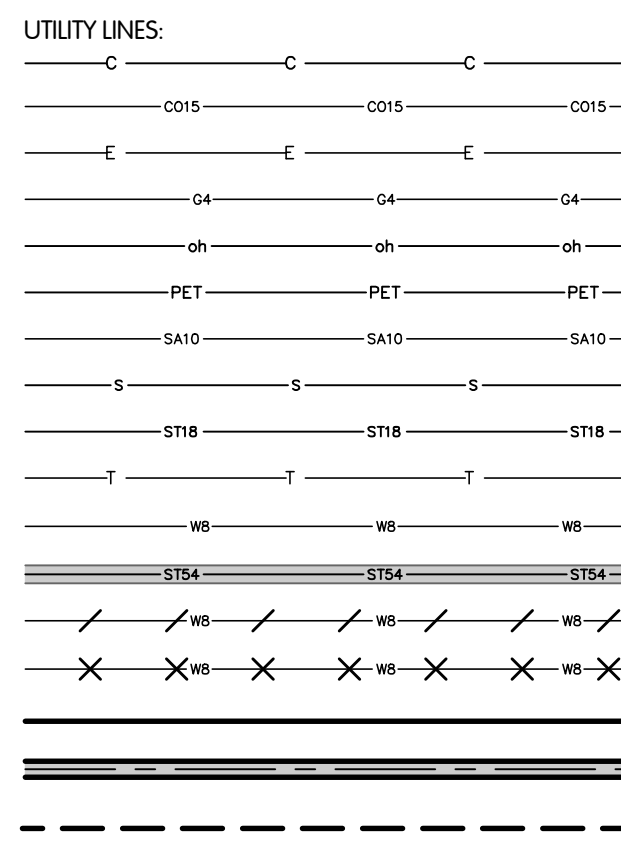
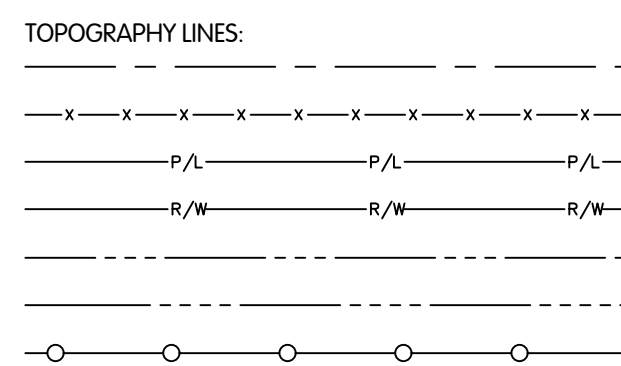


TYPICAL EXISTING SYMBOLS AND ABBREVIATIONS

	AERIAL CONTROL POINT		PETROLEUM PUMP
	AERIAL WING POINT		POST
	AIR CONDITIONING UNIT		POWER LINE MARKER
	AXLE		POWER POLE
	BARBEQUE GRILL		POWER POLE AND TELEPHONE POLE
	BENCHMARK		RAIL ROAD CROSSING SIGNAL
	BOLLARD		RAIL ROAD GATE
	BOLT		RAIL ROAD FROG
	CABLE TV		RAIL ROAD MILE POST
	CATCH BASIN		RAIL ROAD SPIKE
	CLEAN OUT		RAIL ROAD SPIKE SET
	CONCRETE MONUMENT		SANITARY MANHOLE
	CONIFEROUS TREE		SANITARY VALVE
	CONTROL POINT		SANITARY VENT
	CONTROLLER POLE MOUNTED		SANITARY MARKER
	CURB INLET		SATELLITE DISH
	DECIDUOUS TREE		SEPTIC TANK
	DECORATIVE ROCK		SHRUB
	DRAIN TILE		SIGN
	DRILL HOLE		SIGNAL
	DRY WELL		SOIL BORING
	EDGE OF PAVEMENT		SPIGOT
	ELECTRIC MANHOLE		SPRINKLER HEAD
	ELECTRIC METER		SPOT ELEVATION *POINT OF ELEVATION IS DECIMAL
	ELECTRIC PULLBOX		STORM LINE MARKER
	ELECTRIC TRANSFORMER		STORM MANHOLE
	ELECTRIC VAULT		STUMP
	EXISTING BUILDING		SUPPORT POLE
	FIRE HYDRANT OR YARD HYDRANT		T-BAR
	FLAG POLE		TACKED HUB
	FORCE MAIN FLUSHING CONNECTION		TANK FILLER CAP
	FOUND MONUMENT BOX		TC - TOP OF CURB ELEVATION
	GAS LINE MARKER		G - GUTTER ELEVATION
	GAS LINE VENT		TELEPHONE BOOTH
	GAS MANHOLE		TELEPHONE LINE MARKER
	GAS METER		TELEPHONE MANHOLE
	GAS TEST STATION		TELEPHONE PEDESTAL
	GAS VALVE		TELEPHONE POLE
	GAS WELL		TELEPHONE POLE AND LIGHT POLE
	GOLF BALL WASHER		TOP OF WALK
	GUY WIRE		TOPO GRADE SHOT (THE . OF THE NUMBER SIGNIFIES THE LOCATION OF THE SHOT)
	HEAD STONE		TOWER
	INLET PROTECTION		TPB
	INVERT ELEVATION		TRAFFIC MANHOLE
	IRON PIN (OR LABELED POST, MARKER ETC.)		TRAFFIC PULL BOX
	LIGHT, POWER POLE AND TELEPHONE POLE		UNKNOWN BOX
	LIGHT POLE		UNKNOWN MANHOLE
	LIGHT POLE BOX		UNKNOWN PEDESTAL
	MAILBOX		UNKNOWN POLE
	METER PIT		UNKNOWN VALVE
	MINE SPIKE		UNKNOWN WELL
	MONITORING WELL		VAULT
	NEWS PAPER BOX		VENT PIPE
	OIL TANK		WATER LINE MARKER
	PARKING METER		WATER MANHOLE
	PAVEMENT BORING		WATER MAIN PLUG
	PAY PHONE		WATER METER
			WATER METER PIT
			WATER WELL
			WATER VALVE
			WATER VENT
			YARD LIGHT

SERVICE

AA	AERATION AIR
AL	ALUM
C	CABLE (UNDERGROUND)*
CA	COMPRESSED AIR
CL	CHLORINE SOLUTION
CO	COMBINED SEWER
CLG	CHLORINE GAS
DG	DIGESTER GAS
DS	DIGESTED SLUDGE
DW	DILUTION WATER
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
EW	EFFLUENT WATER
E	ELECTRICAL (UNDERGROUND)*
FC	FERRIC/FERROUS CHLORIDE
FD	FOUNDATION DRAIN
FE	FINAL EFFLUENT
FO	FIBER OPTIC
FU	FUEL OIL
G	NATURAL GAS (OFF SITE)
GR	GREASE
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
IC	IRON CHLORIDE
ML	MIXED LIQUOR
NG	NATURAL GAS (ON SITE)
NPW	NON POTABLE WATER
P	POLYMER
PE	PRIMARY EFFLUENT
PS	PRIMARY SLUDGE
RAS	RETURN ACTIVATED SLUDGE
RD	ROOF DRAIN
RS	RAW SEWAGE
RW	RAW WATER
SA	SANITARY SEWER
SB	SECONDARY BYPASS
SC	SCUM
SE	SECONDARY EFFLUENT
S	SIGNAL (UNDERGROUND)*
SPA	SPARE
ST	STORM SEWER
SM	STEAM
SP	DIGESTER SUPERNATANT
TD	TANK DRAIN
T	TELEPHONE (UNDERGROUND)*
TE	THICKENER EFFLUENT
TS	THICKENED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
WAS	WASTE ACTIVATED SLUDGE



ALPHA DESIGNATION REFERS TO UTILITY TYPE OR SERVICE TYPES, NUMERICAL DESIGNATION REFERS TO PIPE NOMINAL DIAMETER. LINES WITH NO NUMERICAL DESIGNATION ARE OF UNKNOWN SIZE.

* AERIAL LINES, IF SHOWN, ARE DESIGNATED WITH LOWER CASE LETTERS
 ** FOR ELLIPTICAL SEWERS, THE VERTICAL DIMENSION (RISE) IS CALLED OUT FIRST FOLLOWED BY THE HORIZONTAL DIMENSION (SPAN). EXAMPLE: 45X35 (RISE X SPAN) THE VERTICAL DIMENSION IS 45", THE HORIZONTAL DIMENSION IS 35".
 *** INDICATES THE REMOVAL OF ALL SPECIFIED STRUCTURES AND APPURTENANCES.

VERTICAL DATUM:
 VERTICAL DATUM IS BASED ON '88 NAVD.

NOTE: ACCURACY OF EXISTING ELEVATIONS AND DIMENSIONS IS NOT GUARANTEED. FIELD VERIFY BEFORE CONSTRUCTION.

PROPOSED SYMBOLS

	ABANDON VALVE BOX		PLUG VALVE AND BOX
	ABANDON VALVE MANHOLE		PLUG VALVE AND MANHOLE
	AIR RELEASE VALVE AND MANHOLE		POLE TO BE TEMPORARILY SUPPORTED AND PROTECTED BY CONTRACTOR
	BUTTERFLY VALVE AND BOX		REDUCER
	BUTTERFLY VALVE AND MANHOLE		SANITARY MANHOLE
	CURB INLET		STORM MANHOLE
	CLEAN OUT		STUMP TO BE REMOVED
	FIRE HYDRANT ASSEMBLY, TYPE A		TAPPING SLEEVE VALVE AND BOX
	FIRE HYDRANT ASSEMBLY, TYPE B		TAPPING SLEEVE VALVE AND MANHOLE
	FIRE HYDRANT TO BE REMOVED		TREE TO BE REMOVED
	FORCE MAIN FLUSHING CONNECTION		
	GATE VALVE AND BOX		
	GATE VALVE AND MANHOLE		
	INSERTING VALVE AND MANHOLE		
	METER PIT		

STANDARD ABBREVIATIONS

ALUM.	ALUMINUM	MAX.	MAXIMUM
AVE.	AVENUE	MH	MANHOLE
BM	BENCH MARK	MJ	MECHANICAL JOINT
BF	BLIND FLANGE	MIN.	MINIMUM
BLDG.	BUILDING	N	NORTH
C/C	CENTER TO CENTER	NTS	NOT TO SCALE
CK'D PL.	CHECKERED PLATE	OC	ON CENTER
CONC.	CONCRETE	OD	OUTSIDE DIAMETER
DIA.	DIAMETER	PE	PLAIN END
DWG.	DRAWING	R	RADIUS
EW	EACH WAY	RR	RAILROAD
EF	EACH FACE	S	SOUTH
ECC.	ECCENTRIC	SCH.	SCHEDULE
EL.	ELEVATION	SH.	SHEET
E	EAST	SS	STAINLESS STEEL
EX.	EXISTING	ST.	STREET
F	FLANGE	STA.	STATION
* OR FT.	FEET OR FOOT	T&B	TOP AND BOTTOM
GAL	GALLON	TYP.	TYPICAL
GRD	GRADE	VERT.	VERTICAL
HOR.	HORIZONTAL	W	WEST
* OR IN.	INCH	W/	WITH
ID	INSIDE DIAMETER		
INV. EL.	INVERT ELEVATION		

PIPING ABBREVIATIONS

MATERIAL	SERVICE		
ABS	ABS ACRYLONITRILE-BUTADIENE-STYRENE	PS	PRIMARY SLUDGE
ABSC	ABS COMPOSITE SEWER PIPE (TRUSS PIPE)	RAS	RETURN ACTIVATED SLUDGE
BSP	BLACK STEEL PIPE	WAS	WASTE ACTIVATED SLUDGE
CIP	CAST IRON PIPE	DS	DIGESTED SLUDGE
CISP	CAST IRON SOIL PIPE	SC	SCUM
CMP	CORRUGATED METAL PIPE	SP	SUPERNATANT
CPP	CONCRETE PRESSURE PIPE	DG	DIGESTER GAS
CPT	CORRUGATED POLYETHYLENE TUBING	NG	NATURAL GAS
CPVC	CHLORINATED POLYVINYL CHLORIDE PIPE	CW	CITY WATER
Cu	COPPER TUBING OR PIPING	HW	HOT CITY WATER
DIP	DUCTILE IRON PIPE	EW	EFFLUENT WATER
FRP	FIBERGLASS REINFORCED PIPE	PW	PROTECTED WATER
GLDIP	GLASS-LINED DUCTILE IRON PIPE	CA	COMPRESSED AIR
GSP	GALVANIZED STEEL PIPE	TD	TANK DRAIN
HDPE	HIGH DENSITY POLYETHYLENE	SS	SANITARY SEWER
PCP	PLAIN CONCRETE PIPE	ST	STORM SEWER
PE	POLYETHYLENE		
PP	POLYPROPYLENE		
PPVC	PERFORATED POLYVINYL CHLORIDE PIPE		
PVC	POLYVINYL CHLORIDE PIPE		
PVCP	PERFORATED VITRIFIED CLAY PIPE		
PVDF	POLYVINYLIDENE FLUORIDE (KYNAR)		
RCP	REINFORCED CONCRETE PIPE		
SP	STEEL PIPE		
SSP	STAINLESS STEEL PIPE		
SWS	SPIRAL WELDED STEEL		
UPVC	UNPLASTICIZED POLYVINYL CHLORIDE PIPE		
VCP	VITRIFIED CLAY PIPE		

DRAWING INDEX

Sheet List Table		
Page Number	Sheet Number	Sheet Title
GENERAL		
1	G-0.1	LEGENDS, INDEX AND GENERAL NOTES
2	G-0.2	EXISTING SITE PLAN AND SURVEY CONTROL
3	G-0.3	GENERAL SUMMARY
REMOVALS		
4	R-1.1	INDUSTRIAL DIVERSION CHAMBER 1 - REMOVALS
5	R-1.2	PARSHALL FLUME - REMOVALS
6	R-1.3	JUNCTION CHAMBER - ABANDONMENT DETAILS
CIVIL		
7	C-0.1	STANDARD CIVIL DETAILS
8	C-0.2	SANITARY AND STORM DETAILS
9	C-1.1	SITE PLAN AND SHEET KEY
10	C-1.2	GRADING AND EROSION CONTROL - PARTIAL SITE PLAN
SANITARY		
11	SA-1.1	SANITARY - PLAN & PROFILE STA 0+00 TO 5+00
12	SA-1.2	SANITARY - PLAN & PROFILE STA 5+00 TO 6+84
STORM		
13	ST-1.1	STORM - PLAN & PROFILE STA 10+00 TO 13+00
STRUCTURAL AND EQUIPMENT		
14	S-0.1	STRUCTURAL DETAILS
15	S-1.1	INDUSTRIAL DIVERSION CHAMBER 1 - PLANS
16	S-1.2	PARSHALL FLUME - PLANS
ELECTRICAL		
17	E-0.1	ELECTRICAL LEGEND
18	E-1.1	ELECTRICAL SINGLE LINE DIAGRAM AND DETAILS
19	E-1.2	INDUSTRIAL DIVERSION CHAMBER 1 - ELECTRICAL PLAN
ADDENDUM ADDITIONS		
20	C-2.1	BY-PASS VAULT AND MISCELLANEOUS DETAILS
21	ST-2.1	GPI STORM - PLAN & PROFILE STA 20+00 TO 23+50

KAL-79820010-LEGENDS INDEX AND GENERAL NOTES
 6/9/2023 12:46 PM - CFERRELL
 6/9/2023 12:47 PM



LEGENDS, INDEX AND
 GENERAL NOTES

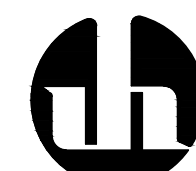
CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

ISSUED FOR BID

DATE

NO.

Jones & Henry
 Engineers, Ltd.



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JOB NO. 017-7982.001

SCALE NONE

THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE

DESIGNED RGE DRAWN CJAF CHECKED RGE

STATUS: ISSUE FOR BID

DATE: MAY 2023

SHEET NO.

G-0.1

1 of 21

Alignment Name: PROPOSED SANITARY
 Description:
 Station Range: Start: 0+00.00, End: 6+84.00

PI Station	Northing	Easting	Distance	Direction
0+00.00	296,180.59'	12,797,035.30'		
			13.42'	S87°E
0+13.42	296,179.87'	12,797,048.70'		
			44.46'	S86°E
0+57.88	296,176.94'	12,797,093.06'		
			112.56'	S34°E
1+70.44	296,083.86'	12,797,156.35'		
			286.45'	S22°E
4+56.89	295,817.91'	12,797,262.78'		
			194.86'	S1°W
6+51.75	295,623.09'	12,797,259.11'		
			6.65'	S1°W
6+58.40	295,616.43'	12,797,258.99'		
			25.59'	S66°E
6+84.00	295,605.95'	12,797,282.33'		

Alignment Name: PROPOSED STORM
 Description:
 Station Range: Start: 10+00.00, End: 13+00.00

PI Station	Northing	Easting	Distance	Direction
10+00.00	296,364.48'	12,797,223.13'		
			160.87'	S13°W
11+60.87	296,207.93'	12,797,186.12'		
			108.09'	S62°W
12+68.96	296,157.29'	12,797,090.63'		
			31.04'	N89°W
13+00.00	296,158.03'	12,797,059.60'		

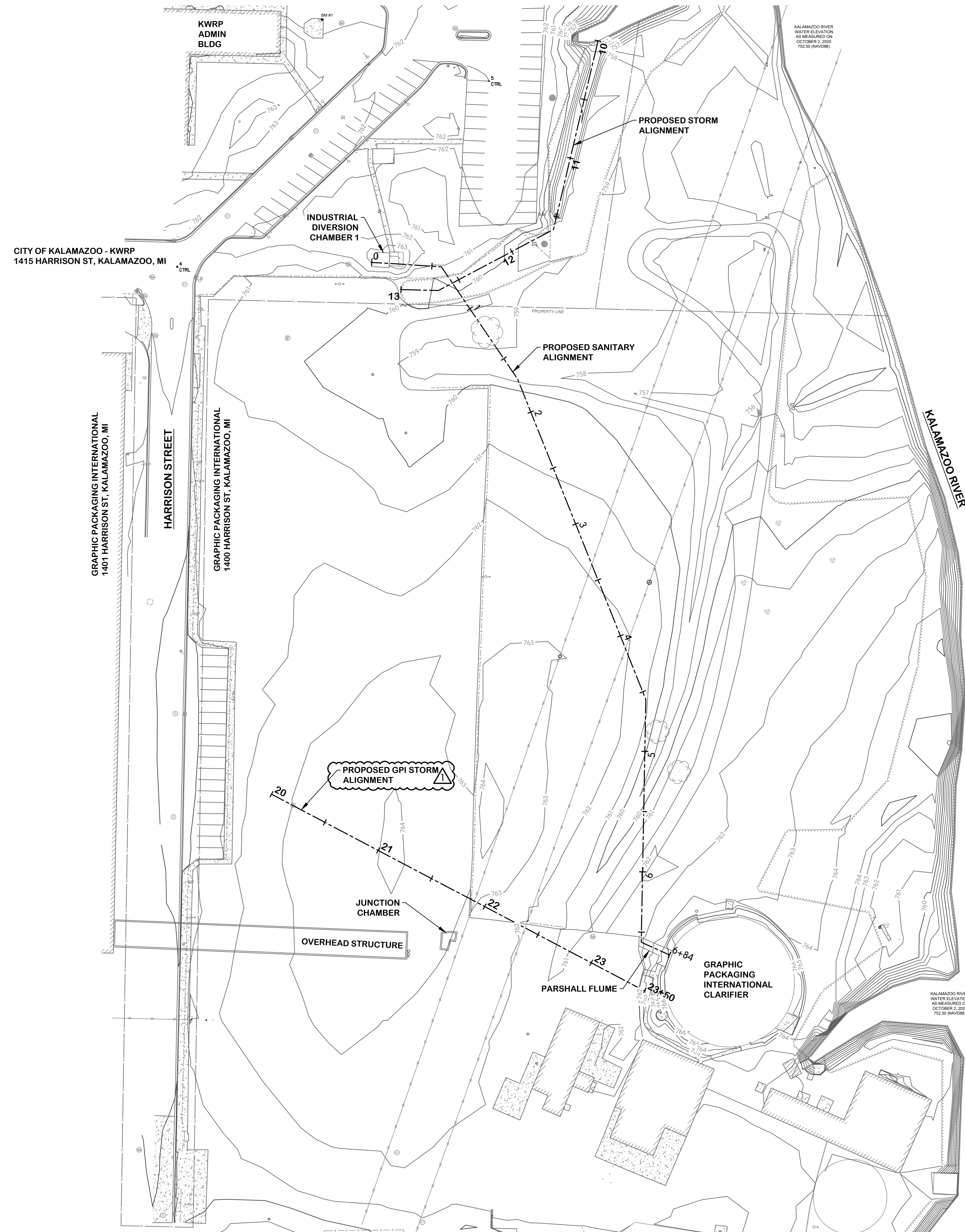
Alignment Name: PROPOSED GPI STORM
 Description:
 Station Range: Start: 20+00.00, End: 23+50.00

PI Station	Northing	Easting	Distance	Direction
20+00.00	295,739.28'	12,796,952.09'		
			350.00'	S62°E
23+50.00	295,576.07'	12,797,261.71'		

SURVEYOR NOTES:

- Utilities shown are approximate locations derived from actual measurements. They should not be interpreted to be exact locations nor should it be assumed that they are the only utilities in this area.
- Benchmark #1: Plastic tag stamped "763.76" near the NE corner of overflow chamber East of the Administration Building. ELEVATION: 763.30 (NAVD88).
- Basis of Coordinates: Michigan State Plane South, International feet.
- Control Point Information:

NO.	NORTHING	EASTING	ELEV	MAG NAIL	NOTE IN PLAN VIEW
1	296855.290	12797095.924	780.27	MAG NAIL	}
2	296626.441	12797089.940	781.54	MAG NAIL	
3	296403.981	12797084.294	781.92	MAG NAIL	
4	296177.009	12796873.824	761.58	MAG NAIL	
5	296331.126	12797132.506	762.99	MAG NAIL	



KAL-798200-EXISTING SITE PLAN AND SURVEY CONTROL
 6/8/2023 4:20 PM - CFERRELL
 6/8/2023 6:58 PM



**EXISTING PROJECT AREA
 AND SURVEY CONTROL**

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

DESIGNED	RGE	DRAWN	CJAF	CHECKED	RGE
STATUS: ISSUE FOR BID					
DATE: MAY 2023					
SHEET NO. G-0.2					
2 OF 21					

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JOB NO. 017-7982.001
 SCALE 1:50
 THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE
 DESIGNED RGE DRAWN CJAF CHECKED RGE
 STATUS: ISSUE FOR BID
 DATE: MAY 2023
 SHEET NO. G-0.2
 2 OF 21



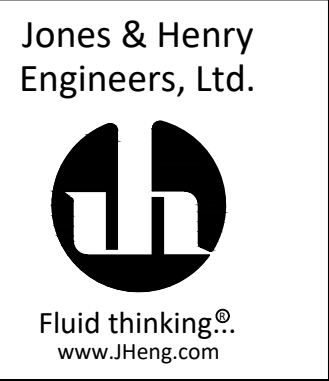
GENERAL SUMMARY

Item No.	Plan Quantity	Unit	Description	G-0.1	G-0.2	G-0.3	R-1.1	R-1.2	R-1.3	C-0.1	C-0.2	C-0.3	C-1.1	C-1.2	SA-1.1	SA-1.2	ST-1.1	S-0.1	S-1.1	S-1.2	E-0.1	E-1.1	E-1.2	C-2.1	ST-2.1
1	1	LS	General Conditions/ Mobilization	1																					
2	1	LS	Audio/Video Recording	1																					
3	3	EA	Tree and Stump Removal 6 inches to 18 inches										3												
4	0.25	AC	Clearing and Grubbing											0.25											
5	1	LS	Reconstruct Industrial Diversion Chamber No. 1				0.45													0.45			0.05	0.05	
6	1	LS	Remove, Fill, and Abandon Existing Junction Chamber						1																
7	1	LS	Reconstruct Parshall Flume Piping					0.50													0.50				
8	1	LS	Reconstruct Parshall Flume Liner												1										
9	3	EA	5' Diameter Storm Manhole														2							1	
10	258	LF	30-inch Diameter HDPE Storm Sewer														258								
11	5	LF	6-inch Ductile Iron Storm Sewer, All Depths																					5	
12	303	LF	12-inch Ductile Iron Storm Sewer, All Depths																						303
13	1	EA	30-inch Concrete Storm Sewer Outlet Headwall														1								
14	1	EA	12-inch Ductile Iron Flanged Wye																					1	
15	1	EA	12-inch Ductile Iron Blind Flange																					1	
16	3	EA	12-inch Ductile Iron Flanged 45 Degree Bend																					3	
17	1	EA	12-inch Ductile Iron Flanged Plug Valve																					1	
18	1	EA	12-inch x 6-inch Flanged Tee																					1	
19	1	EA	6-inch Ductile Iron Male Cam Lock & Cap																					1	
20	2	EA	12-inch Ductile Iron MJ 45 Degree Bend																					2	
21	22	LF	6-inch Concrete Curb																					22	
22	47	SF	Concrete Spillway																					47	
23	1	EA	By-Pass Vault Structure																					1	
24	15	SY	6"-12" Rip Rap														15								
25	14	LF	12-inch Diameter Class 52 DI Sanitary Sewer (Labor Only)												14										
26	641	LF	24-inch Diameter Class 52 DI Sanitary Sewer (Labor Only)												443	198									
27	3	EA	24-inch Class 52 DI Flanged Tee (Labor Only)																						
28	1	EA	24-inch x12-inch Class 52 DI MJ Tee (Labor Only)									3													
29	3	EA	24-inch Blind Flange (Labor Only)												1										
30	3	EA	24-inch Flanged 45 Degree Bend (Labor Only)																						
31	2	EA	24-inch Flanged 11.25 Degree Bend (Labor Only)																						
32	1	EA	24-inch Flanged 22.5 Degree Bend (Labor Only)																						
33	9	EA	24-inch Mega-Flange Adapter (Labor Only)																						
34	9	EA	24-inch Nut & Bolt Gasket Set (NLA 24 304 SS 150# RR FF 1/8 FLG P) (Labor Only)																						
35	1	EA	24-inch MJ 90 Degree Bend (Labor Only)																						
36	6	EA	24-inch Megalug F/DI (Labor Only)																						
37	6	EA	24-inch MJ Bolt & Gasket Package Less Gland (Labor Only)																						
38	5	EA	12-inch Megalug F/DI																						
39	5	EA	12-inch MJ Bolt & Gasket Package Less Gland (Labor Only)																						
40	1	EA	12-inch MJ 90 Degree Bend (Labor Only)																						
41	3	EA	Type III Sanitary Sewer Manhole (8' Diameter)																						
42	641	EA	CIPP 24-inch sanitary Sewer																						
43	1	EA	Post-CCTV Inspection of Sewers	1																					
44	206	LF	Remove Chain Link Fence																						
45	156	LF	Chain Link Fence (6' High)																						
46	1	EA	Restoration	1																					
47	1	EA	Materials Testing	1																					
48	1	EA	Construction Staking	1																					
49	1	LS	Ductile Iron Sewer Material Advance Purchase (Sales and Use Tax)	1																					
			Base Bid (Items 1-48)																						
50	1	EA	Meter Vault Alternate Bid (Add)																						
8	1	EA	Reconstruct Parshall Flume Liner (Deduct)																						
			Alternate Bid (Items 49 and 50)																						

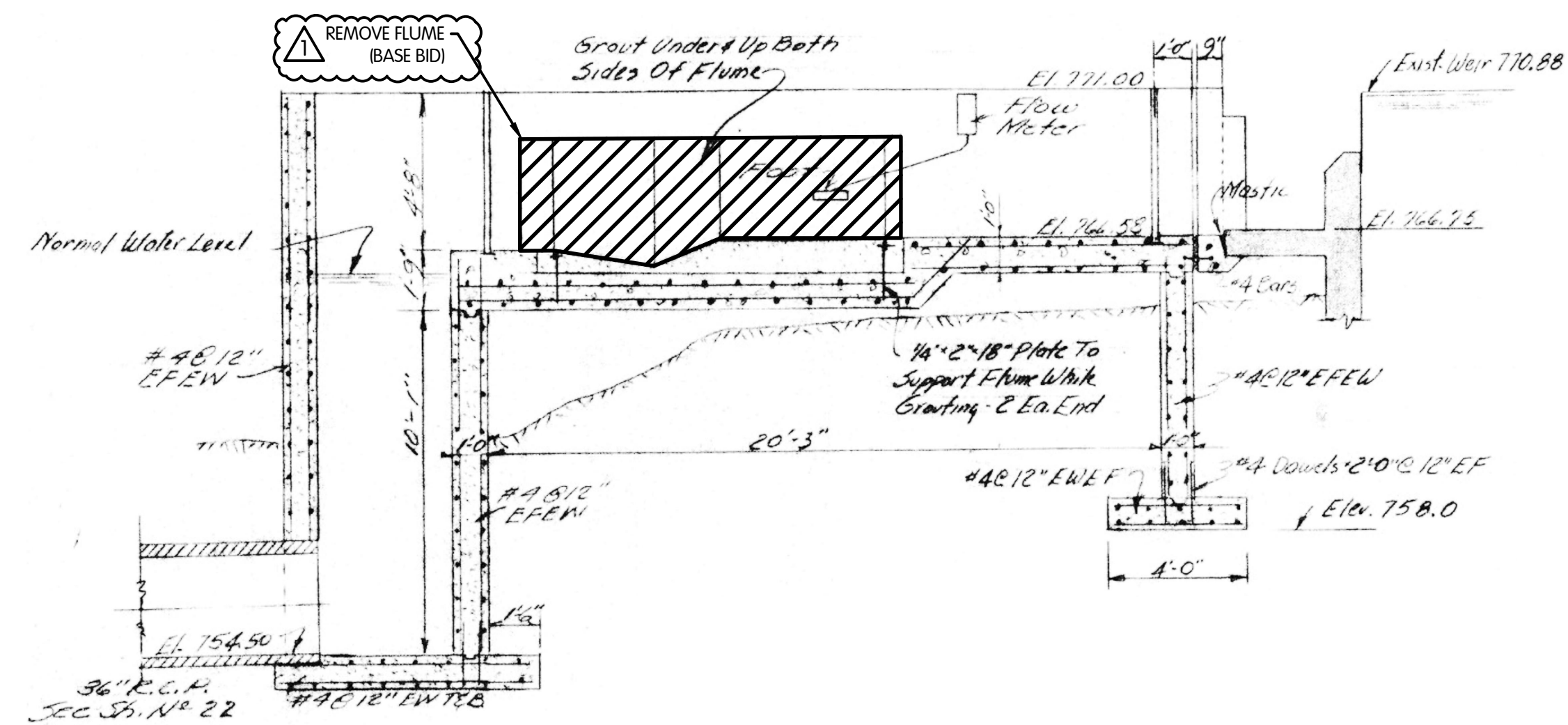
GENERAL SUMMARY

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

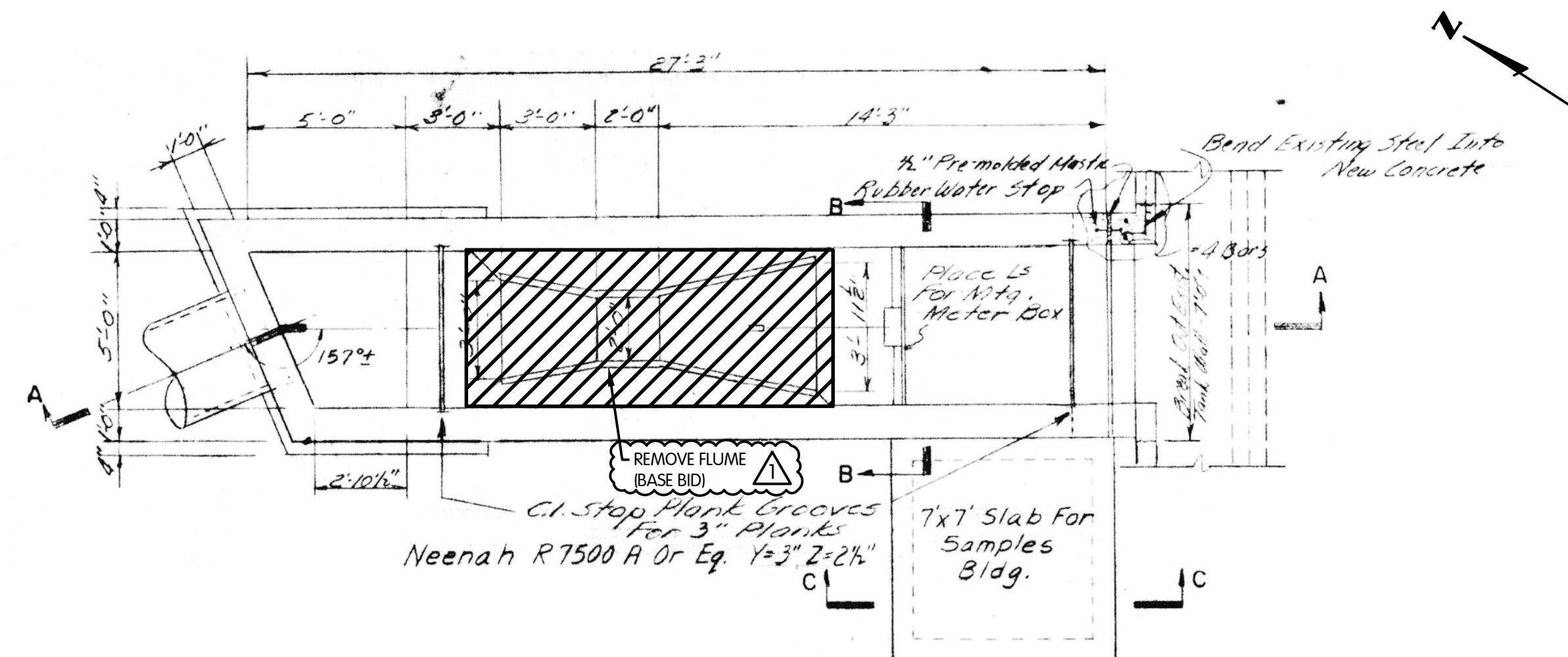
REVISIONS AFTER ISSUED FOR BID
 NO. 1
 DATE 06/08/2023
 ADDENDUM 01



JOB NO. 017-7982.001
 SCALE NONE
 THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE
 DESIGNED RGE DRAWN CJAF CHECKED RGE
 STATUS: ISSUE FOR BID
 DATE: MAY 2023
 SHEET NO. G-0.3
 3 OF 21

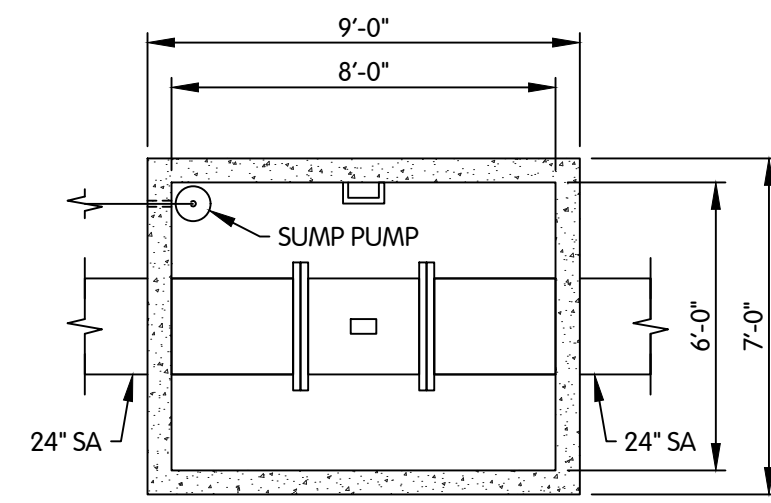


SECTION A-A

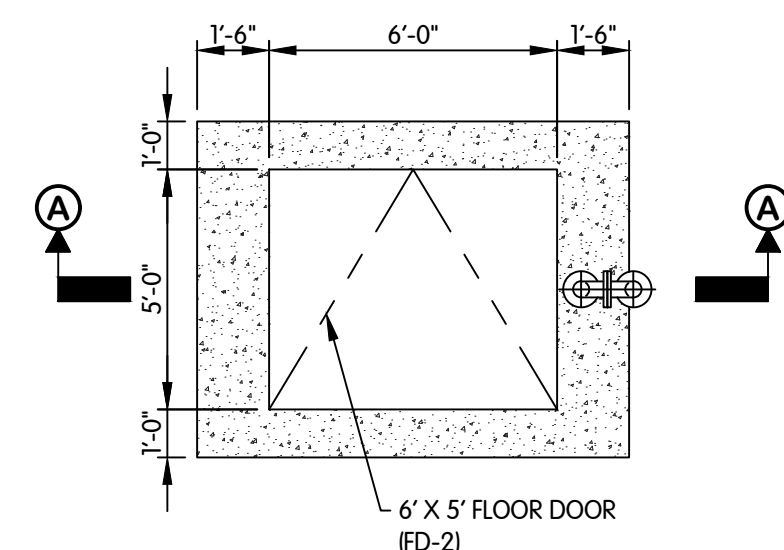


REMOVAL PLAN VIEW

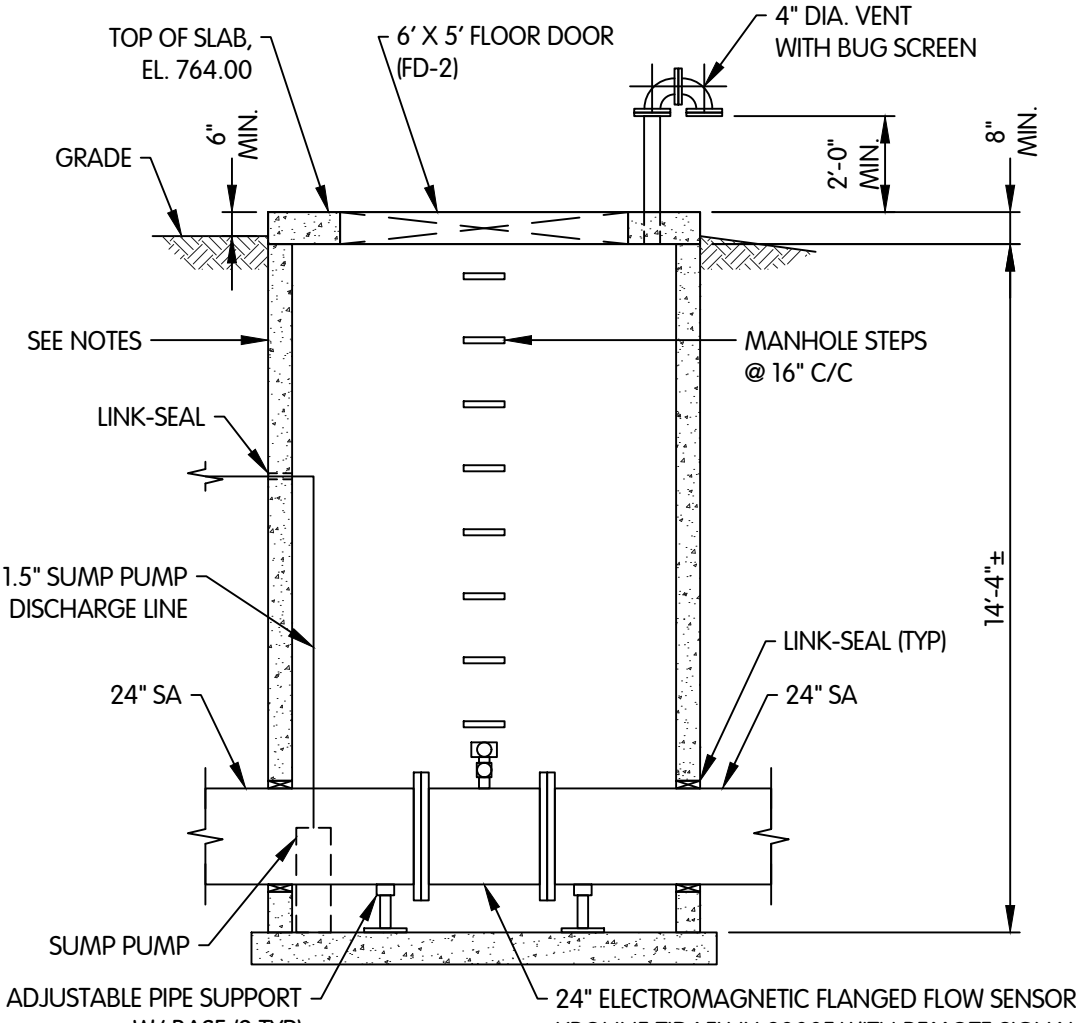
- NOTES:
1. ALL ELEVATIONS SHOWN ARE NGVD 29.
 2. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE INTERFACE BETWEEN EXISTING AND NEW CONSTRUCTION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
 3. ESTIMATED SCALE: 1/4" = 1'-0".



PLAN ELEVATION 759.00



PLAN VIEW

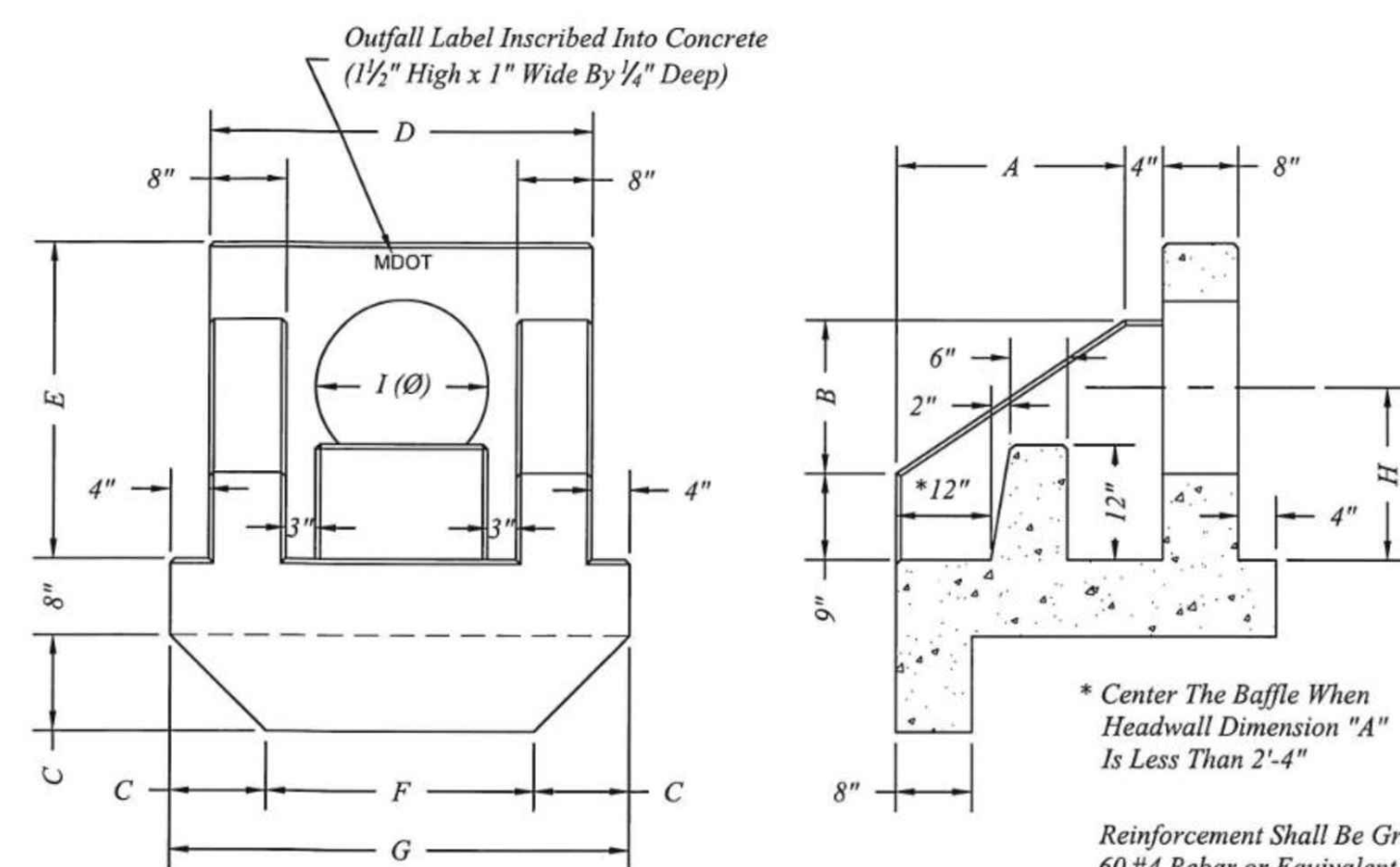


SECTION VIEW A-A

NOTES:

- LIFT HOLES SHALL BE FILLED IN WITH NON-SHRINK MORTAR.
- PREFORMED BITUMEN SEALS, KENT SEAL OR EQUAL, MAY BE USED BETWEEN ADJUSTING RINGS IN LIEU OF MORTAR.
- METER VAULT TO BE A PRECAST CONCRETE STRUCTURE.
- FILL AROUND STRUCTURE WITH SPECIAL BACKFILL.
- BED BASE SECTION IN 4" (MIN.) COMPACTED GRANULAR BEDDING MATERIAL.
- CONTRACTOR TO FIRST INSTALL A SPOOL SECTION THE SAME LENGTH AS THE ELECTROMAGNETIC FLOW SENSOR SO THE LINING CONTRACTOR CAN LINE THROUGH THE METER VAULT. ONCE THE LINING IS COMPLETE, THE CONTRACTOR WILL REMOVE THE SPOOL SECTION, CUT THE LINER AT THE FLANGES AND INSTALL THE ELECTROMAGNETIC FLOW SENSOR.

METER VAULT (BID ALTERNATE)
1/4" = 1'-0"

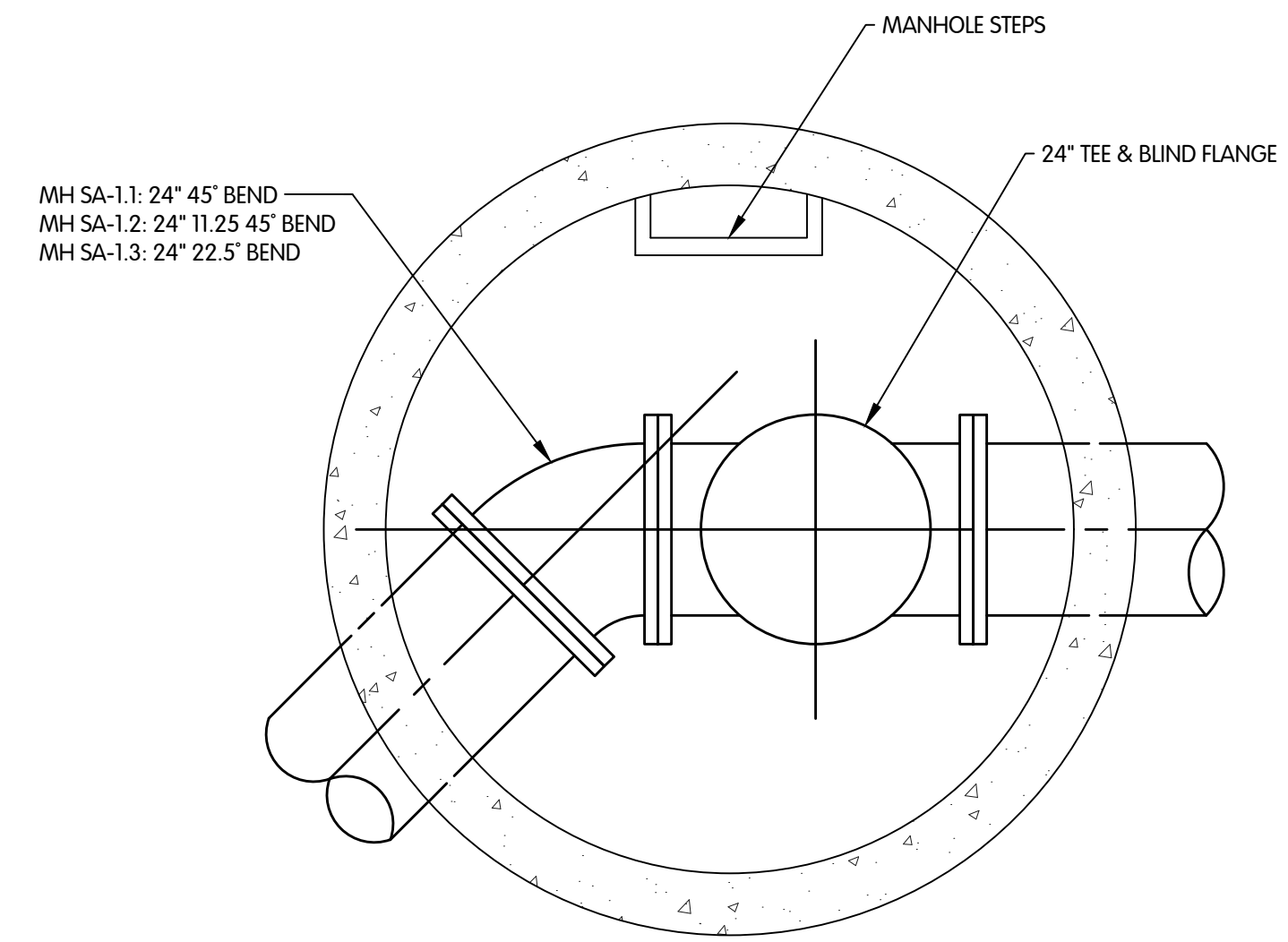


Outlet Headwall Dimensions										
Dia	A	B	C	D	E	F	G	H	I (Ø)	Weight
30"	4'-3"	2'-10"	1'-4"	4'-10"	4'-3"	2'-10"	5'-6"	2'-3"	42"	7,380

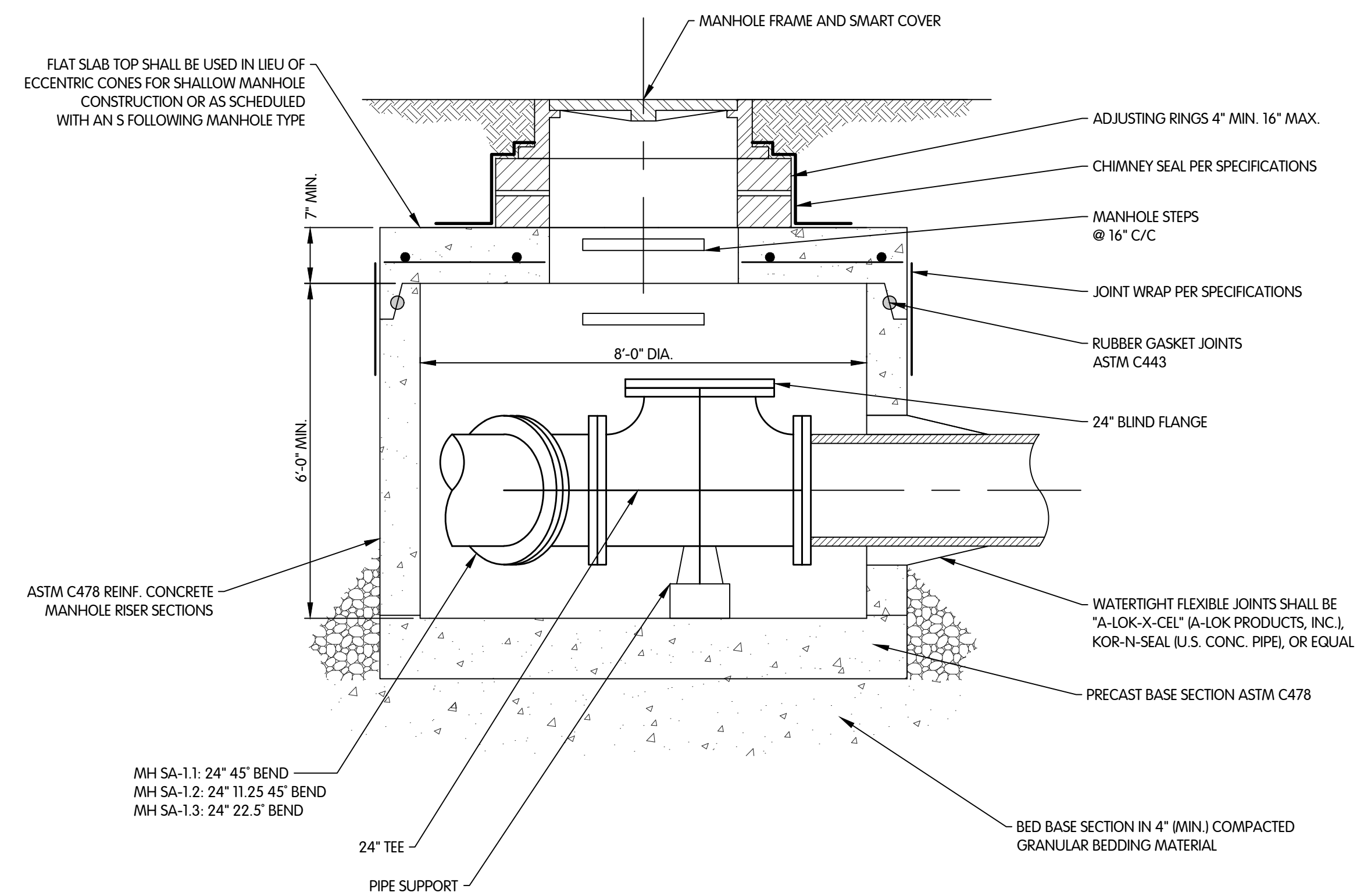
Reinforcement Shall Be Grade 60 #4 Rebar or Equivalent WWF per MDOT Standard Detail R-85-D.

Contractor To Complete Connection Between Pipe and Outlet Headwall w/Mortar Meeting MDOT 2012 Standard Specification for Construction, Section 702.

OUTLET HEADWALL
NTS



SECTIONAL PLAN
1/2" = 1'-0"



NOTES:

- LIFT HOLES SHALL BE FILLED IN WITH NON-SHRINK MORTAR.
- PREFORMED BITUMEN SEALS, KENT SEAL OR EQUAL, MAY BE USED BETWEEN ADJUSTING RINGS IN LIEU OF MORTAR.

MANHOLE STRUCTURES SA-1.1, SA-1.2 & SA-1.3
1/2" = 1'-0"



**SANITARY AND STORM
DETAILS**

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

DESIGNED BY: RGE
DRAWN BY: CJAF
CHECKED BY: RGE
DATE: MAY 2023
SHEET NO. C-0.2
8 OF 21

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JOB NO. 017-7982.001

SCALE AS NOTED

THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE

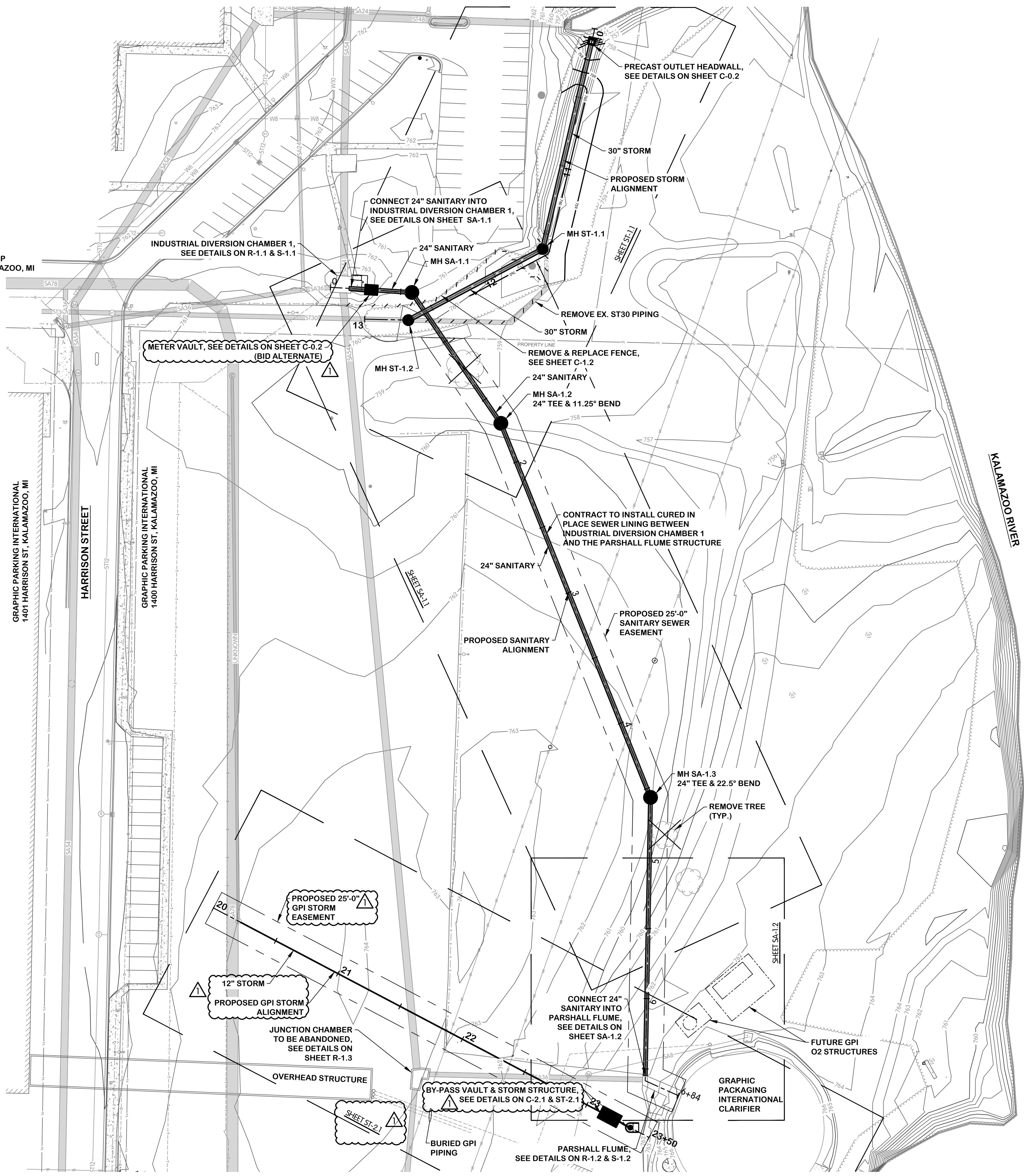
DESIGNED: RGE
DRAWN: CJAF
CHECKED: RGE

STATUS: ISSUE FOR BID
DATE: MAY 2023

SHEET NO. C-0.2
8 OF 21

KAL-7982001-G05-SITE PLAN AND SHEET KEY
 6/8/2023 5:20 PM - CERRELL
 6/8/2023 6:58 PM

CITY OF KALAMAZOO - KWRP
 1415 HARRISON ST, KALAMAZOO, MI



SITE PLAN AND SHEET KEY
 CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

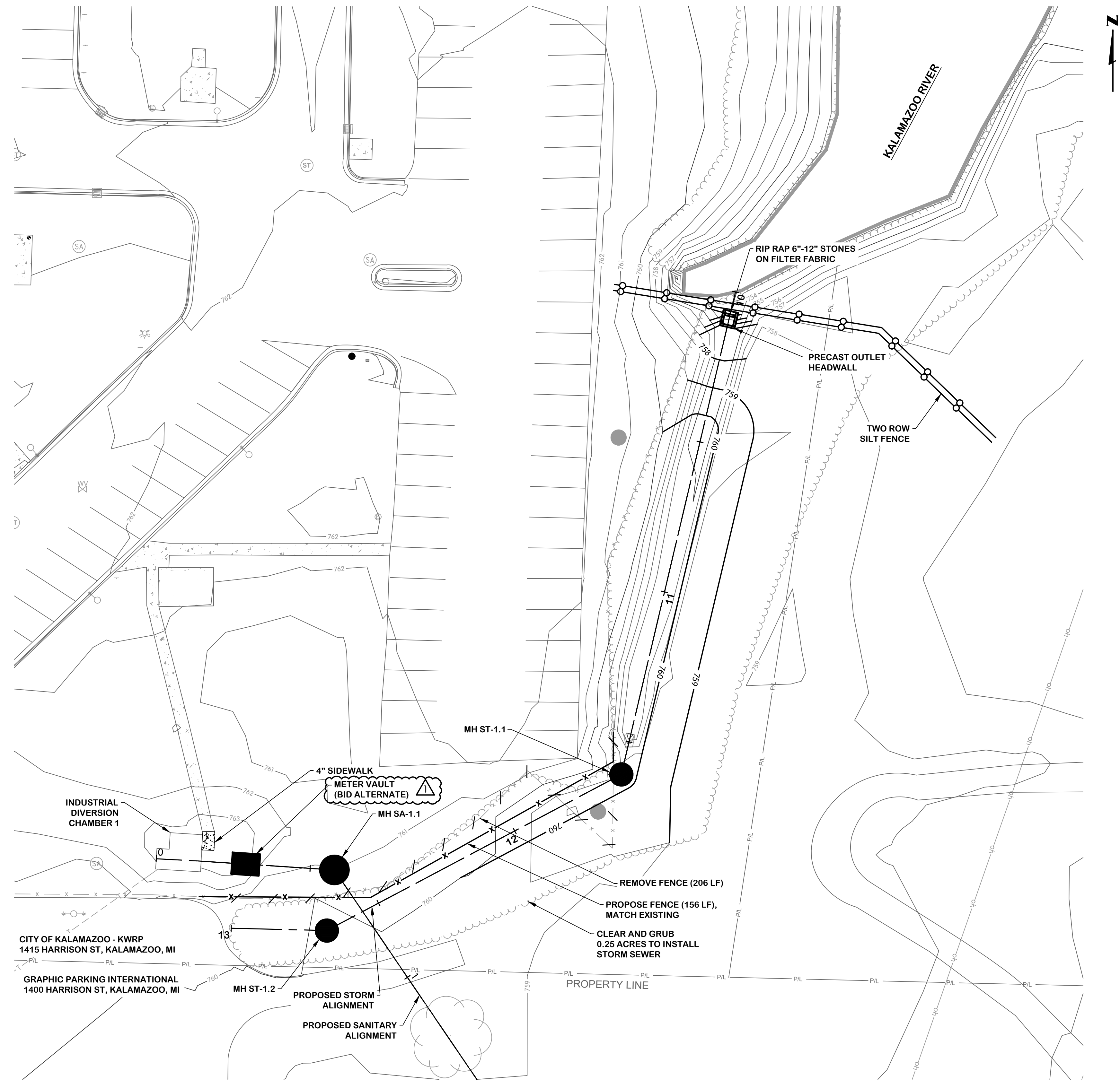
NO.	DATE	REVISIONS	ISSUED FOR	BY
1	06/08/2023	REVISIONS AFTER	ISSUED FOR BID	
2				
3				
4				
5				

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JOB NO.	017-7982.001
SCALE	1:40
THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE	
DESIGNED	RGE
DRAWN	CJAF
CHECKED	RGE
STATUS	ISSUE FOR BID
DATE	MAY 2023
SHEET NO.	C-1.1
	9 OF 21

KAL-7982001C05-GRADING AND EROSION CONTROL - PARTIAL SITE PLAN
 6/8/2023 5:19 PM - CERRELL
 6/8/2023 6:58 PM



GRADING AND EROSION CONTROL
 PARTIAL SITE PLAN

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	06/08/2023	REVISIONS AFTER	RGE
2			
3			
4			

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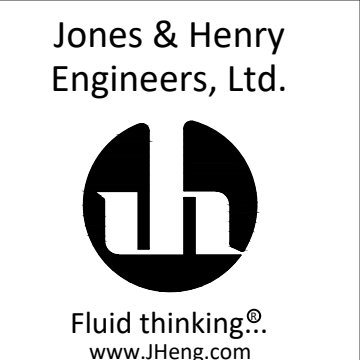
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DESIGNED	DRAWN	CHECKED
RGE	CJAF	RGE
STATUS	ISSUE FOR BID	
DATE	MAY 2023	
SHEET NO.	C-1.2	
	10 OF 21	



**SANITARY
PLAN AND PROFILE
STA. 0+00 TO 5+00**

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

REVISIONS AFTER ISSUED FOR BID
 NO. DATE
 1 06/08/2023
 2
 3
 4
 5



JOB NO. 017-7982.001

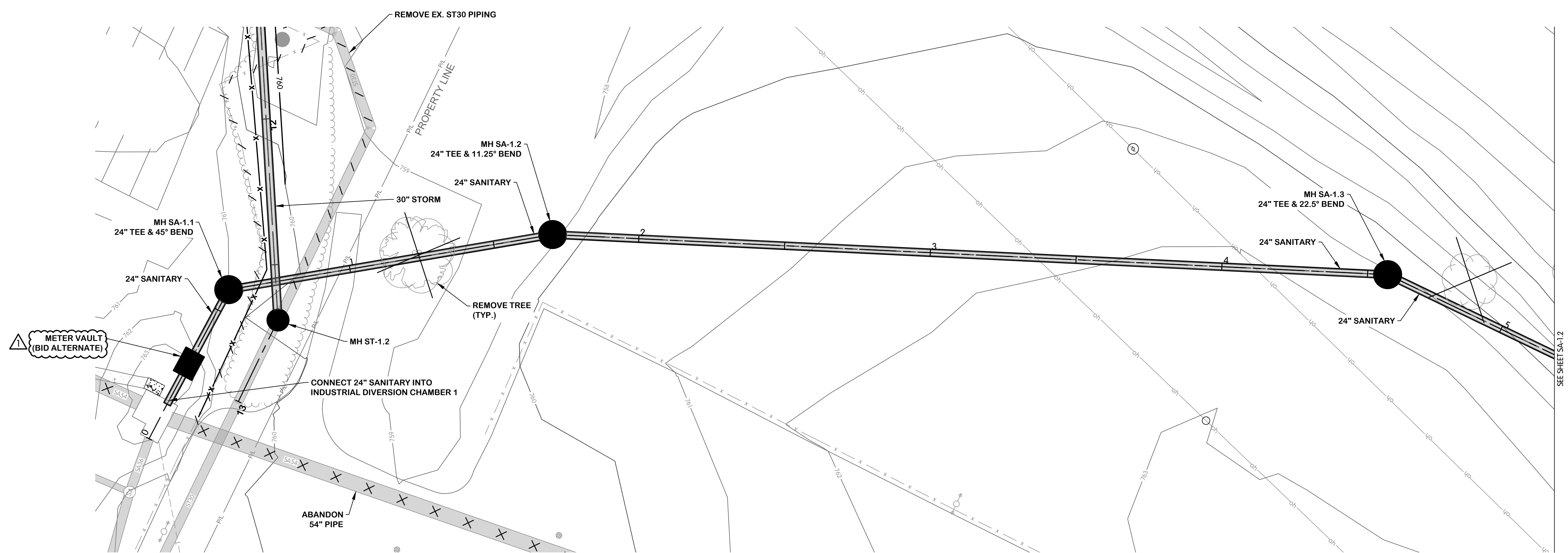
SCALE 1"=20'H, 1"=4'V

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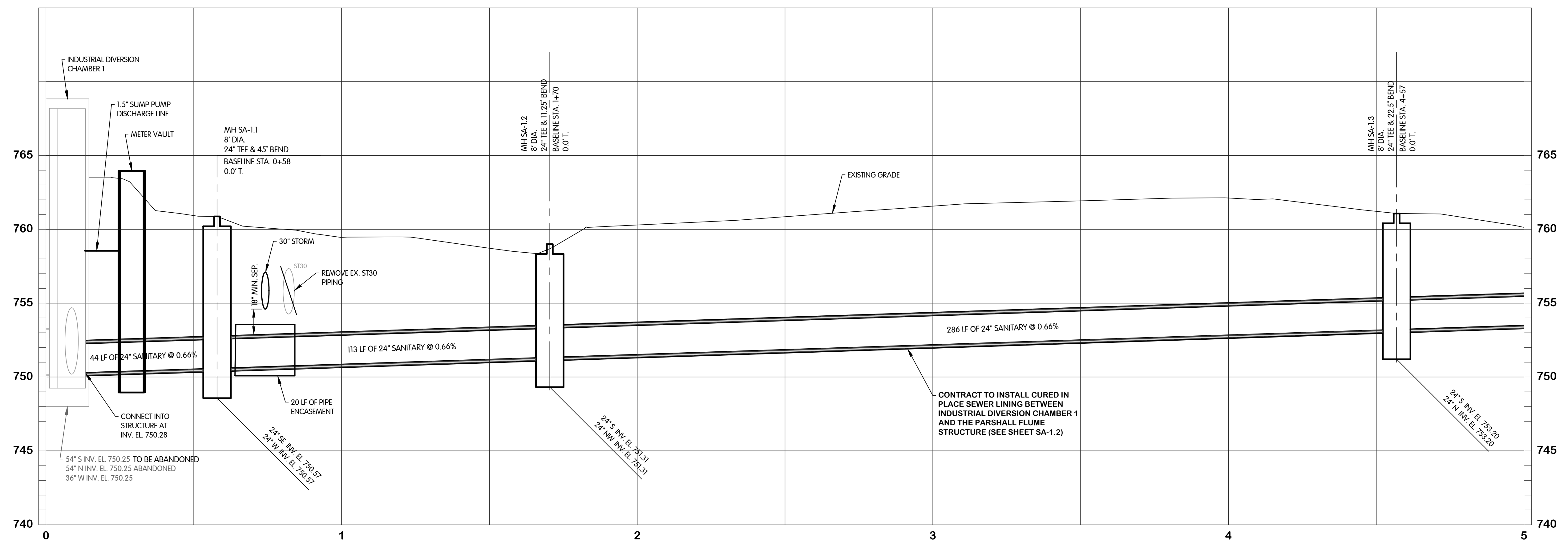
DESIGNED	DRAWN	CHECKED
RGE	CJAF	RGE

STATUS: ISSUE FOR BID
DATE: MAY 2023

SHEET NO. SA-1.1
11 OF 21

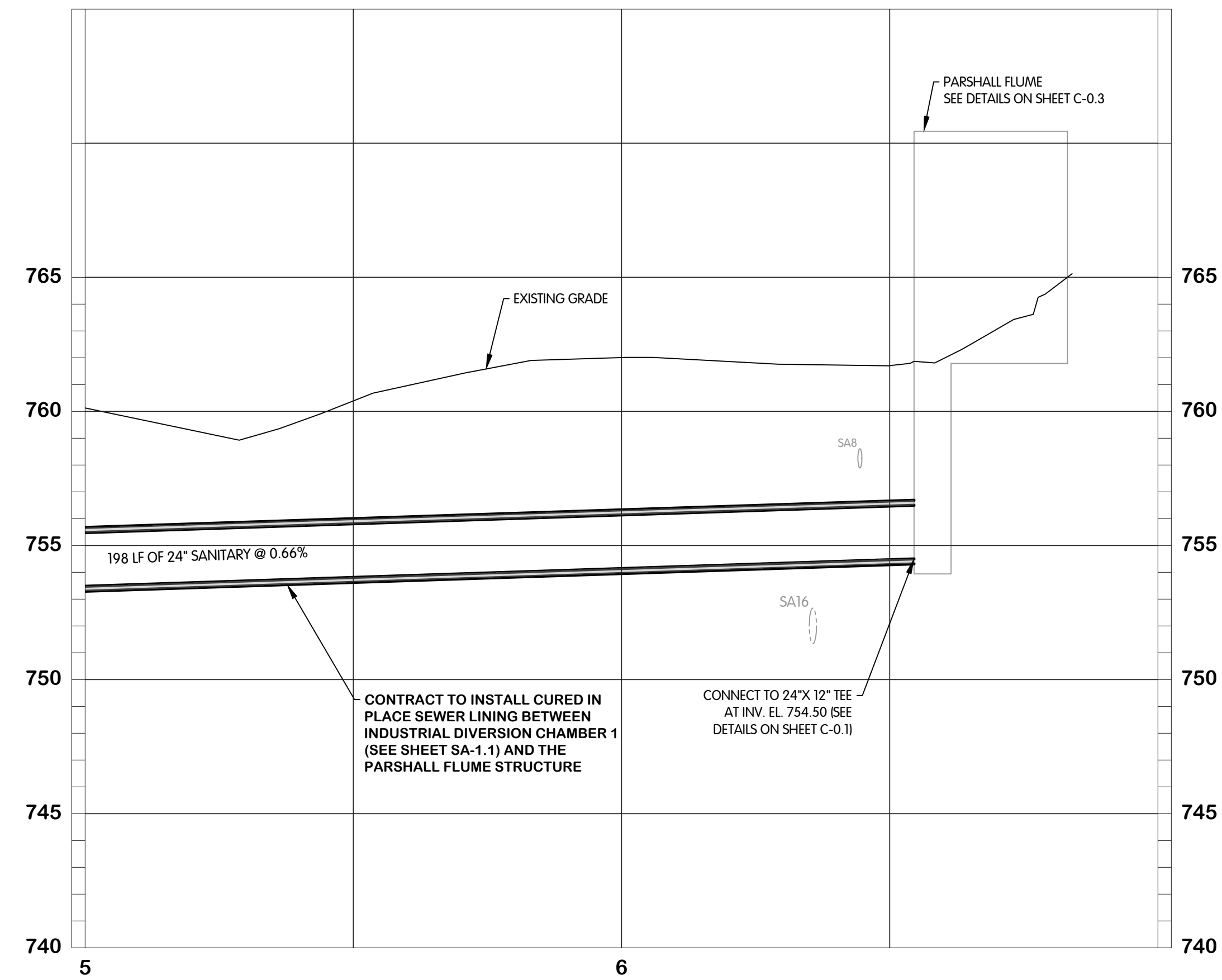
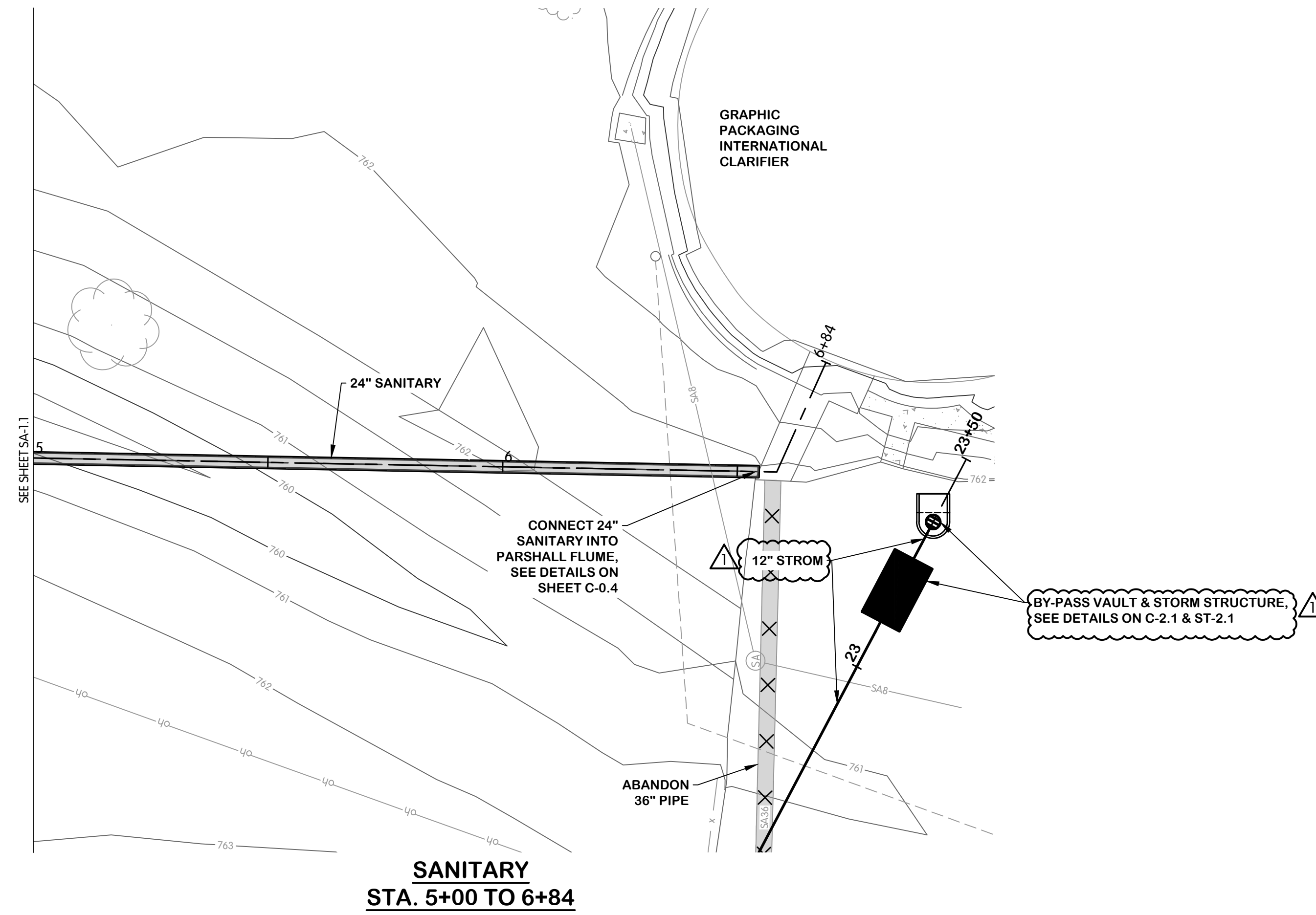


**SANITARY
STA. 0+00 TO 5+00**



KAL-7982001SA02-SANITARY - PLAN & PROFILE STA. 0+00 TO 5+00
 6/8/2023 5:20 PM - CFERRELL
 6/8/2023 6:58 PM

KAL-7982001SA03-SANITARY - PLAN & PROFILE STA 5+00 TO 6+84
 6/8/2023 5:28 PM - CFERRELL
 6/8/2023 6:58 PM



**SANITARY
 PLAN AND PROFILE
 STA. 5+00 TO 6+84**

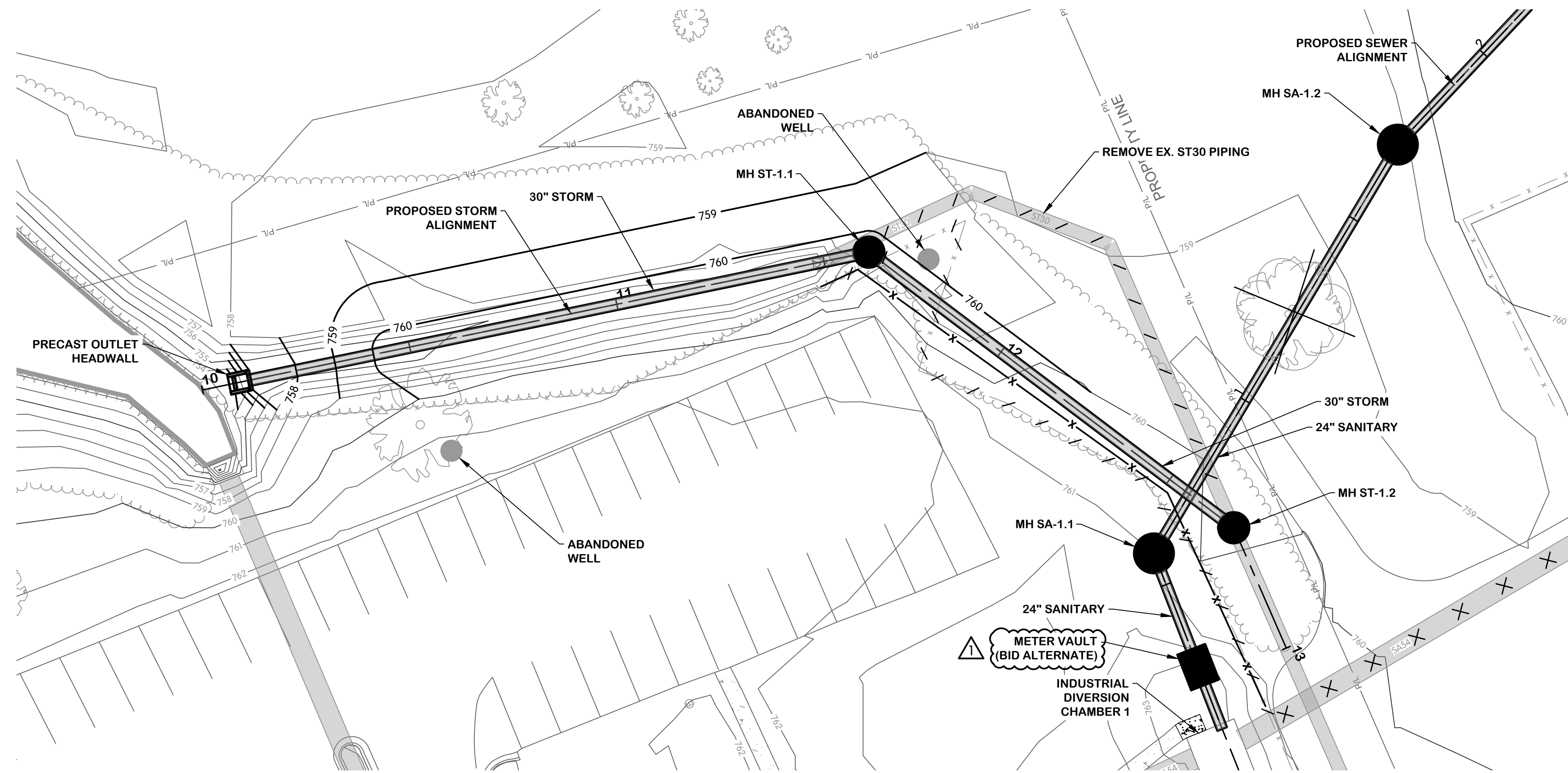
CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
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2		REVISIONS AFTER	
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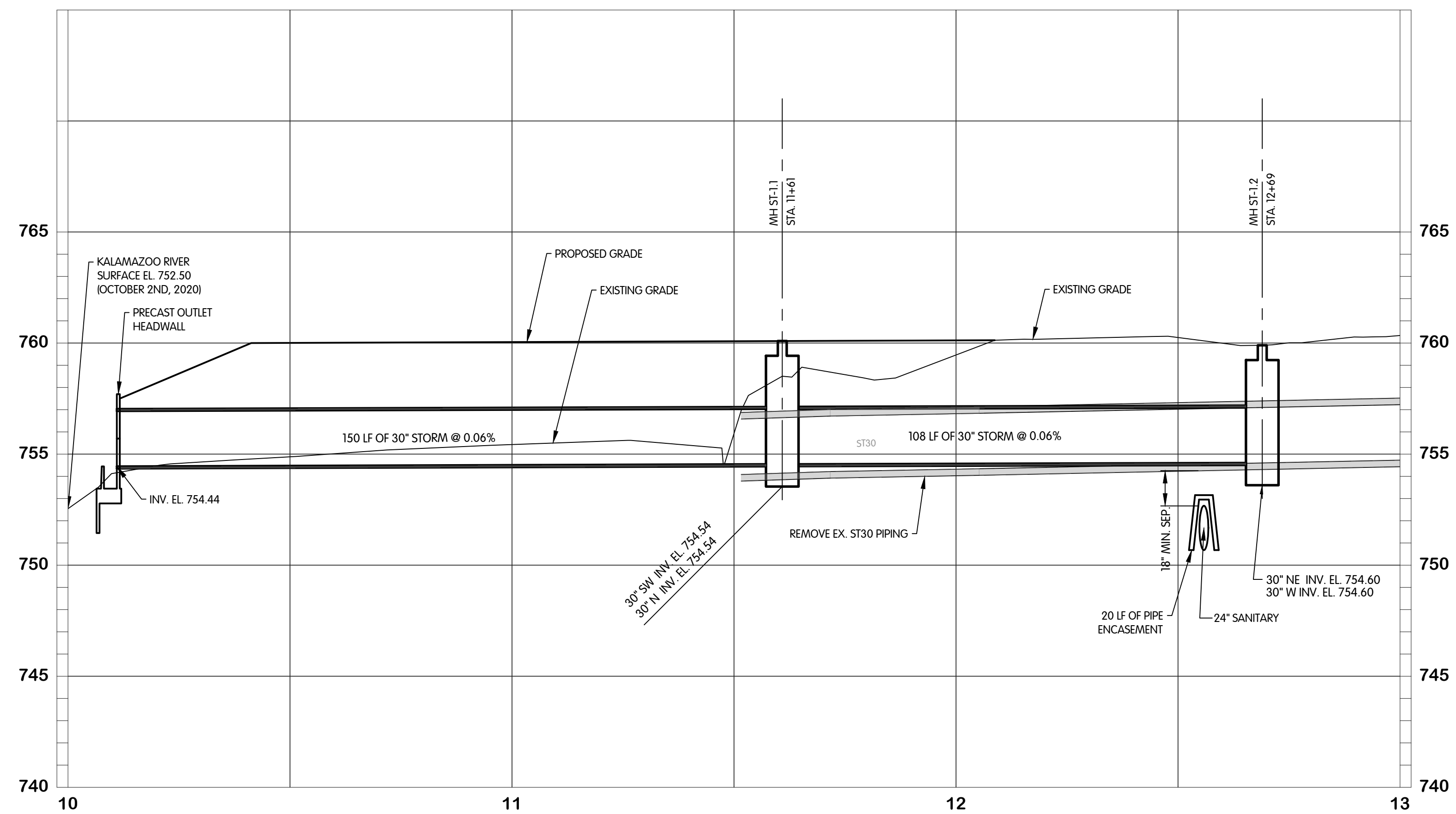
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JOB NO.	017-7982.001	
SCALE	1"=20'H, 1"=4'V	
THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE		
DESIGNED	DRAWN	CHECKED
RGE	CJAF	RGE
STATUS:	ISSUE FOR BID	
DATE:	MAY 2023	



**STORM
STA. 10+00 TO 13+00**



KAL-7982001-STORM - PLAN & PROFILE STA. 10+00 TO 13+00
 6/8/2023 5:36 PM - CFERRELL
 6/8/2023 6:58 PM



**STORM
PLAN AND PROFILE
STA. 10+00 TO 13+00**

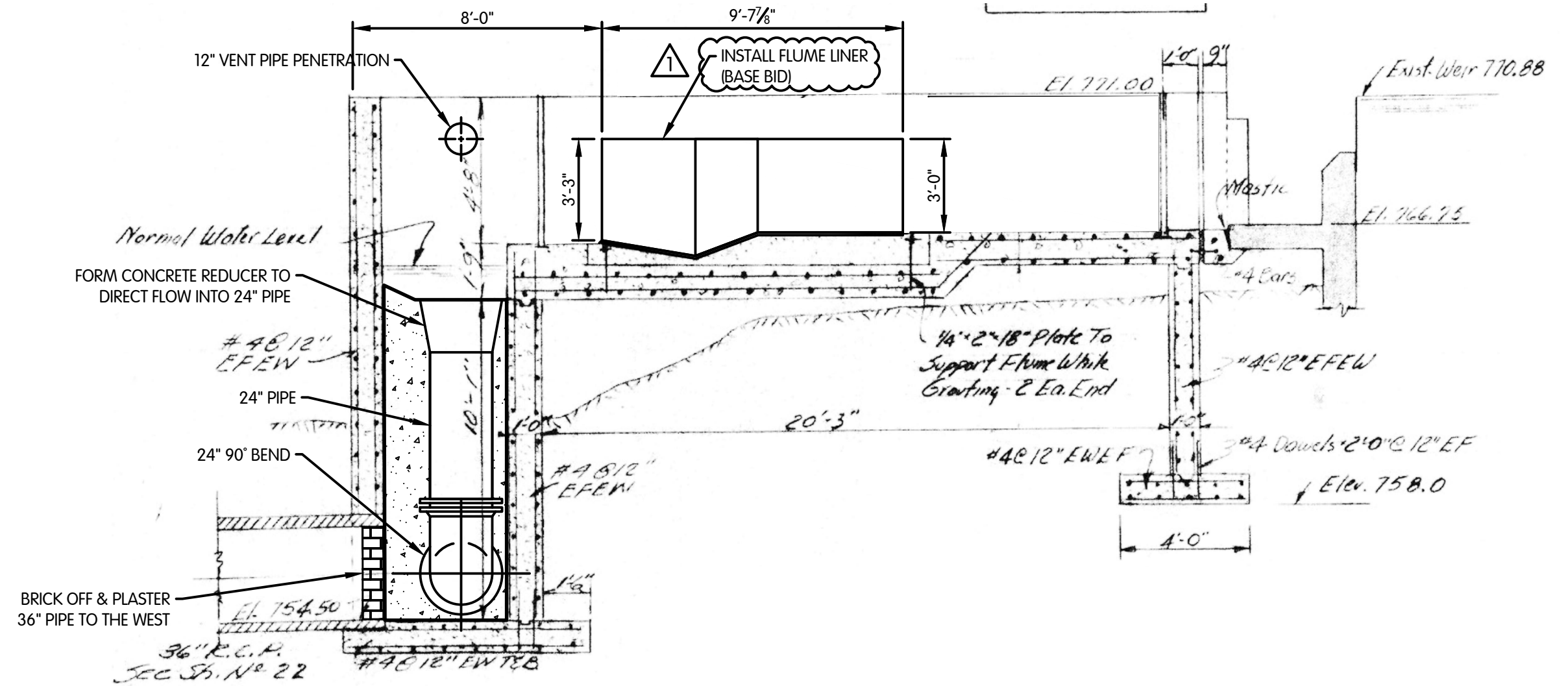
CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	06/08/2023		
2			
3			
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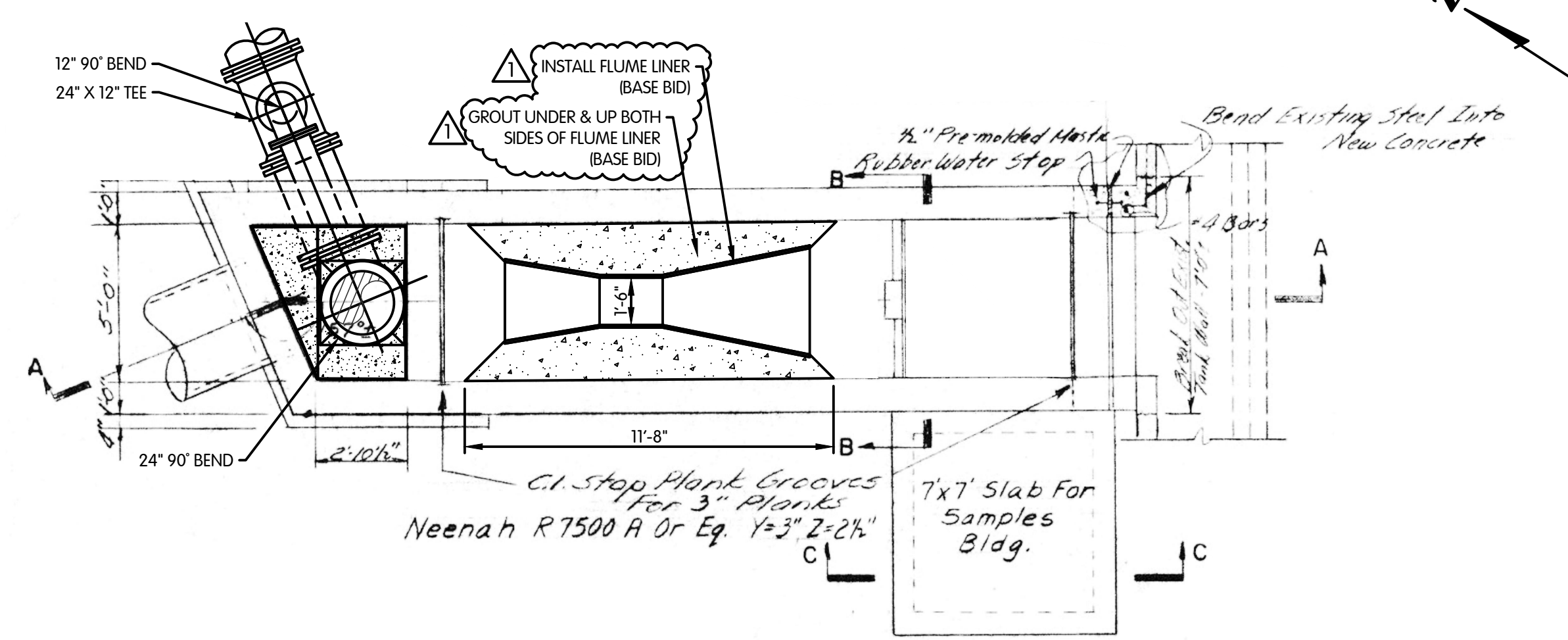
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JOB NO.	017-7982.001	
SCALE	1"=20'H, 1"=4'V	
THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE		
DESIGNED	DRAWN	CHECKED
RGE	CJAF	RGE
STATUS:	ISSUE FOR BID	
DATE:	MAY 2023	
SHEET NO.		



SECTION A-A



PROPOSED PLAN VIEW

- NOTES:
1. ALL ELEVATIONS SHOWN ARE NGVD 29.
 2. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE INTERFACE BETWEEN EXISTING AND NEW CONSTRUCTION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
 3. ESTIMATED SCALE: 1/4" = 1'-0".

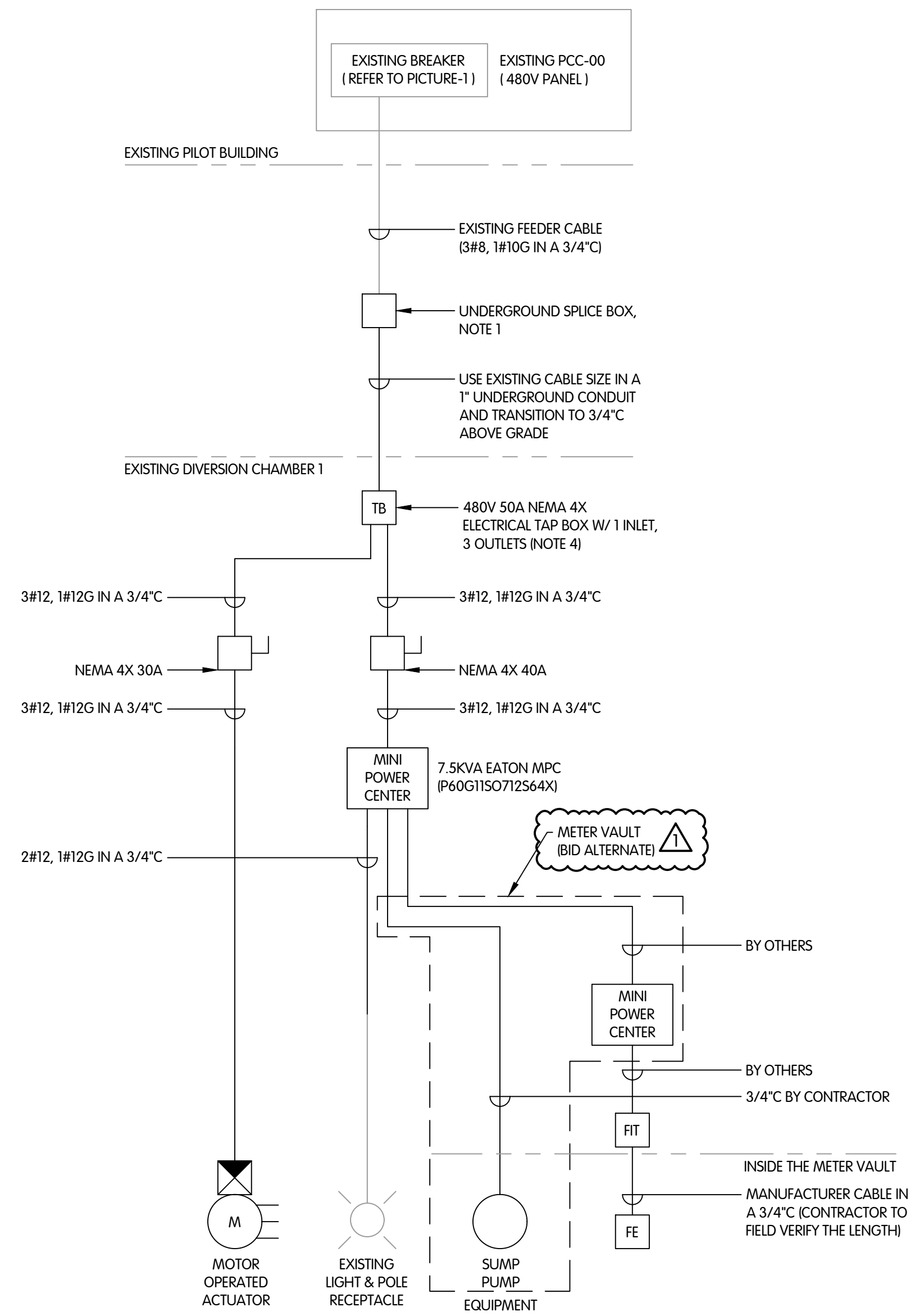
KAL-798200(GS)01-PARSHALL FLUME - PLANS
6/8/2023 5:47 PM - CFERRELL
6/8/2023 6:58 PM

NO.	DATE	ISSUED FOR	BY
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2		REVISIONS AFTER	
3			

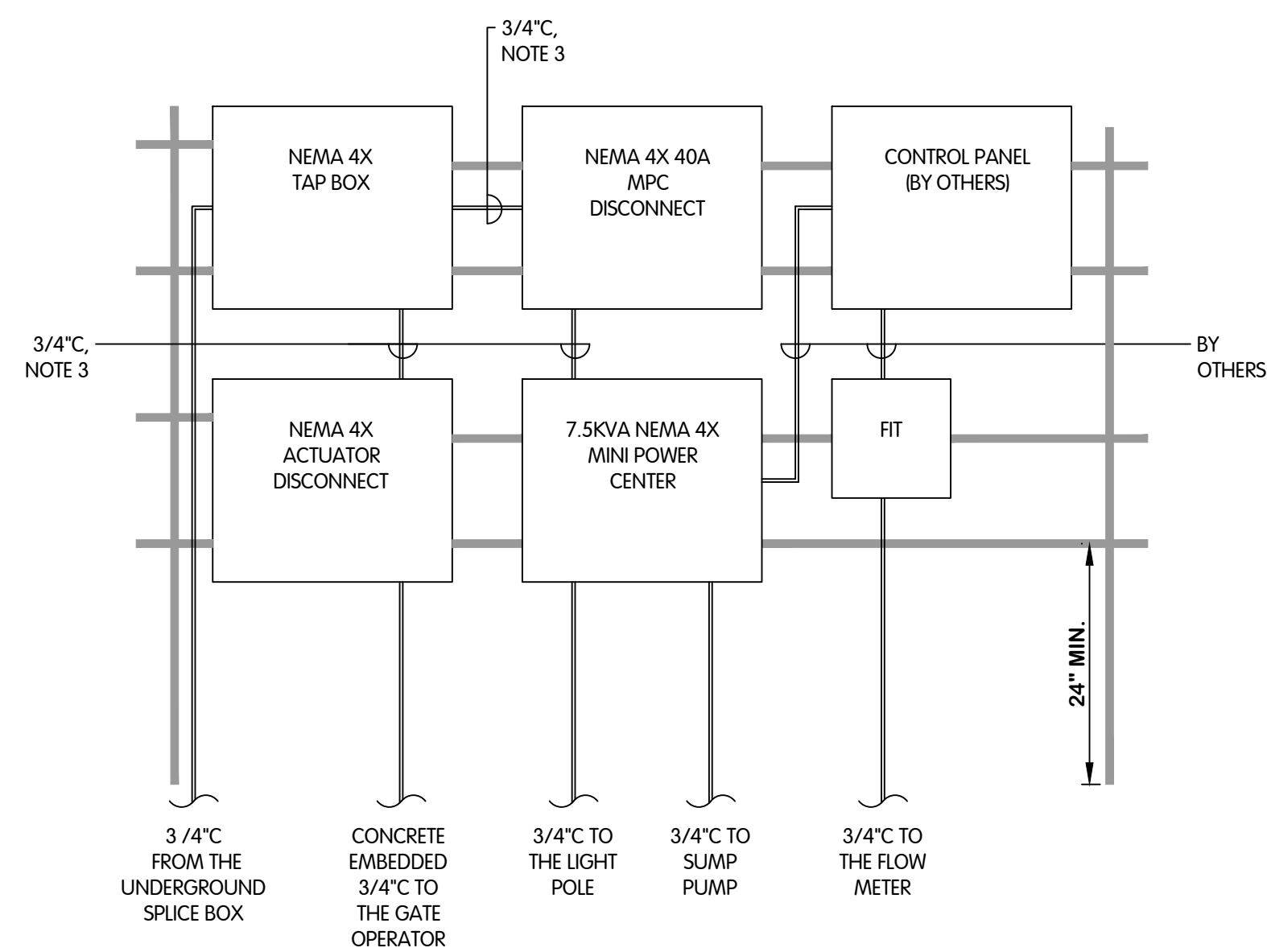
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JOB NO.	017-7982.001
SCALE	NONE
DESIGNED	DRC
DRAWN	CJAF
CHECKED	RGE
STATUS	ISSUE FOR BID
DATE	MAY 2023
SHEET NO.	S-1.2
	16 OF 21



ONE-LINE DIAGRAM



EQUIPMENT RACK DETAIL
NTS

- NOTES:
- CONTRACTOR SHALL EXTEND THE EXISTING FEEDER CABLE USING A SPICE BOX (BY QUAZITE OF SIZE 11L X 9"W X 6-3/4"D) AT THE DIVERSION CHAMBER #1 TO THE NEW ACTUATOR.
 - REFER TO PHOTOS ON THIS DRAWING SHEET FOR REFERENCE.
 - CONDUITS ARE SHOWN ONLY FOR DIAGRAMMATIC REFERENCE. CONTRACTOR SHALL INSTALL CONDUITS AS PER APPROVED OUTDOOR INSTALLATIONS.
 - CONTRACTOR SHALL INSTALL A TAP BOX WITH 3 OUTLETS TO FACILITATE WIRING FOR FUTURE FLOW METER/SUMP PUMP OR FLUME THAT IS TO BE PROVIDED AND INSTALLED BY OTHERS THROUGH A MINI POWER ZONE.

480V FEEDER BREAKER IN PCC-00 INSIDE PILOT BUILDING FEEDING THE INDUSTRIAL DIVERSION CHAMBER 1



PICTURE-1

CONTRACTOR SHALL REMOVE THE EXISTING JUNCTION BOX, SPICE THE CABLES AND EXTEND THE CONDUIT AND WIRE TO THE NEW TAP BOX



PICTURE-2

KAL-798200102-ELECTRICAL SINGLE LINE DIAGRAM AND DETAILS
6/8/2023 5:49 PM - CERRELL
6/8/2023 6:58 PM



**ELECTRICAL
SINGLE LINE DIAGRAM AND DETAILS**

CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

NO.	DATE	BY
1	06/08/2023	RGE
ADDITIONAL REVISIONS AFTER ISSUED FOR BID		

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JOB NO. 017-7982.001

SCALE NONE

THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LR	CJAF	RGE

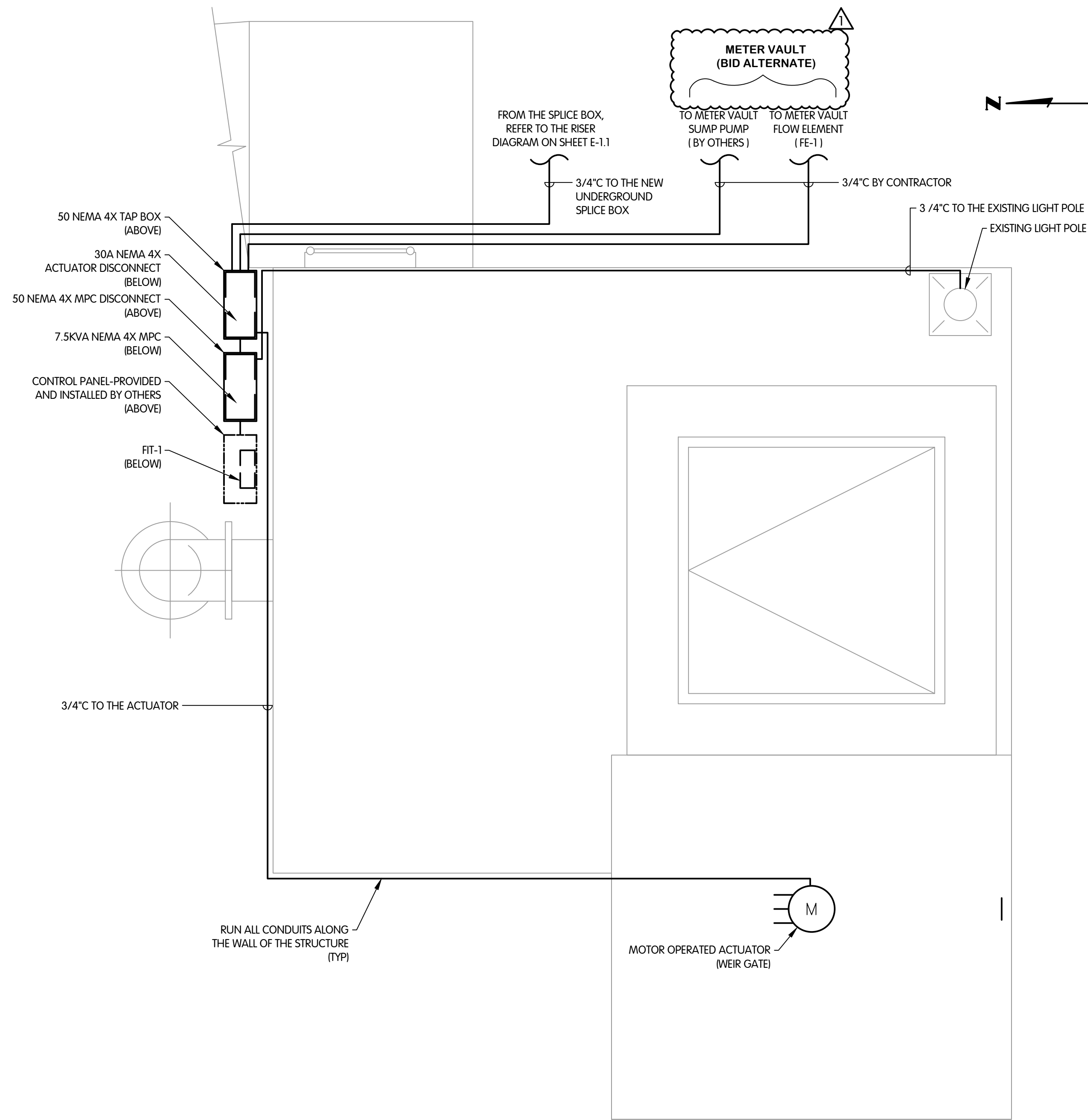
STATUS: ISSUE FOR BID

DATE: MAY 2023

SHEET NO.

E-1.1

18 OF 21



PLAN VIEW

- NOTES:
1. CONTRACTOR SHALL INSTALL ALL THE ELECTRICAL EQUIPMENT ON A RACK AGAINST THE WALL OF THE STRUCTURE. REFER TO THE EQUIPMENT RACK DETAIL ON SHEET E-1.1.
 2. REFER TO SPEC 16005 SECTION 2.08 AND 3.10 FOR SPLICE BOX/ SPLICING DETAILS.
 3. ALL ELEVATIONS SHOWN ARE NGVD 29.
 4. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE INTERFACE BETWEEN EXISTING AND NEW CONSTRUCTION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
 5. ESTIMATED SCALE: 3/4" = 1'-0".



**INDUSTRIAL DIVERSION CHAMBER 1
 ELECTRICAL PLAN**

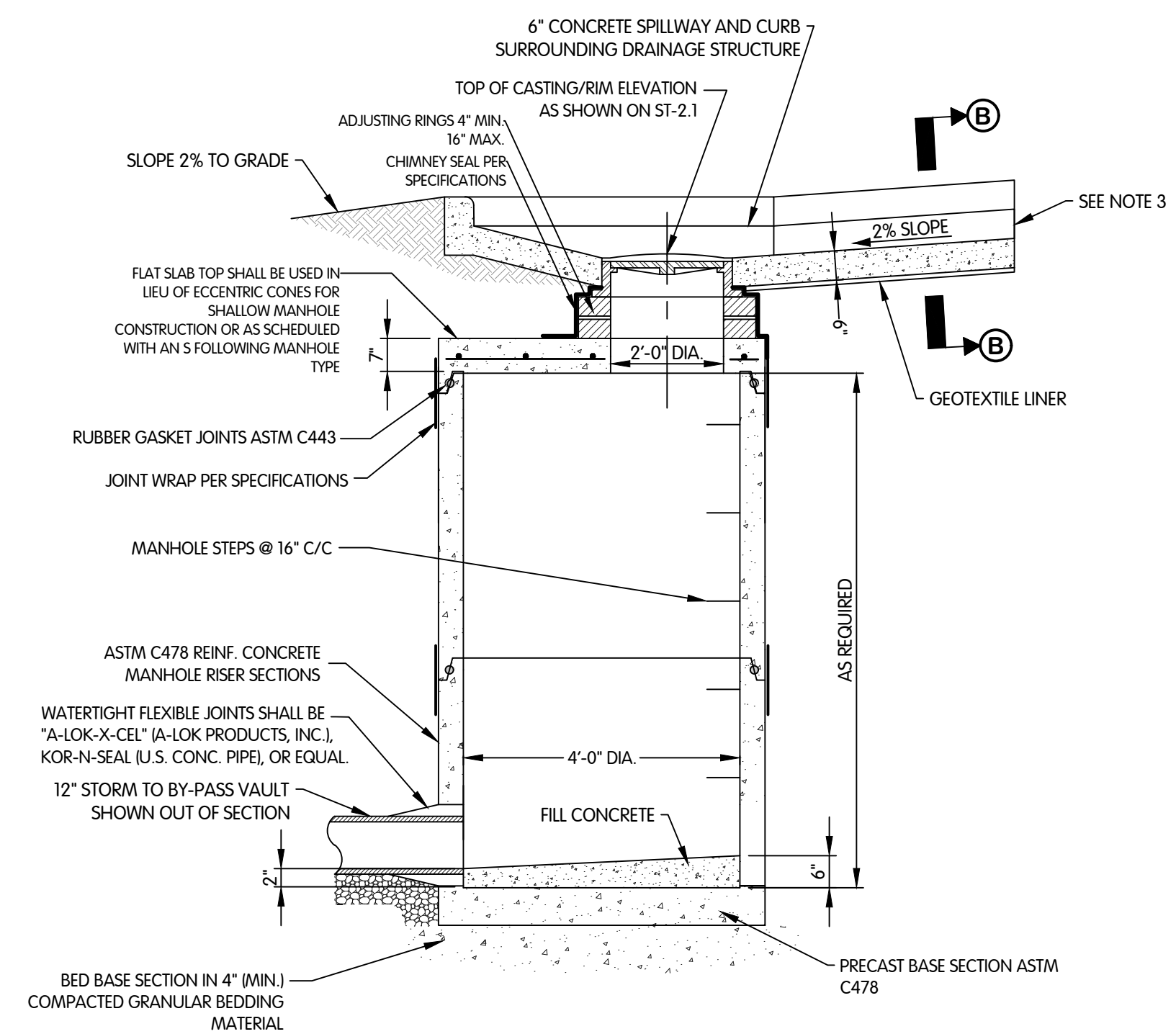
CITY OF KALAMAZOO, MI - KALAMAZOO/GPI EFFLUENT SEWER REALIGNMENT

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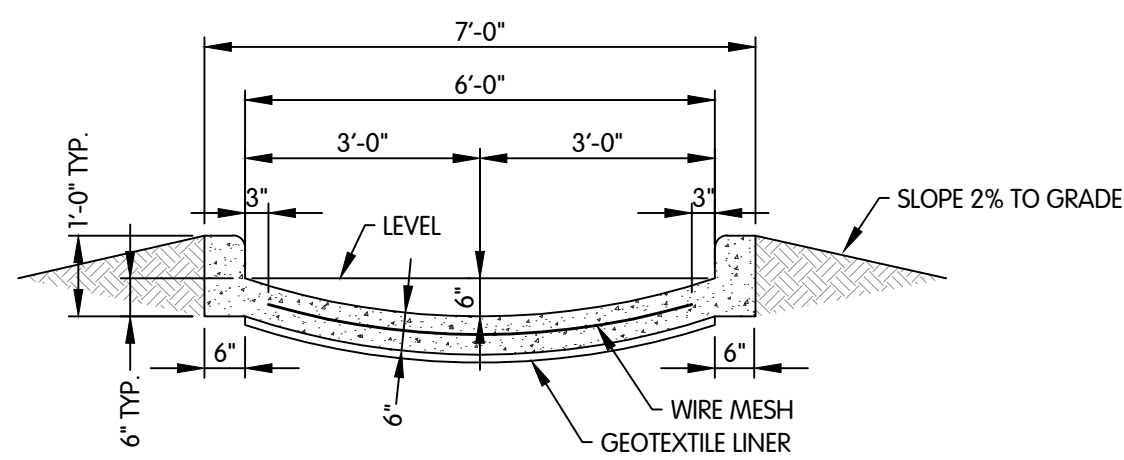
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JOB NO.	017-7982.001	
SCALE	AS NOTED	
THIS LINE SCALES IF WHEN PLOTTED TO NOTED SCALE		
DESIGNED	DRAWN	CHECKED
LR	CJAF	RGE
STATUS: ISSUE FOR BID		
DATE: MAY 2023		
SHEET NO.		
E-1.2		
19 OF 21		

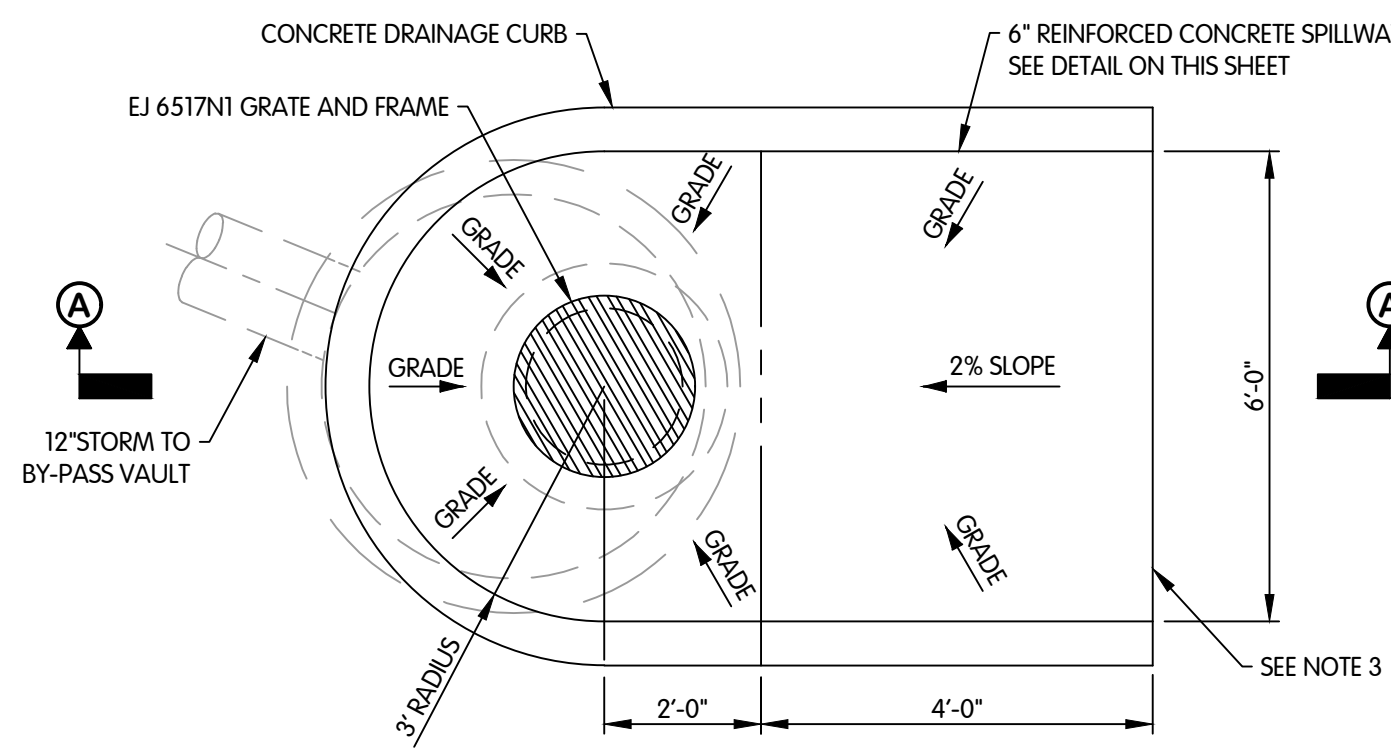
NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
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2		REVISIONS AFTER	
3			
4			
5			



SECTION A-A



SECTION B-B



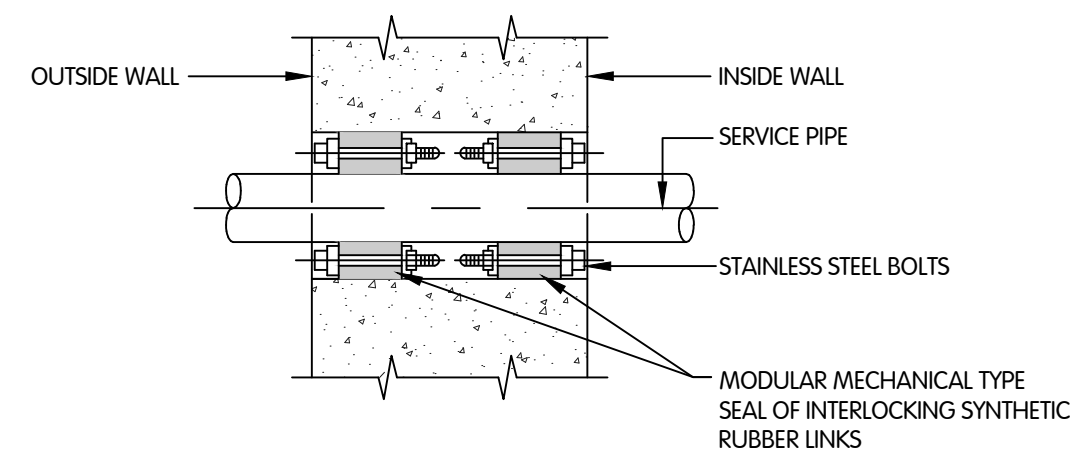
PLAN VIEW

NOTES:

1. PREFORMED BITUMEN SEALS, KENT SEAL OR EQUAL, MAY BE USED BETWEEN ADJUSTING RINGS IN LIEU OF MORTAR.
2. LIFT HOLES SHALL BE FILLED IN WITH NON-SHRINK MORTAR.
3. CONNECTION LOCATION OF NEW SPILLWAY & CURB TO FUTURE SPILLWAY/CURB THAT WILL BE COMPLETED BY OTHERS.

STORM MANHOLE (ST-2.1) AND SPILL WAY DETAIL

NTS



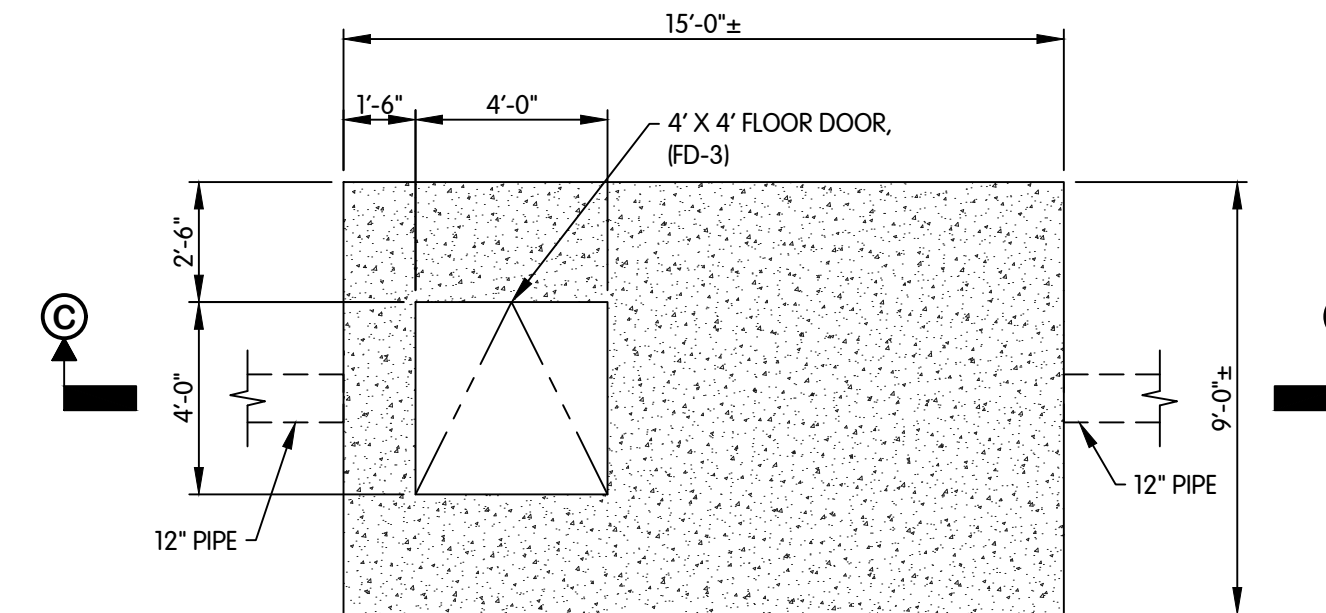
TYPE C

NOTE:

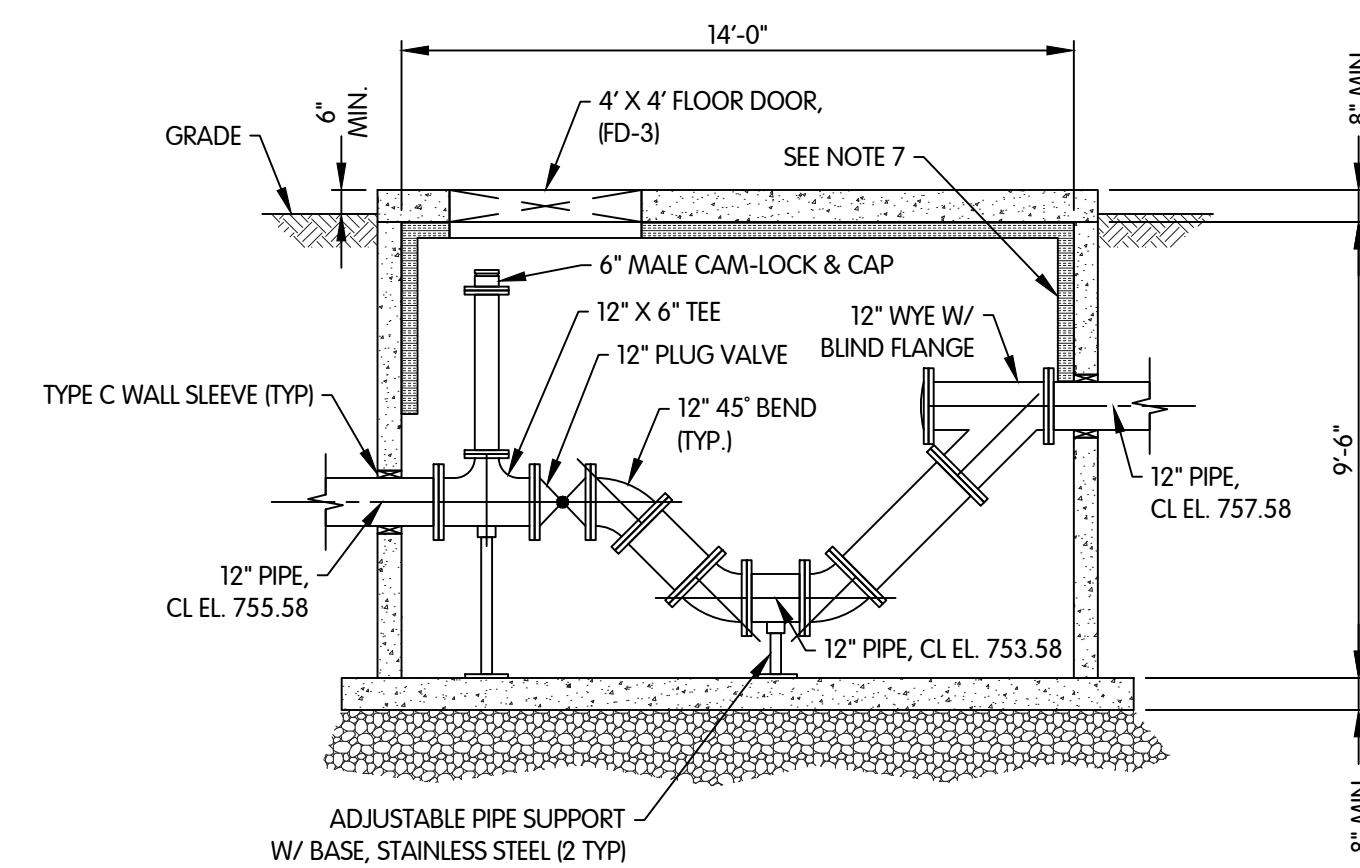
1. EXISTING WALLS SHALL BE CORE DRILLED.
2. CONCRETE SHALL BE WORKED IN AND VIBRATED TO ELIMINATE ALL VOIDS IN CONCRETE - IF VOIDS DO REMAIN, FILL WITH GROUT BEFORE INSTALLING CONDUIT AND RUBBER SEALS.
3. UNLESS OTHERWISE SHOWN ON THE DRAWINGS ALL INTERIOR WALL PENETRATIONS SHALL USE TYPE C CONDUIT SLEEVE.

DUAL PIPE SLEEVE

NTS



PLAN VIEW



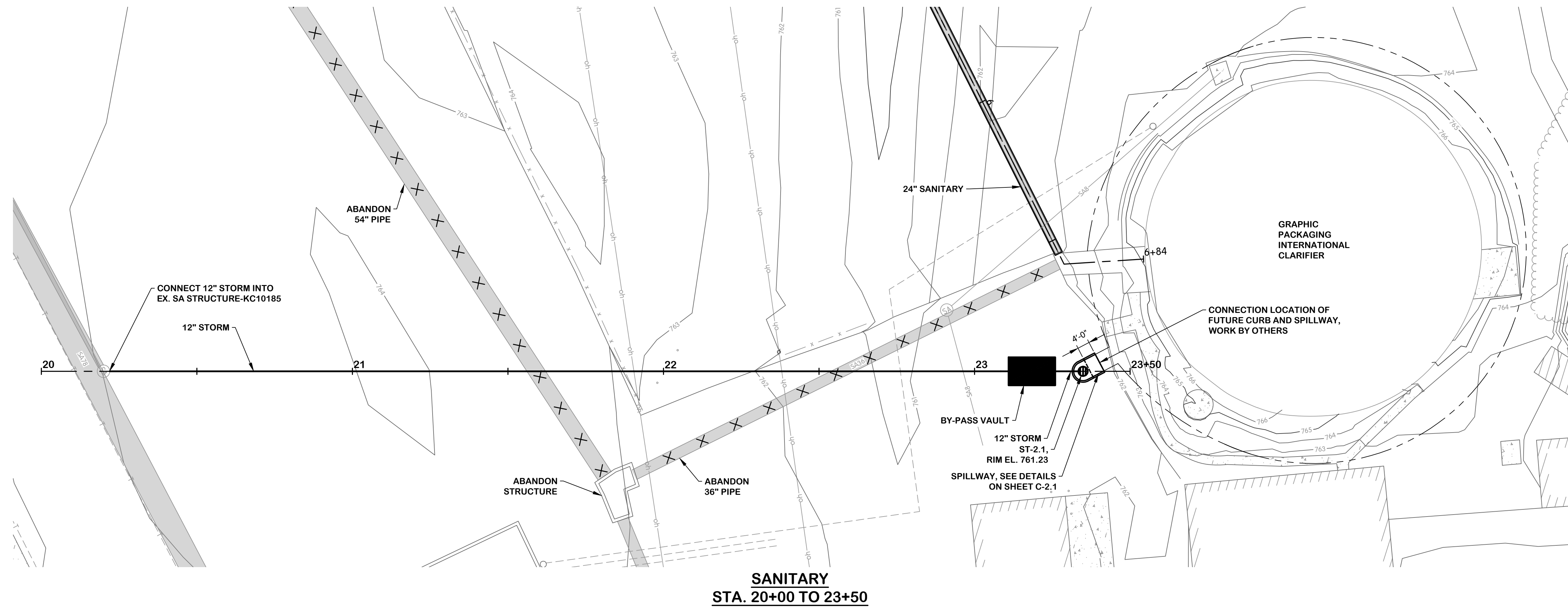
SECTION VIEW D-D

BY-PASS VAULT DETAIL

1/4" = 1'-0"

NOTES:

1. LIFT HOLES SHALL BE FILLED IN WITH NON-SHRINK MORTAR.
2. PREFORMED BITUMEN SEALS, KENT SEAL OR EQUAL, MAY BE USED BETWEEN ADJUSTING RINGS IN LIEU OF MORTAR.
3. BY-PASS VAULT TO BE A PRECAST CONCRETE STRUCTURE.
4. FILL AROUND STRUCTURE WITH SPECIAL BACKFILL.
5. BED BASE SECTION IN 4" (MIN.) COMPACTED GRANULAR BEDDING MATERIAL.
6. PRECAST CONCRETE VAULT AND FLOOR DOOR SHALL BE HS-20 LOAD RATED.
7. AFFIX 4-INCH POLYSTYRENE BOARD INSULATION TO VAULT CEILING AND ALL WALLS TO 4 FEET BELOW GRADE.



**SANITARY
STA. 20+00 TO 23+50**

