:	310000
Name of Material:	JET FUEL: JP-1 (KEROSENE)	Unit Reach Water:	POUND(S)
Amount of Material:	310000		

Calls Information

Date Time Received:	6/3/2005 4:08:29 PM	Responsible City:	
Date Time Complete:	6/3/2005 4:24:59 PM	Responsible State:	IL
Call Type:	INC	Responsible Zip:	
Resp Company:	UNITED AIRLINES	Source:	TELEPHONE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OOSP No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	N
NPDES:		Airbag Deployed:	
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:	UAL881	Allision:	N
Aircraft Runway No:	14 RIGHT	Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:	COMMERCIAL	Structure Oper:	U
Aircraft Model:	747	Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:		Passenger Handling:	
Type of Fuel:		Passenger Route:	XXX
DOT Crossing No:		Passenger Delay:	XXX
DOT Regulated:	U	Sub Part C Test Req:	XXX
Pipeline Type:		Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	N	Yard Foreman Test:	
Railroad Hotline:		RCL Operator Test:	
Railroad Milepost:		Brakeman Test:	
Grade Crossing:	N	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:		Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:	Y	State Agen Report No:	NONE
Release Rate:		State Agen on Scene:	NONE
Release Rate Unit:		State Agen Notified:	FIRE, OEM

Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NO ACTION HAS BEEN TAKEN.
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: WATER
Add Medium Info: LAKE MICHIGAN

Fed Agency Notified: NONE
Oth Agency Notified:
Body of Water: LAKE MICHIGAN
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: PARTLY CLOUDY
Air Temperature: 66
Wind Direction: ESE
Wind Speed: 7
Wind Speed Unit: MPH
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: CALLER DID NOT HAVE ALL OF THE INFORMATION.

Site:
 OFF OF LAKE STREET IL

ERNS

NRC Report No: 883971
Type of Incident: RAILROAD
Incident Cause: DERAILMENT
Incident Date: 9/15/2008 11:39:00 AM
Incident Location: RAIL YARD
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag: No
Year: Year 2008 Reports
Direction from City:
Location County: COOK
Description of Incident:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

CALLER IS REPORTING A SPILL OF DIESEL FUEL FROM A DERAILMENT, DUE TO UNKNOWN CAUSES. AN INVESTIGATION IS UNDERWAY.

Material Spill Information

Chris Code: ODS
CAS No: 000000-00-0
UN No:
Name of Material: OIL: DIESEL
Amount of Material: 25

Unit of Measure: GALLON(S)
If Reached Water: NO
Amount in Water:
Unit Reach Water:

Calls Information

Date Time Received: 9/15/2008 4:12:35 PM
Date Time Complete: 9/15/2008 4:24:51 PM

Responsible City:
Responsible State: XX

Call Type:	INC	Responsible Zip:	
Resp Company:		Source:	TELEPHONE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OCSF No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	U
NPDES:		Airbag Deployed:	U
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	PROBISO
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:		Allision:	U
Aircraft Runway No:		Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:		Structure Oper:	U
Aircraft Model:		Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:		Passenger Handling:	
Type of Fuel:		Passenger Route:	UNK
DOT Crossing No:		Passenger Delay:	UNK
DOT Regulated:	U	Sub Part C Test Req:	UNK
Pipeline Type:		Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	N	Yard Foreman Test:	
Railroad Hotline:		RCL Operator Test:	
Railroad Milepost:	14.68	Brakeman Test:	
Grade Crossing:	N	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:		Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:	Y	State Agen Report No:	RR-2008-0075
Release Rate:		State Agen on Scene:	NONE
Release Rate Unit:		State Agen Notified:	OEM, MWRD
Release Rate Rate:		Fed Agency Notified:	NONE
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	INVESTIGATION UNDERWAY AND RERAILMENT IN PROGRESS.	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:	U	Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	N
Who Evacuated:		Weather Conditions:	PARTLY CLOUDY
Radius of Evacu:		Air Temperature:	62
Any Injuries:	N	Wind Direction:	W
No. Injured:		Wind Speed:	3
No. Hospitalized:		Wind Speed Unit:	MPH
No. Fatalities:		Water Supp Contam:	U
Any Fatalities:	N	Water Temperature:	
Any Damages:	U	Wave Condition:	

Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: BALLAST
Add Medium Info:

Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact:
Passengers Transfer: NO
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: NO ADDITIONAL INFORMATION.

Site: 1573/1575 TAHOE CIRCLE WHEELING IL ERNS

NRC Report No: 700664
Type of Incident: PIPELINE
Incident Cause: UNKNOWN
Incident Date: 9/24/2003 6:10:00 AM
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 2003 Reports
Direction from City:
Location County: COOK
Description of Incident: A HOUSE FIRE STARTED DUE TO UNKNOWN CAUSES. THE NATURAL GAS SERVICE LINE TO THE HOUSE CONTRIBUTED TO THE FIRE.

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: ONG
CAS No: 000000-00-0
UN No:
Name of Material: NATURAL GAS
Amount of Material: 0

Unit of Measure: UNKNOWN AMOUNT
If Reached Water: NO
Amount in Water:
Unit Reach Water:

Calls Information

Date Time Received: 9/24/2003 5:27:50 PM
Date Time Complete: 9/24/2003 5:33:08 PM
Call Type: INC
Resp Company: NICOR GAS
Resp Org Type: PUBLIC UTILITY

Responsible City: NAPERVILLE
Responsible State: IL
Responsible Zip: 60507
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N

NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type:
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: SERVICE
Pipeline Abv Ground: BELOW
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost:
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: Y

Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: Y
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: THE SERVICE LINE WAS DISCONNECTED.
Fire Involved: Y
Fire Extinguished: Y
Any Evacuations: Y
No Evacuated: 1
Who Evacuated: PRIVATE CITIZENS
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:

State Agen Report No: NO REPORT #
State Agen on Scene:
State Agen Notified: IL. COMMERCE COMMISSION
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: UNKNOWN
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:

Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: AIR
Addl Medium Info: ATMOSPHERE

Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: CALLER HAD NO ADDITIONAL INFORMATION.

Site: MILWAUKEE AVE NORTH OF LAKE COOK RD BUFFALO GROVE IL

ERNS

NRC Report No: 245081
Type of Incident: MOBILE
Incident Cause: UNKNOWN
Incident Date: 6/20/1994 1:00:00 PM
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 1994 Reports
Direction from City:
Location County: LAKE
Description of Incident: FUEL TANK ON TRUCK / THE RELEASE OCCURRED AS THE RESULT OF A MULTIVEHICLE ACCIDENT

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: ODS
CAS No:
UN No:
Name of Material: OIL: DIESEL
Amount of Material: 100

Unit of Measure: GALLON(S)
If Reached Water: YES
Amount in Water: 100
Unit Reach Water: GALLON(S)

Calls Information

Date Time Received: 6/20/1994 3:21:39 PM
Date Time Complete: 6/20/1994 3:30:00 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN

Responsible City:
Responsible State: XX
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSP No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:

Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: UNKNOWN
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: CREWS ON SCENE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: U
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: WATER
Add Medium Info: DESPLAINES RIVER

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: MILWAUKEE AVE HAS BEEN CLOSED INDEFINITELY

Site: LAKE COOK RD NEAR MILWAUKEE AVE BUFFALO GROVE IL ERNS

NRC Report No: 231358
Type of Incident: FIXED
Incident Cause: UNKNOWN
Incident Date: 3/23/1994 11:30:00 AM
Incident Location:
Incident Dtg: DISCOVERED

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:

Distance from City:
Distance Units:
Potential Flag:
Year: Year 1994 Reports
Direction from City:
Location County: COOK
Description of Incident:

Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

CALLER STATES THAT THERE IS CONSTRUCTION NEAR RIVER AND ALL BYPRODUCTS OF CONST ARE ENTERING RIVER (DIRT, SEDIMENT, WATER)

Material Spill Information

Chris Code:	UNK	Unit of Measure:	UNKNOWN AMOUNT
CAS No:		If Reached Water:	YES
UN No:		Amount in Water:	0
Name of Material:	UNKNOWN MATERIAL	Unit Reach Water:	UNKNOWN AMOUNT
Amount of Material:	0		

Calls Information

Date Time Received:	3/23/1994 12:33:17 PM	Responsible City:	WHEELING
Date Time Complete:	3/23/1994 12:37:20 PM	Responsible State:	IL
Call Type:	INC	Responsible Zip:	
Resp Company:	UNKNOWN CONSTRUCTION CO	Source:	UNAVAILABLE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OCSF No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	N
NPDES:		Airbag Deployed:	
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:		Allision:	N
Aircraft Runway No:		Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:	UNKNOWN	Structure Oper:	Y
Aircraft Model:		Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:	UNKNOWN	Passenger Handling:	
Type of Fuel:		Passenger Route:	XXX
DOT Crossing No:		Passenger Delay:	XXX
DOT Regulated:	U	Sub Part C Test Req:	XXX
Pipeline Type:	UNKNOWN	Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	U	Yard Foreman Test:	
Railroad Hotline:	No	RCL Operator Test:	
Railroad Milepost:	UNKNOWN	Brakeman Test:	
Grade Crossing:	N	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:	UNKNOWN	Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:		State Agen Report No:	
Release Rate:		State Agen on Scene:	
Release Rate Unit:		State Agen Notified:	
Release Rate Rate:		Fed Agency Notified:	
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	NONE	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:		Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	
Who Evacuated:		Weather Conditions:	
Radius of Evacu:		Air Temperature:	
Any Injuries:	U	Wind Direction:	
No. Injured:		Wind Speed:	
No. Hospitalized:		Wind Speed Unit:	
No. Fatalities:		Water Supp Contam:	
Any Fatalities:	U	Water Temperature:	
Any Damages:	N	Wave Condition:	
Damage Amount:		Current Speed:	
Air Corridor Closed:		Current Direction:	
Air Corridor Desc:		Current Speed Unit:	
Air Closure Time:		EMPL Fatality:	
Waterway Closed:		Pass Fatality:	
Waterway Desc:		Community Impact:	
Waterway Close Time:		Passengers Transfer:	UNK
Road Closed:		Passenger Injuries:	
Road Desc:		Employee Injuries:	
Road Closure Time:		Occupant Fatality:	
Road Closure Units:		Sheen Size:	
Closure Direction:		Sheen Size Units:	
Major Artery:		Sheen Size Length:	
Track Closed:		Sheen Size Length U:	
Track Desc:		Sheen Size Width:	
Track Closure Time:		Sheen Size Width U:	
Track Closure Units:		Sheen Color:	
Track Close Dir:		Dir of Sheen Travel:	
Media Interest:		Sheen Odor Desc:	
Medium Desc:	WATER	Duration Unit:	
Addl Medium Info:	DES PLAINES RIVER	Additional Info:	

Site: FREUND INTERNATIONAL
BUFFALO GROVE RD BUFFALO GROVE IL 60089

FINDS/FRS

Registry ID: 110018471679
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 19-OCT-2004 19:54:53
Update Date: 29-DEC-2014 13:25:17
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK

US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110018471679
Program Acronyms:

Site: **ROSEGLLEN SUBDIVISION**
BUFFALO GROVE RD BUFFALO GROVE IL 60089

[FINDS/FRS](#)

Registry ID: 110061094890
FIPS Code: 17097
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 16-OCT-2014 09:19:31
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110061094890
Program Acronyms:

Site: **BRIDGE**
W JEFFERY OVER BUFFALO CREEK WHEELING IL 60090

[FINDS/FRS](#)

Registry ID: 110060382241
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 16-SEP-2014 08:06:51
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:

Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110060382241
Program Acronyms:

ACES:170002052631

Site: CHEVY CHASE SEWER & WATER CO
RTE 21, .5 M N OF LAKE-COOK RD WHEELING IL 60090

FINDS/FRS

Registry ID: 110054184654
FIPS Code: 17097
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 21-NOV-2012 13:30:14
Update Date: 29-DEC-2014 15:24:31
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110054184654
Program Acronyms:

ACES:170001957407

Site: PLOTE INC.
LAKE-COOK RD. W. OF PORTWINE WHEELING IL 60090

FINDS/FRS

Registry ID: 110007051858
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY

Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00
Update Date: 09-JAN-2015 17:46:00
Interest Types: AIR MINOR, STATE MASTER
SIC Codes: 9999
SIC Code Descriptions: NONCLASSIFIABLE ESTABLISHMENTS
NAICS Codes: 212312
NAICS Code Descriptions: CRUSHED AND BROKEN LIMESTONE MINING AND QUARRYING.
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110007051858
Program Acronyms:

ACES:170000065809, AIR:IL000031823AAN, AIRS/AFS:1703103388

Site: COOK COUNTY BRIDGE
LAKE COOK RD WHEELING IL 60090

FINDS/FRS

Registry ID: 110012271932
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location: OVR WI CENTRAL RR
Create Date: 01-MAR-2000 00:00:00
Update Date: 26-JAN-2012 16:24:23
Interest Types: HAZARDOUS WASTE BIENNIAL REPORTER, UNSPECIFIED UNIVERSE
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110012271932
Program Acronyms:

BR:ILR000112136, RCRAINFO:ILR000112136

Site: COOK COUNTY HWY DEPT
LAKE COOK RD & WI CENTRAL RR WHEELING IL 60090

FINDS/FRS

Registry ID: 110024856798
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 10-JUN-2006 11:23:27
Update Date: 16-MAY-2008 11:07:34
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110024856798
Program Acronyms:

ACES:170000406692

Site: EAST LAKE/COOK RD BUFFALO GROVE IL

HMIRS

Incident County: COOK

HMIR Incident Reports

Report No:	I-1994041246	Fed DOT Agency Nm:	
Report Type:	A hazardous material incident	Fed DOT Report No:	
Date of Incident:	04/14/1994	Report Submit Src:	Paper
Time of Incident:	1315	Inc Multiple Rows:	No
Haz Class Code:	3	Inc Non US State:	
Hazardous Class:	FLAMMABLE - COMBUSTIBLE LIQUID	Mode Transport:	Highway
Commodity Short Nm:	GASOLINE INCLUDES GASOLI	Transport Phase:	UNLOADING
Commodity Long Nm:	GASOLINE INCLUDES GASOLINE MIXED WITH ETHYL ALCOHOL WITH NOT MORE THAN 10% ALCOHOL	Incident Occrrnce:	
Trade Name:		Mat Ship Approval?:	No
ID No:	UN1203	Mat Ship Approv No:	
Haz Waste Ind:	No	Undecl Hazmat Ship?:	No
Haz Waste EPA No:		Packaging Type:	Cargo Tank Motor Vehicle (CTMV)
HMIS Tox Inhalation?:	No	Packing Group:	
TIH Hazard Zone:		Carrier Reporter:	SHELL OIL COMPANY
Qty Released:	277	CR Street Name:	150 N DAIRY ASHFORD RD A
Unit of Measure:	LGA	CR City:	HOUSTON

What Failed:
What Failed Desc:
How Failed Code:
How Failed Desc:
Failure Cause Code: 508
Failure Cause Desc: Defective Component or Device
Ident. Markings:
Cont1 Pkging Type:
Cont1 Const Mat:
Cont1 Head Type:
Cont1 Pkg Capacity: 9000
C1 Capacity UOM: LGA
Cont1 Pkg Amt:
C1 Pkg Amt UOM:
Cont1 Pkg No: 1
C1 Pkg NO Failed: 1
Cont1 Pkg Mnfr: HEIL COMPANY
Cont1 Pkg Mnfr Dt:
Cont1 Pkg Serial NO: 1HLA3A7B25
C1 Pkg Last Test Dt:
C1 Test Const Mat:
C1 Pkg Dsign Pres.:
C1 Dsign Press UOM:
C1 Pkg Shell Thick:
C1 Shell Thick UOM:
C1 Head Thickness:
C1 Head Thick UOM:
C1 Pkg Srvc Pres.:
C1 Srvc Press UOM:
C1 Valve/Device Fail?: No
C1 Device Type:
C1 Device Mnfr:
C1 Device Model:
NRC No:

RAM Pkg Category:
RAM Pkg Cert.: FALSE
RAM Pkg Cert. NBR:
RAM Nuclide S:
RAM Transport Index:
RAM UOM:
RAM Activity Rpted:
RAM UOM Rpted:
RAM Activity:
RAM Activity UOM:
RAM Mat Safety:
Spillage Result: Yes
Fire Result: No
Explosion Result: No
Water Sewer Result: No
Gas Dispersion: No
Environment Damage: No
No Release Result: No
Fire EMS Report: No
Fire EMS EMS Report:
Police Report: No
Police Report No:
In House Cleanup: No
Other Cleanup: No
Damage > 500: Yes
Material Loss: 192
Carrier Damage: 0
Property Damage: 0
Response Cost: 0
Remediation Cost: 1200
Damage Old Form: 0
Total Damages Amt: 1392
Hazmat Fatality: No
Haz Fatal Employees: 0
Haz Fatal Respndrs: 0

CR State: TX
CR Postal Code: 77079-1116
CR Non US State:
CR Fed DOT ID: 0
CR Hazmat Reg ID:
CR Country: US
Shipper Name: SHELL OIL COMPANY
Shipper Street Name: 150 N DAIRY ASHFORD RD A
Shipper City: HOUSTON
Shipper State: TX
Shipper Postal: 77079-1116
Shipper Non US St:
Shipper Country: US
Shipper Waybill: BL# 225333
Ship Hazmat Reg ID:
Origin City: ARLINGTON HEIGHTS
Origin State: ILLINOIS
Origin Postal: 60005
Origin Non US St:
Origin Country: US
Destination City: BUFFALO GROVE
Destination State: ILLINOIS
Destination Postal:
Destination Non US:
Destination Country: US
Cont2 Package Type:
Cont2 Const Mat:
Cont2 Pkg Capacity:
Cont2 Capacity UOM:
Cont2 Pkg Amount:
Cont2 Pkg Amt UOM:
Cont2 Pkg No:
Cont2 Pkg No Failed:

Haz NonHosp Public: 0
Haz NonHosp Old: 0
Tot Haz Non Hosp Inj: 0
Total Hazmat Injuries: 0
Evacuation Indicator: No
Public Evacuated: 0
Employees Evac: 0
Total Evacuated: 0
Total Evacuation Hrs: 0
Major Artery Closed: No
Mjr Artery Hrs Closed: 0
Material Involved: No
Estimated Speed: 0
Weather Conditions:
Vehicle Overturn: No
Vehicle Left Roadway: No
Passenger Aircraft: No
Cargo Baggage:
Ship Non Transport: No
Ship Air First Flight: No
Ship Air Subflight: No
Ship Init Transport: No
Ship Phase Transfer: No
Contact Name: R M HERRERA
Contact Title: PCT SUPT
Contact Business:
Contact Street:
Contact City:
Contact State:
Contact Postal:
Contact Non US St:
Contact Country: US
Inc. Report Prepared:
HMIS Serious Incidnt: Yes
HMIS Serious Fatality: No

Haz Fatal Gen Public: 0
Tot Hazmat Fatalities: 0
Non Hazmat Fatality: No
Non Hazmat Fatals: 0
Hazmat Injury: No
Haz Hospital Empl: 0
Haz Hospital Resp: 0
Haz Hosp Gen Public: 0
Haz Hosp Old Form: 0
Total Haz Hosp Inj: 0
Haz Non Hosp Empl: 0
Haz Non Hosp Resp: 0
Description of Events:

HMIS Serious Injury: No
HMIS Flight Plan: No
HMIS Serious Evacs: No
HMIS Major Artery: No
HMIS Bulk Release: Yes
HMIS Marine Pollutnt: No
HMIS Radioactive: No
HMIS Gen Pkg Type: OHMIR.Ref_Container.descr_txt
HMIS Container Code: MC306
HMIS Container Desc: Cargo tanks
HMIS Bulk Incident: Yes
Undeclared Shipment: No

WHILE THE CARGO TANKER WAS UNLOADING OF THE SCOTTVILLE STATION THE OVERFILL PROTECTION FLAP ON THE UNDERGROUND STORAGE TANK PREMATURELY CLOSED CAUSING THE DROP FITTING TO COME LOOSE FROM THE FILL-UP. THE FITTING TURNED SIDEWAYS ALLOWING GASOLINE TO SPILL ONTO THE STATION PARKING LOT. THE DRAWER CLOSED ALL OF THE UNLOADING VALVES IMMEDIATELY. BUFFALO GROVE FIRE DEPARTMENT WAS CALLED. HERITAGE ENVIRONMENTAL WAS CALLED OUT TO PERFORM CLEAN-UP. SHELL OIL RETAIL ENGINEERING IS INVESTIGATING CORRECTION ACTION.

Recommend Actions Taken:

Site: **PROFILE PRODUCTS LLC**
750 LAKE COOK ROAD SUITE 440 BUFFALO GROVE IL 60089

PRP

Site EPA ID: GAD981258270
Site Name: CONSTITUTION ROAD DRUM SITE
Site NPL Status: Not on the NPL
Site Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

Noticed Party Action Information

Action Type Seq: AC-1
Action Name: ADM ORDR
Action Date: SETTLEMENT DATE 09/26/2006

Site: **MOTOROLA INC**
852 TO 890 HASTINGS LAKE BUFFALO GROVE IL 60089

RCRA NON GEN

EPA Handler ID: ILD984804971
Gen Status Universe: No Report
Contact Name: ENV COORDINATOR
Contact Address: US
Contact Phone No and Ext: 847-632-7700
Contact Email:
Contact Country: US
County Name: LAKE
EPA Region: 05
Land Type: Private
Receive Date: 20060401

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No

Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19901015
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19920301
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Annual/Biennial Report

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20060401
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Annual/Biennial Report update with Notification

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	
Name:	CHEVY CHASE BUSINESS PK LTD PT	Street 2:	
Date Became Current:		City:	
Date Ended Current:		State:	
Phone:		Country:	
Source Type:	Notification	Zip Code:	

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	
Name:	MOTOROLA INC	Street 2:	
Date Became Current:	19000101	City:	
Date Ended Current:		State:	
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Private	Street 1:	
Name:	MOTOROLA INC	Street 2:	
Date Became Current:	19000101	City:	
Date Ended Current:		State:	
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	

Historical Handler Details

Receive Dt: 19920301

Generator Code Description: Large Quantity Generator
Handler Name: MOTOROLA INC

Receive Dt: 19901015
Generator Code Description: Large Quantity Generator
Handler Name: MOTOROLA INC

Site: **COOK COUNTY BRIDGE**
LAKE COOK RD OVR WI CENTRAL RR WHEELING IL 60090

RCRA NON GEN

EPA Handler ID: ILR000112136
Gen Status Universe: No Report
Contact Name: ENV COORDINATOR
Contact Address: US
Contact Phone No and Ext: 312-603-1740
Contact Email:
Contact Country: US
County Name: COOK
EPA Region: 05
Land Type: County
Receive Date: 20060401

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20020501
Handler Name: COOK COUNTY BRIDGE
Generator Status Universe: No Report
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20060401
Handler Name: COOK COUNTY BRIDGE
Generator Status Universe: No Report
Source Type: Annual/Biennial Report update with Notification

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: County
Name: COOK COUNTY HIGHWAY DEPT
Date Became Current:
Date Ended Current:
Phone: 312-603-1740
Source Type: Notification

Street No:
Street 1: 69 W WASHINGTON
Street 2:
City: CHICAGO
State: IL
Country:
Zip Code: 60602

Owner/Operator Ind: Current Operator
Type: County
Name: COOK COUNTY BRIDGE
Date Became Current: 19000101
Date Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification

Street No:
Street 1:
Street 2:
City:
State:
Country: US
Zip Code:

Owner/Operator Ind: Current Owner
Type: County
Name: COOK COUNTY BRIDGE
Date Became Current: 19000101
Date Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification

Street No:
Street 1:
Street 2:
City:
State:
Country: US
Zip Code:

Historical Handler Details

Receive Dt: 20020501
Generator Code Description: Large Quantity Generator
Handler Name: COOK COUNTY BRIDGE

Site: **Ahmet Tuzik**
2737 W Glenlake Chicago IL

SPILLS

Incident No: H-2019-0892
Date/Time Occurred:
Area Involved: Fixed Facility
Media Release: Ground
Milepost: N/A
County: Cook
Facility Manager: Ahmet Tuzik
Fac Manager Phone: 773/343-9355
Responsible Party Street: 2737 W Glenlake

Section: N/A
Township: N/A
Range: N/A
Latitude: 41.992184
Longitude: -87.698402

Hazardous Materials Incident Report

Hazmat Incident Type: Leak or spill
LUST?: Yes
Data Input Status: Closed
Incident Report Date: 8/27/2019 12:39:54 PM
Street Address: 2737 W Glenlake
City: Chicago
County: Cook
URL: <https://public.iema.state.il.us/FOIAHazmatSearch/HazmatDetails.aspx?RptNum=H-2019-0892>
Narrative:

Date Entered:
Entered by: Kirgan, Ken (IEMA)
Caller: David Streich
Caller Represents: Chicago Tank Removal

Follow Up Information:

Weather Information

Temp: n/a
Wind: n/a

Materials Involved

Name:	Heating Oil	Cause of Release:	tank failure due to corrosion
Type:	Liquid	Est Spill Extent:	Unknown
CHRIS CODE:	Unknown	Spill Extent Units:	
CAS No:	Unknown	Date/Time Inc Occur:	
UN/NA No:	Unknown	Unknown Occurr:	Yes
Container Type:	Under ground storage tank	Date/Time Discov:	2019-08-27 12:00
Container Size:	1-1,000 gallons	Unknown Discovered:	
Amount Released:	unknown	Where Taken:	none
Rate of Release Min:	Unknown	On Scene Contact:	David Streich
Duration of Release:	Unknown	No of People Evacuat:	0
A 302(a) Extremely Haz Sub?:	No		
A RCRA Hazardous Waste?:	No		
A RCRA Regulated Facility?:	No		
Public Health Risks:	none		
State Agency Assistance:	none		
Containment/Cleanup Plans:	tank has been removed, Chicago Tank Removal will clean it up.		

Emergency Units Contacted

Contacted ESDA?:		Name of Police Dep:	None
ESDA on Scene?:		Sheriff Police Dep?:	
Spec ESDA Agency:	None	Sheriff Dep on Scene:	
Contacted Fire Dep?:		Name of Sheriff Dep:	None
Fire Dep on Scene?:		Other Agency?:	
Name of Fire Dep:	None	Agency on Scene?:	Yes
Police Dep Contact?:		Name of Agency:	City of Chicago inspector
Police Dep on Scene:			

Agency or Persons Notified

Agency:	IEPA, NRTP, OSFM, CFD, IEMA Region 4	Name of Person:	emailed
Date/Time:	2019-08-27 12:43	Notification Action:	Report Sent

Site: **VILLAGE OF ARLINGTON HEIGHTS** SPILLS2
LAKE COOK ROAD [CREEK ON N. END NEAR TERRAMERE SUBDIVISION] ARLINGTON HEIGHTS IL

Incident ID:	NL850786	Occured Date:	
Received Date:	7/17/1985	Incident LUST:	
Action:		Incident County:	COOK
Action Description:			

Site: **RAIN-RD CONSTRUCTION** SPILLS2
LAKE SIDE CIRCLE TOWN HOUSE COMPLEX WHEELING IL

Incident ID:	NL830407	Occured Date:	
Received Date:	5/29/1983	Incident LUST:	
Action:		Incident County:	COOK
Action Description:			

Site: **MOBILE OIL** SPILLS2
NEAR BUFFALO GROVE BUFFALO GROVE IL

Incident ID:	NL850868	Occured Date:	
Received Date:	8/7/1985	Incident LUST:	
Action:		Incident County:	COOK
Action Description:			

Site: **TEMPO 2 CO.** SPILLS2
DEER VALLEY RD 1 MI N OF LAKE-COOK RD WHEELING IL

Incident ID: NL810201
Received Date: 4/9/1981
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: LAKE

Site: RAIN-RD CONSTRUCTION
LAKE SIDE CIRCLE TOWN HOUSE COMPLEX WHEELING IL

SPILLS2

Incident ID: NL830407
Received Date: 5/28/1983
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: MOBILE OIL
NEAR BUFFALO GROVE BUFFALO GROVE IL

SPILLS2

Incident ID: NL850868
Received Date: 7/12/1985
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: True North Energy LLC
185 Milwaukee Avenue Buffalo Grove, IL 60089 IL

UST

Facility No: 2046886
Facility Status: Not Installed
Facility Type: Self-Service Station
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type: Private
Owner Status: Current Owner
Owner Name: True North Energy, LLC
Owner Address: 10346 Brecksville Road
Brecksville, OH 44141

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Lake

Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2046886&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2046886>

Tank Information

Tank No: 2
Status: Not Installed
Removed Date:
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 6000
Regulated Status: Federal

Current Age:
Product: Gasoline - Premium
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt:
CAS Code:

Tank Information

Tank No: 3
Status: Not Installed
Removed Date:
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:

Current Age:
Product: Diesel Fuel
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00

Capacity: 9000
Regulated Status: Federal

OSFM First Noti Dt:
CAS Code:

Tank Information

Tank No: 1
Status: Not Installed
Removed Date:
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 15000
Regulated Status: Federal

Current Age:
Product: Gasoline - Regular
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt:
CAS Code:

Owner Summary

Owner No: U0035735
Owner Name: True North Energy, LLC

Owner Status: Current Owner
Purchase Date:

Site: **Powernail Company, Inc.**
301 East Half Day Road Buffalo Grove, IL 60089 IL

UST

Facility No: 2006509
Facility Status: Closed
Facility Type: Industrial / Manufacturing
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date: 1/1/1954
Type Financial Resp: Other (add note)
Property Parcel:
Owner Type: Private
Owner Status: Current Owner
Owner Name: Powernail Company, Inc
Owner Address: P. O. Box 300
Lincolnshire, IL 60069

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Lake

Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2006509&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2006509>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 1/18/1996
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 1500
Regulated Status: Federal

Current Age: 14
Product: Diesel Fuel
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 3/27/1986
CAS Code:

Tank Information

Tank No: 2
Status: Removed
Removed Date: 1/18/1996
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 1500
Regulated Status: Federal

Current Age: 14
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 3/27/1986
CAS Code:

Tank Information

Tank No: 4
Status: Removed
Removed Date: 10/8/2003
Red Tag Issue Date:
Abandoned Date:
Install Date: 1/1/1959
Last Used Date:
Capacity: 10000
Regulated Status: State

Current Age: 44
Product: Heating Oil
Product Date:
Petroleum Use: Consumptive Use on Premises
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 6/23/1992
CAS Code:

Tank Information

Tank No: 3
Status: Removed
Removed Date: 1/18/1996
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 2000
Regulated Status: Federal

Current Age: 14
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 3/27/1986
CAS Code:

Owner Summary

Owner No: U0012090
Owner Name: Powernail Company, Inc

Owner Status: Current Owner
Purchase Date: 1/1/1954

Site: **Construction Site**
20194 Buffalo Grove Road Buffalo Grove, IL 60089 IL

UST

Facility No: 2042552
Facility Status: Exempt
Facility Type: None
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner
Owner Name: Buffalo Grove Bank & Trust
Owner Address:
Facility URL:
Permit History Link:

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Lake

<http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2042552&PrintDetail=true>
<https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2042552>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 12/6/2004
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 12/31/1973
Capacity: 550
Regulated Status: Exempt

Current Age:
Product: Heating Oil
Product Date:
Petroleum Use: Consumptive Use on Premises
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 12/21/2004
CAS Code:

Owner Summary

Owner No: U0032398
Owner Name: Buffalo Grove Bank & Trust

Owner Status: Current Owner
Purchase Date:

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

[NPL](#)

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Nov 25, 2019

National Priority List - Proposed:

[PROPOSED NPL](#)

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Nov 25, 2019

Deleted NPL:

[DELETED NPL](#)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Nov 25, 2019

SEMS List 8R Active Site Inventory:

[SEMS](#)

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Nov 25, 2019

Inventory of Open Dumps, June 1985:

[ODI](#)

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites:

[SEMS ARCHIVE](#)

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Nov 25, 2019

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS:

CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands:

IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned:

CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 18, 2019

RCRA non-CORRACTS TSD Facilities:

RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Nov 18, 2019

RCRA Generator List:

RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Nov 18, 2019

RCRA Small Quantity Generators List:

RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Nov 18, 2019

RCRA Conditionally Exempt and Very Small Quantity Generators List:

[RCRA CESQG](#)

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt and Very Small Quantity Generators (VSQG and CESQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG and CESQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 18, 2019

RCRA Non-Generators:

[RCRA NON GEN](#)

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 18, 2019

Federal Engineering Controls-ECs:

[FED ENG](#)

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jun 11, 2019

Federal Institutional Controls- ICs:

[FED INST](#)

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Jun 11, 2019

Emergency Response Notification System:

[ERNS 1982 TO 1986](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

[ERNS 1987 TO 1989](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

[ERNS](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Mar 21, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:

[FED BROWNFIELDS](#)

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 3, 2019

FEMA Underground Storage Tank Listing:

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries:

REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Oct 8, 2019

Petroleum Product and Crude Oil Rail Terminals:

BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property:

SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Nov 25, 2019

Superfund Decision Documents:

SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Oct 25, 2019

State

State Response Action Program Database:

SSU

The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit. The State Response Action Program database made available by Illinois Environmental Protection Agency. This database is state equivalent CERCLIS.

Government Publication Date: Aug 20, 2019

Delisted State Response Action Program:

DELISTED SSU

List of sites removed from the State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit.

Government Publication Date: Aug 20, 2019

Solid Waste Landfills Subject to State Surcharge Database:

SWF/LF

The Bureau of Land maintains a list of solid waste facilities and landfills throughout the state. This list made available by Illinois Environmental Protection Agency's Bureau of land.

Government Publication Date: Mar 2, 2018

Special Waste Site List:

SWF/LF SPECIAL

The following landfills are those that as of January 1, 1990, accept non-hazardous special waste pursuant to the Illinois Environmental Protection Agency Non-Hazardous Special Waste Definition. List A includes landfills that may receive any non-hazardous waste. Non-Regional Pollutant Control Facilities are so noted. List B includes landfills designed to receive specific non-hazardous wastes. List B landfills are designated as a Regional Pollutant Control Facility by RPCF, or Non-regional Pollutant Control Facility by Non-RPCF.

Government Publication Date: Jan 1, 1990

Northeastern Illinois Planning Commission Historical Inventory of Solid Waste Disposal Sites in

NIPC

Northeastern Illinois:

Historical inventory of solid waste disposal sites in northeastern Illinois prepared by the Northeastern Illinois Planning Commission (NIPC).

Clean Construction or Demolition Debris:

CCDD

This is a list of CCDD Fill Operations with Approved Permits. Beginning July 1, 2008, no person can use CCDD as fill material in a current or former quarry, mine, or other excavation unless they have obtained a permit from the Illinois EPA.

Government Publication Date: Apr 30, 2018

Leaking Underground Storage Tanks (LUST):

LUST

The Leaking Underground Storage Tank Incident Tracking (LIT) database identifies the status of all Illinois LUST incidents reported to the Illinois Emergency Management Agency (IEMA) and to the Illinois Environmental Protection Agency.

Government Publication Date: Dec 2, 2019

Leaking UST Document:

LUST DOCUMENT

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Leaking Underground Storage Tank (LUST) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Oct 30, 2019

Delisted Leaking Underground Storage Tank Sites:

DELISTED LUST

List of sites removed from the Leaking Underground Storage Tank Incident Tracking (LIT) database made available by the Illinois Environmental Protection Agency.

Government Publication Date: Oct 30, 2019

Underground Storage Tank Fund Payment Priority List:

LUST TRUST

In case sufficient funds are not available in the Underground Storage Tank Fund, requests for payment are entered on the Payment Priority List by "queue date" order. As required by the Environmental Protection Act, the queue date is the date that a complete request for partial or final payment was received by the Agency. The queue date is "officially" confirmed at the end of the payment review process when a Final Decision Letter is sent to the site owner. The Underground Storage Tank Fund Priority list made available by Illinois Environmental Protection Agency.

Government Publication Date: Nov 01, 2016

Underground Storage Tank Database (UST):

UST

This database maintained by Division of Petroleum & Chemical Safety, contains information derived from tank registration information supplied to the Office of the Illinois State Fire Marshal (OSFM) from outside sources.

Government Publication Date: Jul 17, 2019

Aboveground Storage Tanks (AST):

AST

A list of aboveground storage tanks inspected by the Office of State Fire Marshal (OSFM).

Government Publication Date: Sep 30, 2019

Delisted Storage Tanks:

DELISTED TANK

This database contains a list of closed storage tank sites that were removed from the Illinois Department of Environmental Quality.

Government Publication Date: Dec 11, 2019

Sites with Engineering Controls:

ENG

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remediation Program (SRP) database with engineering controls in place.

Government Publication Date: Dec 2, 2019

Institutional Controls:

INST

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remediation Program (SRP) database with institutional controls in place.

Government Publication Date: Dec 2, 2019

Illinois Site Remediation Program Database:

SRP

The Site Remediation Program (SRP) database identifies the status of all voluntary remediation projects administered through the Pre-Notice Site Cleanup Program (1989 to 1995) and the Site Remediation Program (1996 to the present). This Site Remediation program database made available by Illinois Environmental Protection Agency.

Government Publication Date: Dec 2, 2019

Brownfields Redevelopment Assessment Database:

[BROWNFIELDS](#)

The Office of Site Evaluations Redevelopment Assessment database identifies the status of properties within the State in which the Illinois EPA's Office of Site Evaluation has conducted a Municipal Brownfields Redevelopment Grant (MBRG) project.

Government Publication Date: Sep 12, 2019

Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through

[BROWN MBRGP](#)

OBA:

The Office of Brownfields Assistance (OBA) database identifies the status of all Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through OBA. Office of Brownfields Assistance Database search made available by Illinois Environmental Protection Agency's Bureau of Land Data-Center.

Government Publication Date: Mar 31, 2013

Tribal

Leaking Underground Storage Tanks on Indian Lands:

[INDIAN LUST](#)

List of Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands in EPA Region 5, which includes Michigan, Minnesota and Wisconsin. There no LUST records in Illinois at this time.

Government Publication Date: Oct 16, 2017

Underground Storage Tanks (USTs) on Indian Lands:

[INDIAN UST](#)

Underground Storage Tanks (USTs) on Tribal/Indian Lands in EPA Region 5. There are no UST records in Illinois at this time.

Government Publication Date: Oct 16, 2017

Delisted Tribal Leaking Storage Tanks:

[DELISTED ILST](#)

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: May 2, 2019

Delisted Tribal Underground Storage Tanks:

[DELISTED IUST](#)

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: May 2, 2019

County

Chicago Storage Tanks:

[TANKS CHICAGO](#)

This dataset contains Aboveground Storage Tank (AST) and Underground Storage Tank (UST) information from the City of Chicago Department of Public Health's (CDPH) Tank Asset Database. The Tank Asset Database contains tank information from CDPH AST and UST permit applications as well as UST records imported from the historic City of Chicago Department of Environment (DOE) database. This dataset also includes AST records from the historic DOE and pre-1992 UST records from the Building Department.

Government Publication Date: Dec 11, 2019

Chicago Environmental Permits:

[PERMITS CHICAGO](#)

Permits issued by the City of Chicago Department of Environment (DOE) from January 1993 to December 31, 2011 and by the City of Chicago Department of Public Health (CDPH) since January 1, 2012. On January 1, 2012, the DOE was disbanded and all its inspection, permitting, and enforcement authorities were transferred to the CDPH.

Government Publication Date: Sep 12, 2019

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites:

PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 15, 2019

Facility Registry Service/Facility Index:

FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Nov 6, 2019

Toxics Release Inventory (TRI) Program:

TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Releases:

PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Dec 31, 2017

Hazardous Materials Information Reporting System:

HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs:

NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Sep 26, 2019

Toxic Substances Control Act:

TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Jun 30, 2017

Hist TSCA:

HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Oct 25, 2019

State Coalition for Remediation of Drycleaners Listing:

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Nov 18, 2016

Drycleaner Facilities:

FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities:

DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 29, 2018

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Nov 1, 2018

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

[MINES](#)

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: May 3, 2019

Alternative Fueling Stations:

[ALT FUELS](#)

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Oct 1, 2019

Registered Pesticide Establishments:

[SSTS](#)

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: May 31, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

[PCB](#)

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Oct 9, 2019

State

Spills and Incidents:

[SPILLS](#)

A list of reports taken by Illinois Emergency Management Agency (IEMA) of Hazardous Material spills in Illinois.

Government Publication Date: Dec 11, 2019

Emergency Response Releases & Spills Database:

[SPILLS2](#)

The Office of Emergency Response (OER) maintains the Emergency Response Releases & Spills Database. The Emergency Operations Unit, within OER, coordinates Illinois EPA's response to environmental emergencies involving oil or hazardous materials and ensures that any environmental contamination is cleaned up. EOU works with other response agencies including the Illinois Emergency Management Agency (IEMA), which is the initial contact for responses to an emergency or disaster in Illinois.

Government Publication Date: Dec 11, 2019

Per- and Polyfluoroalkyl Substances (PFAS):

[PFAS](#)

A list of reports taken by the Illinois Emergency Management Agency (IEMA) of incidents involving hazardous materials, where the hazardous material involved in the incident is in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Sep 12, 2019

Dry Cleaning Facilities:

[DRYCLEANERS](#)

A list of licensed drycleaners facilities provided by Drycleaner Environmental Response Trust Fund of Illinois.

Government Publication Date: Nov 12, 2019

Delisted Drycleaners:

[DELISTED DRYCLEANERS](#)

List of sites removed from the drycleaners database made available by the Drycleaner Environmental Response Trust Fund of Illinois.

Government Publication Date: Nov 12, 2019

Clandestine Drug Labs:

[CDL](#)

List of clandestine drug lab locations made available by the Illinois Department of Public Health. The Department maintains a list of properties from reports it receives from the Illinois State Police through the Illinois Emergency Management Agency.

Government Publication Date: Aug 21, 2019

Tier 2 Report:

TIER 2

List of facilities who submit Tier II forms to the Illinois Emergency Management Agency (IEMA).

Government Publication Date: Sep 16, 2019

Air Permits:

AIR PERMITS

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Air Permits (construction and operating) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Oct 30, 2019

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



DATABASE **REPORT**

Project Property: *Downing/ Saxon 2
Downing/ Saxon 2
Buffalo Grove IL 60089*

Project No: *T20-039*

Report Type: *Screen Report Plus*

Order No: *20200113265*

Requested by: *Bluff City Materials, Inc*

Date Completed: *January 13, 2020*

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Executive Summary

Property Information:

Project Property: *Downing/ Saxon 2
Downing/ Saxon 2 Buffalo Grove IL 60089*

Project No: *T20-039*

Coordinates:

Latitude: *42.138287*
Longitude: *-87.953018*
UTM Northing: *4,665,569.72*
UTM Easting: *421,244.06*
UTM Zone: *16T*

Elevation: *674 FT*

Order Information:

Order No: *20200113265*
Date Requested: *January 13, 2020*
Requested by: *Bluff City Materials, Inc*
Report Type: *Screen Report Plus*

Historicals/Products:

ERIS Xplorer [*ERIS Xplorer*](#)
Excel Add-On *Excel Add-On*

Executive Summary: Report Summary

<i>Database</i>	<i>Searched</i>	<i>Project Property</i>	<i>Within 0.250mi</i>	<i>Total</i>
<u>Standard Environmental Records</u>				
Federal				
NPL	Y	0	0	0
PROPOSED NPL	Y	0	0	0
DELETED NPL	Y	0	0	0
SEMS	Y	0	0	0
SEMS ARCHIVE	Y	0	0	0
ODI	Y	0	0	0
CERCLIS	Y	0	0	0
IODI	Y	0	0	0
CERCLIS NFRAP	Y	0	0	0
CERCLIS LIENS	Y	0	0	0
RCRA CORRACTS	Y	0	0	0
RCRA TSD	Y	0	0	0
RCRA LQG	Y	0	1	1
RCRA SQG	Y	0	1	1
RCRA CESQG	Y	0	1	1
RCRA NON GEN	Y	0	0	0
FED ENG	Y	0	0	0
FED INST	Y	0	0	0
ERNS 1982 TO 1986	Y	0	0	0
ERNS 1987 TO 1989	Y	0	0	0
ERNS	Y	0	0	0
FED BROWNFIELDS	Y	0	0	0
FEMA UST	Y	0	0	0
REFN	Y	0	0	0
BULK TERMINAL	Y	0	0	0
SEMS LIEN	Y	0	0	0

Database	Searched	Project Property	Within 0.250mi	Total
SUPERFUND ROD	Y	0	0	0
State				
SSU	Y	0	0	0
DELISTED SSU	Y	0	0	0
SWF/LF	Y	0	0	0
SWF/LF SPECIAL	Y	0	0	0
NIPC	Y	0	0	0
CCDD	Y	0	0	0
LUST	Y	0	0	0
LUST DOCUMENT	Y	0	0	0
DELISTED LUST	Y	0	0	0
LUST TRUST	Y	0	0	0
UST	Y	0	0	0
AST	Y	0	0	0
DELISTED TANK	Y	0	0	0
ENG	Y	0	1	1
INST	Y	0	1	1
SRP	Y	0	1	1
BROWNFIELDS	Y	0	0	0
BROWN MBRGP	Y	0	0	0
Tribal				
INDIAN LUST	Y	0	0	0
INDIAN UST	Y	0	0	0
DELISTED ILST	Y	0	0	0
DELISTED IUST	Y	0	0	0
County				
TANKS CHICAGO	Y	0	0	0
PERMITS CHICAGO	Y	0	0	0
<u>Additional Environmental Records</u>				
Federal				
PFAS NPL	Y	0	0	0
FINDS/FRS	Y	0	5	5
TRIS	Y	0	0	0
PFAS TRI	Y	0	0	0
HMIRS	Y	0	0	0
NCDL	Y	0	0	0
TSCA	Y	0	0	0

Database	Searched	Project Property	Within 0.250mi	Total
HIST TSCA	Y	0	0	0
FTTS ADMIN	Y	0	0	0
FTTS INSP	Y	0	0	0
PRP	Y	0	0	0
SCRD DRYCLEANER	Y	0	0	0
ICIS	Y	0	0	0
FED DRYCLEANERS	Y	0	0	0
DELISTED FED DRY	Y	0	0	0
FUDS	Y	0	0	0
MLTS	Y	0	0	0
HIST MLTS	Y	0	0	0
MINES	Y	0	0	0
ALT FUELS	Y	0	0	0
SSTS	Y	0	0	0
PCB	Y	0	0	0

State

SPILLS	Y	0	0	0
SPILLS2	Y	0	0	0
PFAS	Y	0	0	0
DRYCLEANERS	Y	0	0	0
DELISTED DRYCLEANERS	Y	0	1	1
CDL	Y	0	0	0
TIER 2	Y	0	0	0
AIR PERMITS	Y	0	0	0

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Total: 0 12 12

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
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No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	309 DUNDEE	309 DUNDEE WHEELING IL 60090	NNE	0.03 / 176.72	1	15
2	RCRA SQG	GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090 <i>EPA Handler ID:</i> ILD984784314	WNW	0.15 / 777.99	2	15
2	FINDS/FRS	GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090-6908	WNW	0.15 / 777.99	2	17
2	DELISTED DRYCLEANERS	GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090-6908	WNW	0.15 / 777.99	2	18
2	SRP	G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	2	18
2	ENG	G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	2	19
2	INST	G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	2	19
3	RCRA CESQG	LUX CARS CHICAGO INC	88 E DUNDEE RD BUFFALO GROVE IL 60089 <i>EPA Handler ID:</i> ILR000195826	W	0.19 / 992.71	1	20
3	FINDS/FRS	LUX CARS CHICAGO INC	88 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.19 / 992.71	1	22
4	FINDS/FRS	EVALANCE CYCLE INC	1307 OAKMEADOW CT WHEELING IL 60090	ENE	0.20 / 1,047.68	-4	22
5	RCRA LQG	CVS PHARMACY 2788	20 E DUNDEE RD BUFFALO GROVE IL 60089 <i>EPA Handler ID:</i> ILR000171439	W	0.24 / 1,284.46	2	23
5	FINDS/FRS	CVS PHARMACY 2788	20 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.24 / 1,284.46	2	29

Executive Summary: Summary by Data Source

Standard

Federal

RCRA LQG - RCRA Generator List

A search of the RCRA LQG database, dated Nov 18, 2019 has found that there are 1 RCRA LQG site(s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
CVS PHARMACY 2788	20 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.24 / 1,284.46	5
<i>EPA Handler ID: ILR000171439</i>				

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Nov 18, 2019 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090	WNW	0.15 / 777.99	2
<i>EPA Handler ID: ILD984784314</i>				

RCRA CESQG - RCRA Conditionally Exempt and Very Small Quantity Generators List

A search of the RCRA CESQG database, dated Nov 18, 2019 has found that there are 1 RCRA CESQG site(s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
LUX CARS CHICAGO INC	88 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.19 / 992.71	3
<i>EPA Handler ID: ILR000195826</i>				

State

ENG - Sites with Engineering Controls

A search of the ENG database, dated Dec 2, 2019 has found that there are 1 ENG site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	2

INST - Institutional Controls

A search of the INST database, dated Dec 2, 2019 has found that there are 1 INST site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	<u>2</u>

SRP - Illinois Site Remediation Program Database

A search of the SRP database, dated Dec 2, 2019 has found that there are 1 SRP site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
G-K Cleaners	35 Huntington Lane Wheeling IL 60090	WNW	0.15 / 777.99	<u>2</u>

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Nov 6, 2019 has found that there are 5 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
309 DUNDEE	309 DUNDEE WHEELING IL 60090	NNE	0.03 / 176.72	<u>1</u>
GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090-6908	WNW	0.15 / 777.99	<u>2</u>
LUX CARS CHICAGO INC	88 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.19 / 992.71	<u>3</u>
CVS PHARMACY 2788	20 E DUNDEE RD BUFFALO GROVE IL 60089	W	0.24 / 1,284.46	<u>5</u>

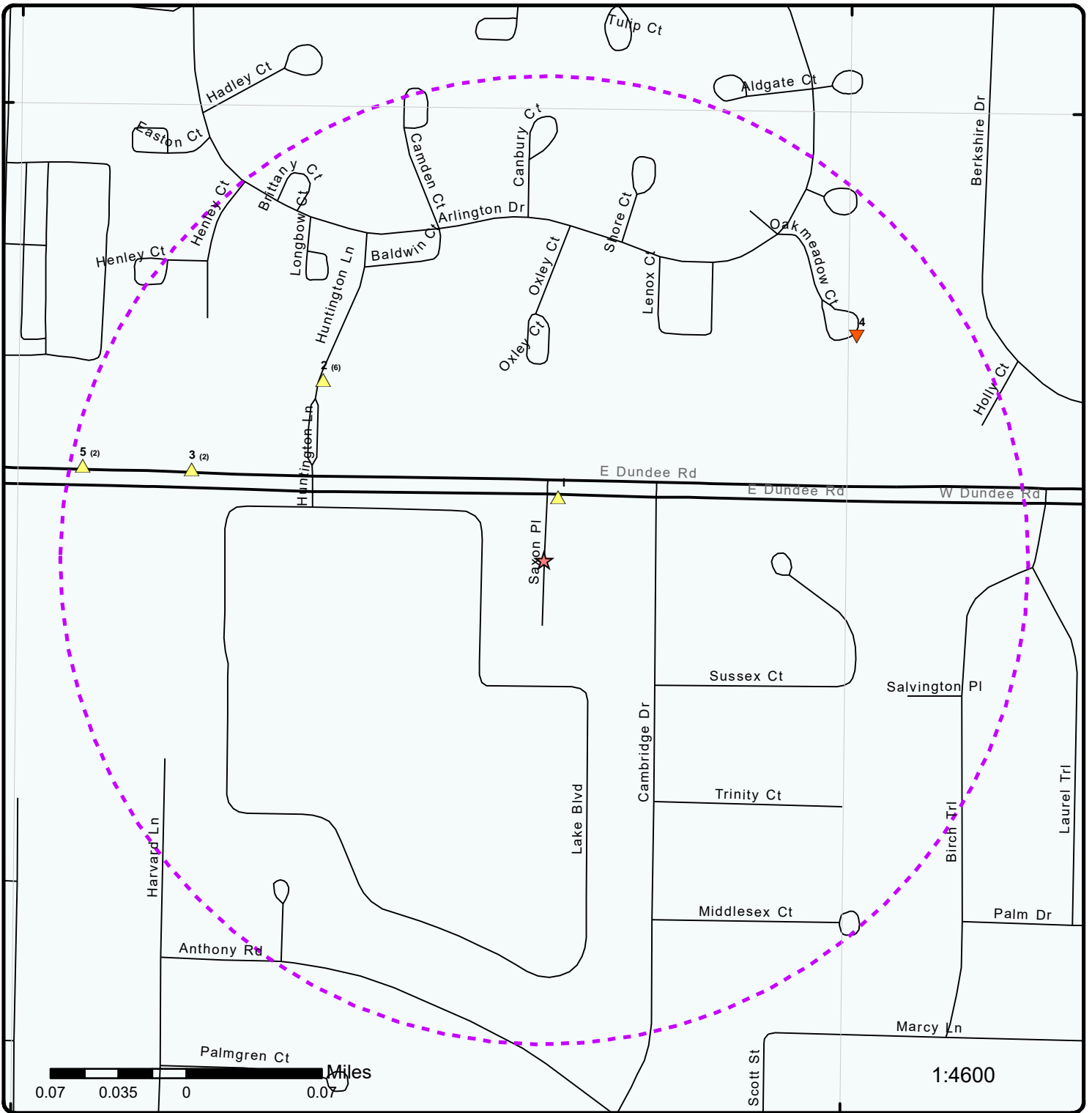
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
EVALANCE CYCLE INC	1307 OAKMEADOW CT WHEELING IL 60090	ENE	0.20 / 1,047.68	<u>4</u>

State

DELISTED DRYCLEANERS - Delisted Drycleaners

A search of the DELISTED DRYCLEANERS database, dated Nov 12, 2019 has found that there are 1 DELISTED DRYCLEANERS site (s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
GK CLEANERS	35 HUNTINGTON LANE WHEELING IL 60090-6908	WNW	0.15 / 777.99	2



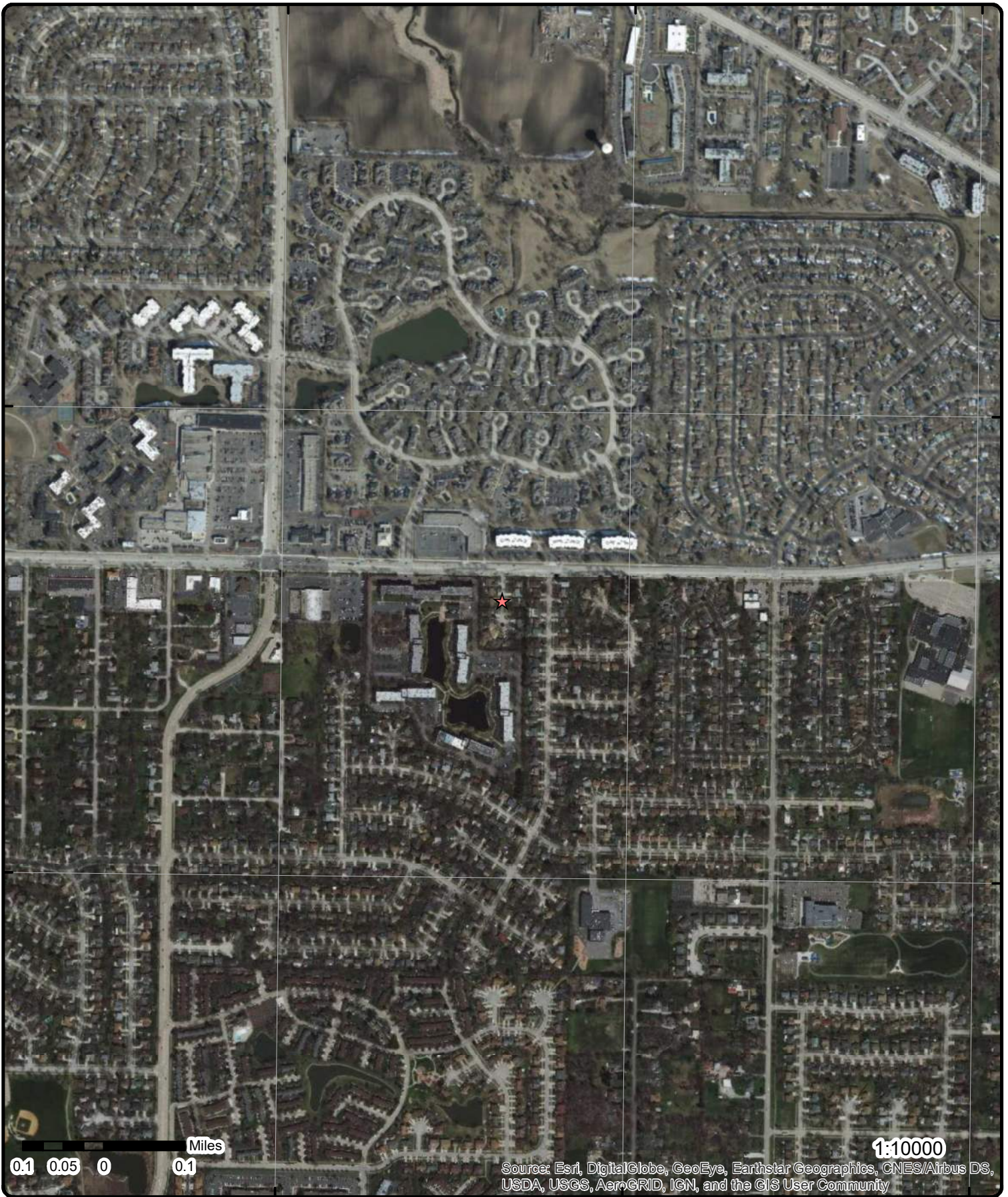
Map : 0.25 Mile Radius

Order Number: 20200113265

Address: Downing/ Saxon 2, Buffalo Grove, IL



Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas: Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas: NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		



Miles
0.1 0.05 0 0.1

1:10000

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Aerial Year: 2018

Address: Downing/ Saxon 2, Buffalo Grove, IL

Source: ESRI World Imagery

Order Number: 20200113265



© ERIS Information Inc.

87°58'30"W

87°58'W

87°57'30"W

87°57'W

87°56'30"W

87°56'W

87°55'30"W

42°9'30"N

42°9'N

42°8'30"N

42°8'N

42°7'30"N

42°7'N

42°9'30"N

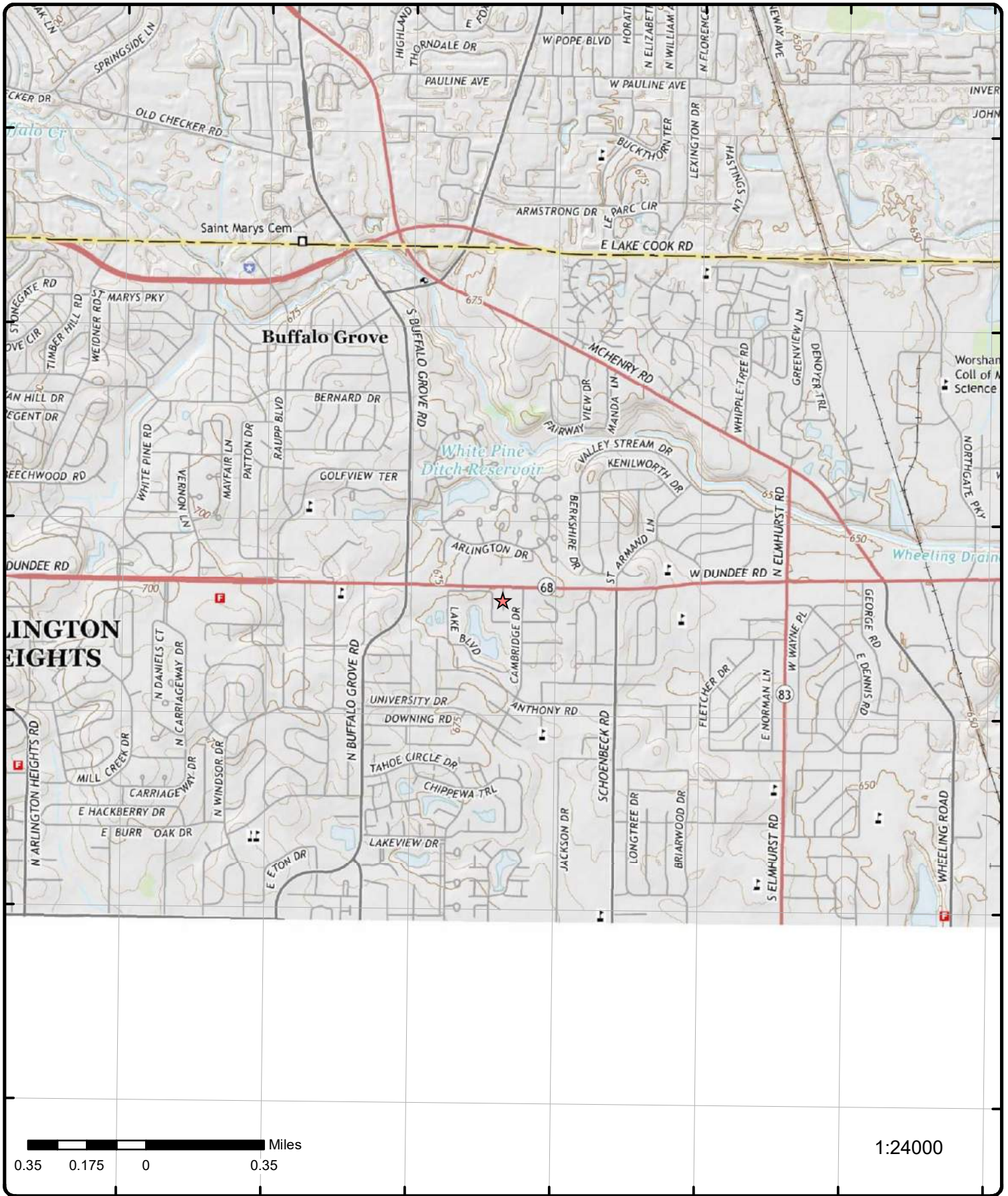
42°9'N

42°8'30"N

42°8'N

42°7'30"N

42°7'N



Topographic Map

Year: 2015

Order Number: 20200113265

Address: Downing/ Saxon 2, IL

Quadrangle(s): Wheeling, IL

Source: USGS Topographic Map



© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	NNE	0.03 / 176.72	675.08 / 1	309 DUNDEE 309 DUNDEE WHEELING IL 60090	FINDS/FRS

Registry ID: 110040762270
FIPS Code: 17031
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 22-APR-2010 10:05:47
Update Date: 29-DEC-2014 16:26:22
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318025052000
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude: 42.139391
Longitude: -87.923592
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110040762270
Program Acronyms:
 ACES:170001845010

2	1 of 6	WNW	0.15 / 777.99	675.91 / 2	GK CLEANERS 35 HUNTINGTON LANE WHEELING IL 60090	RCRA SQG
EPA Handler ID:		ILD984784314				

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Gen Status Universe:		Small Quantity Generator				
Contact Name:		GEZA KOVACS				
Contact Address:		35 HUNTINGTON LANE , , WHEELING , IL, 60090 , US				
Contact Phone No and Ext:		708-537-0772				
Contact Email:						
Contact Country:		US				
County Name:		COOK				
EPA Region:		05				
Land Type:						
Receive Date:		19900501				

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19900501
Handler Name:	GK CLEANERS
Generator Status Universe:	Small Quantity Generator
Source Type:	Notification

Waste Code Details

Hazardous Waste Code:	F002
Waste Code Description:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:
Type:	Private	Street 1:
Name:	KOVACS GEZA	Street 2:
Date Became Current:		City:
Date Ended Current:		State:
Phone:		Country:
Source Type:	Notification	Zip Code:

<u>2</u>	2 of 6	WNW	0.15 / 777.99	675.91 / 2	GK CLEANERS 35 HUNTINGTON LANE WHEELING IL 60090-6908	FINDS/FRS
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Registry ID: 110005873297
FIPS Code: 17031
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00
Update Date: 26-JAN-2012 13:24:52
Interest Types: SQG, STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318024031008
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude: 42.139455
Longitude: -87.955325
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110005873297
Program Acronyms:

ACES:170000259850, RCRAINFO:ILD984784314

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	3 of 6	WNW	0.15 / 777.99	675.91 / 2	GK CLEANERS 35 HUNTINGTON LANE WHEELING IL 60090-6908	DELISTED DRYCLEANERS

License: 3026-0922-01
DC No: DC-00056
Owner Contact: YOON BONG HUH
Expire: 12/31/17
Original Source: DRYC
Record Date: 18-DEC-2017

2	4 of 6	WNW	0.15 / 777.99	675.91 / 2	G-K Cleaners 35 Huntington Lane Wheeling IL 60090	SRP
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I EPA ID: 0314975130 **Longitude:** -87.954370
US EPA ID: ILD984784314 **Latitude:** 42.139200
County: Cook

Site Applicant / Consultant Information

RA Title: Mr.	Received SA Date: 7/18/2017 12:00:00 AM
RA First Name: Mark	PM ID: Todd Hall
RA Last Name: Brennan	Foury Letter Date:
RA Address1: 2215 York Road	Active Site: No
RA Address2: Suite 503	Consultant Address1: 1815 South Meyers Road
RA City: Oak Brook, IL	Consultant Address2: Suite 670
RA Zip: 60523	Consultant City: Oakbrook Terrace, IL
Consultant Contact: David J. Patton	Consultant Zip: 60181
RA Company: Edgemark Asset Management, LLC	
Consultant Company: ATC Group Services LLC	

Letter Information

NFR Site Name: G-K Cleaners	Indust Commercial: Yes
NFR Letter Date: 5/1/2018 12:00:00 AM	Worker Caution: No
Effective: True	Slab on Grade: Yes
NFR Recorded Date: 5/24/2018 12:00:00 AM	BCT: Yes
Comp Focus: Focused	Inst Control Other: No
RA First Name: Mark	Building Slab: No
RA Last Name: Brennan	Asphalt Used: No
RA Company: Edgemark Asset Management, LLC	Concrete Used: No
RA Address1: 2215 York Road	Clean Soil Three ft: No
RA Address2: Suite 503	Clean Soil Ten ft: No
RA City: Oak Brook, IL	Alternate Barrier: No
RA Zip: 60523	Other Barrier: No
Acres: 0.0820	ELUC Other: No
Ordinance: No	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
ELUC Groundwater Use Restrict:		No				
Groundwater Use Restriction:		Yes				
Highway Authority Agreement:		No				
Land Use:		Industrial/Commercial				

[2](#) 5 of 6 **WNW** 0.15 / 777.99 675.91 / 2 **G-K Cleaners
35 Huntington Lane
Wheeling IL 60090** **ENG**

I EPA ID: 0314975130 **Longitude:** -87.954370
US EPA ID: ILD984784314 **Latitude:** 42.139200
County: Cook

Site Applicant / Consultant Information

Active Site:	No	Consultant Contact:	David J. Patton
RA Title:	Mr.	Consultant Address1:	1815 South Meyers Road
RA First Name:	Mark	Consultant Address2:	Suite 670
RA Last Name:	Brennan	Consultant City:	Oakbrook Terrace, IL
RA Address1:	2215 York Road	Consultant Zip:	60181
RA Address2:	Suite 503	PM ID:	Todd Hall
RA City:	Oak Brook, IL	Received SA Date:	7/18/2017 12:00:00 AM
RA Zip:	60523	Fourey Letter Date:	
RA Company:	Edgemark Asset Management, LLC		
Consultant Company:	ATC Group Services LLC		

Letters Information

NFR Site Name:	G-K Cleaners	Indust Commercial:	Yes
NFR Letter Date:	5/1/2018 12:00:00 AM	Worker Caution:	No
Effective:	True	Slab on Grade:	Yes
NFR Recorded Date:	5/24/2018 12:00:00 AM	BCT:	Yes
Comp Focus:	Focused	Inst Control Other:	No
RA First Name:	Mark	Building Slab:	No
RA Last Name:	Brennan	Asphalt Used:	No
RA Company:	Edgemark Asset Management, LLC	Concrete Used:	No
RA Address1:	2215 York Road	Clean Soil Three ft:	No
RA Address2:	Suite 503	Clean Soil Ten ft:	No
RA City:	Oak Brook, IL	Alternate Barrier:	No
RA Zip:	60523	Other Barrier:	No
Acres:	0.0820	ELUC Other:	No
Ordinance:	No		
ELUC Groundwater Use Restrict:		No	
Groundwater Use Restriction:		Yes	
Highway Authority Agreement:		No	
Land Use:		Industrial/Commercial	

[2](#) 6 of 6 **WNW** 0.15 / 777.99 675.91 / 2 **G-K Cleaners
35 Huntington Lane
Wheeling IL 60090** **INST**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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I EPA ID:	0314975130			Longitude:	-87.954370	
US EPA ID:	ILD984784314			Latitude:	42.139200	
County:	Cook					

Site Applicant / Consultant Information

RA Title:	Mr.	Received SA Date:	7/18/2017 12:00:00 AM
RA First Name:	Mark	PM ID:	Todd Hall
RA Last Name:	Brennan	Four Letter Date:	
RA Company:	Edgemark Asset Management, LLC	Active Site:	No
RA Address1:	2215 York Road	Consultant Address1:	1815 South Meyers Road
RA Address2:	Suite 503	Consultant Address2:	Suite 670
RA City:	Oak Brook, IL	Consultant City:	Oakbrook Terrace, IL
RA Zip:	60523	Consultant Zip:	60181
Consultant Contact:	David J. Patton		
Consultant Company:	ATC Group Services LLC		

Letters Information

NFR Site Name:	G-K Cleaners	Indust Commercial:	Yes
NFR Letter Date:	5/1/2018 12:00:00 AM	Worker Caution:	No
Effective:	True	Slab on Grade:	Yes
NFR Recorded Date:	5/24/2018 12:00:00 AM	BCT:	Yes
Comp Focus:	Focused	Inst Control Other:	No
RA First Name:	Mark	Building Slab:	No
RA Last Name:	Brennan	Asphalt Used:	No
RA Company:	Edgemark Asset Management, LLC	Concrete Used:	No
RA Address1:	2215 York Road	Clean Soil Three ft:	No
RA Address2:	Suite 503	Clean Soil Ten ft:	No
RA City:	Oak Brook, IL	Alternate Barrier:	No
RA Zip:	60523	Other Barrier:	No
Acres:	0.0820	ELUC Other:	No
Ordinance:	No		
ELUC Groundwater Use Restrict:	No		
Groundwater Use Restriction:	Yes		
Highway Authority Agreement:	No		
Land Use:	Industrial/Commercial		

3	1 of 2	W	0.19 / 992.71	674.93 / 1	LUX CARS CHICAGO INC 88 E DUNDEE RD BUFFALO GROVE IL 60089	RCRA CESQG
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EPA Handler ID:	ILR000195826
Gen Status Universe:	Conditionally Exempt Small Quantity Generator
Contact Name:	BENEDICT LABINOV
Contact Address:	88 E DUNDEE RD , , BUFFALO GROVE , IL, 60089 , US
Contact Phone No and Ext:	847-947-2900
Contact Email:	BEN@LUXCARSCHICAGO.COM
Contact Country:	US

<i>Map Key</i>	<i>Number of Records</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev/Diff (ft)</i>	<i>Site</i>	<i>DB</i>
<i>County Name:</i>		COOK				
<i>EPA Region:</i>		05				
<i>Land Type:</i>		Private				
<i>Receive Date:</i>		20170905				

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20170905
Handler Name: LUX CARS CHICAGO INC
Generator Status Universe: Conditionally Exempt Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Owner/Operator Details

<i>Owner/Operator Ind:</i>	Current Operator	<i>Street No:</i>	
<i>Type:</i>	Private	<i>Street 1:</i>	88 E DUNDEE RD
<i>Name:</i>	BENEDICT LABINOV	<i>Street 2:</i>	
<i>Date Became Current:</i>	20131120	<i>City:</i>	BUFFALO GROVE
<i>Date Ended Current:</i>		<i>State:</i>	IL

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Phone:				Country:	US	
Source Type:	Notification			Zip Code:	60089	
Owner/Operator Ind:	Current Owner			Street No:		
Type:	Private			Street 1:	4120 RIDGELAND LN	
Name:	TATYANA POVOROZNIOUK			Street 2:		
Date Became Current:	20170905			City:	NORTHBROOK	
Date Ended Current:				State:	IL	
Phone:	847-687-0306			Country:	US	
Source Type:	Notification			Zip Code:	60062	

[3](#) 2 of 2 **W** 0.19 / 992.71 674.93 / 1 **LUX CARS CHICAGO INC
88 E DUNDEE RD
BUFFALO GROVE IL 60089** **FINDS/FRS**

Registry ID: 110070124011
FIPS Code: 17031
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 17-OCT-2017 10:38:29
Update Date:
Interest Types: CESQG
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318024031011
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude: 42.13889
Longitude: -87.95655
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070124011
Program Acronyms:

[4](#) 1 of 1 **ENE** 0.20 / 1,047.68 670.11 / -4 **EVALANCE CYCLE INC
1307 OAKMEADOW CT** **FINDS/FRS**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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WHEELING IL 60090

Registry ID: 110056309962
FIPS Code: 17031
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 27-NOV-2013 13:28:36
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEocode
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318024031001
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude: 42.140229
Longitude: -87.950274
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110056309962
Program Acronyms:
 ACES:170002007646

5	1 of 2	W	0.24 / 1,284.46	676.11 / 2	CVS PHARMACY 2788 20 E DUNDEE RD BUFFALO GROVE IL 60089	RCRA LQG
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EPA Handler ID: ILR000171439
Gen Status Universe: Large Quantity Generator
Contact Name: ERIC ENSMINGER
Contact Address:
Contact Phone No and Ext: 401-765-1500
Contact Email:
Contact Country:
County Name: LAKE
EPA Region: 05

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Land Type: Private
Receive Date: 20180301

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20120501
Handler Name: CVS PHARMACY 2788
Generator Status Universe: Large Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: P001
Waste Code Description: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

Hazardous Waste Code: P042
Waste Code Description: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Hazardous Waste Code: P075
Waste Code Description: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Hazardous Waste Code: P081
Waste Code Description: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20130301
Handler Name: CVS PHARMACY 2788
Generator Status Universe: Large Quantity Generator
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: P001
Waste Code Description: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

Hazardous Waste Code: P075
Waste Code Description: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Hazardous Waste Code: P081
Waste Code Description: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

Hazardous Waste Code: P188
Waste Code Description: BENZOIC ACID, 2-HYDROXY-, COMPD. WITH (3AS-CIS)-1,2,3,3A,8,8A-HEXAHYDRO-1,3A,8-TRIMETHYLPYRROLO[2,3-B]INDOL-5-YL METHYLCARBAMATE ESTER (1:1) (OR) PHYSOSTIGMINE SALICYLATE

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20130708
Handler Name: CVS PHARMACY 2788
Generator Status Universe: Large Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Waste Code Description:		IGNITABLE WASTE				
Hazardous Waste Code:		D002				
Waste Code Description:		CORROSIVE WASTE				
Hazardous Waste Code:		D009				
Waste Code Description:		MERCURY				
Hazardous Waste Code:		D011				
Waste Code Description:		SILVER				
Hazardous Waste Code:		P001				
Waste Code Description:		2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%				
Hazardous Waste Code:		P042				
Waste Code Description:		1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE				
Hazardous Waste Code:		P075				
Waste Code Description:		NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS				
Hazardous Waste Code:		P081				
Waste Code Description:		1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)				
<u>Hazardous Waste Handler Details</u>						
Sequence No:		2				
Receive Date:		20160301				
Handler Name:		CVS PHARMACY 2788				
Generator Status Universe:		Large Quantity Generator				
Source Type:		Annual/Biennial Report update with Notification				
<u>Waste Code Details</u>						
Hazardous Waste Code:		D001				
Waste Code Description:		IGNITABLE WASTE				
Hazardous Waste Code:		D002				
Waste Code Description:		CORROSIVE WASTE				
Hazardous Waste Code:		D007				
Waste Code Description:		CHROMIUM				
Hazardous Waste Code:		D009				
Waste Code Description:		MERCURY				
Hazardous Waste Code:		D010				
Waste Code Description:		SELENIUM				

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Hazardous Waste Code:		D024				
Waste Code Description:		M-CRESOL				
Hazardous Waste Code:		P001				
Waste Code Description:		2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%				
Hazardous Waste Code:		P075				
Waste Code Description:		NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS				
Hazardous Waste Code:		U002				
Waste Code Description:		2-PROPANONE (I) (OR) ACETONE (I)				
Hazardous Waste Code:		U129				
Waste Code Description:		CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE				
Hazardous Waste Code:		U205				
Waste Code Description:		SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)				

Hazardous Waste Handler Details

Sequence No: 3
Receive Date: 20180301
Handler Name: CVS PHARMACY 2788
Generator Status Universe: Large Quantity Generator
Source Type: Annual/Biennial Report update with Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D010
Waste Code Description: SELENIUM

Hazardous Waste Code: D024
Waste Code Description: M-CRESOL

Hazardous Waste Code: P001
Waste Code Description: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%	
Hazardous Waste Code:		P075				
Waste Code Description:		NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS				
Hazardous Waste Code:		U002				
Waste Code Description:		2-PROPANONE (I) (OR) ACETONE (I)				
Hazardous Waste Code:		U129				
Waste Code Description:		CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE				
Hazardous Waste Code:		U205				
Waste Code Description:		SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)				

Owner/Operator Details

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Private	Street 1:	1 CVS DR
Name:	CVS	Street 2:	
Date Became Current:	20020121	City:	WOONSOCKET
Date Ended Current:		State:	RI
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	02895

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	ONE CVS DR
Name:	HIGHLAND PARK CVS	Street 2:	
Date Became Current:	20020326	City:	WOONSOCKET
Date Ended Current:		State:	RI
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	02895

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	1 CVS DR
Name:	HIGHLAND PARK CVS LLC	Street 2:	
Date Became Current:	20020326	City:	WOONSOCKET
Date Ended Current:		State:	RI
Phone:	401-765-1500	Country:	US
Source Type:	Notification	Zip Code:	02895

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Private	Street 1:	1 CVS DR
Name:	HIGHLAND PARK CVS LLC	Street 2:	
Date Became Current:	20020121	City:	WOONSOCKET
Date Ended Current:		State:	RI
Phone:	401-765-1500	Country:	US
Source Type:	Notification	Zip Code:	02895

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Historical Handler Details

Receive Dt: 20160301
Generator Code Description: Large Quantity Generator
Handler Name: CVS PHARMACY 2788

Receive Dt: 20130708
Generator Code Description: Large Quantity Generator
Handler Name: CVS PHARMACY 2788

Receive Dt: 20130301
Generator Code Description: Large Quantity Generator
Handler Name: CVS PHARMACY 2788

Receive Dt: 20120501
Generator Code Description: Very Small Quantity Generator
Handler Name: CVS PHARMACY 2788

5	2 of 2	W	0.24 / 1,284.46	676.11 / 2	CVS PHARMACY 2788 20 E DUNDEE RD BUFFALO GROVE IL 60089	FINDS/FRS
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Registry ID: 110045973899
FIPS Code: 17097
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 15-JUN-2012 15:04:11
Update Date: 27-JAN-2015 13:50:10
Interest Types: HAZARDOUS WASTE BIENNIAL REPORTER, LQG, STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes: 446110
NAICS Code Descriptions: PHARMACIES AND DRUG STORES.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318024031011
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude: 42.13891
Longitude: -87.958109
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:

<i>Map Key</i>	<i>Number of Records</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev/Diff (ft)</i>	<i>Site</i>	<i>DB</i>
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<i>Facility Detail Rprt URL:</i>	http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110045973899					
<i>Program Acronyms:</i>						

Unplottable Summary

Total: 55 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
AIR PERMITS	Longfellow School	501 N Arlington H Rd	Buffalo Grove IL	60089	878673797
AIR PERMITS	Amoco Oil	Arlington Heights & Miner	Arlington Heights IL	60006	878668347
ERNS		ARLINGTON PARK METROLINK COMMUTER,STATION	ARLINGTON HEIGHTS IL		807059909
ERNS		ARLINGTON MARKET DRYDEN ROAD	ARLINGTON HEIGHTS IL	60004	806762352
ERNS			ARLINGTON HEIGHTS IL	60005	807233675
ERNS		OFF OF LAKE STREET	IL		807096877
ERNS		MP: 23.08 SD: HARVARD	ARLINGTON HEIGHTS IL		858630727
ERNS		LAKE COOK RD NEAR MILWAUKEE AVE	BUFFALO GROVE IL		807176120
ERNS		LAKE MICHAGAN	IL		806555904
ERNS		MILWAUKEE AVE NORTH OF LAKE COOK RD	BUFFALO GROVE IL		806764021
ERNS		LAKE-COOK ROAD BETWEEN MILWAUKEE AVE & NORTH GATE ROAD	WHEELING IL		806542632
ERNS		ARLINGTON HEIGHTS AVE	ARLINGTON HEIGHTS IL		806986130

ERNS		ARLINGTON HEIGHTS ROAD	ARLINGTON HEIGHTS IL		806554000
FINDS/FRS	KC CLEANERS	926W. DUNDEE RD.	ARLINGTON HEIGHTS IL	60004-7823	817476986
FINDS/FRS	CHEVY CHASE SEWER & WATER CO	RTE 21, .5 M N OF LAKE-COOK RD	WHEELING IL	60090	817565205
FINDS/FRS	BUFFALO GROVE PWS	COOK RD E OF ARLINGTON HEIGHTS RD	BUFFALO GROVE IL	60089	821549227
FINDS/FRS	VACANT LOT	SW CORNER ARLINGTON HGTS RD AN	ARLINGTON HEIGHTS IL	60005	817483100
FINDS/FRS	PLOTE INC.	LAKE-COOK RD. W. OF PORTWINE	WHEELING IL	60090	817561712
FINDS/FRS	COOK COUNTY BRIDGE	LAKE COOK RD	WHEELING IL	60090	817560271
FINDS/FRS	LONGFELLOW SCHOOL	501 N ARLINGTON H RD	BUFFALO GROVE IL	60089	817467522
FINDS/FRS	COOK COUNTY HWY DEPT	LAKE COOK RD & WI CENTRAL RR	WHEELING IL	60090	817560967
FINDS/FRS	VACANT LOT	ARLINGTON HT SW COR	ARLINGTON HEIGHTS IL	60005	817483101
HMIRS		EAST LAKE/COOK RD	BUFFALO GROVE IL		818292439
LUST	Mobil Oil #05EW9	1200 West Dundee Rd. & Arlington Heights	Buffalo Grove IL	60089	812671495
LUST DOCUMENT	Amoco 18656	1006 W Dundee & Kennicott	Arlington Heights IL	60004	878541311
LUST DOCUMENT	Mueller Property	Rand & Arlington Height	Arlington Heights IL	60004	878543612

PRP	PROFILE PRODUCTS LLC	750 LAKE COOK ROAD SUITE 440	BUFFALO GROVE IL	60089	860591156
RCRA NON GEN	MOTOROLA INC	852 TO 890 HASTINGS LAKE	BUFFALO GROVE IL	60089	810107211
RCRA NON GEN	COOK COUNTY BRIDGE	LAKE COOK RD OVR WI CENTRAL RR	WHEELING IL	60090	810113792
RCRA SQG	VACANT LOT	SW CORNER ARLINGTON HGTS RD AN	ARLINGTON HEIGHTS IL	60005	810680227
SPILLS	SHELL OIL COMPANY	934 SOUTH ARLINGTON HTGS	ARLINGTON HEIGHTS IL		813011813
SPILLS	Ahmet Tuzik	2737 W Glenlake	Chicago IL		878608759
SPILLS	Unknown	Arlington Heights Branch of Salt Creek @ Dundee Rd & Northwest Highway	Palatine & Barrington IL		822049991
SPILLS2	RAIN-RD CONSTRUCTION	LAKE SIDE CIRCLE TOWN HOUSE COMPLEX	WHEELING IL		822437988
SPILLS2	TEMPO 2 CO.	DEER VALLEY RD 1 MI N OF LAKE-COOK RD	WHEELING IL		813051456
SPILLS2	UNKNOWN	NEAR ARLINGTON HEIGHTS	ARLINGTON HEIGHTS IL		822438412
SPILLS2	UNKNOWN	IN ARLINGTON HEIGHTS	ARLINGTON HEIGHTS IL		825137074
SPILLS2	VILLAGE OF ARLINGTON HEIGHTS	LAKE COOK ROAD [CREEK ON N. END NEAR TERRAMERE SUBDIVISION]	ARLINGTON HEIGHTS IL		822437756
SPILLS2	UNKNOWN	IN ARLINGTON HEIGHTS	ARLINGTON HEIGHTS IL		813052620

SPILLS2	HONEYWELL	NEAR ARLINGTON HEIGHTS	ARLINGTON HEIGHTS IL	822436281
SPILLS2	RAIN-RD CONSTRUCTION	LAKE SIDE CIRCLE TOWN HOUSE COMPLEX	WHEELING IL	825139302
UST	St. Peter Lutheran Church and School	111 Olive Street Arlington Heights, IL 60004	IL	813456580
UST	M.G. Electric Service Company	1450 East Algonquin Road Arlington Heights, IL 60005	IL	813485887
UST	Shell Service Station	934 South Arlington & Central Arlington Heights, IL 60005	IL	813484569
UST	Cook County School Bus, Inc.	1910 S. Busse Road Arlington Heights, IL 60005	IL	813469413
UST	Amoco SS #5395 Facility #13140	Central & State Arlington Heights, IL 60005	IL	813480376
UST	Amoco SS 15693 Facility 24660	Sec Rand & Camp McDonald Arlington Heights, IL 60004	IL	813447865
UST	Speed O Matic Printing Inc	3109 W Devon Avenue Arlington Heights, IL 60004	IL	813457414
UST	Mueller Property	Rand And Arlington Heights Arlington Heights, IL 60004	IL	813473209
UST	Westgate School	1211 Westgate Arlington Heights, IL 60005	IL	813483976
UST	Arlington Palce Apartments	200 Arlington Place Arlington Heights, IL 60004	IL	813462869
UST	Arling Corporation	1600 Rand Rd Arlington Heights, IL 60004	IL	813450207
UST	Marathon Unit #2252	1545 S Wilkie & Algonquin Arlington Heights, IL 60004	IL	813482098

UST	Auto Repair Shop	400 Northwest Hwy Arlington Heights, IL 60004	IL	813466404
UST	Vacant Lot	Sw Crnr Of Arlngtn Hts Rd & Davis St Arlington Heights, IL 60005	IL	813451350

Unplottable Report

Site: Longfellow School
501 N Arlington H Rd Buffalo Grove IL 60089

AIR PERMITS

Site ID:	170000037181	Document Count:	
Program ID:	031418AAD	Total Pages:	
Interest Type:	PERMIT	Collection Date:	
Media Code:	AIR	Latitude Measure:	42.127826
Category:		Longitude Measure:	-87.92227
Originating Bureau:			
Name (Doc Search):			
Addr (Doc Search):			
City (Doc Search):			
State (Doc Search):			
Zip Code (Doc Search):			
Name (Geo Search):	Longfellow School		
Address (Geo Search):	501 N Arlington H Rd		
City (Geo Search):	Buffalo Grove		
State (Geo Search):	IL		
Postal (Geo Search):	60089		
Category URL:			
Data Source:	IEPA Document Explorer - Geographic Search		

Site: Amoco Oil
Arlington Heights & Miner Arlington Heights IL 60006

AIR PERMITS

Site ID:	170000012493	Document Count:	
Program ID:	031009ADL	Total Pages:	
Interest Type:	PERMIT	Collection Date:	
Media Code:	AIR	Latitude Measure:	42.084027
Category:		Longitude Measure:	-87.980071
Originating Bureau:			
Name (Doc Search):			
Addr (Doc Search):			
City (Doc Search):			
State (Doc Search):			
Zip Code (Doc Search):			
Name (Geo Search):	Amoco Oil		
Address (Geo Search):	Arlington Heights & Miner		
City (Geo Search):	Arlington Heights		
State (Geo Search):	IL		
Postal (Geo Search):	60006		
Category URL:			
Data Source:	IEPA Document Explorer - Geographic Search		

Site: ARLINGTON PARK METROLINK COMMUTER,STATION ARLINGTON HEIGHTS IL

ERNS

NRC Report No:	470904	Latitude Degrees:	
Type of Incident:	RAILROAD	Latitude Minutes:	
Incident Cause:	OTHER	Latitude Seconds:	
Incident Date:	1/18/1999 8:27:00 AM	Longitude Degrees:	
Incident Location:		Longitude Minutes:	
Incident Dtg:	OCCURRED	Longitude Seconds:	
Distance from City:		Lat Quad:	
Distance Units:		Long Quad:	
Potential Flag:		Location Section:	
Year:	Year 1999 Reports	Location Township:	

Direction from City:
Location County: COOK
Description of Incident: A METRO TRAIN STRUCK A PEDESTRIAN AT A STATION ON A CROSSWALK / TRACK AND TRAIN SPEED UNKNOWN
Location Range:

Calls Information

Date Time Received: 1/18/1999 9:59:38 AM
Date Time Complete: 1/18/1999 10:04:45 AM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN
Responsible City:
Responsible State: XX
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OCSF No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	N
NPDES:		Airbag Deployed:	
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:		Allision:	N
Aircraft Runway No:		Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:	UNKNOWN	Structure Oper:	Y
Aircraft Model:		Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:	UNKNOWN	Passenger Handling:	
Type of Fuel:		Passenger Route:	XXX
DOT Crossing No:		Passenger Delay:	XXX
DOT Regulated:	U	Sub Part C Test Req:	XXX
Pipeline Type:	UNKNOWN	Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	U	Yard Foreman Test:	
Railroad Hotline:	No	RCL Operator Test:	
Railroad Milepost:	24.2	Brakeman Test:	
Grade Crossing:	N	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:	UNKNOWN	Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:	U	State Agen Report No:	
Release Rate:		State Agen on Scene:	
Release Rate Unit:		State Agen Notified:	
Release Rate Rate:		Fed Agency Notified:	
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	NONE	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:	U	Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	

No Evacuated:		Offshore:	N
Who Evacuated:		Weather Conditions:	
Radius of Evacu:		Air Temperature:	
Any Injuries:	U	Wind Direction:	
No. Injured:		Wind Speed:	
No. Hospitalized:		Wind Speed Unit:	
No. Fatalities:	1	Water Supp Contam:	U
Any Fatalities:	Y	Water Temperature:	
Any Damages:	N	Wave Condition:	
Damage Amount:		Current Speed:	
Air Corridor Closed:	N	Current Direction:	
Air Corridor Desc:		Current Speed Unit:	
Air Closure Time:		EMPL Fatality:	
Waterway Closed:	N	Pass Fatality:	
Waterway Desc:		Community Impact:	N
Waterway Close Time:		Passengers Transfer:	UNK
Road Closed:	N	Passenger Injuries:	
Road Desc:		Employee Injuries:	
Road Closure Time:		Occupant Fatality:	
Road Closure Units:		Sheen Size:	
Closure Direction:		Sheen Size Units:	
Major Artery:	No	Sheen Size Length:	
Track Closed:	N	Sheen Size Length U:	
Track Desc:		Sheen Size Width:	
Track Closure Time:		Sheen Size Width U:	
Track Closure Units:		Sheen Color:	
Track Close Dir:		Dir of Sheen Travel:	
Media Interest:		Sheen Odor Desc:	
Medium Desc:	RAIL REPORT (N/A)	Duration Unit:	
Addl Medium Info:		Additional Info:	HARVARD SUBDIVISION / FATALITY WAS TO THE PEDESTRIAN DUE TO IMPACT /PROTECTIVE DEVICES: FLASHERS, CONDITION UNKNOWN

Site: **ARLINGTON MARKET DRYDEN ROAD ARLINGTON HEIGHTS IL 60004** ERNS

NRC Report No:	236295	Latitude Degrees:	
Type of Incident:	FIXED	Latitude Minutes:	
Incident Cause:	OPERATOR ERROR	Latitude Seconds:	
Incident Date:	4/22/1994 4:30:00 PM	Longitude Degrees:	
Incident Location:		Longitude Minutes:	
Incident Dtg:	DISCOVERED	Longitude Seconds:	
Distance from City:		Lat Quad:	
Distance Units:		Long Quad:	
Potential Flag:		Location Section:	
Year:	Year 1994 Reports	Location Township:	
Direction from City:		Location Range:	
Location County:	COOK		
Description of Incident:	CALLER STATE THAT LOWES SERVICES IS REMOVING ASBESTOS FM BUILDINGAGAINST REGULATIONS/		

Material Spill Information

Chris Code:	NCC	Unit of Measure:	UNKNOWN AMOUNT
CAS No:		If Reached Water:	YES
UN No:		Amount in Water:	0
Name of Material:	ASBESTOS	Unit Reach Water:	UNKNOWN AMOUNT
Amount of Material:	0		

Calls Information

Date Time Received:	4/23/1994 1:28:47 AM	Responsible City:	ARLINGTON HEIGHTS
Date Time Complete:	4/23/1994 1:40:07 AM	Responsible State:	IL
Call Type:	INC	Responsible Zip:	60004
Resp Company:	WALGREENS	Source:	UNAVAILABLE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: UNKNOWN
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE/ CALLER MADE WALGREENS
MANAGER AWARE OF SITUATION
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: U
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:

Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: AIR
Addl Medium Info: ATMOSPHERE

Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: CALLER STATES THAT RP REMOVING MATERIAL DURING NIGHT HOURSLOADING VEHICLE LICENSE NUMBER 175MZ IL/

Site: ARLINGTON HEIGHTS IL 60005

ERNS

NRC Report No: 560822
Type of Incident: FIXED
Incident Cause: UNKNOWN
Incident Date: 3/27/2001 8:00:00 AM
Incident Location: BETWEEN CENTRAL AND GULF ROAD ON ARLINGTON HEIGHTS ROAD OFF OF 210 EAST NOIES OCCURRED

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:

Incident Dtg:
Distance from City:
Distance Units:
Potential Flag:
Year: Year 2001 Reports
Direction from City:
Location County: COOK
Description of Incident: CALLER STATED THAT THE IL DOT IS DUMPING OIL DOWN THE SEWER SYSTEM

Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: OWA
CAS No: 000000-00-0
UN No:
Name of Material: WASTE OIL
Amount of Material: 0

Unit of Measure: UNKNOWN AMOUNT
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Chris Code: EGL
CAS No: 000107-21-1
UN No:
Name of Material: ETHYLENE GLYCOL
Amount of Material: 0

Unit of Measure: UNKNOWN AMOUNT
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Calls Information

Date Time Received: 3/27/2001 9:30:35 AM
Date Time Complete: 3/27/2001 9:40:47 AM
Call Type: INC
Resp Company: IL DOT
Resp Org Type: STATE GOVERNMENT

Responsible City: ARLINGTON HEIGHTS
Responsible State: IL
Responsible Zip: 60005
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:

Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground:
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: N
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: N
Exposed Underwater: U
Railroad Hotline:
Railroad Milepost:
Grade Crossing: U
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: U

OCSP No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: U
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: U
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water: SEWER SYSTEM
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: N
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:

Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: WATER
Addl Medium Info: SEWER SYSTEM

Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: CALLER STATED THIS HAPPENES EVERYDAY

Site:
OFF OF LAKE STREET IL

ERNS

NRC Report No: 883971
Type of Incident: RAILROAD
Incident Cause: DERAILMENT
Incident Date: 9/15/2008 11:39:00 AM
Incident Location: RAIL YARD
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag: No
Year: Year 2008 Reports
Direction from City:
Location County: COOK
Description of Incident:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

CALLER IS REPORTING A SPILL OF DIESEL FUEL FROM A DERAILMENT, DUE TO UNKNOWN CAUSES. AN INVESTIGATION IS UNDERWAY.

Material Spill Information

Chris Code: ODS
CAS No: 000000-00-0
UN No:
Name of Material: OIL: DIESEL
Amount of Material: 25

Unit of Measure: GALLON(S)
If Reached Water: NO
Amount in Water:
Unit Reach Water:

Calls Information

Date Time Received: 9/15/2008 4:12:35 PM
Date Time Complete: 9/15/2008 4:24:51 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN

Responsible City:
Responsible State: XX
Responsible Zip:
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type:
Aircraft Model:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: U
Airbag Deployed: U
Transport Contain: U
Location Subdiv: PROBISO
Platform Rig Name:
Platform Letter:
Allision: U
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:

Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost: 14.68
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: Y

Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: UNK
Passenger Delay: UNK
Sub Part C Test Req: UNK
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: Y
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: INVESTIGATION UNDERWAY AND RERAILMENT IN PROGRESS.
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: U
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: BALLAST
Addl Medium Info:

State Agen Report No: RR-2008-0075
State Agen on Scene: NONE
State Agen Notified: OEM, MWRD
Fed Agency Notified: NONE
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: PARTLY CLOUDY
Air Temperature: 62
Wind Direction: W
Wind Speed: 3
Wind Speed Unit: MPH
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact:
Passengers Transfer: NO
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: NO ADDITIONAL INFORMATION.

Site:

MP: 23.08 SD: HARVARD ARLINGTON HEIGHTS IL

ERNS

NRC Report No: 1138640
Type of Incident: RAILROAD NON-RELEASE
Incident Cause: OTHER
Incident Date: 1/21/2016 2:33:00 PM
Incident Location: PASSENGER ROUTE
Incident Dtg: DISCOVERED
Distance from City:
Distance Units:
Potential Flag: No
Year: Year 2016 Reports
Direction from City:
Location County: COOK
Description of Incident:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

THE CALLER IS REPORTING A COMMUTER TRAIN VERSUS PASSENGER VEHICLE (UNKNOWN TYPE) AT A GRADE CROSSING. THE CALLER STATED THAT THERE IS ONE REPORTED FATALITY TO THE OCCUPANT OF THE VEHICLE. CALLER STATED THAT CONFIRMATION OF THE FATALITY WAS AT 444 CDT/1644 LOCAL TIME.

Calls Information

Date Time Received: 1/21/2016 5:53:29 PM
Date Time Complete: 1/21/2016 6:00:16 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN

Responsible City:
Responsible State: XX
Responsible Zip:
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type:
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: U
Airbag Deployed: U
Transport Contain: U
Location Subdiv: HARVARD
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling: CALLER STATED IT IS UNKNOWN HOW THE PASSENGERS WILL BE HANDLED.

Type of Fuel:
DOT Crossing No: 176927M
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost: 23.08
Grade Crossing: Y
Crossing Device Ty: GATES
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Passenger Route: YES
Passenger Delay: YES
Sub Part C Test Req: UNK
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured:	U	State Agen Report No:	RC20160010
Release Rate:		State Agen on Scene:	LOCAL RESPONDERS
Release Rate Unit:		State Agen Notified:	OEM
Release Rate Rate:		Fed Agency Notified:	
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	INVESTIGATION UNDERWAY.	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:	U	Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	N
Who Evacuated:		Weather Conditions:	UNKNOWN
Radius of Evacu:		Air Temperature:	
Any Injuries:	N	Wind Direction:	
No. Injured:		Wind Speed:	
No. Hospitalized:		Wind Speed Unit:	
No. Fatalities:	1	Water Supp Contam:	U
Any Fatalities:	Y	Water Temperature:	
Any Damages:	N	Wave Condition:	
Damage Amount:		Current Speed:	
Air Corridor Closed:	N	Current Direction:	
Air Corridor Desc:		Current Speed Unit:	
Air Closure Time:		EMPL Fatality:	
Waterway Closed:	N	Pass Fatality:	
Waterway Desc:		Community Impact:	
Waterway Close Time:		Passengers Transfer:	UNK
Road Closed:	N	Passenger Injuries:	
Road Desc:		Employee Injuries:	
Road Closure Time:		Occupant Fatality:	1
Road Closure Units:		Sheen Size:	
Closure Direction:		Sheen Size Units:	
Major Artery:	No	Sheen Size Length:	
Track Closed:	Y	Sheen Size Length U:	
Track Desc:	TRIPLE MAIN	Sheen Size Width:	
Track Closure Time:	2.5	Sheen Size Width U:	
Track Closure Units:		Sheen Color:	
Track Close Dir:	ALL	Dir of Sheen Travel:	
Media Interest:	UNKNOWN	Sheen Odor Desc:	
Medium Desc:	RAIL REPORT (N/A)	Duration Unit:	
Addl Medium Info:	/GRADE CROSSING INCIDENT	Additional Info:	

Site: LAKE COOK RD NEAR MILWAUKEE AVE BUFFALO GROVE IL ERNS

NRC Report No:	231358	Latitude Degrees:	
Type of Incident:	FIXED	Latitude Minutes:	
Incident Cause:	UNKNOWN	Latitude Seconds:	
Incident Date:	3/23/1994 11:30:00 AM	Longitude Degrees:	
Incident Location:		Longitude Minutes:	
Incident Dtg:	DISCOVERED	Longitude Seconds:	
Distance from City:		Lat Quad:	
Distance Units:		Long Quad:	
Potential Flag:		Location Section:	
Year:	Year 1994 Reports	Location Township:	
Direction from City:		Location Range:	
Location County:	COOK		
Description of Incident:	CALLER STATES THAT THERE IS CONSTRUCTION NEAR RIVER AND ALL BYPRODUCTSOF CONST ARE ENTERING RIVER (DIRT,SEDIMENT, WATER)		

Material Spill Information

Chris Code:	UNK	Unit of Measure:	UNKNOWN AMOUNT
CAS No:		If Reached Water:	YES
UN No:		Amount in Water:	0
Name of Material:	UNKNOWN MATERIAL	Unit Reach Water:	UNKNOWN AMOUNT
Amount of Material:	0		

Calls Information

Date Time Received:	3/23/1994 12:33:17 PM	Responsible City:	WHEELING
Date Time Complete:	3/23/1994 12:37:20 PM	Responsible State:	IL
Call Type:	INC	Responsible Zip:	
Resp Company:	UNKNOWN CONSTRUCTION CO	Source:	UNAVAILABLE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OCSF No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	N
NPDES:		Airbag Deployed:	
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:		Allision:	N
Aircraft Runway No:		Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:	UNKNOWN	Structure Oper:	Y
Aircraft Model:		Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:	UNKNOWN	Passenger Handling:	
Type of Fuel:		Passenger Route:	XXX
DOT Crossing No:		Passenger Delay:	XXX
DOT Regulated:	U	Sub Part C Test Req:	XXX
Pipeline Type:	UNKNOWN	Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	U	Yard Foreman Test:	
Railroad Hotline:	No	RCL Operator Test:	
Railroad Milepost:	UNKNOWN	Brakeman Test:	
Grade Crossing:	N	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:	UNKNOWN	Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:		State Agen Report No:	
Release Rate:		State Agen on Scene:	
Release Rate Unit:		State Agen Notified:	
Release Rate Rate:		Fed Agency Notified:	
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	NONE	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:		Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	
Who Evacuated:		Weather Conditions:	
Radius of Evacu:		Air Temperature:	
Any Injuries:	U	Wind Direction:	

No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed:
Air Corridor Desc:
Air Closure Time:
Waterway Closed:
Waterway Desc:
Waterway Close Time:
Road Closed:
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery:
Track Closed:
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: WATER
Add Medium Info: DES PLAINES RIVER

Wind Speed:
Wind Speed Unit:
Water Supp Contam:
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact:
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info:

Site: LAKE MICHAGAN IL ERNS

NRC Report No:	760921	Latitude Degrees:	42
Type of Incident:	AIRCRAFT	Latitude Minutes:	5
Incident Cause:	UNKNOWN	Latitude Seconds:	
Incident Date:	6/3/2005 2:15:00 PM	Longitude Degrees:	87
Incident Location:		Longitude Minutes:	15
Incident Dtg:	OCCURRED	Longitude Seconds:	
Distance from City:		Lat Quad:	N
Distance Units:		Long Quad:	W
Potential Flag:		Location Section:	
Year:	Year 2005 Reports	Location Township:	
Direction from City:		Location Range:	
Location County:	COOK		
Description of Incident:	CALLER FROM THE CITY OF CHICAGO OEM STATED AN AIRLINER HAD TO DUMP ITS FUEL INTO LAKE MICHIGAN DUE TO THE PLANE HITTING RUBBER AND METAL ON THE RUNWAY DUE TO UNKNOWN CAUSES DURING TAKE OFF. PLANE RETURNED TO THE RUNWAY AND DUMPED FUEL AS A PRECAUTION INTO LAKE MICHIGAN.		

Material Spill Information

Chris Code:	JPO	Unit of Measure:	POUND(S)
CAS No:	000000-00-0	If Reached Water:	YES
UN No:		Amount in Water:	310000
Name of Material:	JET FUEL: JP-1 (KEROSENE)	Unit Reach Water:	POUND(S)
Amount of Material:	310000		

Calls Information

Date Time Received:	6/3/2005 4:08:29 PM	Responsible City:	
Date Time Complete:	6/3/2005 4:24:59 PM	Responsible State:	IL
Call Type:	INC	Responsible Zip:	
Resp Company:	UNITED AIRLINES	Source:	TELEPHONE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	

Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID: UAL881
Aircraft Runway No: 14 RIGHT
Aircraft Spot No:
Aircraft Type: COMMERCIAL
Aircraft Model: 747
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj:
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: N
Railroad Hotline:
Railroad Milepost:
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: Y

Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: Y
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NO ACTION HAS BEEN TAKEN.
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:

State Agen Report No: NONE
State Agen on Scene: NONE
State Agen Notified: FIRE, OEM
Fed Agency Notified: NONE
Oth Agency Notified:
Body of Water: LAKE MICHIGAN
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions: PARTLY CLOUDY
Air Temperature: 66
Wind Direction: ESE
Wind Speed: 7
Wind Speed Unit: MPH
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:

Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: WATER
Addl Medium Info: LAKE MICHIGAN

Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: CALLER DID NOT HAVE ALL OF THE INFORMATION.

Site: MILWAUKEE AVE NORTH OF LAKE COOK RD BUFFALO GROVE IL ERNS

NRC Report No: 245081
Type of Incident: MOBILE
Incident Cause: UNKNOWN
Incident Date: 6/20/1994 1:00:00 PM
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 1994 Reports
Direction from City:
Location County: LAKE
Description of Incident: FUEL TANK ON TRUCK / THE RELEASE OCCURRED AS THE RESULT OF A MULTIVEHICLE ACCIDENT

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: ODS
CAS No:
UN No:
Name of Material: OIL: DIESEL
Amount of Material: 100

Unit of Measure: GALLON(S)
If Reached Water: YES
Amount in Water: 100
Unit Reach Water: GALLON(S)

Calls Information

Date Time Received: 6/20/1994 3:21:39 PM
Date Time Complete: 6/20/1994 3:30:00 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN

Responsible City:
Responsible State: XX
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN

Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y

Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: UNKNOWN
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: CREWS ON SCENE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: U
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: WATER
Addl Medium Info: DESPLAINES RIVER

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: MILWAUKEE AVE HAS BEEN CLOSED INDEFINITELY

Site:

ERNS

LAKE-COOK ROAD BETWEEN MILWAUKEE AVE & NORTH GATE ROAD WHEELING IL

NRC Report No: 608460
Type of Incident: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Incident Date: 6/4/2002 6:30:00 PM
Incident Location: UNMARKED LAKE < LAKE
Incident Dtg: DISCOVERED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 2002 Reports
Direction from City:
Location County: LAKE
Description of Incident: THE CALLER REPORTED UNKNOWN SHEEN IN THE WATER

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Material Spill Information

Chris Code: OUN
CAS No: 000000-00-0
UN No:
Name of Material: UNKNOWN OIL
Amount of Material: 0
Unit of Measure: UNKNOWN AMOUNT
If Reached Water: YES
Amount in Water: 0
Unit Reach Water: UNKNOWN AMOUNT

Calls Information

Date Time Received: 6/4/2002 9:53:36 PM
Date Time Complete: 6/4/2002 10:00:46 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN
Responsible City:
Responsible State: XX
Responsible Zip:
Source: TELEPHONE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type:
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:
Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: U
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:

Exposed Underwater: N
Railroad Hotline:
Railroad Milepost:
Grade Crossing: N
Crossing Device Ty:
Ty Vehicle Involved:
Device Operational: Y

Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu: N
Any Injuries: N
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: N
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest: NONE
Medium Desc: WATER
Addl Medium Info: LAKE < LAKE

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water: LAKE < LAKE
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color: RAINBOW
Dir of Sheen Travel:
Sheen Odor Desc: KEROSENE
Duration Unit:
Additional Info: THE CALLER STATED RELEASE GOES FROM ONE LAKE TO ANOTHER LAKE AND IS LOCATED IN BETWEEN LAKE AND COOK COUNTY. THE CALLER STATED IT LOOKS LIKE SOMEONE DUMPED KEROSENE INTO WATER.

Site: ARLINGTON HEIGHTS AVE ARLINGTON HEIGHTS IL

ERNS

NRC Report No: 426669
Type of Incident: RAILROAD NON-RELEASE
Incident Cause: OTHER
Incident Date: 3/3/1998 1:15:00 AM
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 1998 Reports
Direction from City:

Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Location County: COOK
Description of Incident: PASSENGER TRAIN TRAVELING WEST STRUCK A VEHICLE AT A GRADE CROSSING PROTECTED BY GATES AND LIGHTS (BEING INSPECTED)

Calls Information

Date Time Received: 3/3/1998 3:05:14 AM
Date Time Complete: 3/3/1998 3:08:25 AM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN
Responsible City:
Responsible State: XX
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:		Building ID:	
Tank Regulated:	U	Location Area ID:	
Tank Regulated By:		Location Block ID:	
Capacity of Tank:		OCSG No:	
Capacity Tank Units:		OCSF No:	
Description of Tank:		State Lease No:	
Actual Amount:		Pier Dock No:	
Actual Amount Units:		Berth Slip No:	
Tank Above Ground:	ABOVE	Brake Failure:	N
NPDES:		Airbag Deployed:	
NPDES Compliance:	U	Transport Contain:	U
Init Contin Rel No:		Location Subdiv:	
Contin Rel Permit:		Platform Rig Name:	
Contin Release Type:		Platform Letter:	
Aircraft ID:		Allision:	N
Aircraft Runway No:		Type of Structure:	
Aircraft Spot No:		Structure Name:	
Aircraft Type:	UNKNOWN	Structure Oper:	Y
Aircraft Model:		Transit Bus Flag:	
Aircraft Fuel Cap:		Date Time Norm Serv:	
Aircraft Fuel Cap U:		Serv Disrupt Time:	
Aircraft Fuel on Brd:		Serv Disrupt Units:	
Aircraft Fuel OB U:		CR Begin Date:	
Aircraft Hanger:		CR End Date:	
Road Mile Marker:		CR Change Date:	
Power Gen Facility:	U	FBI Contact:	
Generating Capacity:		FBI Contact Dt Tm:	
Type of Fixed Obj:	UNKNOWN	Passenger Handling:	
Type of Fuel:		Passenger Route:	XXX
DOT Crossing No:		Passenger Delay:	XXX
DOT Regulated:	U	Sub Part C Test Req:	XXX
Pipeline Type:	UNKNOWN	Conductor Test:	
Pipeline Abv Ground:	ABOVE	Engineer Test:	
Pipeline Covered:	U	Trainman Test:	
Exposed Underwater:	U	Yard Foreman Test:	
Railroad Hotline:	No	RCL Operator Test:	
Railroad Milepost:	22.31	Brakeman Test:	
Grade Crossing:	Y	Train Dispat Test:	
Crossing Device Ty:		Signalman Test:	
Ty Vehicle Involved:	UNKNOWN	Oth Employee Test:	
Device Operational:	Y	Unknown Test:	

Incident Details Information

Release Secured:	U	State Agen Report No:	
Release Rate:		State Agen on Scene:	
Release Rate Unit:		State Agen Notified:	
Release Rate Rate:		Fed Agency Notified:	
Est Duration of Rel:		Oth Agency Notified:	
Desc Remedial Act:	NONE	Body of Water:	
Fire Involved:	N	Tributary of:	
Fire Extinguished:	U	Near River Mile Make:	
Any Evacuations:	N	Near River Mile Mark:	
No Evacuated:		Offshore:	N

Who Evacuated:
Radius of Evacu:
Any Injuries: Y
No. Injured: 1
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: N
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N
Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: RAIL REPORT (N/A)
Addl Medium Info:

Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:
Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: THE INJURED PERSON MAY HAVE BEEN KILLED (UNKNOWN AT THIS TIME)INJURY WAS TO THE OCCUPANT OF THE VEHICLE /REPORT UPDATED 0537 03MAR98

Site: ARLINGTON HEIGHTS ROAD ARLINGTON HEIGHTS IL ERNS

NRC Report No: 469616
Type of Incident: RAILROAD NON-RELEASE
Incident Cause: OPERATOR ERROR
Incident Date: 1/4/1999 3:16:00 PM
Incident Location:
Incident Dtg: OCCURRED
Distance from City:
Distance Units:
Potential Flag:
Year: Year 1999 Reports
Direction from City:
Location County: COOK
Description of Incident: WESTBOUND CHICAGO COMMUTER TRAIN COLLIDED WITH AUTO DUE TO FAILURE OF GRADE CROSSING WARNING DEVICE / NO DERAILMENT
Latitude Degrees:
Latitude Minutes:
Latitude Seconds:
Longitude Degrees:
Longitude Minutes:
Longitude Seconds:
Lat Quad:
Long Quad:
Location Section:
Location Township:
Location Range:

Calls Information

Date Time Received: 1/5/1999 11:37:58 AM
Date Time Complete: 1/5/1999 12:01:58 PM
Call Type: INC
Resp Company:
Resp Org Type: UNKNOWN
Responsible City:
Responsible State: XX
Responsible Zip:
Source: UNAVAILABLE

Incident Information

Tank ID:
Tank Regulated: U
Tank Regulated By:
Capacity of Tank:
Capacity Tank Units:
Description of Tank:
Actual Amount:
Building ID:
Location Area ID:
Location Block ID:
OCSG No:
OCSF No:
State Lease No:
Pier Dock No:

Actual Amount Units:
Tank Above Ground: ABOVE
NPDES:
NPDES Compliance: U
Init Contin Rel No:
Contin Rel Permit:
Contin Release Type:
Aircraft ID:
Aircraft Runway No:
Aircraft Spot No:
Aircraft Type: UNKNOWN
Aircraft Model:
Aircraft Fuel Cap:
Aircraft Fuel Cap U:
Aircraft Fuel on Brd:
Aircraft Fuel OB U:
Aircraft Hanger:
Road Mile Marker:
Power Gen Facility: U
Generating Capacity:
Type of Fixed Obj: UNKNOWN
Type of Fuel:
DOT Crossing No:
DOT Regulated: U
Pipeline Type: UNKNOWN
Pipeline Abv Ground: ABOVE
Pipeline Covered: U
Exposed Underwater: U
Railroad Hotline: No
Railroad Milepost: 22.31
Grade Crossing: Y
Crossing Device Ty:
Ty Vehicle Involved: UNKNOWN
Device Operational: Y

Berth Slip No:
Brake Failure: N
Airbag Deployed:
Transport Contain: U
Location Subdiv:
Platform Rig Name:
Platform Letter:
Allision: N
Type of Structure:
Structure Name:
Structure Oper: Y
Transit Bus Flag:
Date Time Norm Serv:
Serv Disrupt Time:
Serv Disrupt Units:
CR Begin Date:
CR End Date:
CR Change Date:
FBI Contact:
FBI Contact Dt Tm:
Passenger Handling:
Passenger Route: XXX
Passenger Delay: XXX
Sub Part C Test Req: XXX
Conductor Test:
Engineer Test:
Trainman Test:
Yard Foreman Test:
RCL Operator Test:
Brakeman Test:
Train Dispat Test:
Signalman Test:
Oth Employee Test:
Unknown Test:

Incident Details Information

Release Secured: U
Release Rate:
Release Rate Unit:
Release Rate Rate:
Est Duration of Rel:
Desc Remedial Act: NONE
Fire Involved: N
Fire Extinguished: U
Any Evacuations: N
No Evacuated:
Who Evacuated:
Radius of Evacu:
Any Injuries: U
No. Injured:
No. Hospitalized:
No. Fatalities:
Any Fatalities: U
Any Damages: U
Damage Amount:
Air Corridor Closed: N
Air Corridor Desc:
Air Closure Time:
Waterway Closed: N
Waterway Desc:
Waterway Close Time:
Road Closed: N
Road Desc:
Road Closure Time:
Road Closure Units:
Closure Direction:
Major Artery: No
Track Closed: N

State Agen Report No:
State Agen on Scene:
State Agen Notified:
Fed Agency Notified:
Oth Agency Notified:
Body of Water:
Tributary of:
Near River Mile Make:
Near River Mile Mark:
Offshore: N
Weather Conditions:
Air Temperature:
Wind Direction:
Wind Speed:
Wind Speed Unit:
Water Supp Contam: U
Water Temperature:
Wave Condition:
Current Speed:
Current Direction:
Current Speed Unit:
EMPL Fatality:
Pass Fatality:
Community Impact: N
Passengers Transfer: UNK
Passenger Injuries:
Employee Injuries:
Occupant Fatality:
Sheen Size:
Sheen Size Units:
Sheen Size Length:
Sheen Size Length U:

Track Desc:
Track Closure Time:
Track Closure Units:
Track Close Dir:
Media Interest:
Medium Desc: RAIL REPORT (N/A)
Addl Medium Info:

Sheen Size Width:
Sheen Size Width U:
Sheen Color:
Dir of Sheen Travel:
Sheen Odor Desc:
Duration Unit:
Additional Info: NO INJURIES/FATALITIES / DAMAGED BUMPER TO AUTO / TRACK SPEED: 70MPH TRAIN SPEED 20 - 40MPH / TRACK AND ROAD CLEARED / DOT DEVICE#176923K

Site: KC CLEANERS
926W. DUNDEE RD. ARLINGTON HEIGHTS IL 60004-7823

FINDS/FRS

Registry ID: 110001225246
FIPS Code: 17031
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00
Update Date: 01-JUN-2017 17:14:03
Interest Types: AIR EMISSIONS CLASSIFICATION UNKNOWN, AIR MINOR, SQG, STATE MASTER
SIC Codes: 7216
SIC Code Descriptions: DRYCLEANING PLANTS, EXCEPT RUG CLEANING
NAICS Codes: 812320
NAICS Code Descriptions: DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED).
Conveyor: RCRIS
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170318030121024
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude: 42.139116
Longitude: -87.994708
Reference Point: PLANT ENTRANCE (GENERAL)
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 150
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110001225246
Program Acronyms:

Site: CHEVY CHASE SEWER & WATER CO
RTE 21, .5 M N OF LAKE-COOK RD WHEELING IL 60090

FINDS/FRS

Registry ID: 110054184654
FIPS Code: 17097
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 21-NOV-2012 13:30:14
Update Date: 29-DEC-2014 15:24:31
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:

Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110054184654
Program Acronyms:

ACES:170001957407

Site: **BUFFALO GROVE PWS**
COOK RD E OF ARLINGTON HEIGHTS RD BUFFALO GROVE IL 60089

[FINDS/FRS](#)

Registry ID: 110058226254
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 22-MAR-2014 08:36:06
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110058226254
Program Acronyms:

Site: **VACANT LOT**
SW CORNER ARLINGTON HGTS RD AN ARLINGTON HEIGHTS IL 60005

[FINDS/FRS](#)

Registry ID: 110007557777
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00

Update Date: 26-JAN-2012 16:12:55
Interest Types: SQG
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110007557777
Program Acronyms:

Site: **PLOTE INC.**
LAKE-COOK RD. W. OF PORTWINE WHEELING IL 60090

[FINDS/FRS](#)

Registry ID: 110007051858
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00
Update Date: 09-JAN-2015 17:46:00
Interest Types: AIR MINOR, STATE MASTER
SIC Codes: 9999
SIC Code Descriptions: NONCLASSIFIABLE ESTABLISHMENTS
NAICS Codes: 212312
NAICS Code Descriptions: CRUSHED AND BROKEN LIMESTONE MINING AND QUARRYING.
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110007051858
Program Acronyms:

ACES:170000065809, AIR:IL000031823AAN, AIRS/AFS:1703103388

Site: **COOK COUNTY BRIDGE**

Registry ID: 110012271932
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location: OVR WI CENTRAL RR
Create Date: 01-MAR-2000 00:00:00
Update Date: 26-JAN-2012 16:24:23
Interest Types: HAZARDOUS WASTE BIENNIAL REPORTER, UNSPECIFIED UNIVERSE
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110012271932
Program Acronyms:

BR:ILR000112136, RCRAINFO:ILR000112136

Site: LONGFELLOW SCHOOL
 501 N ARLINGTON H RD BUFFALO GROVE IL 60089

FINDS/FRS

Registry ID: 110002025442
FIPS Code: 17097
HUC Code: 07120004
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-2000 00:00:00
Update Date: 09-JAN-2015 15:39:29
Interest Types: AIR MINOR, STATE MASTER
SIC Codes: 8211
SIC Code Descriptions: ELEMENTARY AND SECONDARY SCHOOLS
NAICS Codes: 611110
NAICS Code Descriptions: ELEMENTARY AND SECONDARY SCHOOLS.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 10
Census Block Code: 170978645161006
EPA Region Code: 05
County Name: LAKE
US/Mexico Border Ind:
Latitude: 42.162988
Longitude: -87.984871
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50

Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110002025442
Program Acronyms:

Site: COOK COUNTY HWY DEPT
LAKE COOK RD & WI CENTRAL RR WHEELING IL 60090

[FINDS/FRS](#)

Registry ID: 110024856798
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 10-JUN-2006 11:23:27
Update Date: 16-MAY-2008 11:07:34
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110024856798
Program Acronyms:

ACES:170000406692

Site: VACANT LOT
ARLINGTON HT SW COR ARLINGTON HEIGHTS IL 60005

[FINDS/FRS](#)

Registry ID: 110018043035
FIPS Code: 17031
HUC Code:
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 18-OCT-2004 11:23:17
Update Date: 17-MAR-2006 19:30:22
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:

Census Block Code:
EPA Region Code: 05
County Name: COOK
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110018043035
Program Acronyms:

Site: EAST LAKE/COOK RD BUFFALO GROVE IL HMIRS

Incident County: COOK

HMIR Incident Reports

Report No: I-1994041246
Report Type: A hazardous material incident
Date of Incident: 04/14/1994
Time of Incident: 1315
Haz Class Code: 3
Hazardous Class: FLAMMABLE - COMBUSTIBLE LIQUID
Commodity Short Nm: GASOLINE INCLUDES GASOLI
Commodity Long Nm: GASOLINE INCLUDES GASOLINE MIXED WITH ETHYL ALCOHOL WITH NOT MORE THAN 10% ALCOHOL

Fed DOT Agency Nm:
Fed DOT Report No:
Report Submit Src: Paper
Inc Multiple Rows: No
Inc Non US State:
Mode Transport: Highway
Transport Phase: UNLOADING
Incident Occrrnce:

Trade Name:
ID No: UN1203
Haz Waste Ind: No
Haz Waste EPA No:
HMIS Tox Inhalation?: No
TIH Hazard Zone:
Qty Released: 277
Unit of Measure: LGA
What Failed:
What Failed Desc:
How Failed Code:
How Failed Desc:
Failure Cause Code: 508
Failure Cause Desc: Defective Component or Device
Ident. Markings:
Cont1 Pkging Type:
Cont1 Const Mat:
Cont1 Head Type:
Cont1 Pkg Capacity: 9000
C1 Capacity UOM: LGA
Cont1 Pkg Amt:
C1 Pkg Amt UOM:
Cont1 Pkg No: 1
C1 Pkg NO Failed: 1
Cont1 Pkg Mnfctr: HEIL COMPANY
Cont1 Pkg Mnfct Dt:
Cont1 Pkg Serial NO: 1HLA3A7B25
C1 Pkg Last Test Dt:
C1 Test Const Mat:
C1 Pkg Dsign Pres.:
C1 Dsign Press UOM:
C1 Pkg Shell Thick:
C1 Shell Thick UOM:
C1 Head Thickness:
C1 Head Thick UOM:
C1 Pkg Srvc Pres.:

Mat Ship Approval?: No
Mat Ship Approv No:
Undecl Hazmat Ship?: No
Packaging Type: Cargo Tank Motor Vehicle (CTMV)
Packing Group:
Carrier Reporter: SHELL OIL COMPANY
CR Street Name: 150 N DAIRY ASHFORD RD A
CR City: HOUSTON
CR State: TX
CR Postal Code: 77079-1116
CR Non US State:
CR Fed DOT ID: 0
CR Hazmat Reg ID:
CR Country: US
Shipper Name: SHELL OIL COMPANY
Shipper Street Name: 150 N DAIRY ASHFORD RD A
Shipper City: HOUSTON
Shipper State: TX
Shipper Postal: 77079-1116
Shipper Non US St:
Shipper Country: US
Shipper Waybill: BL# 225333
Ship Hazmat Reg ID:
Origin City: ARLINGTON HEIGHTS
Origin State: ILLINOIS
Origin Postal: 60005
Origin Non US St:
Origin Country: US
Destination City: BUFFALO GROVE
Destination State: ILLINOIS
Destination Postal:
Destination Non US:
Destination Country: US
Cont2 Package Type:
Cont2 Const Mat:
Cont2 Pkg Capacity:

C1 Srvc Press UOM:
 C1 Valve/Device Fail?: No
 C1 Device Type:
 C1 Device Mnfrtr:
 C1 Device Model:
 NRC No:

Cont2 Capacity UOM:
 Cont2 Pkg Amount:
 Cont2 Pkg Amt UOM:
 Cont2 Pkg No:
 Cont2 Pkg No Failed:

RAM Pkg Category:
 RAM Pkg Cert.: FALSE
 RAM Pkg Cert. NBR:
 RAM Nuclide S:
 RAM Transport Index:
 RAM UOM:
 RAM Activity Rpted:
 RAM UOM Rpted:
 RAM Activity:
 RAM Activity UOM:
 RAM Mat Safety:
 Spillage Result: Yes
 Fire Result: No
 Explosion Result: No
 Water Sewer Result: No
 Gas Dispersion: No
 Environment Damage: No
 No Release Result: No
 Fire EMS Report: No
 Fire EMS EMS Report:
 Police Report: No
 Police Report No:
 In House Cleanup: No
 Other Cleanup: No
 Damage > 500: Yes
 Material Loss: 192
 Carrier Damage: 0
 Property Damage: 0
 Response Cost: 0
 Remediation Cost: 1200
 Damage Old Form: 0
 Total Damages Amt: 1392
 Hazmat Fatality: No
 Haz Fatal Employees: 0
 Haz Fatal Respntrs: 0
 Haz Fatal Gen Public: 0
 Tot Hazmat Fatalities: 0
 Non Hazmat Fatality: No
 Non Hazmat Fatals: 0
 Hazmat Injury: No
 Haz Hospital Empl: 0
 Haz Hospital Resp: 0
 Haz Hosp Gen Public: 0
 Haz Hosp Old Form: 0
 Total Haz Hosp Inj: 0
 Haz Non Hosp Empl: 0
 Haz Non Hosp Resp: 0
 Description of Events:

Haz NonHosp Public: 0
 Haz NonHosp Old: 0
 Tot Haz Non Hosp Inj: 0
 Total Hazmat Injuries: 0
 Evacuation Indicator: No
 Public Evacuated: 0
 Employees Evac: 0
 Total Evacuated: 0
 Total Evacuation Hrs: 0
 Major Artery Closed: No
 Mjr Artery Hrs Closed: 0
 Material Involved: No
 Estimated Speed: 0
 Weather Conditions:
 Vehicle Overturn: No
 Vehicle Left Roadway: No
 Passenger Aircraft: No
 Cargo Baggage:
 Ship Non Transport: No
 Ship Air First Flight: No
 Ship Air Subflight: No
 Ship Init Transport: No
 Ship Phase Transfer: No
 Contact Name: R M HERRERA
 Contact Title: PCT SUPT
 Contact Business:
 Contact Street:
 Contact City:
 Contact State:
 Contact Postal:
 Contact Non US St:
 Contact Country: US
 Inc. Report Prepared:
 HMIS Serious Incidnt: Yes
 HMIS Serious Fatality: No
 HMIS Serious Injury: No
 HMIS Flight Plan: No
 HMIS Serious Evacs: No
 HMIS Major Artery: No
 HMIS Bulk Release: Yes
 HMIS Marine Pollutnt: No
 HMIS Radioactive: No
 HMIS Gen Pkg Type: OHMIR.Ref_Container.descr_txt
 HMIS Container Code: MC306
 HMIS Container Desc: Cargo tanks
 HMIS Bulk Incident: Yes
 Undeclared Shipment: No

WHILE THE CARGO TANKER WAS UNLOADING OF THE SCOTTVILLE STATION THE OVERFILL PROTECTION FLAP ON THE UNDERGROUND STORAGE TANK PREMATURELY CLOSED CAUSING THE DROP FITTING TO COME LOOSE FROM THE FILL-UP. THE FITTING TURNED SIDEWAYS ALLOWING GASOLINE TO SPILL ONTO THE STATION PARKING LOT. THE DRAWER CLOSED ALL OF THE UNLOADING VALVES IMMEDIATELY. BUFFALO GROVE FIRE DEPARTMENT WAS CALLED. HERITAGE ENVIRONMENTAL WAS CALLED OUT TO PERFORM CLEAN-UP. SHELL OIL RETAIL ENGINEERING IS INVESTIGATING CORRECTION ACTION.

Recommend Actions Taken:

Site: Mobil Oil #05EW9
 1200 West Dundee Rd. & Arlington Heights Buffalo Grove IL 60089

LUST

Incident No: 891540
Incidents ID: 6695
NFR Date: 04/24/2006

LPC No: 0314185001
IEMA Date: 08/17/1989
Regulation: 731

Gasoline: True
Unleaded: False
Diesel: False
Fuel Oil: False
Jet Fuel: False
Used Oil: False
Non Petroleum Prod: False
Other Petroleum: False
Non LUST Date:
Non LUST Letter Dt:
Heating Oil Letter Date:
Free Product Discovery Date:
Primary Resp Party Name: Mobil Oil Corp.
Primary Resp Party Address: P.O. Box 874
Primary Resp Party City: Joliet
Primary Resp Party State: IL
Primary Resp Party Zip: 60434-0874
Primary Resp Party Phone:
Primary Resp Party Contact: Mike Holland

C 20 Day Report Date:
C 45 Day Report Date:
NFR Recorded Date: 05/08/2006
Pre 74 Date:
Proj Manager Phone: (217) 782-3101
Proj Mngr First Nm: Michael
Proj Mngr Last Nm: Piggush
Proj Manager Email: Michael.Piggush@illinois.gov
Site County: Cook

Site: **Amoco 18656**
1006 W Dundee & Kennicott Arlington Heights IL 60004

[LUST DOCUMENT](#)

Site ID:	170000377269	Interest Type:	LUST
Program ID:	0314035105	Media Code:	LAND
Category:	Leaking UST Technical	Latitude Measure:	42.13912
Originating Bureau:	Bureau of Land	Longitude Measure:	-87.99408
Name (Doc Search):	Amoco 18656 - 170000377269	Name (Geo Search):	Amoco 18656
Addr (Doc Search):	1006 W Dundee & Kennicott	Addr (Geo Search):	1006 W Dundee & Kennicott
City (Doc Search):	Arlington Heights	City (Geo Search):	Arlington Heights
State (Doc Search):	IL	State (Geo Search):	IL
Zip (Doc Search):	60004	Postal (Geo Search):	60004
Document Count:	75	Collection Date:	01/01/2001
Total Pages:	1125		
Category Url:	https://docuware67.illinois.gov/DocuWare/PlatformRO/WebClient/3/Integration?lc=VXNlcj1kd3B1YmtpY1xuUHdkPU4xbWRhJHRyYXRvclBANTU1&p=RLV&rl=ce728c9a-11c1-4ddf-9003-314169ab1943&tw=Results&q=W0IFUEFJRF09IjE3MDAwMDM3NzI2OSlgQU5EIFtDQVRFR09SWV09IjlxQSI1		
Data Source:	IEPA Document Explorer - Geographic Search; IEPA Document Explorer - Facility/ Site Search		

Site: **Mueller Property**
Rand & Arlington Height Arlington Heights IL 60004

[LUST DOCUMENT](#)

Site ID:	170000376108	Interest Type:	LUST
Program ID:	0314035179	Media Code:	LAND
Category:		Latitude Measure:	42.11218
Originating Bureau:		Longitude Measure:	-87.9808
Name (Doc Search):		Name (Geo Search):	Mueller Property
Addr (Doc Search):		Addr (Geo Search):	Rand & Arlington Height
City (Doc Search):		City (Geo Search):	Arlington Heights
State (Doc Search):		State (Geo Search):	IL
Zip (Doc Search):		Postal (Geo Search):	60004
Document Count:		Collection Date:	01/01/2001
Total Pages:			
Category Url:			
Data Source:	IEPA Document Explorer - Geographic Search		

Site: **PROFILE PRODUCTS LLC**
750 LAKE COOK ROAD SUITE 440 BUFFALO GROVE IL 60089

[PRP](#)

Site EPA ID:	GAD981258270
Site Name:	CONSTITUTION ROAD DRUM SITE
Site NPL Status:	Not on the NPL
Site Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

Noticed Party Action Information

Action Type Seq: AC-1
Action Name: ADM ORDR
Action Date: SETTLEMENT DATE 09/26/2006

Site: MOTOROLA INC
852 TO 890 HASTINGS LAKE BUFFALO GROVE IL 60089

RCRA NON GEN

EPA Handler ID: ILD984804971
Gen Status Universe: No Report
Contact Name: ENV COORDINATOR
Contact Address: US
Contact Phone No and Ext: 847-632-7700
Contact Email:
Contact Country: US
County Name: LAKE
EPA Region: 05
Land Type: Private
Receive Date: 20060401

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19901015
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19920301
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Annual/Biennial Report

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20060401
Handler Name: MOTOROLA INC
Generator Status Universe: No Report
Source Type: Annual/Biennial Report update with Notification

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	
Name:	CHEVY CHASE BUSINESS PK LTD PT	Street 2:	
Date Became Current:		City:	
Date Ended Current:		State:	
Phone:		Country:	
Source Type:	Notification	Zip Code:	

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	
Name:	MOTOROLA INC	Street 2:	
Date Became Current:	19000101	City:	
Date Ended Current:		State:	
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Private	Street 1:	
Name:	MOTOROLA INC	Street 2:	
Date Became Current:	19000101	City:	
Date Ended Current:		State:	
Phone:		Country:	US
Source Type:	Annual/Biennial Report update with Notification	Zip Code:	

Historical Handler Details

Receive Dt: 19920301
Generator Code Description: Large Quantity Generator
Handler Name: MOTOROLA INC

Receive Dt: 19901015
Generator Code Description: Large Quantity Generator
Handler Name: MOTOROLA INC

Site: **COOK COUNTY BRIDGE** RCRA NON GEN
LAKE COOK RD OVR WI CENTRAL RR WHEELING IL 60090

EPA Handler ID: ILR000112136
Gen Status Universe: No Report
Contact Name: ENV COORDINATOR
Contact Address: US
Contact Phone No and Ext: 312-603-1740
Contact Email:
Contact Country: US
County Name: COOK
EPA Region: 05
Land Type: County
Receive Date: 20060401

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20020501
Handler Name: COOK COUNTY BRIDGE
Generator Status Universe: No Report
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20060401
Handler Name: COOK COUNTY BRIDGE
Generator Status Universe: No Report
Source Type: Annual/Biennial Report update with Notification

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: County
Name: COOK COUNTY HIGHWAY DEPT
Date Became Current:
Date Ended Current:
Phone: 312-603-1740
Source Type: Notification

Street No:
Street 1: 69 W WASHINGTON
Street 2:
City: CHICAGO
State: IL
Country:
Zip Code: 60602

Owner/Operator Ind: Current Operator
Type: County
Name: COOK COUNTY BRIDGE
Date Became Current: 19000101
Date Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification

Street No:
Street 1:
Street 2:
City:
State:
Country: US
Zip Code:

Owner/Operator Ind: Current Owner
Type: County
Name: COOK COUNTY BRIDGE
Date Became Current: 19000101
Date Ended Current:
Phone:
Source Type: Annual/Biennial Report update with Notification

Street No:
Street 1:
Street 2:
City:
State:
Country: US
Zip Code:

Historical Handler Details

Receive Dt: 20020501
Generator Code Description: Large Quantity Generator
Handler Name: COOK COUNTY BRIDGE

Site: VACANT LOT
SW CORNER ARLINGTON HGTS RD AN ARLINGTON HEIGHTS IL 60005

RCRA SQG

EPA Handler ID: ILR000045062
Gen Status Universe: Small Quantity Generator
Contact Name: ELLEN BUTOR
Contact Address: 1400 S WOLF RD BLDG 100 , , WHEELING , IL, 60090 , US
Contact Phone No and Ext: 847-215-5323
Contact Email:
Contact Country: US
County Name: COOK
EPA Region: 05
Land Type: Private
Receive Date: 19971114

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19971114
Handler Name: VACANT LOT
Generator Status Universe: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Private	Street 1:	1400 S WOLF RD BLDG 100
Name:	ARLINGTON BLOCK 349 LLC	Street 2:	
Date Became Current:		City:	WHEELING
Date Ended Current:		State:	IL
Phone:	847-215-5323	Country:	
Source Type:	Notification	Zip Code:	60090

Site: SHELL OIL COMPANY
934 SOUTH ARLINGTON HTGS ARLINGTON HEIGHTS IL

SPILLS

Incident No: 952126
Date/Time Occurred:
Area Involved: FIXED FACILITY
Media Release:
Milepost:
County: COOK
Facility Manager:
Fac Manager Phone:
Responsible Party Street: 1415 WEST 22ND STREET, OAK BROOK,IL 60522

Section:
Township:
Range:
Latitude:
Longitude:

Hazardous Materials Incident Report

Hazmat Incident Type: LEAK
LUST?:
Data Input Status: CLOSED
Incident Report Date: 10/13/1995 10:30:00 AM
Street Address: 934 SOUTH ARLINGTON HTGS
City: ARLINGTON HEIGHTS
County: COOK
URL: https://public.iema.state.il.us/FOIAHazmatSearch/HazmatDetails.aspx?RptNum=952126
Narrative:

Date Entered:
Entered by:
Caller: SANDRA GRATCHNER
Caller Represents: SHELL OIL COMPANY

Follow Up Information:

Materials Involved

Name: GASOLINE
Type: UNKNOWN
CHRIS CODE:
CAS No:
UN/NA No:
Container Type: UNDERGROUND TANK
Container Size: UNDERGROUND TANK
Amount Released: UNKNOWN
Rate of Release Min:
Duration of Release:
A 302(a) Extremely Haz Sub?:
A RCRA Hazardous Waste?:
A RCRA Regulated Facility?:
Public Health Risks: NONE
State Agency Assistance:
Containment/Cleanup Plans:

Cause of Release: UNKNOWN
Est Spill Extent:
Spill Extent Units:
Date/Time Inc Occur:
Unknown Occurr:
Date/Time Discov: 10/13/95 1030
Unknown Discovered:
Where Taken: -0-
On Scene Contact:
No of People Evacuat: -0-

Site: Ahmet Tuzik
2737 W Glenlake Chicago IL

SPILLS

Incident No: H-2019-0892
Date/Time Occurred:
Area Involved: Fixed Facility
Media Release: Ground
Milepost: N/A
County: Cook
Facility Manager: Ahmet Tuzik
Fac Manager Phone: 773/343-9355
Responsible Party Street: 2737 W Glenlake

Section: N/A
Township: N/A
Range: N/A
Latitude: 41.992184
Longitude: -87.698402

Hazardous Materials Incident Report

Hazmat Incident Type: Leak or spill
LUST?: Yes
Data Input Status: Closed
Incident Report Date: 8/27/2019 12:39:54 PM

Date Entered:
Entered by: Kirgan, Ken (IEMA)
Caller: David Streich
Caller Represents: Chicago Tank Removal

Street Address: 2737 W Glenlake
City: Chicago
County: Cook
URL: https://public.iema.state.il.us/FOIAHazmatSearch/HazmatDetails.aspx?RptNum=H-2019-0892
Narrative:

Follow Up Information:

Weather Information

Temp: n/a
Wind: n/a

Materials Involved

Name:	Heating Oil	Cause of Release:	tank failure due to corrosion
Type:	Liquid	Est Spill Extent:	Unknown
CHRIS CODE:	Unknown	Spill Extent Units:	
CAS No:	Unknown	Date/Time Inc Occur:	
UN/NA No:	Unknown	Unknown Occurr:	Yes
Container Type:	Under ground storage tank	Date/Time Discov:	2019-08-27 12:00
Container Size:	1-1,000 gallons	Unknown Discovered:	
Amount Released:	unknown	Where Taken:	none
Rate of Release Min:	Unknown	On Scene Contact:	David Streich
Duration of Release:	Unknown	No of People Evacuat:	0
A 302(a) Extremely Haz Sub?:	No		
A RCRA Hazardous Waste?:	No		
A RCRA Regulated Facility?:	No		
Public Health Risks:	none		
State Agency Assistance:	none		
Containment/Cleanup Plans:	tank has been removed, Chicago Tank Removal will clean it up.		

Emergency Units Contacted

Contacted ESDA?:		Name of Police Dep:	None
ESDA on Scene?:		Sheriff Police Dep?:	
Spec ESDA Agency:	None	Sheriff Dep on Scene:	
Contacted Fire Dep?:		Name of Sheriff Dep:	None
Fire Dep on Scene?:		Other Agency ?:	
Name of Fire Dep:	None	Agency on Scene?:	Yes
Police Dep Contact?:		Name of Agency:	City of Chicago inspector
Police Dep on Scene:			

Agency or Persons Notified

Agency:	IEPA, NRTP, OSFM, CFD, IEMA Region 4	Name of Person:	emailed
Date/Time:	2019-08-27 12:43	Notification Action:	Report Sent

Site: **Unknown**
Arlington Heights Branch of Salt Creek @ Dundee Rd & Northwest Highway Palatine & Barrington IL

SPILLS

Incident No:	H-2008-0892	Section:	
Date/Time Occurred:		Township:	
Area Involved:	Waterway	Range:	
Media Release:		Latitude:	
Milepost:		Longitude:	
County:	Cook		
Facility Manager:			
Fac Manager Phone:			
Responsible Party Street:	Unknown		

Hazardous Materials Incident Report

Hazmat Incident Type: Water Involvement
Date Entered:

LUST?:
Data Input Status: Closed
Incident Report Date: 6/21/2008 6:09:00 PM
Street Address: Arlington Heights Branch of Salt Creek @ Dundee Rd & Northwest Highway
City: Palatine & Barrington
County: Cook
URL: https://public.iema.state.il.us/FOIAHazmatSearch/HazmatDetails.aspx?RptNum=H-2008-0892
Narrative:

Entered by: Kattner, Paul/Comm Center/IEMA
Caller: Jim Mysiewicz
Caller Represents: Forest Preserve District

Unknown material in creek, Caller advised that there was no report of a fish kill. 06/21/2008 18:29 (PBK) Advised IEPA D/O Kinsley 06/21 2008 18:35 (PBK) E-mailed report to IEPA, Chicago Fire, NRTP, & IEMA Region #4/IEMA Region #3

Follow Up Information:

Weather Information

Temp: 85 degrees
Wind: Unknown

Materials Involved

Name:	Unknown Milky Teal Color	Cause of Release:	Unknown
Type:	Liquid	Est Spill Extent:	Unknown
CHRIS CODE:	Unk	Spill Extent Units:	
CAS No:	Unknown	Date/Time Inc Occur:	
UN/NA No:	Unknown	Unknown Occur:	TRUE
Container Type:	UNKNOWN	Date/Time Discov:	6/21/2008 17:00
Container Size:	Unknown	Unknown Discovered:	
Amount Released:	Unknown	Where Taken:	N/A
Rate of Release Min:	Unknown	On Scene Contact:	#1
Duration of Release:		No of People Evacuat:	
A 302(a) Extremely Haz Sub?:	Unknown		
A RCRA Hazardous Waste?:	Unknown		
A RCRA Regulated Facility?:	Unknown		
Public Health Risks:	None		
State Agency Assistance:	Caller would like to speak with someone from IEPA to track down the source		
Containment/Cleanup Plans:	Unknown		

Emergency Units Contacted

Contacted ESDA?:		Name of Police Dep:	Palatine PD, Forest Prese
ESDA on Scene?:		Sheriff Police Dep?:	TRUE
Spec ESDA Agency:		Sheriff Dep on Scene:	TRUE
Contacted Fire Dep?:	TRUE	Name of Sheriff Dep:	Cook County Sheriff's Police
Fire Dep on Scene?:	TRUE	Other Agency ?:	TRUE
Name of Fire Dep:	Barrington Fire	Agency on Scene?:	TRUE
Police Dep Contact?:	TRUE	Name of Agency:	Cook County Forest Preserve Resource Management De
Police Dep on Scene:	TRUE		

Agency or Persons Notified

Agency:		Name of Person:	Unknown
Date/Time:	Jan 28 2010 8:12AM	Notification Action:	Contacted

Site: RAIN-RD CONSTRUCTION
 LAKE SIDE CIRCLE TOWN HOUSE COMPLEX WHEELING IL

SPILLS2

Incident ID:	NL830407	Occured Date:	
Received Date:	5/29/1983	Incident LUST:	
Action:		Incident County:	COOK
Action Description:			

Site: TEMPO 2 CO.
DEER VALLEY RD 1 MI N OF LAKE-COOK RD WHEELING IL SPILLS2

Incident ID: NL810201
Received Date: 4/9/1981
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: LAKE

Site: UNKNOWN
NEAR ARLINGTON HEIGHTS ARLINGTON HEIGHTS IL SPILLS2

Incident ID: NL860535
Received Date: 5/15/1986
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: UNKNOWN
IN ARLINGTON HEIGHTS ARLINGTON HEIGHTS IL SPILLS2

Incident ID: NL820674
Received Date: 10/27/1982
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: VILLAGE OF ARLINGTON HEIGHTS
LAKE COOK ROAD [CREEK ON N. END NEAR TERRAMERE SUBDIVISION] ARLINGTON HEIGHTS IL SPILLS2

Incident ID: NL850786
Received Date: 7/17/1985
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: UNKNOWN
IN ARLINGTON HEIGHTS ARLINGTON HEIGHTS IL SPILLS2

Incident ID: NL820674
Received Date: 10/28/1982
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: HONEYWELL
NEAR ARLINGTON HEIGHTS ARLINGTON HEIGHTS IL SPILLS2

Incident ID: NL740041
Received Date: 5/2/1974
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: RAIN-RD CONSTRUCTION
LAKE SIDE CIRCLE TOWN HOUSE COMPLEX WHEELING IL SPILLS2

Incident ID: NL830407
Received Date: 5/28/1983
Action:
Action Description:

Occured Date:
Incident LUST:
Incident County: COOK

Site: St. Peter Lutheran Church and School

Facility No: 2044994
Facility Status: Closed
Facility Type: Private Institution
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date: 1/1/1976
Type Financial Resp:
Property Parcel:
Owner Type: Private
Owner Status: Current Owner
Owner Name: St. Peter Lutheran Church and School
Owner Address: 111 Olive Street
 Arlington Heights, IL 60004
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2044994&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2044994>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 11/8/2011
Red Tag Issue Date:
Abandoned Date:
Install Date: 1/1/1976
Last Used Date: 1/1/1979
Capacity: 8500
Regulated Status: State
Current Age: 35
Product: Heating Oil
Product Date: 1/1/1976
Petroleum Use: Consumptive Use on Premises
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 9/27/2011
CAS Code:

Owner Summary

Owner No: U0036242
Owner Name: St. Peter Lutheran Church and School
Owner Status: Current Owner
Purchase Date: 1/1/1976

Site: **M.G. Electric Service Company**
1450 East Algonquin Road Arlington Heights, IL 60005 IL

Facility No: 2015924
Facility Status: Closed
Facility Type: None
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner
Owner Name: M G Electric Ser Co
Owner Address: 1450 E Algonquin Rd
 Arlington Heights, IL 60005
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2015924&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2015924>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 1/18/2000
Red Tag Issue Date:
Abandoned Date:
Install Date: 1/15/1985
Last Used Date: 12/20/1998
Capacity: 500
Regulated Status: Federal
Current Age: 15
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 4/8/1986
CAS Code:

Tank Information

Tank No:	2	Current Age:	15
Status:	Removed	Product:	Gasoline
Removed Date:	1/18/2000	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/15/1985	Abandoned Material:	
Last Used Date:	12/20/1998	Fee Due:	\$0.00
Capacity:	500	OSFM First Noti Dt:	4/8/1986
Regulated Status:	Federal	CAS Code:	

Owner Summary

Owner No:	U0010215	Owner Status:	Current Owner
Owner Name:	M G Electric Ser Co	Purchase Date:	

IEMA Numbers

Permit No:	03659-1999REM
IEMA No:	00-0097
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20000097
Inspection Date:	1/18/2000
Inspection Type:	Removal Log

Site: **Shell Service Station**
934 South Arlington & Central Arlington Heights, IL 60005 IL

UST

Facility No:	2021182	Green Tag Exp Dt:	12/31/2007
Facility Status:	Closed	Mtr Fuel Perm Insp Dt:	12/17/2003
Facility Type:	Self-Service Station	Mtr Fuel Perm Exp Dt:	12/15/2004
Motor Fuel Type:	Self Service	Fin Resp Rpt Due:	1/22/2008
Green Tag Decal:	F000167	County:	Cook
Green Tag Issue Dt:	8/30/2004		
Purchase Date:			
Type Financial Resp:	Commercial Insurance		
Property Parcel:			
Owner Type:	Private		
Owner Status:	Current Owner		
Owner Name:	Shell Oil Products US c/o Gilbarco Veeder-Root		
Owner Address:	7300 West Friendly Avenue, P.O. Box 22087 Attn: CMS Mailstop F-76 Greensboro, NC 274202087		
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2021182&PrintDetail=true		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2021182		

Tank Information

Tank No:	1	Current Age:	1
Status:	Removed	Product:	Gasoline
Removed Date:	7/11/1997	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	11/1/1995	Abandoned Material:	
Last Used Date:	7/6/1997	Fee Due:	\$0.00
Capacity:	10000	OSFM First Noti Dt:	5/2/1986
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	5	Current Age:	11
Status:	Removed	Product:	Gasoline
Removed Date:	3/27/2007	Product Date:	11/3/1995
Red Tag Issue Date:		Petroleum Use:	

Abandoned Date:
Install Date: 11/1/1995
Last Used Date:
Capacity: 15000
Regulated Status: Federal

CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 2/5/1996
CAS Code:

Tank Information

Tank No: 2
Status: Removed
Removed Date: 7/11/1997
Red Tag Issue Date:
Abandoned Date:
Install Date: 11/1/1995
Last Used Date: 7/6/1997
Capacity: 10000
Regulated Status: Federal

Current Age: 1
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 5/2/1986
CAS Code:

Tank Information

Tank No: 4
Status: Removed
Removed Date: 10/13/1995
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 10/13/1995
Capacity: 1000
Regulated Status: Federal

Current Age: 42
Product: Used Oil
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 5/2/1986
CAS Code:

Tank Information

Tank No: 3
Status: Removed
Removed Date: 7/11/1997
Red Tag Issue Date:
Abandoned Date:
Install Date: 11/1/1995
Last Used Date: 7/6/1997
Capacity: 10000
Regulated Status: Federal

Current Age: 1
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 5/2/1986
CAS Code:

Tank Information

Tank No: 6
Status: Removed
Removed Date: 3/27/2007
Red Tag Issue Date:
Abandoned Date:
Install Date: 11/1/1995
Last Used Date:
Capacity: 15000
Regulated Status: Federal

Current Age: 11
Product: Gasoline
Product Date: 11/3/1995
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 2/5/1996
CAS Code:

Tank Information

Tank No: 7
Status: Removed
Removed Date: 6/14/1989
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 1000
Regulated Status: State

Current Age:
Product: Heating Oil
Product Date:
Petroleum Use: Consumptive Use on Premises
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 6/14/1989
CAS Code:

Owner Summary

Owner No:	U0031151	Owner Status:	Current Owner
Owner Name:	Shell Oil Products US c/o Gilbarco Veeder-Root	Purchase Date:	
Owner No:	U0027449	Owner Status:	Former Owner
Owner Name:	Equilon Enterprises, LLC	Purchase Date:	10/31/1995
Owner No:	U0013849	Owner Status:	Former Owner
Owner Name:	Shell Oil Products	Purchase Date:	12/31/1967

IEMA Numbers

Permit No:	00120-2007REM
IEMA No:	07-0370
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20070370
Inspection Date:	3/27/2007
Inspection Type:	Removal Log

LUST Fund Eligibility

IEMA No:	95-2126	OSFM Response Dt:	4/11/1996
Status:	Eligible	Deductible:	\$10,000
OSFM Received Date:	3/15/1996	Letter:	
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=952126		

Site: **Cook County School Bus, Inc.**
1910 S. Busse Road Arlington Heights, IL 60005 IL

UST

Facility No:	2001755	Green Tag Exp Dt:	12/31/2019
Facility Status:	Active	Mtr Fuel Perm Insp Dt:	2/28/2017
Facility Type:	School/College	Mtr Fuel Perm Exp Dt:	12/31/2019
Motor Fuel Type:	Fleet	Fin Resp Rpt Due:	12/27/2019
Green Tag Decal:	S002764	County:	Cook
Green Tag Issue Dt:	5/15/2017		
Purchase Date:			
Type Financial Resp:	Self-Insurance		
Property Parcel:			
Owner Type:	County		
Owner Status:	Current Owner		
Owner Name:	Cook-Illinois Corp.		
Owner Address:	2100 Clearwater Drive Oak Brook, IL 60523		
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2001755&PrintDetail=true		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2001755		

Tank Information

Tank No:	1	Current Age:	40
Status:	Removed	Product:	Diesel Fuel
Removed Date:	11/13/2002	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/1/1962	Abandoned Material:	
Last Used Date:	2/28/2002	Fee Due:	\$0.00
Capacity:	10000	OSFM First Noti Dt:	2/11/1986
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	3	Current Age:	7
Status:	Removed	Product:	New Oil
Removed Date:	12/1/1985	Product Date:	
Red Tag Issue Date:		Petroleum Use:	

Abandoned Date:
Install Date: 1/1/1978
Last Used Date:
Capacity: 1000
Regulated Status: Exempt

CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 2/11/1986
CAS Code:

Tank Information

Tank No: 2
Status: Currently in use
Removed Date:
Red Tag Issue Date:
Abandoned Date:
Install Date: 1/1/1978
Last Used Date:
Capacity: 12000
Regulated Status: Federal

Current Age: 41
Product: Diesel Fuel
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 2/11/1986
CAS Code:

Tank Equipment

Equipment Type: Leak Detect - Piping
Last Passing Date: 5/16/2016
Test Expire Date: 5/16/2017
Equipment: Non-Discriminating Sump Sensor Interstitial Monitoring Veeder Root

Equipment Type: Overfill Prev Device
Last Passing Date:
Test Expire Date:
Equipment: Overfill Drop Tube Valve

Equipment Type: Piping
Last Passing Date: N/A
Test Expire Date: N/A
Equipment: Flexible Double Wall A.P.T. Poly Tech

Equipment Type: Spill Contain Device
Last Passing Date:
Test Expire Date:
Equipment: Single Wall Spill Bucket EBW 705

Equipment Type: Leak Detect - Piping
Last Passing Date: N/A
Test Expire Date: N/A
Equipment: European with No Test Req Suction

Equipment Type: Corrosion Prot - Tank
Last Passing Date: 12/20/2018
Test Expire Date: 12/20/2023
Equipment: Lining Materials Internal

Equipment Type: Leak Detect - Tank
Last Passing Date: 4/3/2019
Test Expire Date: 4/3/2020
Equipment: Automatic Tank Gauging Veeder Root TLS 300c

Equipment Type: Corrosion Prot - Piping
Last Passing Date: 7/15/2015
Test Expire Date: 7/15/2018
Equipment: Sacrificial Anode Cathodic Protection

Equipment Type: Corrosion Prot - Piping
Last Passing Date: N/A
Test Expire Date: N/A
Equipment: Fiberglass Non-Corrosive

Equipment Type: Tank
Last Passing Date: N/A
Test Expire Date: N/A
Equipment: Fiberglass Single Wall Tank

Owner Summary

Owner No:	U0003395	Owner Status:	Former Owner
Owner Name:	Chicago Bus Sales	Purchase Date:	
Owner No:	U0038028	Owner Status:	Current Owner
Owner Name:	Cook-Illinois Corp.	Purchase Date:	
Owner No:	U0031749	Owner Status:	Former Owner
Owner Name:	Cook County School Bus, Inc.	Purchase Date:	

IEMA Numbers

Permit No:	01812-2002REM
IEMA No:	02-1655
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20021655
Inspection Date:	11/13/2002
Inspection Type:	Removal Log

LUST Fund Eligibility

IEMA No:	02-1655	OSFM Response Dt:	1/16/2004
Status:	Eligible	Deductible:	\$10,000
OSFM Received Date:	12/22/2003	Letter:	
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20021655		
IEMA No:	02-1655	OSFM Response Dt:	2/3/2003
Status:	Returned	Deductible:	\$Not Selected
OSFM Received Date:	1/21/2003	Letter:	
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20021655		

Site: Amoco SS #5395 Facility #13140
Central & State Arlington Heights, IL 60005 IL

UST

Facility No:	2023168	Green Tag Exp Dt:	
Facility Status:	Closed	Mtr Fuel Perm Insp Dt:	
Facility Type:	Self-Service Station	Mtr Fuel Perm Exp Dt:	
Motor Fuel Type:		Fin Resp Rpt Due:	
Green Tag Decal:		County:	Cook
Green Tag Issue Dt:			
Purchase Date:	1/1/1972		
Type Financial Resp:	Self-Insurance		
Property Parcel:			
Owner Type:	Private		
Owner Status:	Current Owner		
Owner Name:	BP Products North America, Inc.		
Owner Address:	P. O. Box 6038 Environmental Compliance Department Artesia, CA 90702		
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2023168&PrintDetail=true		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2023168		

Tank Information

Tank No:	4	Current Age:	11
Status:	Removed	Product:	Used Oil
Removed Date:	3/19/1996	Product Date:	1/1/1985
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/1/1985	Abandoned Material:	
Last Used Date:	11/1/1994	Fee Due:	
Capacity:	550	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	2	Current Age:	11
Status:	Removed	Product:	Gasoline
Removed Date:	3/19/1996	Product Date:	1/1/1985
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/1/1985	Abandoned Material:	
Last Used Date:	11/1/1994	Fee Due:	
Capacity:	10000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	1	Current Age:	24
Status:	Removed	Product:	Gasoline
Removed Date:	3/19/1996	Product Date:	1/1/1972
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/1/1972	Abandoned Material:	
Last Used Date:	11/1/1994	Fee Due:	
Capacity:	8000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	3	Current Age:	11
Status:	Removed	Product:	Gasoline
Removed Date:	3/19/1996	Product Date:	1/1/1985
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	1/1/1985	Abandoned Material:	
Last Used Date:	11/1/1994	Fee Due:	
Capacity:	12000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Federal	CAS Code:	

Owner Summary

Owner No:	U0000552	Owner Status:	Current Owner
Owner Name:	BP Products North America, Inc.	Purchase Date:	1/1/1972

LUST Fund Eligibility

IEMA No:	96-0450	OSFM Response Dt:	10/4/1996
Status:	Eligible	Deductible:	\$10,000
OSFM Received Date:	9/10/1996	Letter:	
IEMA Link:	http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=960450		

Site: Amoco SS 15693 Facility 24660
Sec Rand & Camp McDonald Arlington Heights, IL 60004 IL

UST

Facility No:	2022745	Green Tag Exp Dt:	
Facility Status:	Closed	Mtr Fuel Perm Insp Dt:	
Facility Type:	Self-Service Station	Mtr Fuel Perm Exp Dt:	
Motor Fuel Type:		Fin Resp Rpt Due:	
Green Tag Decal:		County:	Cook
Green Tag Issue Dt:			
Purchase Date:			
Type Financial Resp:			
Property Parcel:			
Owner Type:	Private		
Owner Status:			
Owner Name:			
Owner Address:			
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2022745&PrintDetail=true		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2022745		

Tank Information

Tank No: 4
Status: Removed
Removed Date: 10/2/1991
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 10000
Regulated Status: Federal

Current Age: 27
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Tank Information

Tank No: 7
Status: Removed
Removed Date: 8/16/1996
Red Tag Issue Date:
Abandoned Date:
Install Date: 10/5/1991
Last Used Date: 2/1/1996
Capacity: 12000
Regulated Status: Federal

Current Age: 4
Product: Gasoline
Product Date: 10/5/1991
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 9/29/1992
CAS Code:

Tank Information

Tank No: 2
Status: Removed
Removed Date: 10/2/1991
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 10000
Regulated Status: Federal

Current Age: 27
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Tank Information

Tank No: 3
Status: Removed
Removed Date: 10/2/1991
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 10000
Regulated Status: Federal

Current Age: 27
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Tank Information

Tank No: 6
Status: Removed
Removed Date: 8/16/1996
Red Tag Issue Date:
Abandoned Date:
Install Date: 10/5/1991
Last Used Date: 2/1/1996
Capacity: 12000
Regulated Status: Federal

Current Age: 4
Product: Gasoline
Product Date: 10/3/1991
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 9/29/1992
CAS Code:

Tank Information

Tank No: 8
Status: Removed

Current Age: 4
Product: Gasoline

Removed Date: 8/16/1996
Red Tag Issue Date:
Abandoned Date:
Install Date: 10/5/1991
Last Used Date: 2/1/1996
Capacity: 12000
Regulated Status: Federal

Product Date: 10/5/1991
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 9/29/1992
CAS Code:

Tank Information

Tank No: 1
Status: Removed
Removed Date: 10/2/1991
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 500
Regulated Status: Federal

Current Age: 27
Product: Used Oil
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Tank Information

Tank No: 5
Status: Removed
Removed Date: 8/16/1996
Red Tag Issue Date:
Abandoned Date:
Install Date: 10/5/1991
Last Used Date: 2/1/1996
Capacity: 550
Regulated Status: Federal

Current Age: 4
Product: Used Oil
Product Date: 10/5/1991
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 9/29/1992
CAS Code:

Owner Summary

Owner No: U0000552
Owner Name: BP Products North America, Inc.

Owner Status: Former Owner
Purchase Date: 12/31/1967

Site: **Speed O Matic Printing Inc**
3109 W Devon Avenue Arlington Heights, IL 60004 IL

UST

Facility No: 2035805
Facility Status: Exempt
Facility Type: Commercial / Retail

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Cook

Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:

Owner Type: Private
Owner Status: Current Owner
Owner Name: Linda Sloan
Owner Address: 3311 N Ridge Avenue
Arlington Heights, IL 60004

Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2035805&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2035805>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 2/14/1997
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 12/1/1973

Current Age:
Product:
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:

Capacity: 550
Regulated Status: Exempt

OSFM First Noti Dt: 3/13/1997
CAS Code:

Tank Information

Tank No: 2
Status: Removed
Removed Date: 2/14/1997
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 550
Regulated Status: Exempt

Current Age:
Product:
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 3/13/1997
CAS Code:

Owner Summary

Owner No: U0026060
Owner Name: Linda Sloan

Owner Status: Current Owner
Purchase Date:

Site: **Mueller Property**
Rand And Arlington Heights Arlington Heights, IL 60004 IL

UST

Facility No: 2030096
Facility Status: Closed
Facility Type: None
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner
Owner Name: Mueller Frank & Herman
Owner Address: 701 Milwaukee Ave
Glenview, IL 60025
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2030096&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2030096>

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Cook

Tank Information

Tank No: 4
Status: Removed
Removed Date: 7/16/1992
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 550
Regulated Status: Federal

Current Age:
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 7/31/1992
CAS Code:

Tank Information

Tank No: 5
Status: Removed
Removed Date: 7/16/1992
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 550
Regulated Status: Federal

Current Age:
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 7/31/1992
CAS Code:

Tank Information

Tank No: 2
Status: Removed
Removed Date: 7/16/1992
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 1/1/1975
Capacity: 2000
Regulated Status: Federal

Current Age:
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 5/27/1992
CAS Code:

Tank Information

Tank No: 1
Status: Removed
Removed Date: 7/16/1992
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 1/1/1975
Capacity: 2000
Regulated Status: Federal

Current Age:
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 5/27/1992
CAS Code:

Tank Information

Tank No: 3
Status: Removed
Removed Date: 7/16/1992
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 1/1/1975
Capacity: 1000
Regulated Status: Federal

Current Age:
Product: Gasoline
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 5/27/1992
CAS Code:

Owner Summary

Owner No: U0019661
Owner Name: Mueller Frank & Herman

Owner Status: Current Owner
Purchase Date:

Site: **Westgate School**
1211 Westgate Arlington Heights, IL 60005 IL

UST

Facility No: 2025709
Facility Status: Closed
Facility Type: School/College
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner
Owner Name: Arlington Heights School Dist 25
Owner Address: 301 W South St
Arlington Heights, IL 60004
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2025709&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2025709>

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Cook

Tank Information

Tank No: 2
Status: Removed
Removed Date: 8/7/1990
Red Tag Issue Date:

Current Age:
Product: Heating Oil
Product Date:
Petroleum Use: Heating Oil

Abandoned Date:
Install Date:
Last Used Date:
Capacity: 5000
Regulated Status: State

CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 5/23/1990
CAS Code:

Tank Information

Tank No: 1
Status: Removed
Removed Date: 8/7/1990
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date:
Capacity: 5000
Regulated Status: State

Current Age:
Product: Heating Oil
Product Date:
Petroleum Use: Heating Oil
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 5/23/1990
CAS Code:

Owner Summary

Owner No: U0000754
Owner Name: Arlington Heights School Dist 25

Owner Status: Current Owner
Purchase Date:

Site: **Arlington Palce Apartments**
200 Arlington Place Arlington Heights, IL 60004 IL

UST

Facility No: 2038505
Facility Status: Closed
Facility Type: Residence (Non-Farm)

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Cook

Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:

Property Parcel:
Owner Type: Private
Owner Status: Current Owner
Owner Name: Arplace Limited Partnership
Owner Address: 600 Las Colinas Blvd Suite 1900
Irving, TX 75039

Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2038505&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2038505>

Tank Information

Tank No: 1
Status: Removed
Removed Date: 6/1/1999
Red Tag Issue Date:
Abandoned Date:
Install Date: 1/1/1988
Last Used Date: 12/22/1998
Capacity: 550
Regulated Status: Federal

Current Age: 11
Product: Diesel Fuel
Product Date:
Petroleum Use: Back-up Generator
CERCLA Substance:
Abandoned Material:
Fee Due: \$0.00
OSFM First Noti Dt: 12/22/1998
CAS Code:

Owner Summary

Owner No: U0028315
Owner Name: Arplace Limited Partnership

Owner Status: Current Owner
Purchase Date:

Site: **Arling Corporation**
1600 Rand Rd Arlington Heights, IL 60004 IL

UST

Facility No: 2034072
Facility Status: Closed

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:

Facility Type: Other
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date: 12/1/1985
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner
Owner Name: Amalgamated Bank Of Chicag Tr 5107
Owner Address: 333 W Wacker Dr Suite 2750
 C/O Arling Corporation
 Chicago, IL 60606
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2034072&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2034072>

Tank Information

Tank No:	1	Current Age:	23
Status:	Removed	Product:	Gasoline
Removed Date:	6/22/1995	Product Date:	6/1/1972
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	6/1/1972	Abandoned Material:	
Last Used Date:	6/1/1992	Fee Due:	
Capacity:	12000	OSFM First Noti Dt:	5/3/1995
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	2	Current Age:	23
Status:	Removed	Product:	Gasoline
Removed Date:	6/22/1995	Product Date:	6/1/1972
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	6/1/1972	Abandoned Material:	
Last Used Date:	6/1/1992	Fee Due:	
Capacity:	12000	OSFM First Noti Dt:	5/3/1995
Regulated Status:	Federal	CAS Code:	

Tank Information

Tank No:	3	Current Age:	23
Status:	Removed	Product:	Diesel Fuel
Removed Date:	6/22/1995	Product Date:	6/1/1972
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:	6/1/1972	Abandoned Material:	
Last Used Date:	6/1/1992	Fee Due:	
Capacity:	12000	OSFM First Noti Dt:	5/3/1995
Regulated Status:	Federal	CAS Code:	

Owner Summary

Owner No:	U0023996	Owner Status:	Current Owner
Owner Name:	Amalgamated Bank Of Chicag Tr 5107	Purchase Date:	12/1/1985

Site: **Marathon Unit #2252**
 1545 S Wilkie & Algonquin Arlington Heights, IL 60004 IL

UST

Facility No:	2019661	Green Tag Exp Dt:	
Facility Status:	Exempt	Mtr Fuel Perm Insp Dt:	
Facility Type:	None	Mtr Fuel Perm Exp Dt:	
Motor Fuel Type:		Fin Resp Rpt Due:	
Green Tag Decal:		County:	Cook
Green Tag Issue Dt:			

Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type:
Owner Status: Current Owner / Operator
Owner Name: Marathon Oil Company
Owner Address: 539 Main Street
Findlay, OH 45840
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2019661&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2019661>

Tank Information

Tank No:	2	Current Age:	38
Status:	Removed	Product:	
Removed Date:	12/1/1979	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	1/1/1978	Fee Due:	
Capacity:	4000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Exempt	CAS Code:	

Tank Information

Tank No:	6	Current Age:	38
Status:	Removed	Product:	
Removed Date:	12/1/1979	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	1/1/1978	Fee Due:	
Capacity:	550	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Exempt	CAS Code:	

Tank Information

Tank No:	3	Current Age:	38
Status:	Removed	Product:	
Removed Date:	12/1/1979	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	1/1/1978	Fee Due:	
Capacity:	4000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Exempt	CAS Code:	

Tank Information

Tank No:	1	Current Age:	38
Status:	Removed	Product:	
Removed Date:	12/1/1979	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	1/1/1978	Fee Due:	
Capacity:	4000	OSFM First Noti Dt:	4/25/1986
Regulated Status:	Exempt	CAS Code:	

Tank Information

Tank No:	5	Current Age:	38
Status:	Removed	Product:	
Removed Date:	12/1/1979	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	

Install Date:
Last Used Date: 1/1/1978
Capacity: 550
Regulated Status: Exempt

Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Tank Information

Tank No: 4
Status: Removed
Removed Date: 12/1/1979
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 1/1/1978
Capacity: 4000
Regulated Status: Exempt

Current Age: 38
Product:
Product Date:
Petroleum Use:
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt: 4/25/1986
CAS Code:

Owner Summary

Owner No: U0009663
Owner Name: Marathon Oil Company

Owner Status: Current Owner / Operator
Purchase Date:

Site: **Auto Repair Shop**
400 Northwest Hwy Arlington Heights, IL 60004 IL

UST

Facility No: 2042883
Facility Status: Exempt
Facility Type: Vacant
Motor Fuel Type:
Green Tag Decal:
Green Tag Issue Dt:
Purchase Date:
Type Financial Resp:
Property Parcel:
Owner Type: Private
Owner Status: Current Owner
Owner Name: TJHD Properties, LLC
Owner Address: 914 Thames Circle
Schaumburg, IL 60193
Facility URL: <http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2042883&PrintDetail=true>
Permit History Link: <https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2042883>

Green Tag Exp Dt:
Mtr Fuel Perm Insp Dt:
Mtr Fuel Perm Exp Dt:
Fin Resp Rpt Due:
County: Cook

Tank Information

Tank No: 1
Status: Removed
Removed Date: 8/3/2005
Red Tag Issue Date:
Abandoned Date:
Install Date:
Last Used Date: 12/31/1973
Capacity: 1000
Regulated Status: Exempt

Current Age:
Product: Heating Oil
Product Date:
Petroleum Use: Consumptive Use on Premises
CERCLA Substance:
Abandoned Material:
Fee Due:
OSFM First Noti Dt:
CAS Code:

Owner Summary

Owner No: U0032868
Owner Name: TJHD Properties, LLC

Owner Status: Current Owner
Purchase Date:

IEMA Numbers

Permit No: 00760-2005REM
IEMA No: 05-1083
IEMA Link: <http://epadata.epa.state.il.us/land/ust/LIT-Display.asp?INCIDENT=20051083>
Inspection Date: 8/3/2005

Site: Vacant Lot
Sw Crnr Of Arlngtn Hts Rd & Davis St Arlington Heights, IL 60005 IL

UST

Facility No:	2035904	Green Tag Exp Dt:	
Facility Status:	Exempt	Mtr Fuel Perm Insp Dt:	
Facility Type:	None	Mtr Fuel Perm Exp Dt:	
Motor Fuel Type:		Fin Resp Rpt Due:	
Green Tag Decal:		County:	Cook
Green Tag Issue Dt:			
Purchase Date:			
Type Financial Resp:			
Property Parcel:			
Owner Type:			
Owner Status:	Current Owner		
Owner Name:	Arlington Block 349 Llc		
Owner Address:	1400 S Wolf Rd Bldg 100 Wheeling, IL 60090		
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2035904&PrintDetail=true		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2035904		

Tank Information

Tank No:	1	Current Age:	
Status:	Removed	Product:	Gasoline
Removed Date:	10/3/1997	Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	12/1/1973	Fee Due:	
Capacity:	1500	OSFM First Noti Dt:	7/24/1997
Regulated Status:	Exempt	CAS Code:	

Tank Information

Tank No:	2	Current Age:	
Status:	Pre 1974	Product:	Gasoline
Removed Date:		Product Date:	
Red Tag Issue Date:		Petroleum Use:	
Abandoned Date:		CERCLA Substance:	
Install Date:		Abandoned Material:	
Last Used Date:	12/1/1973	Fee Due:	
Capacity:	1000	OSFM First Noti Dt:	7/24/1997
Regulated Status:	Exempt	CAS Code:	

Owner Summary

Owner No:	U0026178	Owner Status:	Current Owner
Owner Name:	Arlington Block 349 Llc	Purchase Date:	

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Nov 25, 2019

National Priority List - Proposed:

PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Nov 25, 2019

Deleted NPL:

DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Nov 25, 2019

SEMS List 8R Active Site Inventory:

SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Nov 25, 2019

SEMS List 8R Archive Sites:

SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Nov 25, 2019

Inventory of Open Dumps, June 1985:

ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS:

CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands:

IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned:

CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 18, 2019

RCRA non-CORRACTS TSD Facilities:

RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Nov 18, 2019

RCRA Generator List:

RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Nov 18, 2019

RCRA Small Quantity Generators List:

RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Nov 18, 2019

RCRA Conditionally Exempt and Very Small Quantity Generators List:

[RCRA CESQG](#)

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt and Very Small Quantity Generators (VSQG and CESQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG and CESQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 18, 2019

RCRA Non-Generators:

[RCRA NON GEN](#)

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 18, 2019

Federal Engineering Controls-ECs:

[FED ENG](#)

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jun 11, 2019

Federal Institutional Controls- ICs:

[FED INST](#)

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Jun 11, 2019

Emergency Response Notification System:

[ERNS 1982 TO 1986](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

[ERNS 1987 TO 1989](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

[ERNS](#)

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Mar 21, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:

[FED BROWNFIELDS](#)

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 3, 2019

FEMA Underground Storage Tank Listing:

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries:

REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Oct 8, 2019

Petroleum Product and Crude Oil Rail Terminals:

BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property:

SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Nov 25, 2019

Superfund Decision Documents:

SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Oct 25, 2019

State

State Response Action Program Database:

SSU

The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit. The State Response Action Program database made available by Illinois Environmental Protection Agency. This database is state equivalent CERCLIS.

Government Publication Date: Aug 20, 2019

Delisted State Response Action Program:

DELISTED SSU

List of sites removed from the State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit.

Government Publication Date: Aug 20, 2019

Solid Waste Landfills Subject to State Surcharge Database:

SWF/LF

The Bureau of Land maintains a list of solid waste facilities and landfills throughout the state. This list made available by Illinois Environmental Protection Agency's Bureau of land.

Government Publication Date: Mar 2, 2018

Special Waste Site List:

SWF/LF SPECIAL

The following landfills are those that as of January 1, 1990, accept non-hazardous special waste pursuant to the Illinois Environmental Protection Agency Non-Hazardous Special Waste Definition. List A includes landfills that may receive any non-hazardous waste. Non-Regional Pollutant Control Facilities are so noted. List B includes landfills designed to receive specific non-hazardous wastes. List B landfills are designated as a Regional Pollutant Control Facility by RPCF, or Non-regional Pollutant Control Facility by Non-RPCF.

Government Publication Date: Jan 1, 1990

Northeastern Illinois Planning Commission Historical Inventory of Solid Waste Disposal Sites in

NIPC

Northeastern Illinois:

Historical inventory of solid waste disposal sites in northeastern Illinois prepared by the Northeastern Illinois Planning Commission (NIPC).

Clean Construction or Demolition Debris:

CCDD

This is a list of CCDD Fill Operations with Approved Permits. Beginning July 1, 2008, no person can use CCDD as fill material in a current or former quarry, mine, or other excavation unless they have obtained a permit from the Illinois EPA.

Government Publication Date: Apr 30, 2018

Leaking Underground Storage Tanks (LUST):

LUST

The Leaking Underground Storage Tank Incident Tracking (LIT) database identifies the status of all Illinois LUST incidents reported to the Illinois Emergency Management Agency (IEMA) and to the Illinois Environmental Protection Agency.

Government Publication Date: Dec 2, 2019

Leaking UST Document:

LUST DOCUMENT

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Leaking Underground Storage Tank (LUST) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Oct 30, 2019

Delisted Leaking Underground Storage Tank Sites:

DELISTED LUST

List of sites removed from the Leaking Underground Storage Tank Incident Tracking (LIT) database made available by the Illinois Environmental Protection Agency.

Government Publication Date: Oct 30, 2019

Underground Storage Tank Fund Payment Priority List:

LUST TRUST

In case sufficient funds are not available in the Underground Storage Tank Fund, requests for payment are entered on the Payment Priority List by "queue date" order. As required by the Environmental Protection Act, the queue date is the date that a complete request for partial or final payment was received by the Agency. The queue date is "officially" confirmed at the end of the payment review process when a Final Decision Letter is sent to the site owner. The Underground Storage Tank Fund Priority list made available by Illinois Environmental Protection Agency.

Government Publication Date: Nov 01, 2016

Underground Storage Tank Database (UST):

UST

This database maintained by Division of Petroleum & Chemical Safety, contains information derived from tank registration information supplied to the Office of the Illinois State Fire Marshal (OSFM) from outside sources.

Government Publication Date: Jul 17, 2019

Aboveground Storage Tanks (AST):

AST

A list of aboveground storage tanks inspected by the Office of State Fire Marshal (OSFM).

Government Publication Date: Sep 30, 2019

Delisted Storage Tanks:

DELISTED TANK

This database contains a list of closed storage tank sites that were removed from the Illinois Department of Environmental Quality.

Government Publication Date: Dec 11, 2019

Sites with Engineering Controls:

ENG

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remediation Program (SRP) database with engineering controls in place.

Government Publication Date: Dec 2, 2019

Institutional Controls:

INST

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remediation Program (SRP) database with institutional controls in place.

Government Publication Date: Dec 2, 2019

Illinois Site Remediation Program Database:

SRP

The Site Remediation Program (SRP) database identifies the status of all voluntary remediation projects administered through the Pre-Notice Site Cleanup Program (1989 to 1995) and the Site Remediation Program (1996 to the present). This Site Remediation program database made available by Illinois Environmental Protection Agency.

Government Publication Date: Dec 2, 2019

Brownfields Redevelopment Assessment Database:

[BROWNFIELDS](#)

The Office of Site Evaluations Redevelopment Assessment database identifies the status of properties within the State in which the Illinois EPA's Office of Site Evaluation has conducted a Municipal Brownfields Redevelopment Grant (MBRG) project.

Government Publication Date: Sep 12, 2019

Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through

[BROWN MBRGP](#)

OBA:

The Office of Brownfields Assistance (OBA) database identifies the status of all Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through OBA. Office of Brownfields Assistance Database search made available by Illinois Environmental Protection Agency's Bureau of Land Data-Center.

Government Publication Date: Mar 31, 2013

Tribal

Leaking Underground Storage Tanks on Indian Lands:

[INDIAN LUST](#)

List of Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands in EPA Region 5, which includes Michigan, Minnesota and Wisconsin. There no LUST records in Illinois at this time.

Government Publication Date: Oct 16, 2017

Underground Storage Tanks (USTs) on Indian Lands:

[INDIAN UST](#)

Underground Storage Tanks (USTs) on Tribal/Indian Lands in EPA Region 5. There are no UST records in Illinois at this time.

Government Publication Date: Oct 16, 2017

Delisted Tribal Leaking Storage Tanks:

[DELISTED ILST](#)

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: May 2, 2019

Delisted Tribal Underground Storage Tanks:

[DELISTED IUST](#)

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: May 2, 2019

County

Chicago Storage Tanks:

[TANKS CHICAGO](#)

This dataset contains Aboveground Storage Tank (AST) and Underground Storage Tank (UST) information from the City of Chicago Department of Public Health's (CDPH) Tank Asset Database. The Tank Asset Database contains tank information from CDPH AST and UST permit applications as well as UST records imported from the historic City of Chicago Department of Environment (DOE) database. This dataset also includes AST records from the historic DOE and pre-1992 UST records from the Building Department.

Government Publication Date: Dec 11, 2019

Chicago Environmental Permits:

[PERMITS CHICAGO](#)

Permits issued by the City of Chicago Department of Environment (DOE) from January 1993 to December 31, 2011 and by the City of Chicago Department of Public Health (CDPH) since January 1, 2012. On January 1, 2012, the DOE was disbanded and all its inspection, permitting, and enforcement authorities were transferred to the CDPH.

Government Publication Date: Sep 12, 2019

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites:

PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 15, 2019

Facility Registry Service/Facility Index:

FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Nov 6, 2019

Toxics Release Inventory (TRI) Program:

TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Releases:

PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Dec 31, 2017

Hazardous Materials Information Reporting System:

HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs:

NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Sep 26, 2019

Toxic Substances Control Act:

TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Jun 30, 2017

Hist TSCA:

HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Oct 25, 2019

State Coalition for Remediation of Drycleaners Listing:

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Nov 18, 2016

Drycleaner Facilities:

FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities:

DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 29, 2018

Formerly Used Defense Sites:

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Nov 1, 2018

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

[MINES](#)

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: May 3, 2019

Alternative Fueling Stations:

[ALT FUELS](#)

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Oct 1, 2019

Registered Pesticide Establishments:

[SSTS](#)

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: May 31, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

[PCB](#)

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Oct 9, 2019

State

Spills and Incidents:

[SPILLS](#)

A list of reports taken by Illinois Emergency Management Agency (IEMA) of Hazardous Material spills in Illinois.

Government Publication Date: Dec 11, 2019

Emergency Response Releases & Spills Database:

[SPILLS2](#)

The Office of Emergency Response (OER) maintains the Emergency Response Releases & Spills Database. The Emergency Operations Unit, within OER, coordinates Illinois EPA's response to environmental emergencies involving oil or hazardous materials and ensures that any environmental contamination is cleaned up. EOU works with other response agencies including the Illinois Emergency Management Agency (IEMA), which is the initial contact for responses to an emergency or disaster in Illinois.

Government Publication Date: Dec 11, 2019

Per- and Polyfluoroalkyl Substances (PFAS):

[PFAS](#)

A list of reports taken by the Illinois Emergency Management Agency (IEMA) of incidents involving hazardous materials, where the hazardous material involved in the incident is in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Sep 12, 2019

Dry Cleaning Facilities:

[DRYCLEANERS](#)

A list of licensed drycleaners facilities provided by Drycleaner Environmental Response Trust Fund of Illinois.

Government Publication Date: Nov 12, 2019

Delisted Drycleaners:

[DELISTED DRYCLEANERS](#)

List of sites removed from the drycleaners database made available by the Drycleaner Environmental Response Trust Fund of Illinois.

Government Publication Date: Nov 12, 2019

Clandestine Drug Labs:

[CDL](#)

List of clandestine drug lab locations made available by the Illinois Department of Public Health. The Department maintains a list of properties from reports it receives from the Illinois State Police through the Illinois Emergency Management Agency.

Government Publication Date: Aug 21, 2019

Tier 2 Report:

TIER 2

List of facilities who submit Tier II forms to the Illinois Emergency Management Agency (IEMA).

Government Publication Date: Sep 16, 2019

Air Permits:

AIR PERMITS

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Air Permits (construction and operating) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Oct 30, 2019

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.