



August 12, 2024

Mr. Mike Petegrew, Environmental Services Administrator
Ohio Department of Natural Resources
Office of Real Estate & Land Management
2045 Morse Road, Bldg. E-2
Columbus, OH 43229

RE: Village of Crooksville, Perry County, Ohio
Crooksville WW Pump Station Improvements

Dear Mr. Petegrew:

The Village of Crooksville is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the ARC, Appalachian Community Grant Program for replacement of two Lift Stations (B1 and B6) within the Village of Crooksville. Lift Station B1 is located at 39.770161033038555, -82.09570938149754, and Lift Station B6 is located at 39.77500082950693, -82.0886013365391.

Enclosed is a completed Data Request Form with attached topographical, floodplain and wetland maps that depict the proposal's construction location, site photos and a description of the work involved.

We request that your office review the proposal for any State and Federally listed threatened and endangered species, including Migratory Bird, and any other important State natural resources that may occur in the project area. Please provide any recommendations you may have to mitigate or avoid these impacts.

We would appreciate a response within 30 days. If you need any further information or wish to discuss this project, please contact me at 614-706-0002 or tlwoodland@glcap.org.

Sincerely,

Trina Woodland

Trina Woodland
Sr. Rural Development Specialist
Rural Community Assistance Program (RCAP)

Enclosures

19790 Smith Drive 614-706-0002 www.glcap.org
Sarahsville, OH 43779
tlwoodland@glcap.org

This institution is an equal opportunity provider.

Project Description

The Village of Crooksville is seeking to replace two wastewater Lift Stations (B1 & B6). The proposed project is located in Perry County, Harrison Township within the Village of Crooksville. The Lift Stations are nearing the end of their useful life and are critical to the operation of the village's wastewater collection system. Lift Station B1 is located on the north side of East Main Street west of Sycamore Street, and Lift Station B6 is at the northeast corner of State Street and Mohican Drive. The replacement lift stations are within the limits of the Village of Crooksville and will be constructed adjacent to the existing systems. A new 10-inch force main will connect the replacement B1 lift station to the existing 10-inch force main running to Roseville, and a new 4-inch force main will connect the replacement B6 lift station to the same existing force main. The two replacement lift stations will use submersible pumps installed in HDPE wet wells. The majority of construction activities will be subsurface and will not affect the viewshed. The new segment of force main that will enable Lift Station B1 to pump to Roseville will be installed by horizontal directional drilling within the State Street right of way from South Delaware Drive to the existing force main near new Lift Station B6. All construction activities will occur within the developed urban area of the Village of Crooksville. The new 10" Force Main that will be extended from South Delaware Drive to the existing 10" Force Main north of Mohican Drive will be constructed solely within the road right-of-way. Horizontal drilling will be used to cross under N. State Street. All construction activities will be subsurface. No known habitats will be disturbed by construction activities. There will be no in-water work, and the project will not require any tree cutting.

All construction activities will place on previously disturbed ground and within the road right-of-ways.

CONSTRUCTION DOCUMENTS FOR: VILLAGE OF CROOKSVILLE LIFT STATIONS B1 & B6 REPLACEMENT PERRY COUNTY, OHIO



LOCATION MAP

SCALE: 1" = 1000'



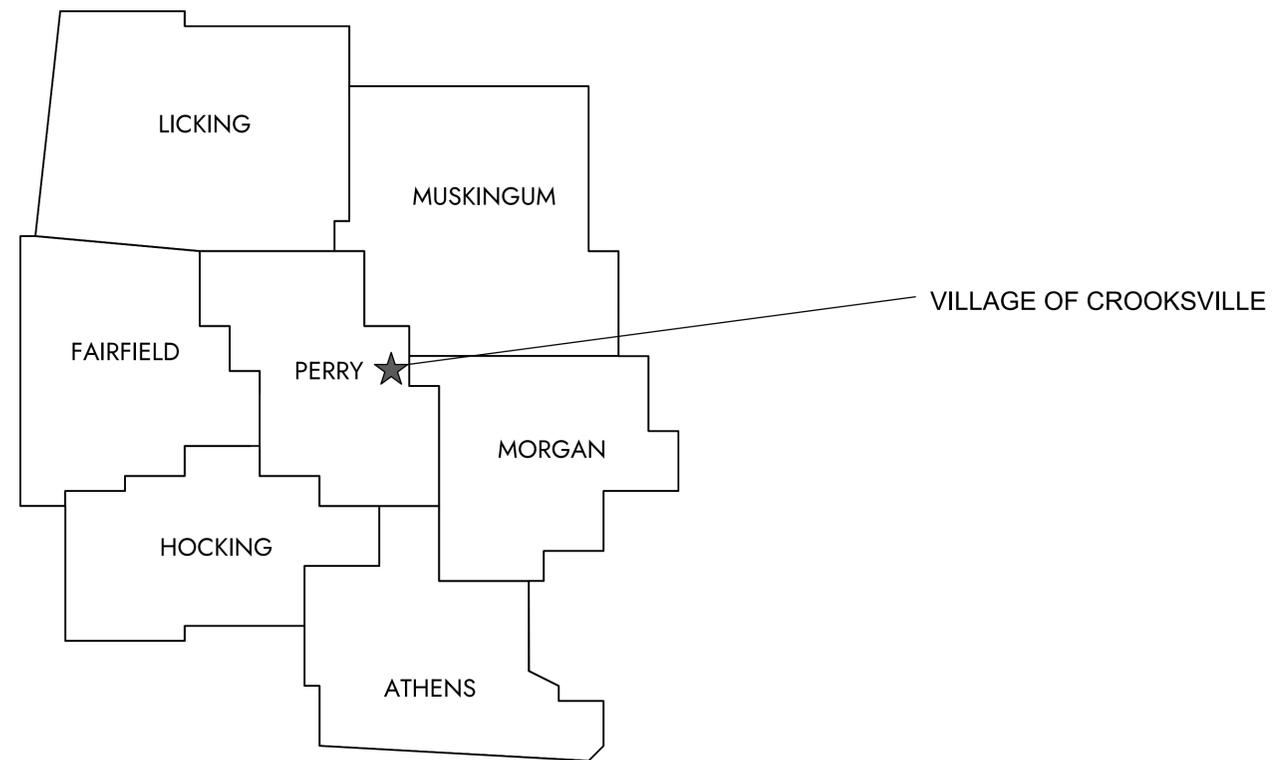
INDEX OF SHEETS

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PLANS PREPARED BY:



GRANT FOREST SCHOOLEY, PE _____ DATE
OHIO REG. NO. 80135



OWNER
VILLAGE OF CROOKSVILLE
98 S. BUCKEYE STREET
CROOKSVILLE, OH 43731
P: (740) 982-2712
CONTACT: MAYOR CHRIS MOHLER

APPROVAL
SIGNATURE BELOW ONLY SIGNIFIES THE AGREEMENT WITH THE GENERAL PURPOSES AND INTENT OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

MAYOR CHRIS MOHLER _____ DATE



DESIGNED BY: GFS	DRAWN BY: JLB	CHECKED BY: GFS	PROJECT NO. 15040
CHK'D BY: DATE			
REVISION	PRELIMINARY NOT FOR CONSTRUCTION		
No.			

CROOKSVILLE ~ PERRY COUNTY ~ OHIO
**VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT**
TITLE SHEET

DATE:
11/21/2023

SCALE:

SHEET:
1

STANDARD CONSTRUCTION DRAWINGS – CITY OF COLUMBUS
 (ADDITIONAL STANDARD DRAWINGS FOR LIFT STATION SITE CONSTRUCTION)

1441 – PAVEMENT & UTILITY CUT REPAIR STANDARDS
 2230 – TEMPORARY CONSTRUCTION DRIVE

NOTES:

1. CONTRACTOR SHALL PREPARE AND SUBMIT A MAINTENANCE OF TRAFFIC PLAN FOR APPROVAL BY THE OWNER AND ENGINEER PRIOR TO ANY WORK BEING COMPLETED.
2. CONTRACTOR SHALL PERFORM START-UP FOR THE LIFT STATION. CONTRACTOR SHALL SUPPLY CLEAN WATER IN ORDER TO PERFORM START-UP. START-UP SHALL CONSIST OF THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR AND A REPRESENTATIVE FROM THE SUPPLIER AT A MINIMUM. CONTRACTOR SHALL COORDINATE THE START-UP AND INCLUDE THE OWNER AND ENGINEER. THIS SHALL BE SCHEDULED A WEEK IN ADVANCE TO THE START-UP DATE.
3. ALL FILL UNDER OR WITHIN 3' OF DRIVE AREA SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AND WITHIN 1.5% OF THE OPTIMUM MOISTURE CONTENT.
4. CONTRACTOR SHALL FINAL GRADE SITE. SURFACE SHALL BE FREE OF ROCKS, ETC. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREA.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING A TEMPORARY CONSTRUCTION DRIVE. CONSTRUCTION DRIVE SHALL FOLLOW THE CITY OF COLUMBUS, STANDARD DRAWING 2230.
6. CONTRACTOR SHALL PROVIDE, IF NECESSARY, DEWATERING FOR THE CONSTRUCTION OF THE LIFT STATION. ALL COST FOR DEWATERING THE LIFT STATION SITE SHALL BE INCLUDED WITHIN THE CONTRACTORS BID. ALL DEWATERING FLOWS SHALL BE KEPT FREE OF SILT, SEDIMENTS, DEBRIS, AND OTHER POLLUTANTS THROUGH APPROPRIATE MEANS (SETTLING BASINS, FILTER, ETC.), AND FOLLOWING THIS, THE FLOWS SHALL ONLY BE RELEASED DIRECTLY INTO STORM SEWERS, STREAM CHANNELS, OR OTHER STABILIZED DRAINAGE COURSES AND NOT ONTO EXPOSED SOILS, STEEP SLOPES, OR ANY OTHER SITE WHERE FLOWS COULD CAUSE FURTHER EROSION. ANY WELL, WELL POINT, PIT, OR OTHER DEVICE INSTALLED FOR THE PURPOSE OF LOWERING THE GROUND WATER LEVEL TO FACILITATE CONSTRUCTION OF THIS PROJECT SHALL BE PROPERLY ABANDONED IN ACCORDANCE WITH THE PROVISIONS OF THIS PLAN OR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. ANY PERSON INSTALLING ANY WELL, WELL POINT, PIT OR OTHER DEVICE USED FOR THE PURPOSE OF REMOVING GROUND WATER FROM AN AQUIFER SHALL COMPLETE AND FILE A WELL LOG AND DRILLING REPORT FORM WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATER, WITHIN 30 DAYS OF THE WELL COMPLETION IN ACCORDANCE WITH OHIO REVISED CODE SECTION 1521.01 AND 1521.05.
7. ALL EXCAVATION ON THIS SITE IS UNCLASSIFIED. THE CONTRACTOR SHALL MAKE ALL EXCAVATION OF WHATEVER NATURE NECESSARY FOR CONSTRUCTION OF THE PROPOSED UTILITY AND THEIR APPURTENANT STRUCTURES INCLUDED IN THIS SITE. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ROCK ENCOUNTERED DURING EXCAVATION.
8. FORCE MAIN PIPE SHALL BE DUCTILE IRON AND CONFORM WITH AWWA C151. JOINT SHALL CONFIRM TO AWWA C111.
9. FORCE MAIN SHALL BE HYDROSTATICALLY TESTED PER ASTM F1417.



1555 WEST MAIN STREET
 NEWARK, OH 43055-9939
 TEL. 740.344.5451
 FAX. 614.360.0023

DESIGNED BY: GFS	DRAWN BY: JLB	CHECKED BY: GFS	PROJECT NO.:
			15040

CHK'D BY:
DATE

REVISION

No.

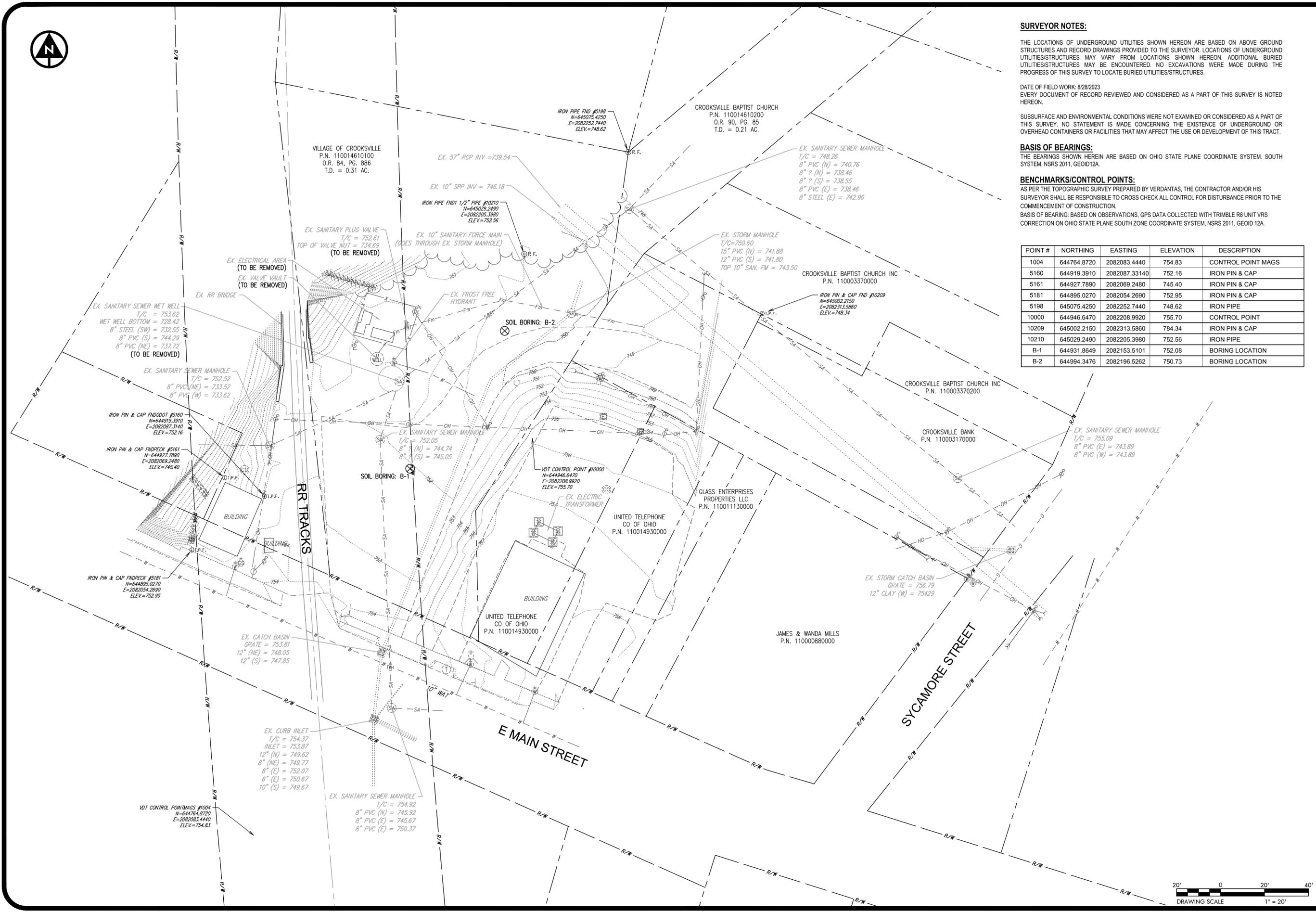
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NOT FOR
CONSTRUCTION

CROOKSVILLE ~ PERRY COUNTY ~ OHIO
VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT
 GENERAL NOTES

DATE: 11/21/2023

SCALE:

SHEET: 3



SURVEYOR NOTES:

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.

DATE OF FIELD WORK: 8/28/2023
EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREIN ARE BASED ON OHIO STATE PLANE COORDINATE SYSTEM. SOUTH SYSTEM, NSRS 2011, GEOID12A.

BENCHMARKS/CONTROL POINTS:

AS PER THE TOPOGRAPHIC SURVEY PREPARED BY VERDANTAS, THE CONTRACTOR AND/OR HIS SURVEYOR SHALL BE RESPONSIBLE TO CROSS CHECK ALL CONTROL FOR DISTURBANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
BASIS OF BEARING: BASED ON OBSERVATIONS, GPS DATA COLLECTED WITH TRIMBLE R8 UNIT VRS CORRECTION ON OHIO STATE PLANE SOUTH ZONE COORDINATE SYSTEM, NSRS 2011, GEOID 12A.

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1004	644764.8720	2082083.4440	754.83	CONTROL POINT MAGS
5160	644919.3910	2082087.33140	752.16	IRON PIN & CAP
5161	644927.7890	2082069.2480	745.40	IRON PIN & CAP
5181	644895.0270	2082054.2690	752.95	IRON PIN & CAP
5198	645075.4250	2082252.7440	748.62	IRON PIPE
10000	644946.6470	2082208.9920	755.70	CONTROL POINT
10209	645002.2150	2082313.5860	784.34	IRON PIN & CAP
10210	645029.2490	2082205.3980	752.56	IRON PIPE
B-1	644931.8649	2082153.5101	752.08	BORING LOCATION
B-2	644994.3476	2082196.5262	750.73	BORING LOCATION



1555 WEST MAIN STREET
NEWARK, OH 43055-3939
TEL. 740.344.5451
FAX. 614.360.0023

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CHECKED BY:	GPS
PROJECT NO.:	15040

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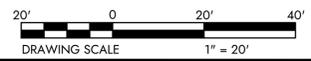
CROOKSVILLE ~ PERRY COUNTY ~ OHIO

VILLAGE OF CROOKSVILLE

LIFT STATIONS B1 & B6 REPLACEMENT

DEMOLITION PLAN - LIFT STATION B1

DATE:	11/21/2023
SCALE:	1" = 20'
SHEET:	4



WILLIAM & CHERI HAYES
P.N. 110013250000

VILLAGE OF CROOKSVILLE
P.N. 110010580000

VILLAGE OF CROOKSVILLE
P.N. 110010590000

BRAD & KENNETH & GLENNA
ALEXANDER
P.N. 110008200000

MARC & PAULA CATON
P.N. 110009960000

BRAD & KENNETH & GLENNA
ALEXANDER
P.N. 110008690000

JOEL HENNING TRUSTEE OF THE
JOEL HENNING TRUST
P.N. 110008690000

JOEL HENNING TRUSTEE OF THE
JOEL HENNING TRUST
P.N. 110008700000

TONIE & WILLIAM WALTERS
P.N. 110010970100

JOSEPH & PAULA HUFFMAN
P.N. 110010610000

JOSEPH & PAULA HUFFMAN
P.N. 110010610000
O.R. 470, PG. 453
T.D. = 0.02 AC.

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BASIS OF BEARINGS:

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BENCHMARKS/CONTROL POINTS:

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POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1003	646664.8980	2084141.3590	824.51	CONTROL POINT MAGS
10025	646772.7230	2084227.0800	822.57	CONTROL POINT
B-3	646761.2458	2084108.4571	819.65	BORING LOCATION



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PROJECT NO: 15040

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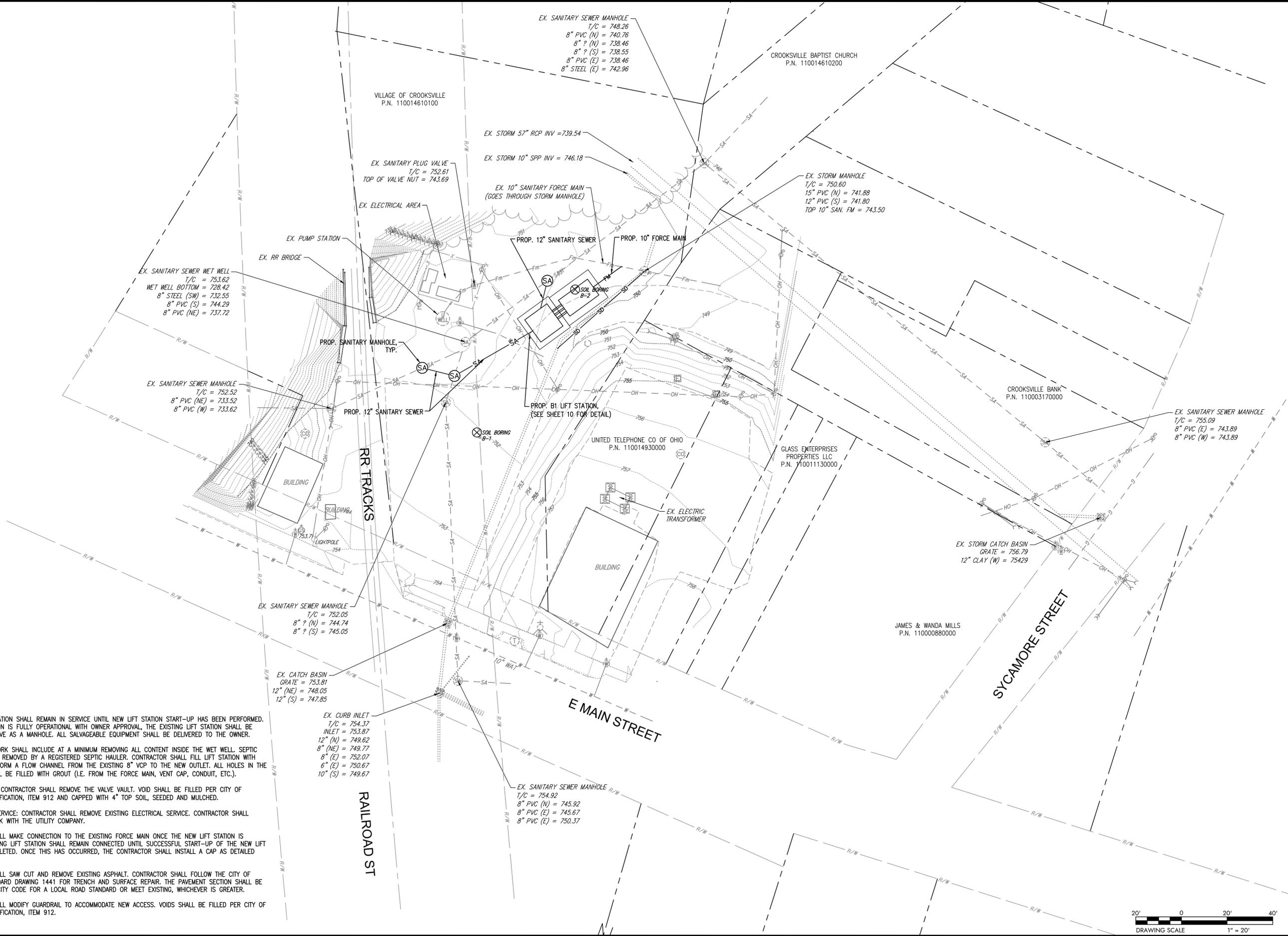
CROOKSVILLE ~ PERRY COUNTY ~ OHIO
VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT
DEMOLITION PLAN - LIFT STATION B6

DATE: 11/21/2023

SCALE: 1" = 20'

SHEET: 5

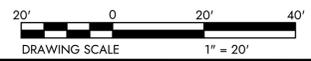




- CODED NOTES:**
- ① EXISTING LIFT STATION SHALL REMAIN IN SERVICE UNTIL NEW LIFT STATION START-UP HAS BEEN PERFORMED. ONCE LIFT STATION IS FULLY OPERATIONAL WITH OWNER APPROVAL, THE EXISTING LIFT STATION SHALL BE MODIFIED TO SERVE AS A MANHOLE. ALL SALVAGEABLE EQUIPMENT SHALL BE DELIVERED TO THE OWNER.
 - WET WELL: WORK SHALL INCLUDE AT A MINIMUM REMOVING ALL CONTENT INSIDE THE WET WELL. SEPTIC WASTE SHALL BE REMOVED BY A REGISTERED SEPTIC HAULER. CONTRACTOR SHALL FILL LIFT STATION WITH CONCRETE AND FORM A FLOW CHANNEL FROM THE EXISTING 8" VCP TO THE NEW OUTLET. ALL HOLES IN THE STRUCTURE SHALL BE FILLED WITH GROUT (I.E. FROM THE FORCE MAIN, VENT CAP, CONDUIT, ETC.).
 - VALVE VAULT: CONTRACTOR SHALL REMOVE THE VALVE VAULT. VOID SHALL BE FILLED PER CITY OF COLUMBUS SPECIFICATION, ITEM 912 AND CAPPED WITH 4" TOP SOIL, SEEDED AND MULCHED.
 - ELECTRICAL SERVICE: CONTRACTOR SHALL REMOVE EXISTING ELECTRICAL SERVICE. CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANY.
 - ② CONTRACTOR SHALL MAKE CONNECTION TO THE EXISTING FORCE MAIN ONCE THE NEW LIFT STATION IS INSTALLED. EXISTING LIFT STATION SHALL REMAIN CONNECTED UNTIL SUCCESSFUL START-UP OF THE NEW LIFT STATION IS COMPLETED. ONCE THIS HAS OCCURRED, THE CONTRACTOR SHALL INSTALL A CAP AS DETAILED ABOVE.
 - ③ CONTRACTOR SHALL SAW CUT AND REMOVE EXISTING ASPHALT. CONTRACTOR SHALL FOLLOW THE CITY OF COLUMBUS STANDARD DRAWING 1441 FOR TRENCH AND SURFACE REPAIR. THE PAVEMENT SECTION SHALL BE PER THE PLAIN CITY CODE FOR A LOCAL ROAD STANDARD OR MEET EXISTING, WHICHEVER IS GREATER.
 - ④ CONTRACTOR SHALL MODIFY GUARDRAIL TO ACCOMMODATE NEW ACCESS. VOIDS SHALL BE FILLED PER CITY OF COLUMBUS SPECIFICATION, ITEM 912.

EX. CURB INLET
 T/C = 754.37
 INLET = 753.87
 12" (N) = 749.62
 8" (NE) = 749.77
 8" (E) = 752.07
 6" (E) = 750.67
 10" (S) = 749.67

EX. SANITARY SEWER MANHOLE
 T/C = 754.92
 8" PVC (N) = 745.92
 8" PVC (E) = 745.67
 8" PVC (E) = 750.37



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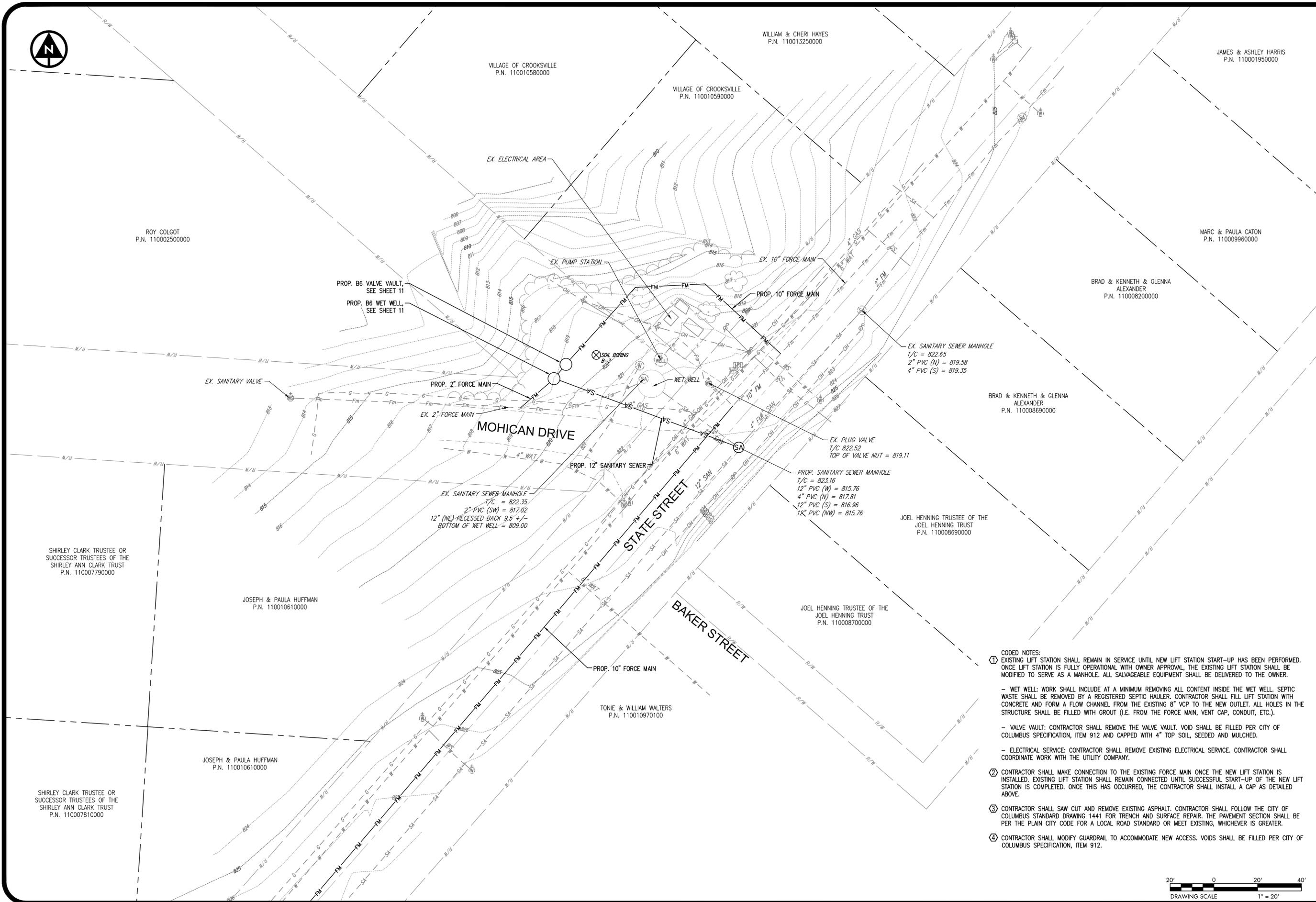
CROOKSVILLE ~ PERRY COUNTY ~ OHIO

VILLAGE OF CROOKSVILLE

LIFT STATIONS B1 & B6 REPLACEMENT

PROPOSED SITE PLAN - LIFT STATION B1

DATE:	11/21/2023
SCALE:	1" = 20'
SHEET:	6



WILLIAM & CHERI HAYES
P.N. 110013250000

JAMES & ASHLEY HARRIS
P.N. 110001950000

VILLAGE OF CROOKSVILLE
P.N. 110010580000

VILLAGE OF CROOKSVILLE
P.N. 110010590000

ROY COLGOT
P.N. 110002500000

MARC & PAULA CATON
P.N. 110009960000

PROP. B6 VALVE VAULT,
SEE SHEET 11

PROP. B6 WET WELL,
SEE SHEET 11

BRAD & KENNETH & GLENNA
ALEXANDER
P.N. 110008200000

EX. 10\"/>

EX. SANITARY SEWER MANHOLE
T/C = 822.65
2\"/>

BRAD & KENNETH & GLENNA
ALEXANDER
P.N. 110008690000

MOHICAN DRIVE

PROP. 12\"/>

PROP. SANITARY SEWER MANHOLE
T/C = 823.16
12\"/>

JOEL HENNING TRUSTEE OF THE
JOEL HENNING TRUST
P.N. 110008690000

SHIRLEY CLARK TRUSTEE OR
SUCCESSOR TRUSTEES OF THE
SHIRLEY ANN CLARK TRUST
P.N. 110007790000

JOSEPH & PAULA HUFFMAN
P.N. 110010610000

JOEL HENNING TRUSTEE OF THE
JOEL HENNING TRUST
P.N. 110008700000

EX. SANITARY SEWER MANHOLE
T/C = 822.35
2\"/>

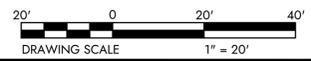
PROP. 10\"/>

TONIE & WILLIAM WALTERS
P.N. 110010970100

JOSEPH & PAULA HUFFMAN
P.N. 110010610000

SHIRLEY CLARK TRUSTEE OR
SUCCESSOR TRUSTEES OF THE
SHIRLEY ANN CLARK TRUST
P.N. 110007810000

- CODED NOTES:**
- EXISTING LIFT STATION SHALL REMAIN IN SERVICE UNTIL NEW LIFT STATION START-UP HAS BEEN PERFORMED. ONCE LIFT STATION IS FULLY OPERATIONAL WITH OWNER APPROVAL, THE EXISTING LIFT STATION SHALL BE MODIFIED TO SERVE AS A MANHOLE. ALL SALVAGEABLE EQUIPMENT SHALL BE DELIVERED TO THE OWNER.
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 - VALVE VAULT: CONTRACTOR SHALL REMOVE THE VALVE VAULT. VOID SHALL BE FILLED PER CITY OF COLUMBUS SPECIFICATION, ITEM 912 AND CAPPED WITH 4" TOP SOIL, SEEDED AND MULCHED.
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 - CONTRACTOR SHALL MODIFY GUARDRAIL TO ACCOMMODATE NEW ACCESS. VOIDS SHALL BE FILLED PER CITY OF COLUMBUS SPECIFICATION, ITEM 912.



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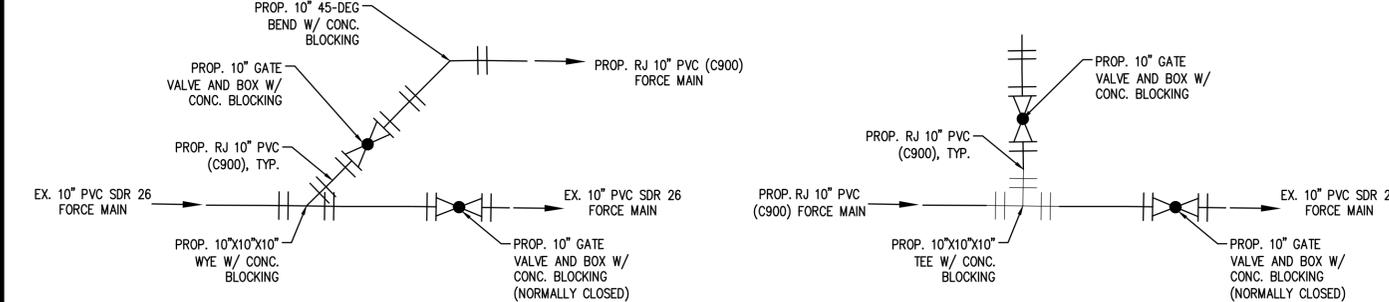
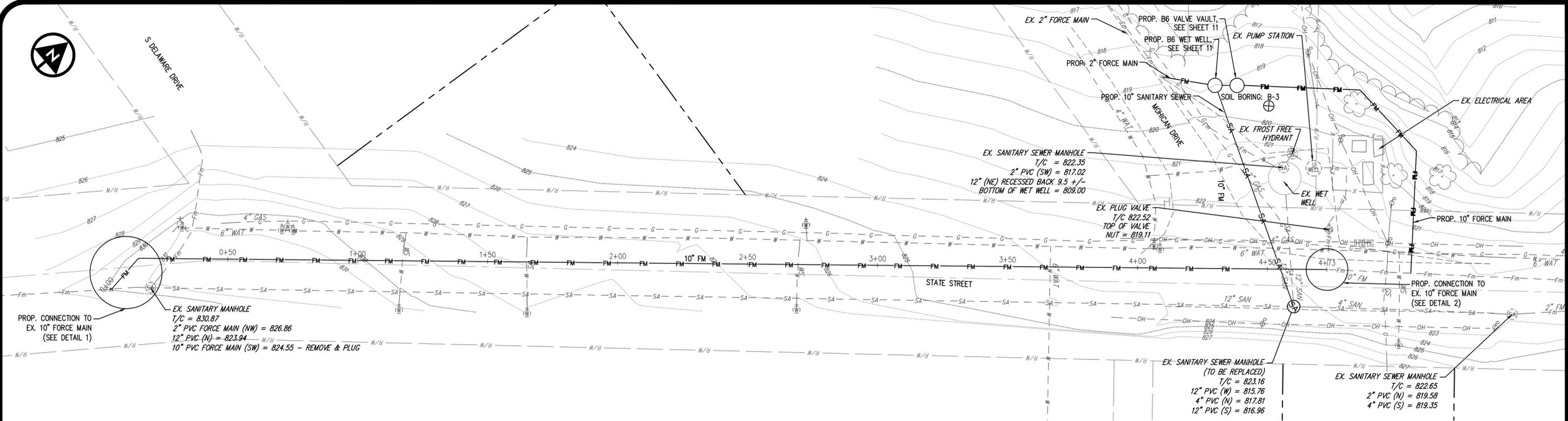
CROOKSVILLE ~ PERRY COUNTY ~ OHIO

VILLAGE OF CROOKSVILLE

LIFT STATIONS B1 & B6 REPLACEMENT

PROPOSED SITE PLAN - LIFT STATION B6

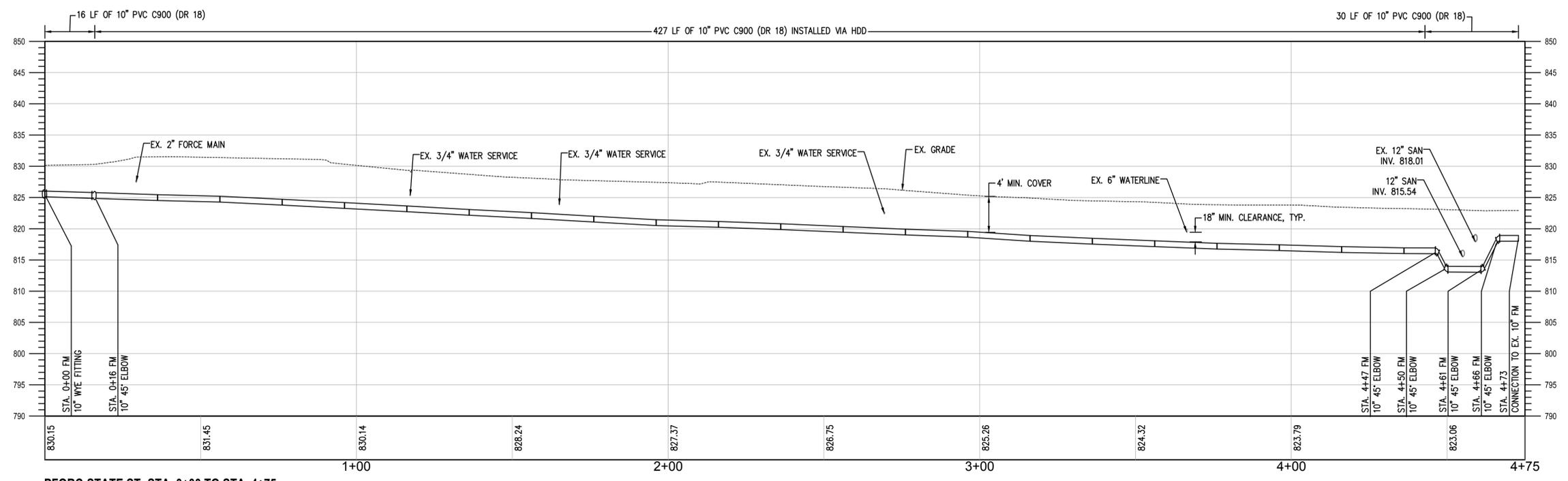
DATE:	11/21/2023
SCALE:	1" = 20'
SHEET:	7



- NOTES:
1. CONTRACTOR SHALL COORDINATE WORK WITH OWNER TO MAINTAIN UNINTERRUPTED SEWER SERVICE.
 2. REFER TO PLAN AND PROFILE SHEET C1 FOR ADDITIONAL INFORMATION.
 3. ALL BURIED VALVES AND FITTINGS SHALL HAVE CONCRETE BLOCKING AND BE RESTRAINED MECHANICAL JOINT. REFER TO SWLCS OMS FOR ADDITIONAL REQUIREMENTS.

1 EXISTING FORCE MAIN CONNECTION DETAIL
Scale: N.T.S.

2 EXISTING FORCE MAIN CONNECTION DETAIL
Scale: N.T.S.



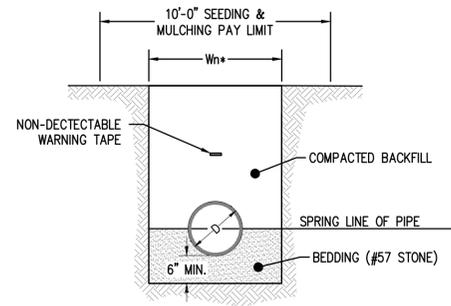
PFORC-STATE ST: STA. 0+00 TO STA. 4+75
SCALE: HORIZONTAL 1" = 20', VERTICAL 1" = 10'

DESIGNED BY:	GFS
DRAWN BY:	LIB
CHECKED BY:	GFS
PROJECT NO.:	15040

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CONSTRUCTION**

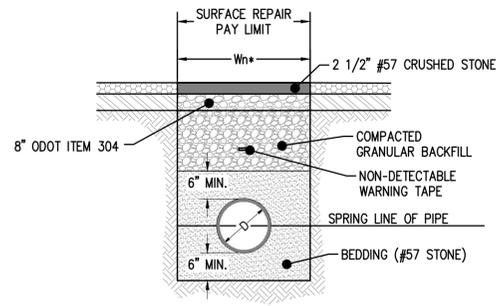
**VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT
FORCE MAIN PLAN AND PROFILE**

DATE:	11/21/2023
SCALE:	1" = 20'
SHEET:	8



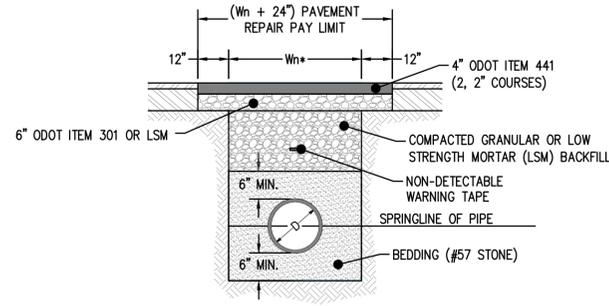
1 SEWER TRENCH DETAIL IN GRASSY AREA
Scale: N.T.S.

- NOTES:
- IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH, OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
 - SEE SPECIFICATIONS FOR ADDITIONAL BEDDING AND BACKFILL REQUIREMENTS.
 - TRENCH DAMS SHALL BE INSTALLED A MINIMUM OF EVERY 200 FEET ALONG THE SEWER MAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



2 SEWER TRENCH DETAIL IN STONE DRIVE
Scale: N.T.S.

- NOTES:
- IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH, OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
 - SEE SPECIFICATIONS FOR ADDITIONAL BEDDING AND BACKFILL REQUIREMENTS.
 - TRENCH DAMS SHALL BE INSTALLED A MINIMUM OF EVERY 200 FEET ALONG THE SEWER MAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

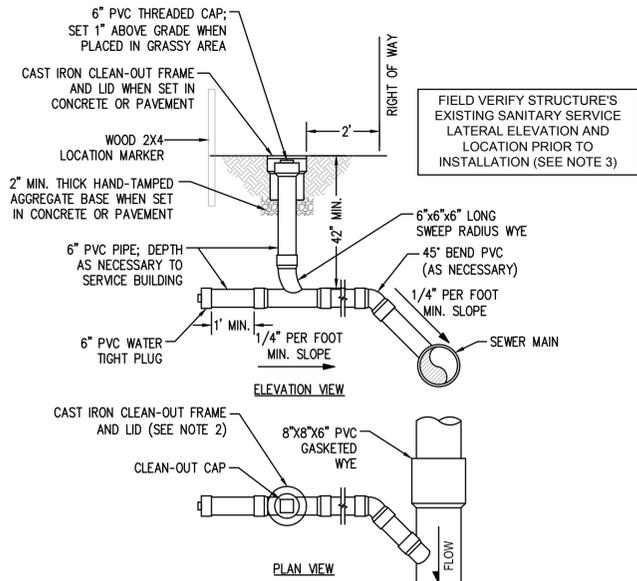


3 SEWER TRENCH DETAIL UNDER OR WITHIN 3' OF PAVEMENT
Scale: N.T.S.

- NOTES:
- IF SOFT OR OTHERWISE UNSUITABLE SOILS ARE ENCOUNTERED AT SUBGRADE DEPTH, OVEREXCAVATE TO FIRM SUBGRADE DEPTH OR AT LEAST 12" BELOW DESIGN SUBGRADE.
 - SEE SPECIFICATIONS FOR ADDITIONAL BEDDING AND BACKFILL REQUIREMENTS.
 - TRENCH DAMS SHALL BE INSTALLED A MINIMUM OF EVERY 200 FEET ALONG THE SEWER MAIN, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

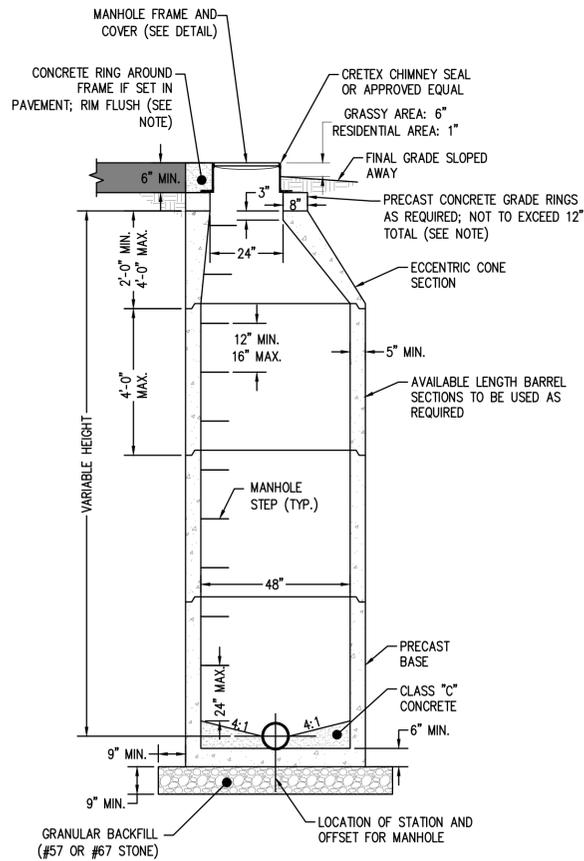
NOMINAL PIPE DIAMETER (D)	MIN. TRENCH WIDTH (Wn+)
6"	30"
8"	30"

* Wn SHOWN FOR TRENCH IS THE MINIMUM WIDTH PERMITTED. ACTUAL WIDTH MAY VARY DEPENDENT ON CONTRACTOR'S CHOICE OF OPERATION. HOWEVER, IN NO EVENT SHALL CONTRACTOR BE PAID FOR QUANTITIES IN EXCESS OF THOSE QUANTITIES CALCULATED BASED ON Wn.



4 SERVICE LATERAL & CLEANOUT DETAIL
Scale: N.T.S.

- NOTES:
- SERVICE LATERAL AND CLEANOUT PVC PIPE AND FITTINGS SHALL BE SDR-35.
 - CAST IRON CLEAN-OUT SHALL BE USED WHEN CLEANOUT IS SET IN CONCRETE OR PAVEMENT. LID SHALL BE EMBOSSED, "SANITARY."
 - CONTRACTOR SHALL VERIFY PROPOSED SANITARY SERVICE LATERAL IS SET AT SUFFICIENT DEPTH TO SERVE THE EXISTING SANITARY LATERAL ELEVATION WITHIN STRUCTURE PRIOR TO INSTALLATION. ADJUST SERVICE LATERAL LOCATION AS NECESSARY FOR CONVENIENT CONNECTION BY OTHERS.



5 STANDARD PRECAST SANITARY MANHOLE
Scale: N.T.S.

MANHOLE NOTES:
ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM C478 UNLESS OTHERWISE SHOWN.

SECTIONS OF THE PRECAST MANHOLE SHALL BE CAST AND ASSEMBLED WITH EITHER ALL TONGUE OR GROOVE ENDS UP. LIFT HOLES MAY BE PROVIDED IN EACH SECTION FOR HANDLING. ALL LIFT HOLES AND OTHER OPENINGS SHALL BE THOROUGHLY AND NEATLY GROUTED WITH CEMENT MORTAR.

PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 5-INCHES AND REINFORCED SUFFICIENTLY TO PERMIT SHIPPING AND HANDLING WITHOUT DAMAGE.

SANITARY MANHOLES SHALL BE WATERTIGHT STRUCTURES. ALL JOINTS TO BE SUPPLIED WITH O-RING RUBBER GASKETS AS PER ASTM C-443.

MANHOLES SHALL BE CARRIED TO PROPER HEIGHT SO THAT THE TOP OF CASTING WILL BE SET AT THE FINISH GRADE. TOP OF CASTING SHALL BE SET FLUSH WITH GRADE WHEN SET WITHIN TRAFFICKED ASPHALT, CONCRETE, OR GRAVEL ROADWAY OR DRIVE, 1 INCH ABOVE FINAL GRADE WHEN SET WITHIN RESIDENTIAL GRASSED AREAS, AND 6 INCHES ABOVE FINAL GRADE WHEN SET WITHIN OPEN GRASSY AREA. WHEN SET IN A GRASSY AREA, SURROUNDING FINAL GRADE SHALL BE SLOPED AWAY FROM MANHOLE TO ALLOW DRAINAGE AWAY FROM MANHOLE.

PROVIDE A UTILITY MARKER FOR EACH MANHOLE LOCATED IN A GRASSY FIELD.

PRECAST GRADE RINGS:
PRECAST CONCRETE GRADE RINGS, GROUTED IN PLACE, SHALL BE USED IF NEEDED BETWEEN THE SLAB OR CONE TOP AND THE ACCESS FRAME CASTING CASTING AND COVER. A 6 INCH THICK GRADE RICK SHALL BE INSTALLED FOR ALL MANHOLES BEING PLACED IN PAVEMENT FOR FLUSH INSTALLATION. CONTRACTOR SHALL INSTALL TAPERED GRADE RINGS AS NECESSARY.

TOP:
THIS SECTION SHALL BE AN ECCENTRIC CONE UNLESS A FLAT SLAB IS SPECIFIED.

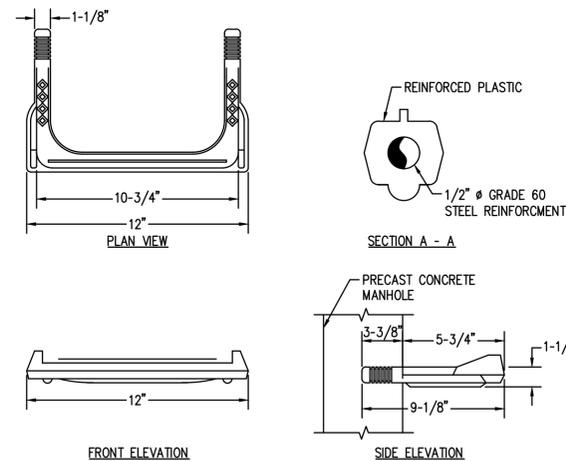
REINFORCING STEEL USED WITHIN THE TOP SLAB SHALL BE EPOXY COATED.

SANITARY SEWER - MANHOLE CONNECTIONS:
SEWER PIPE SHALL BE SECURED THROUGH THE MANHOLE WALL BY A KOR-N-SEAL BOOT OR APPROVED EQUIVALENT MEETING ASTM C923.

CHIMNEY SEALS:
A CRETEX CHIMNEY SEAL OR APPROVED EQUAL SHALL BE INSTALLED ON ALL MANHOLES.

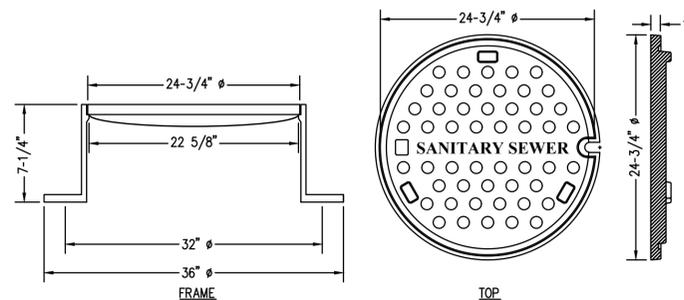
MANHOLE FRAME AND COVER:
ALL MANHOLES (PUBLIC OR PRIVATE) SHALL USE A NEENAH R-1767 FRAME AND COVER OR APPROVED EQUAL. COVER SHALL BE SOLID AND EMBOSSED "SANITARY SEWER."

WHERE REQUIRED, CONCRETE RING SHALL BE 4,000 PSI MINIMUM AND CONTAIN 6% ENTRAINED AIR AND A 3" MAXIMUM SLUMP. ODOT ITEM 452. BORDER SHALL BE 12" WIDE AROUND FRAME AND MINIMUM 6" THICK.



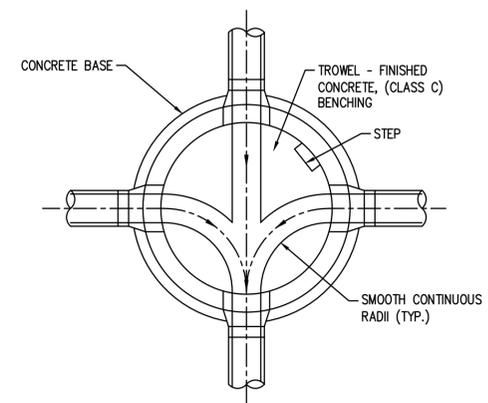
6 MANHOLE STEP DETAIL
Scale: N.T.S.

- NOTE:
- STEPS SHALL MEET THE REQUIREMENTS OF ASTM C-478.



7 MANHOLE FRAME AND COVER
Scale: N.T.S.

- NOTE:
- FRAME AND COVER SHALL BE CAST IRON.



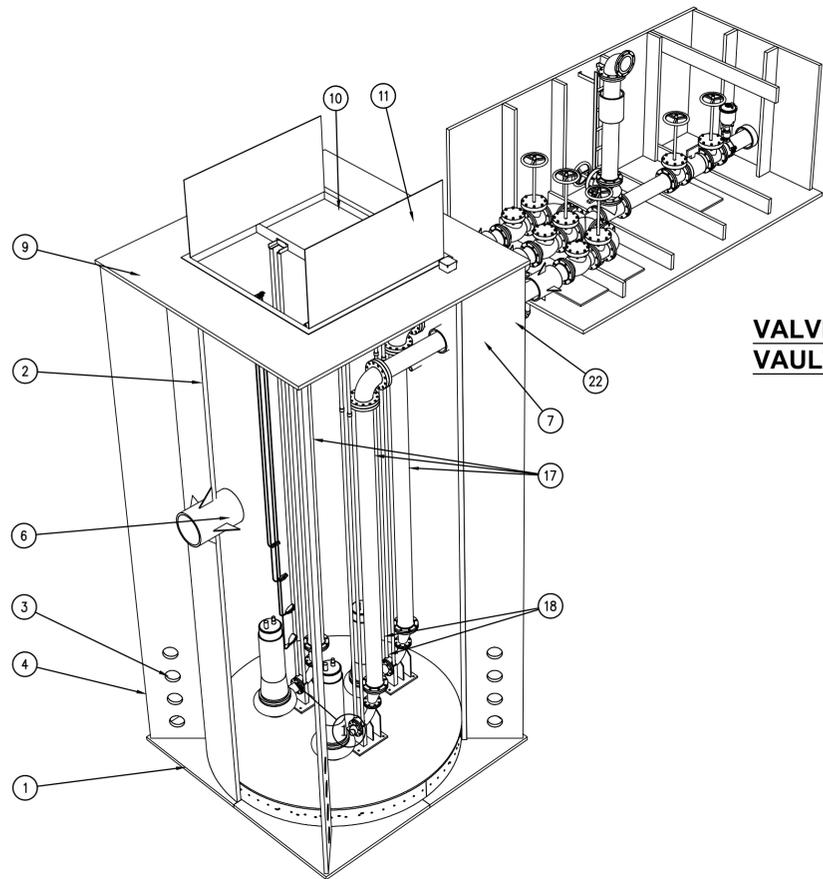
8 PRECAST MANHOLE BASE CHANNELIZATION DETAIL
Scale: N.T.S.

DESIGNED BY:	GFS
DRAWN BY:	ILB
CHECKED BY:	GFS
PROJECT NO.:	15040
CH'D BY:	
DATE:	
REVISION:	
No.	

PRELIMINARY
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CONSTRUCTION

CROOKSVILLE ~ PERRY COUNTY ~ OHIO
VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT
SANITARY SEWER DETAILS

DATE:	11/21/2023
SCALE:	NTS
SHEET:	9



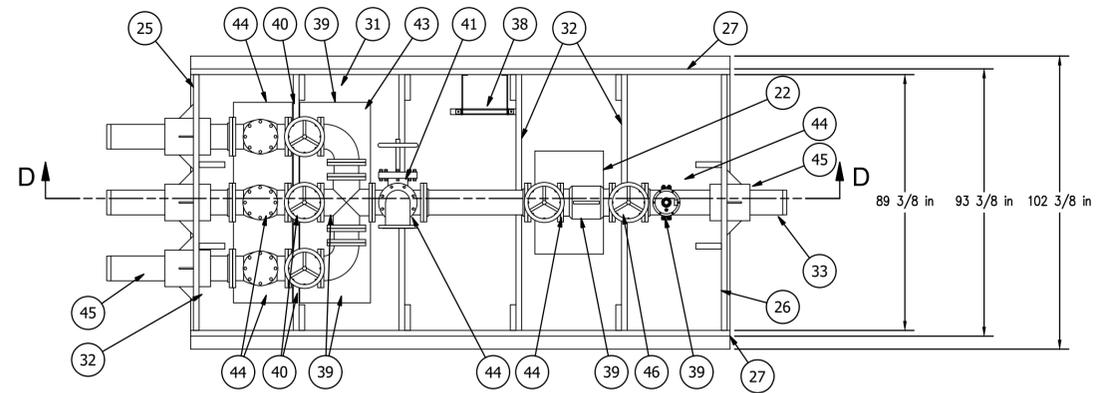
PUMP STATION WETWELL
PUMP STATION
ISOMETRIC VIEW

NOTE: EXTERNAL VALVE VAULT SHOWN FOR GENERAL REPRESENTATION PURPOSES ONLY. REFER TO VALVE VAULT DETAIL SHEETS AS REQUIRED FOR GENERAL CONFIGURATION, EQUIPMENT, DIMENSIONS, AND DETAILS

VALVE VAULT

PUMP SCHEDULE	
DESIGNATION	TBD
PUMP TYPE	SUBMERSIBLE
MANUFACTURER	WILO
MODEL NUMBER	EMU FA10.68W WITH T30-4/55KEx
VOLTAGE/PHASE/FREQUENCY	480V / 3-PH / 60 Hz
PUMP RATE	VARIABLE by VFD CONTROL (500-1400 GPM)
TOTAL DYNAMIC HEAD	260.3' TDH
MOTOR HP	114 hp
PUMP SPEED	1765 RPM
DISCHARGE DIAMETER	4"
IMPELLER DIAMETER	15.39"

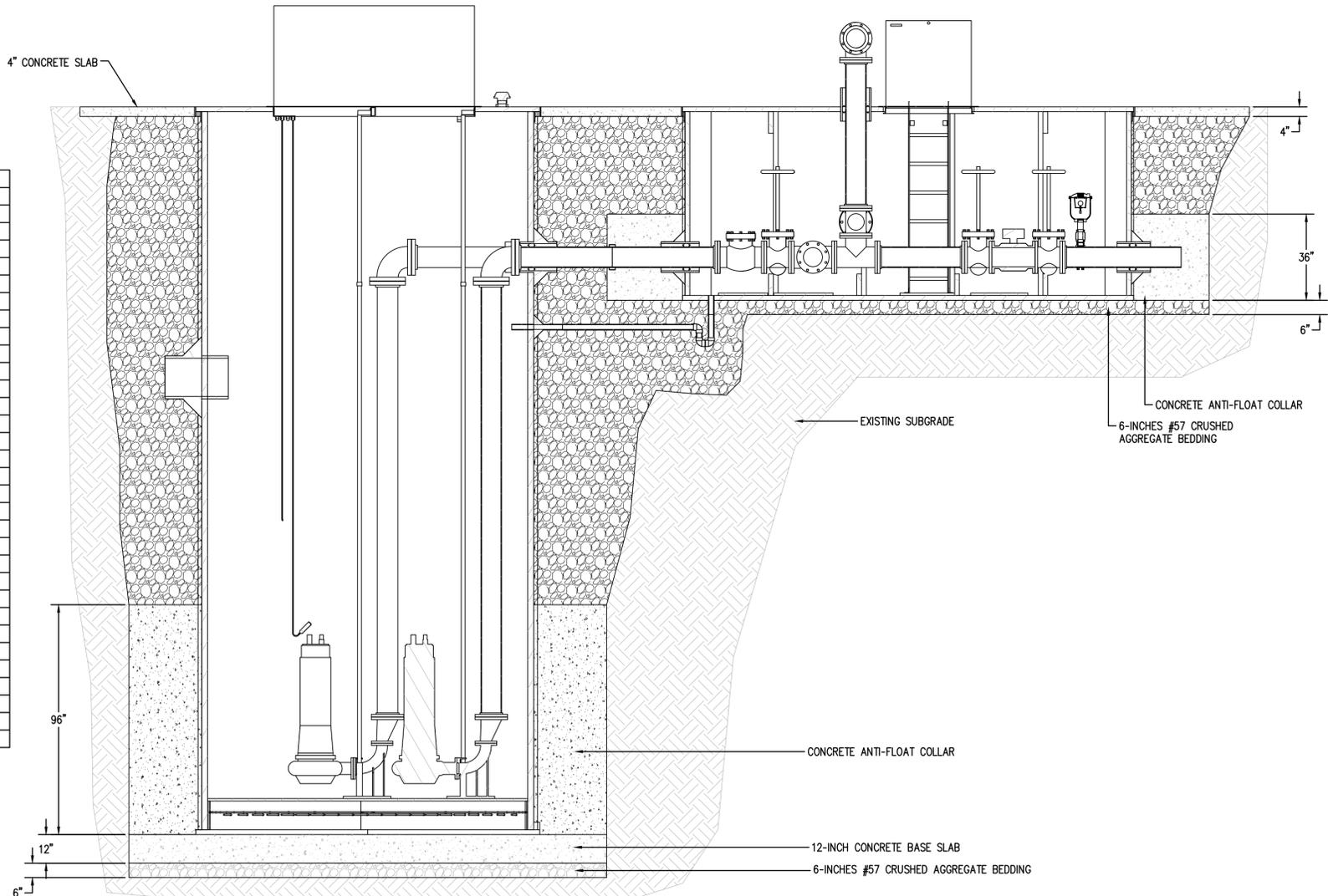
PUMP CONTROL SCHEDULE	
LEVEL FLOAT	ELEVATION
EMERGENCY HIGH WATER ALARM	N/A
HIGH WATER ALARM	742.50'
LAG PUMP ON	742.00'
LEAD PUMPS ON	741.50'
PUMPS OFF	731.94'
LOW WATER ALARM	731.44'



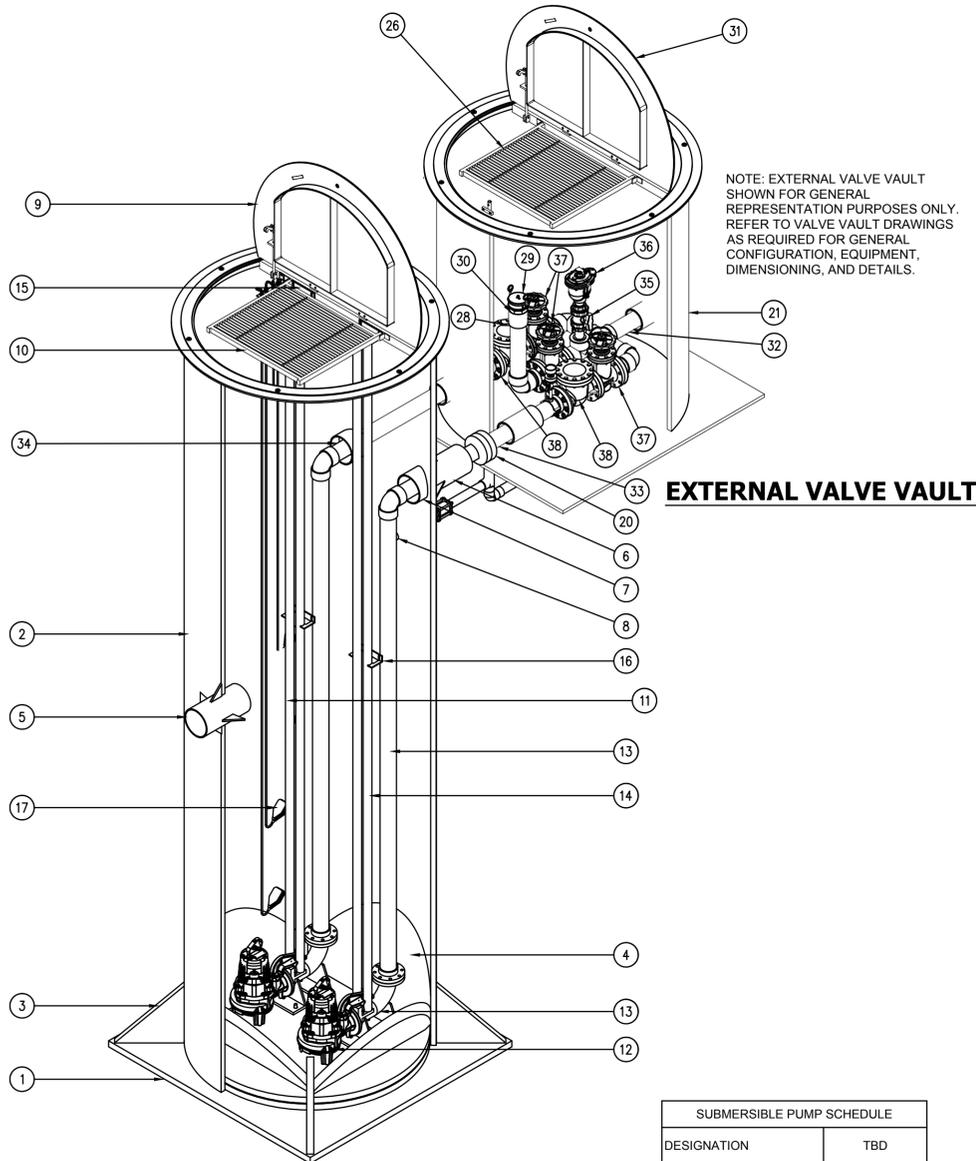
VALVE VAULT
PLAN VIEW

ITEM	QTY	DESCRIPTION
1	1	BASE PLATE ASSEMBLY
2	1	134" ID WET WELL RISER
3	4	EXTERNAL STIFFENER
4	1	18", SCH 80, PP PIPE STUB (INLET STUB)
5	1	12", SCH 80, PP PIPE STUB (CENTER OUTLET STUB)
6	2	12", SCH 80, PP PIPE STUB (OUTER OUTLET STUB)
7	1	2", SCH 80, PP PIPE STUB (FLOWBACK)
8	1	TOP PLATE ASSEMBLY
9	2	6" x 6" ALUMINUM JUNCTION BOX
10	1	TANK VENT
11	1	84" x 84" ALUMINUM ACCESS W/ FALL PROTECTION GRATING
12	1	PUMP STATION LEVEL FLOATS
13	1	BASE ELBOW
14	1	EMU FA10.68W SUBMERSIBLE PUMP
15	1	8" x 4" FLANGED ECCENTRIC REDUCER
16	1	UPPER GUIDERAIL BRACKET
17	1	8" x 12" LINK SEAL
18	1	8", SCH 10, 304 SS, DISCHARGE PIPING AND FLANGED FITTINGS
19	1	1-1/4" SCH10, 316SS, PUMP GUIDERAILS
20	3	8" DRESSER COUPLING
21	1	VALVE VAULT

ITEM	QTY	DESCRIPTION
22	1	VV BASE PLATE
23	1	1" THICK PP MOUNTING PLATE (1 OF 3)
24	1	1" THICK PP MOUNTING PLATE (2 OF 3)
25	1	1" THICK PP MOUNTING PLATE (3 OF 3)
26	1	VV INLET WALL
27	1	VV OUTLET WALL
28	2	VV SIDE WALL
29	12	INTERNAL WALL STIFFENER
30	3	12" SCH 80, PP PIPE STUB (INLET)
31	1	12" SCH 80, PP PIPE STUB (OUTLET)
32	1	2" SCH 80, PP PIPE STUB (FLOWBACK)
33	6	INTERNAL LID AND FLOOR STIFFENER
34	1	VV TOP PLATE
35	1	12", SCH 80, PP PIPE STUB (TOP PLATE STUB)
36	1	36" X 36" ALUMINUM HATCH
37	1	ALUMINUM ACCESS LADDER
38	6	8" FLANGED GATE VALVE
39	3	8" FLANGED SWING CHECK VALVE
40	1	8" FLANGED CROSS
41	2	8" SPOOL PIECE
42	3	8" FLANGED ELBOW
43	8	8", SCH 10, 304SS FLANGE
44	1	8", SCH 10, 304SS PIPING
45	1	8" ELECTROMAGNETIC FLOW METER
46	5	8" x 12" LINK SEAL
47	1	8" FLANGED TEE
48	1	8" x 12" LINK SEAL
49	1	2" NPT, CLOSE NIPPLE
50	1	2" NPT, BRONZE BODY BALL VALVE
51	1	2" NPT, LONG NIPPLE
52	1	AIR RELEASE VALVE



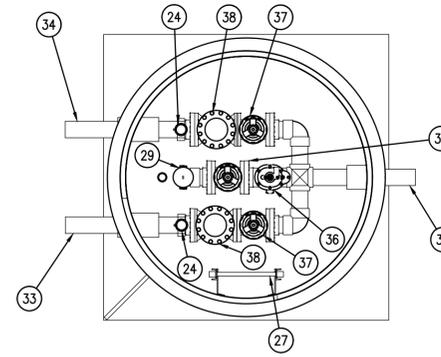
PUMP STATION INSTALLATION DETAIL
SECTION VIEW



NOTE: EXTERNAL VALVE VAULT SHOWN FOR GENERAL REPRESENTATION PURPOSES ONLY. REFER TO VALVE VAULT DRAWINGS AS REQUIRED FOR GENERAL CONFIGURATION, EQUIPMENT, DIMENSIONING, AND DETAILS.

EXTERNAL VALVE VAULT

VALVE VAULT PARTS LIST		
ITEM	QTY	DESCRIPTION
22	3	PENETRATION SLEEVE
23	3	PENETRATION SEAL
24	2	PRESSURE GAUGE
25	1	VV DRAIN STUB
26	1	SAFETY GRATING
27	1	ACCESS LADDER
28	1	4" SCH.80 PVC FEMALE ADAPTER
29	1	FEMALE QUICK CONNECT CAP
30	1	MALE QUICK CONNET X MALE THREAD
31	1	66" FROG-MOUTH HATCH
32	1	COMBINED 4" SCH. 40 PVC EFFLUENT PIPE
33	1	PUMP B DISCHARGE
34	1	PUMP A DISCHARGE
35	1	2" SCH.80 PVC BALL VALVE
36	1	AIR RELEASE/VACUUM BREAKER VALVE
37	3	4" SCH. 80 PVC GATE VALVE
38	2	4" SCH. 80 PVC SWING CHECK VALVE
39	1	66" VALVE VAULT



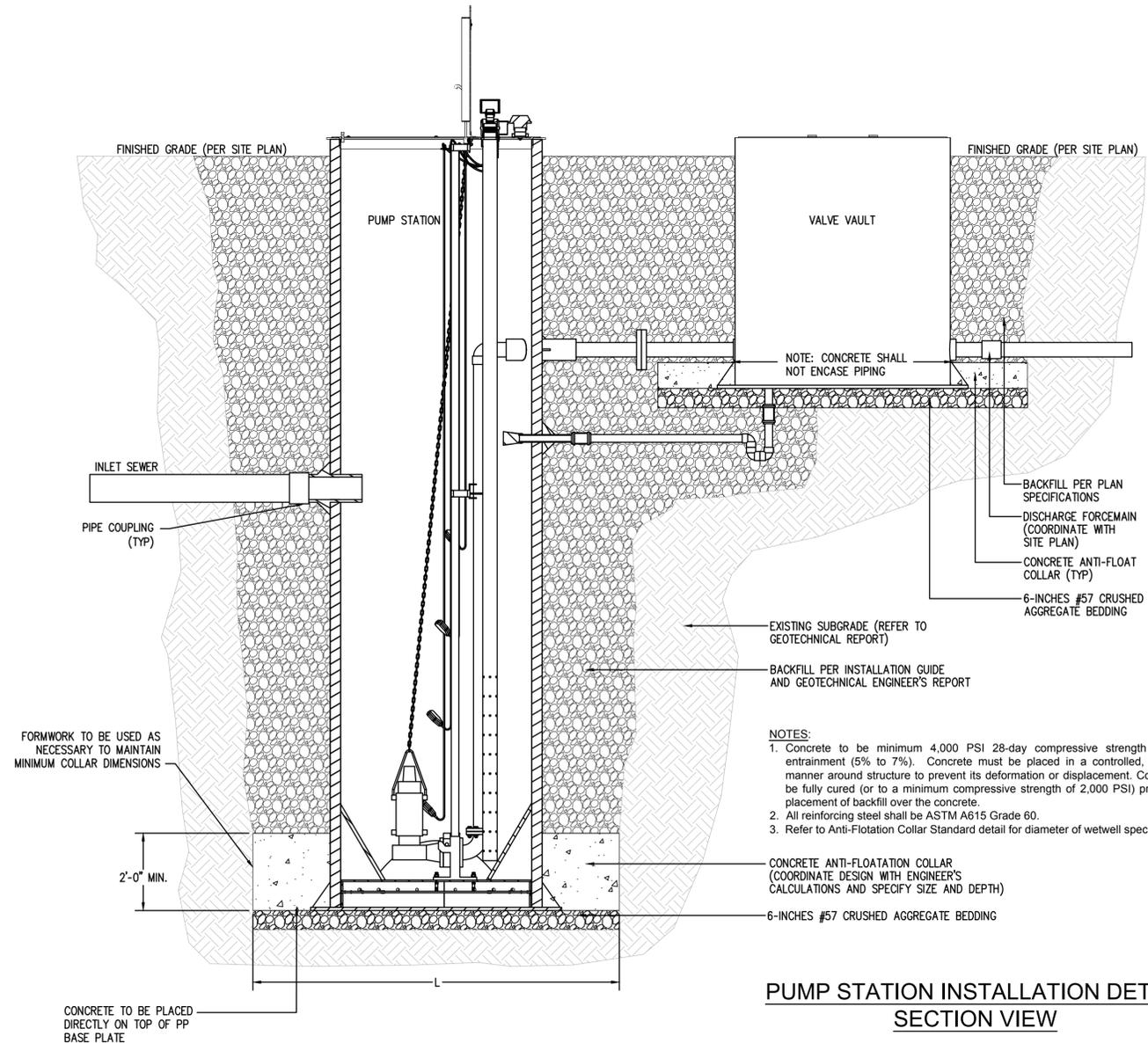
VALVE VAULT PLAN VIEW

PUMP STATION WETWELL
PUMP STATION ISOMETRIC VIEW

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	66" ID STRUCTURAL BASE ASSEMBLY
2	1	66" ID PP RISER
3	4	RISER BASE GUSSET
4	4	SLOPE SUMP PLATES (OPTIONAL)
5	1	GRAVITY INLET PIPE STUB - SEE NOTE 17
6	2	DISCHARGE PENETRATION SLEEVE
7	2	LINK SEAL
8	1	FLOWBACK PIPE STUB
9	1	ALUMINUM ACCESS HATCH
10	1	FALL PROTECTION GRATING
11	2	PUMP
12	2	PUMP BASE ELBOW (DUCTILE IRON)
13	2	OUTLET PIPING (SCH. 80 PVC)
14	2	PUMP GUIDE RAIL (STAINLESS STEEL)
15	2	UPPER GUIDE RAIL SUPPORT (STAINLESS STEEL)
16	2	INTERMEDIATE GUIDE RAIL SUPPORT (STAINLESS STEEL)
17	VARIES	FLOAT SWITCHES
18	2	ELECTRICAL JUNCTION BOX
19	1	TANK VENT ASSEMBLY
20	2	VAN STONE FLANGE (150 LB. FLAT FLANGE)
21	1	EXTERNAL VALVE VAULT ASSEMBLY

SUBMERSIBLE PUMP SCHEDULE	
DESIGNATION	TBD
PUMP TYPE	TBD
MANUFACTURER	TBD
MODEL NUMBER	TBD
VOLTAGE/PHASE/HZ	TBD
PUMP RATE	TBD
TOTAL DYNAMIC HEAD	TBD
MOTOR HORSEPOWER	TBD
PUMP SPEED	TBD
DISCHARGE DIAMETER	4"
IMPELLER DIAMETER	TBD
PUMP SPACING	TBD

PUMP CONTROL SCHEDULE	
EMERGENCY HIGH WATER ALARM	Not Used
HIGH WATER ALARM	TBD
LAG PUMP ON	TBD
LEAD PUMP ON	TBD
PUMPS OFF	TBD
LOW WATER ALARM	Not Used



PUMP STATION INSTALLATION DETAIL SECTION VIEW

DESIGNED BY:	GFS
DRAWN BY:	ILB
CHECKED BY:	GFS
PROJECT NO.:	15040

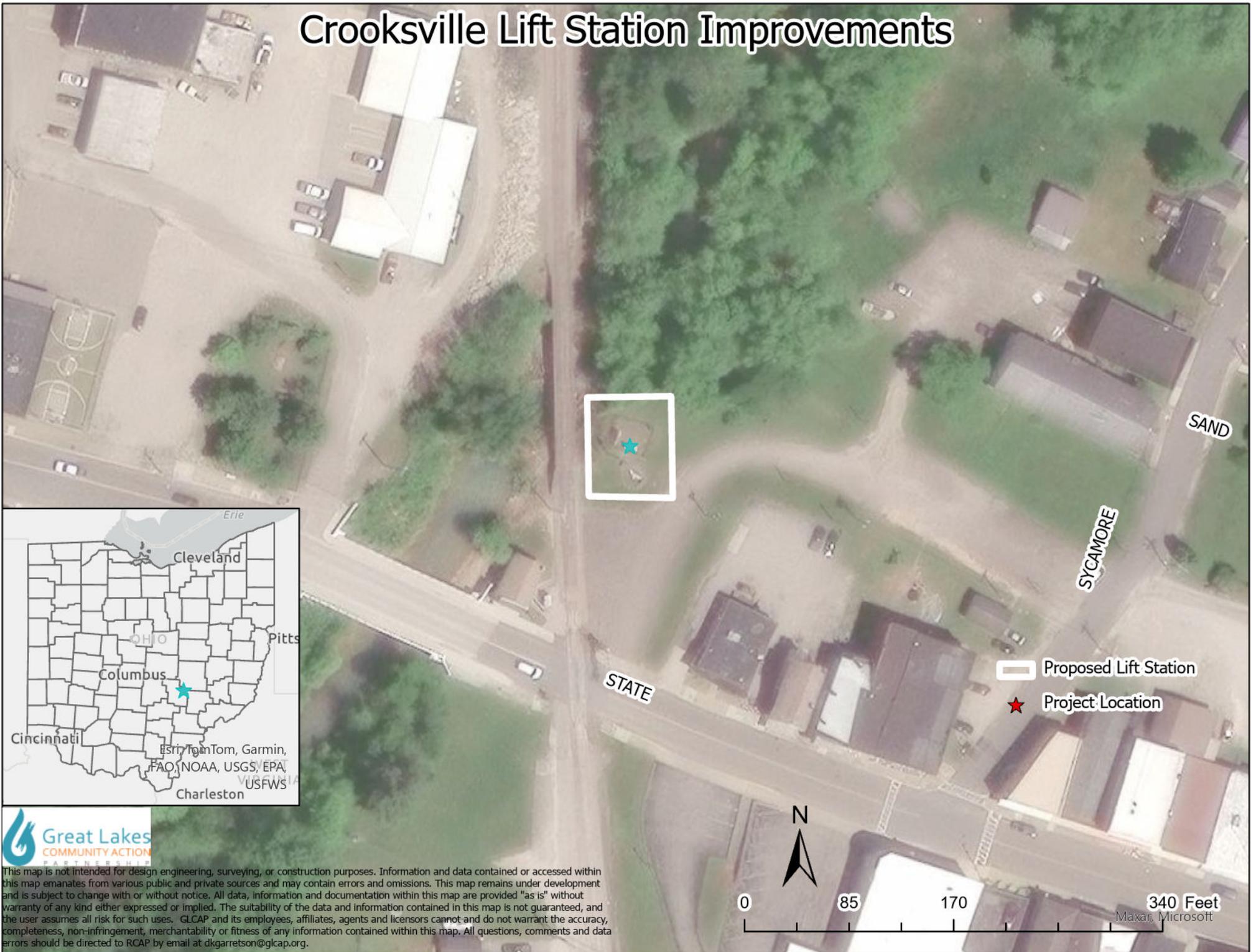
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DATE:	
REVISION	
No.	

**PRELIMINARY
NOT FOR
CONSTRUCTION**

CROOKSVILLE ~ PERRY COUNTY ~ OHIO
VILLAGE OF CROOKSVILLE
LIFT STATIONS B1 & B6 REPLACEMENT
LIFT STATION B6 DETAILS

DATE:	11/21/2023
SCALE:	NTS
SHEET:	11

Crooksville Lift Station Improvements



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Crooksville Lift Station Improvements



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0 130 260 520 Feet
Maxar, Microsoft

Crooksville Lift Station Improvements

FEMA: Floodplains



- Flood Hazard Zones**
- 1% Annual Chance Flood Hazard
 - ▨ Regulatory Floodway
 - ▨ Special Floodway
 - Area of Undetermined Flood Hazard
 - 0.2% Annual Chance Flood Hazard
 - ▨ Future Conditions 1% Annual Chance Flood Hazard
 - ▨ Area with Reduced Risk Due to Levee
 - ▨ Area with Risk Due to Levee
 - ★ Project Location



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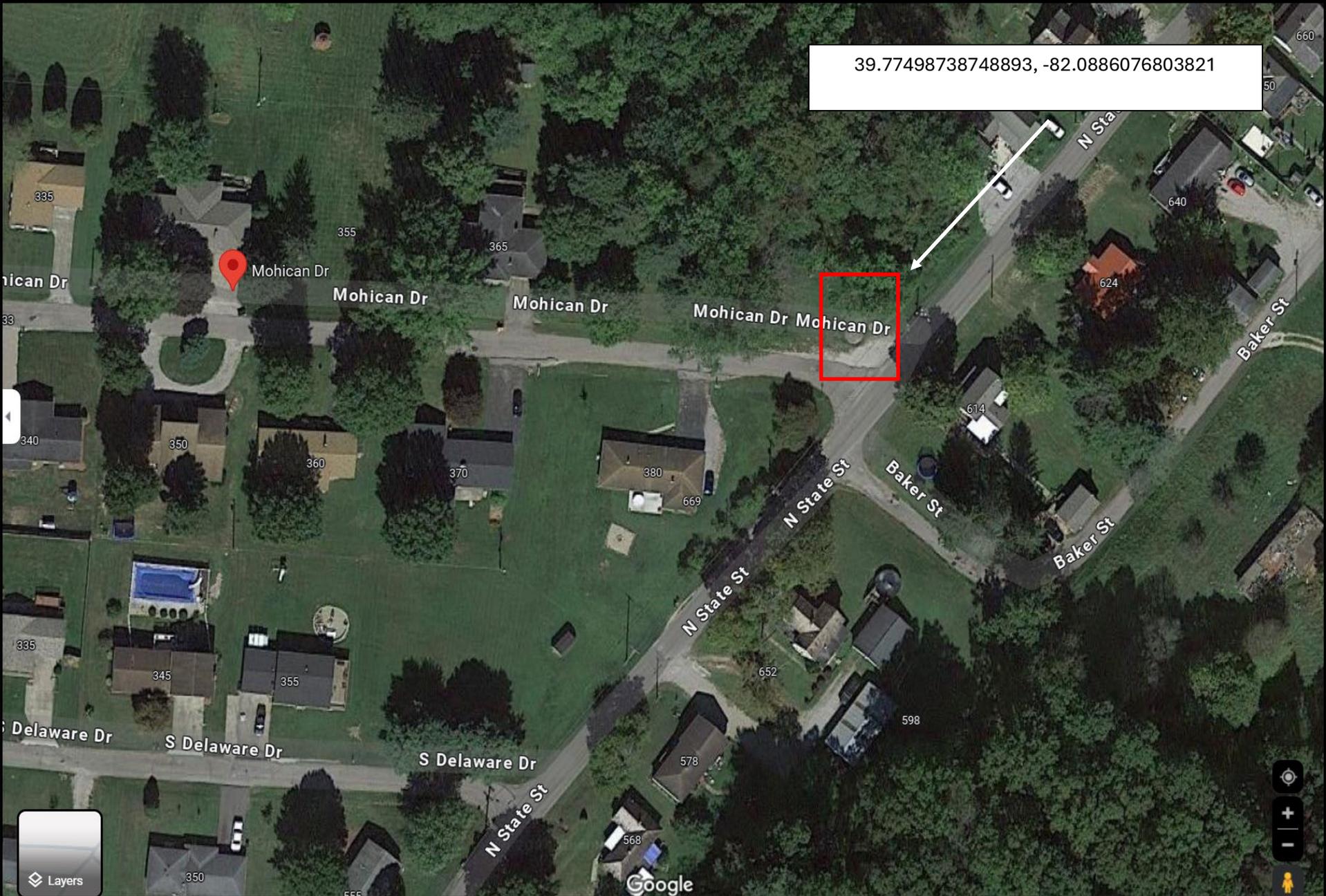


Lift Station B1
Crooksville, OH

39.770191264120875, -82.09570390446189



Lift Station B6
Crooksville, OH



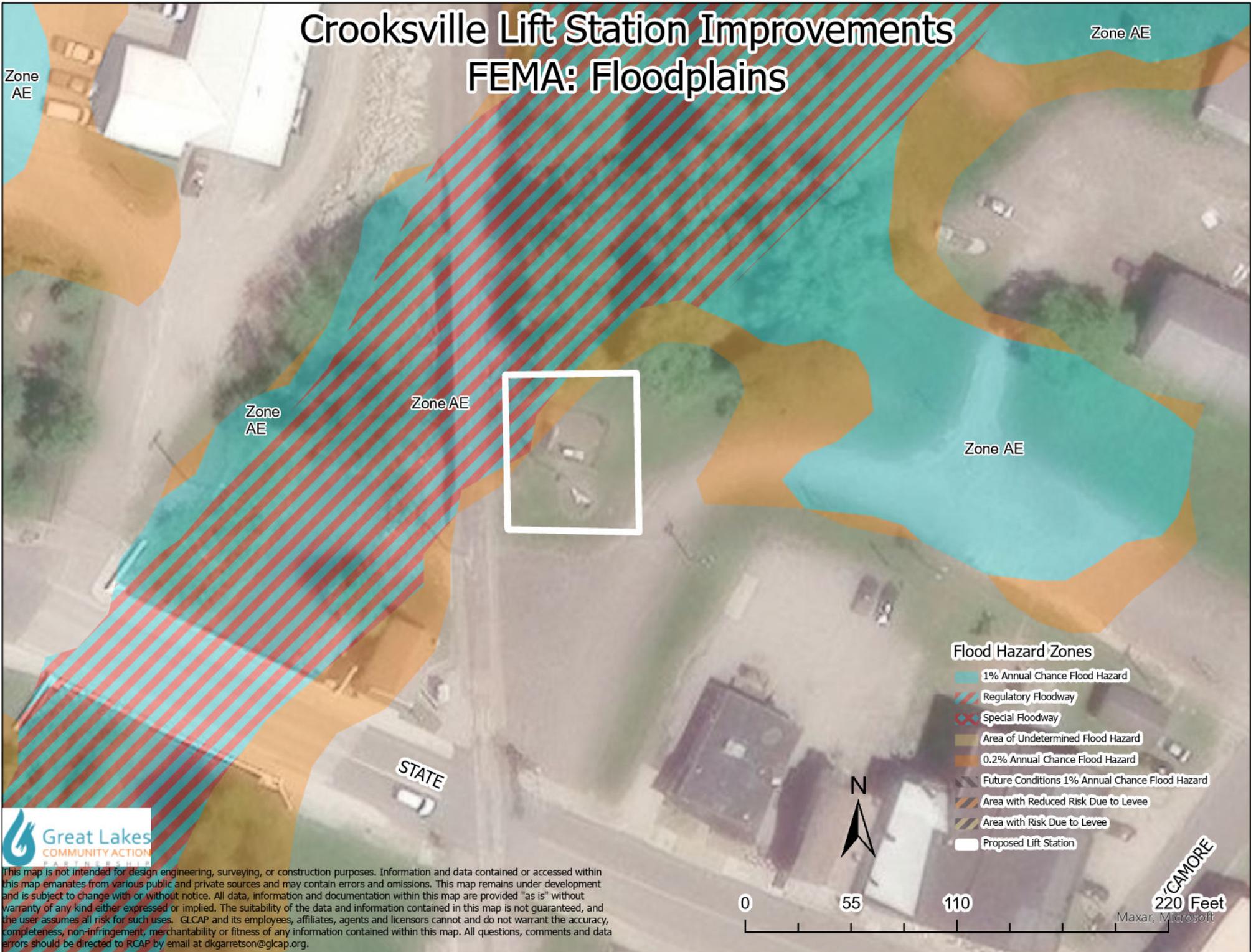
Crooksville Lift Station Improvements USFWS: Wetlands



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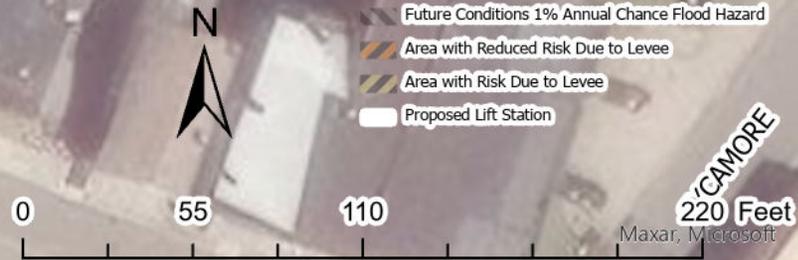
Crooksville Lift Station Improvements

FEMA: Floodplains



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- Flood Hazard Zones**
- 1% Annual Chance Flood Hazard
 - ▨ Regulatory Floodway
 - ▨ Special Floodway
 - Area of Undetermined Flood Hazard
 - 0.2% Annual Chance Flood Hazard
 - Future Conditions 1% Annual Chance Flood Hazard
 - ▨ Area with Reduced Risk Due to Levee
 - ▨ Area with Risk Due to Levee
 - Proposed Lift Station



(INSERT PROJECT TITLE HERE) USFWS: Wetlands



**Photographs of Crooksville
Pump Stations B1 and B2**



1. Pump B1 – Facing East



2. Pump B1 - Facing East – Close Up



3. Pump B1 – Facing North



4. Pump B1 – Facing South



5. Pump B1 – Facing West



6. Pump B1 – Facing West – Close Up



7. Pump B1 – Inside Fence



8. Pump B6 – Facing East



9. Pump B6 – Facing East – Close up



10. Pump Station B6 – Facing South



11. Pump Station B6 – Facing South Close Up



12. Pump Station B6 – Facing West



13. Pump Station B6 – Facing North – Close Up



14. Pump Station 6 – Facing North from Mohican Road.



15. Pump Station B6 – Facing West – Close Up



16. Pump Station B6 – Inside Fence



17. Pump Station B6 – Inside the fence.