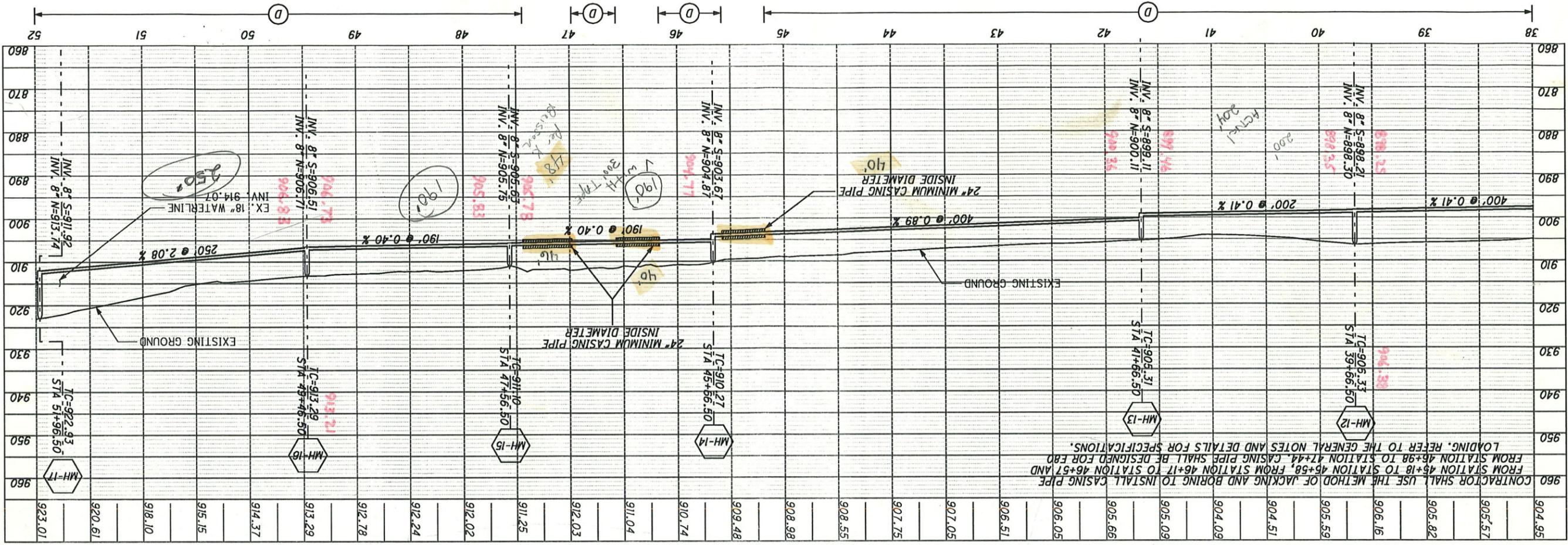
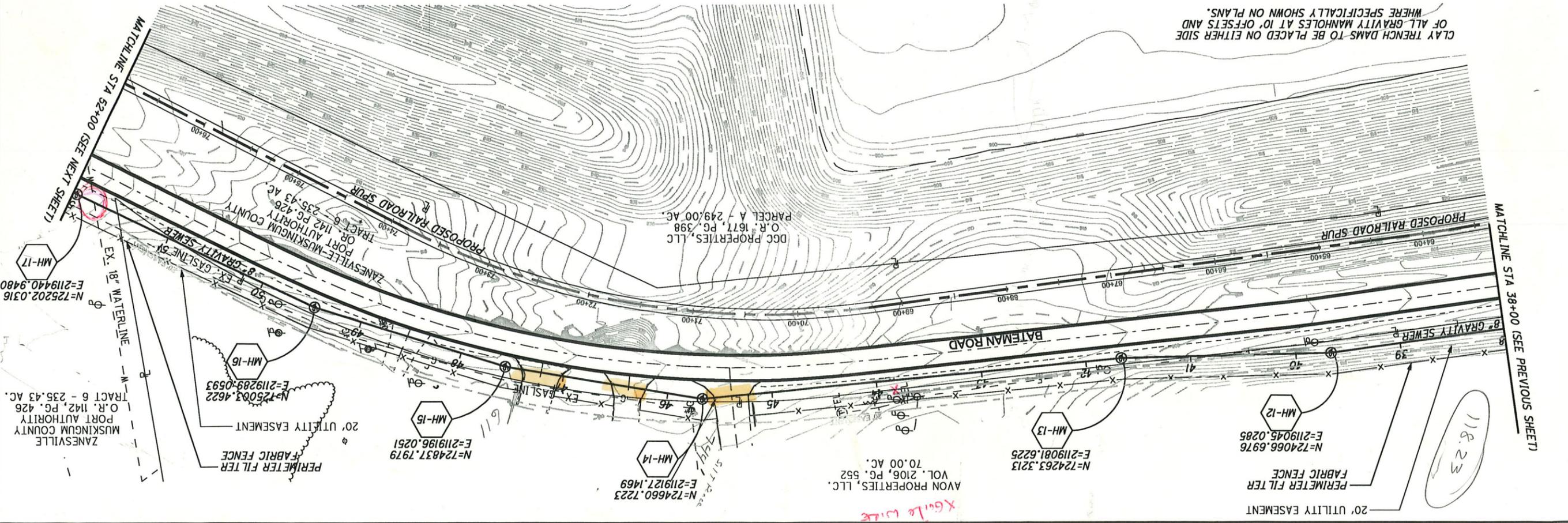
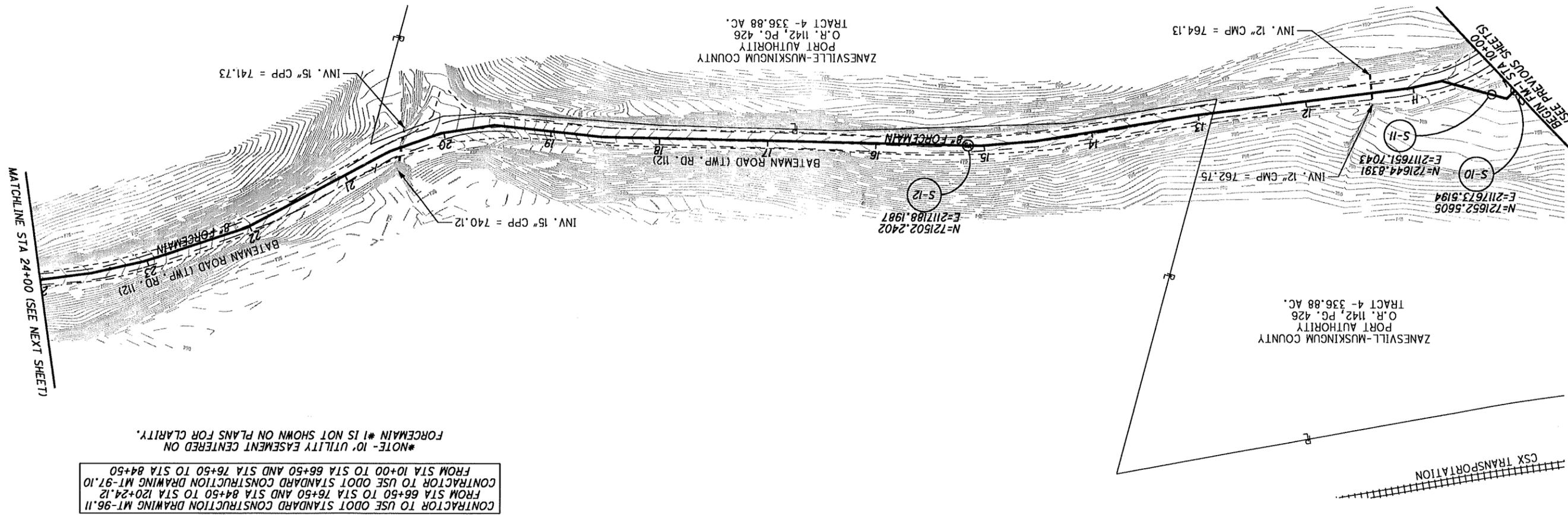
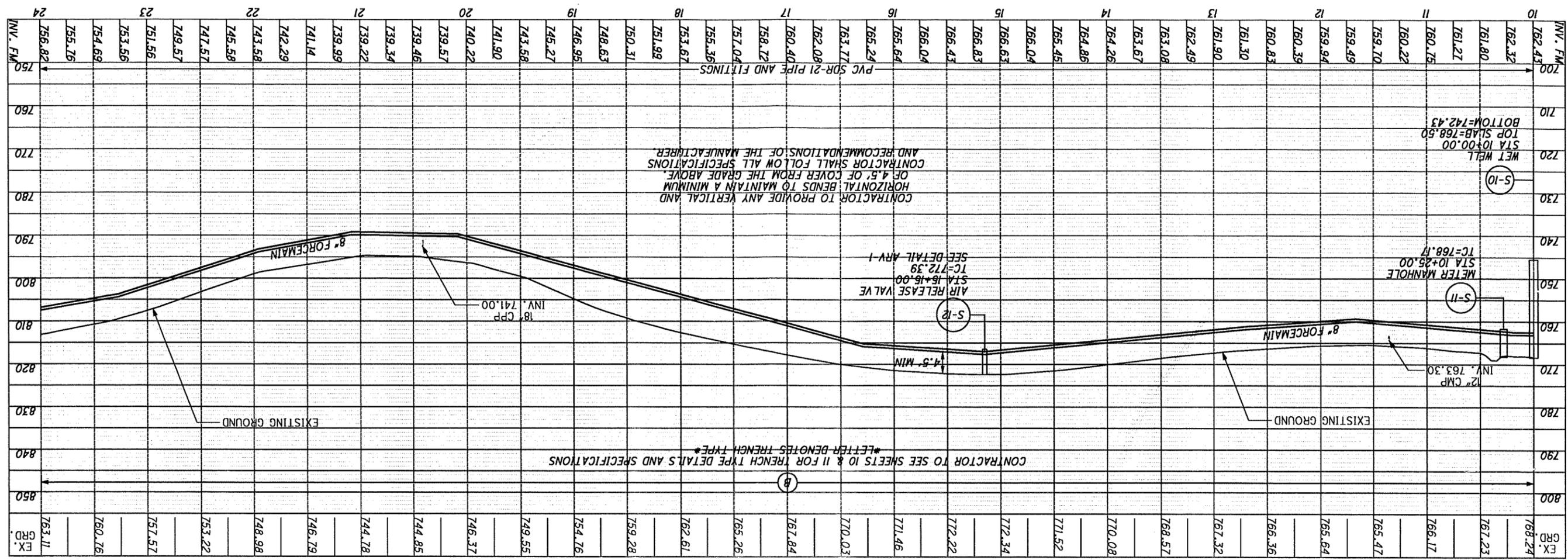


CALCULATED P
 CTM
 CHECKED
 KBS
 25
 HORIZONTAL
 SCALE IN FEET
 50
 100



CONTRACTOR SHALL USE THE METHOD OF JACKING AND BORING TO INSTALL CASING PIPE
 FROM STATION 45+18 TO STATION 45+58, FROM STATION 46+17 TO STATION 46+57 AND
 FROM STATION 46+98 TO STATION 47+44. CASING PIPE SHALL BE DESIGNED FOR END
 LOADING. REFER TO THE GENERAL NOTES AND DETAILS FOR SPECIFICATIONS.

CONTRACTOR TO SEE SHEETS 10 & 11 FOR TRENCH TYPE DETAILS AND SPECIFICATIONS
 LETTER DENOTES TRENCH TYPE



CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 84+50 AND STA 120+24.12 TO STA 120+24.12. CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50. FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.

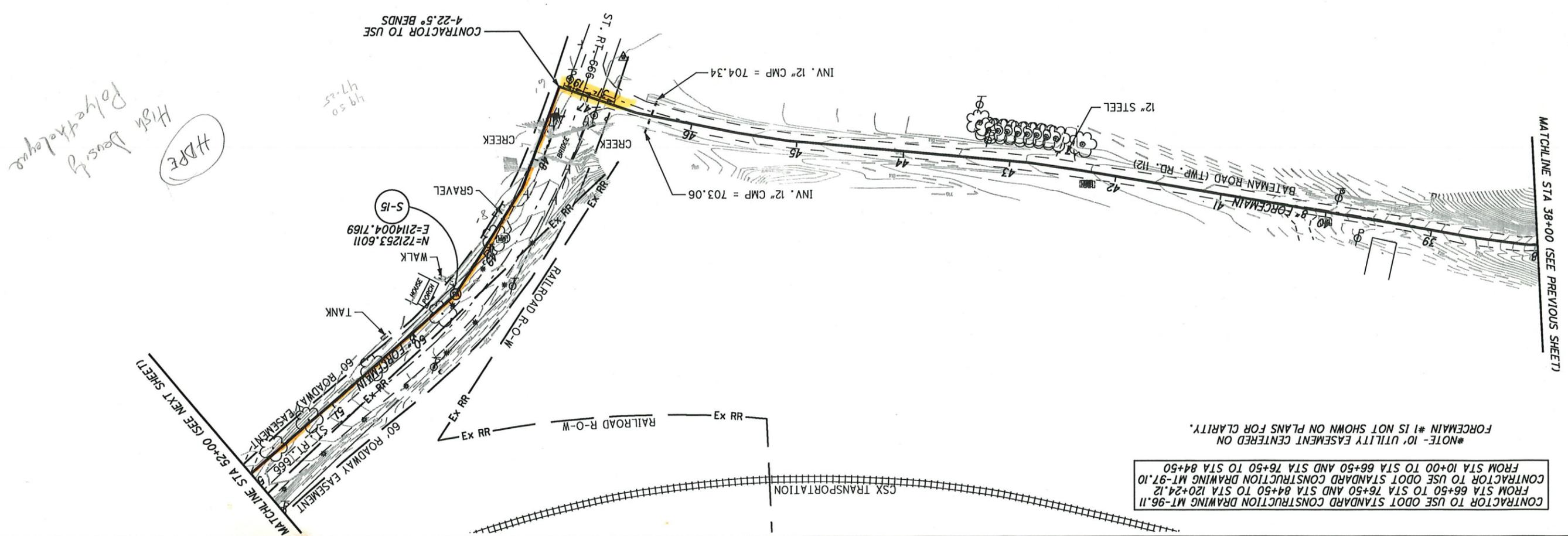
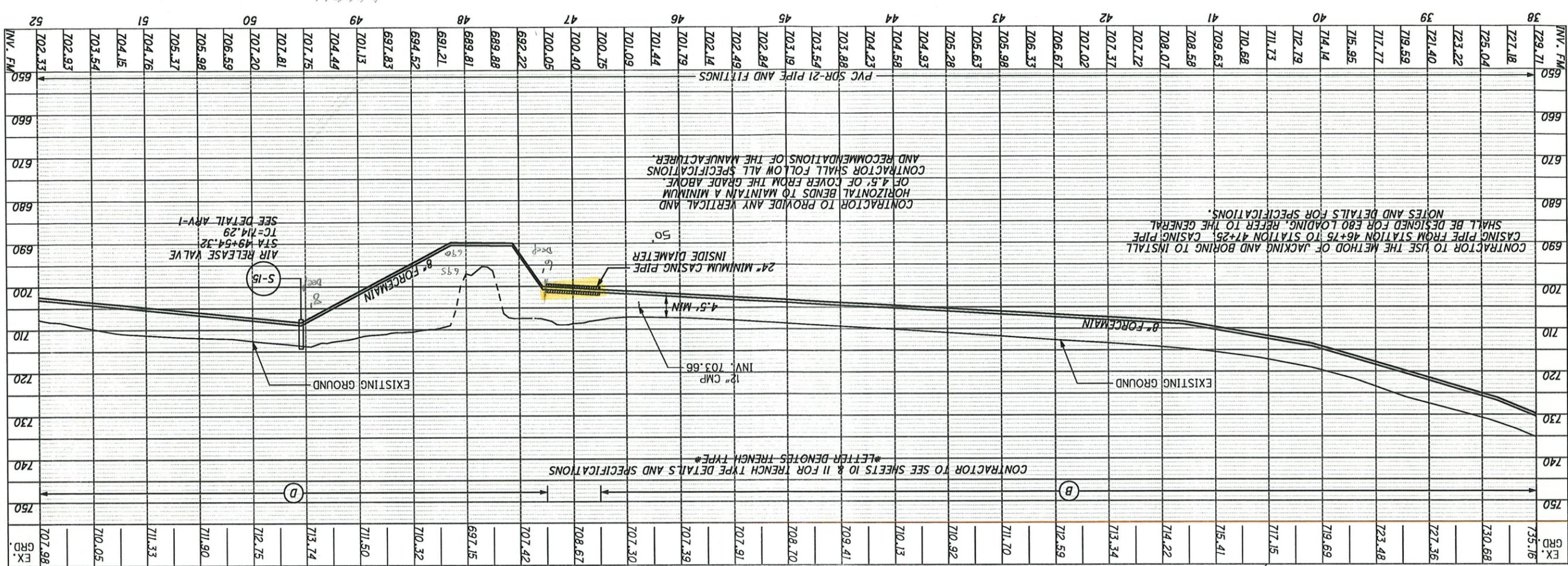
ZANESVILLE-MUSKINGUM COUNTY
PORT AUTHORITY
O.R. 1142, PG. 426
TRACT 4- 336.88 AC.

ZANESVILLE-MUSKINGUM COUNTY
PORT AUTHORITY
O.R. 1142, PG. 426
TRACT 4- 336.88 AC.

CSX TRANSPORTATION

BEGIN NEXT SHEET (SEE PREVIOUS SHEETS)

MATCHLINE STA 24+00 (SEE NEXT SHEET)



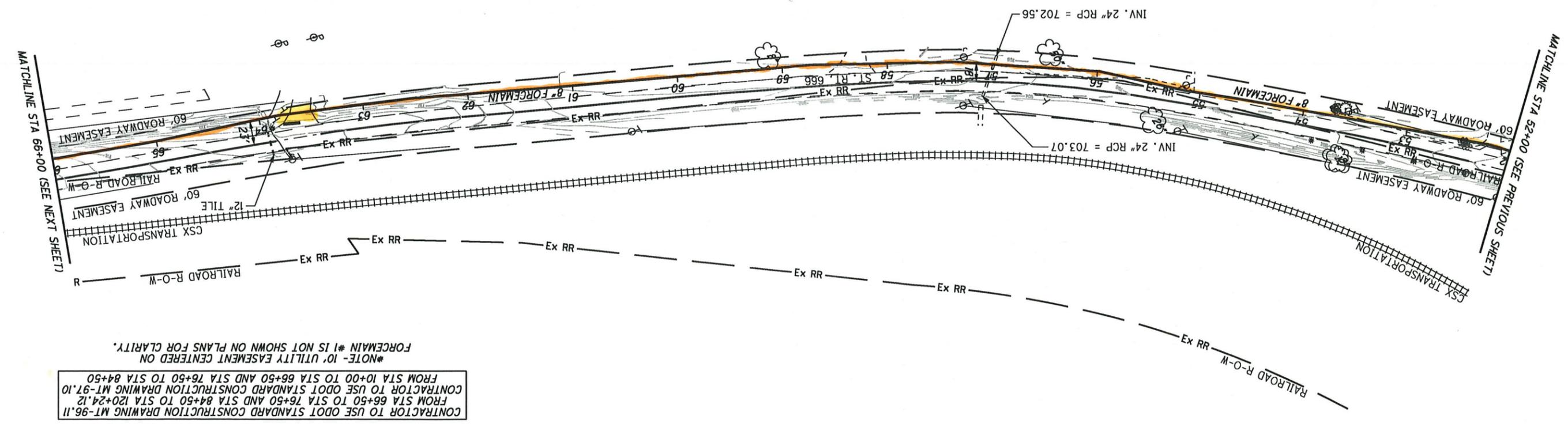
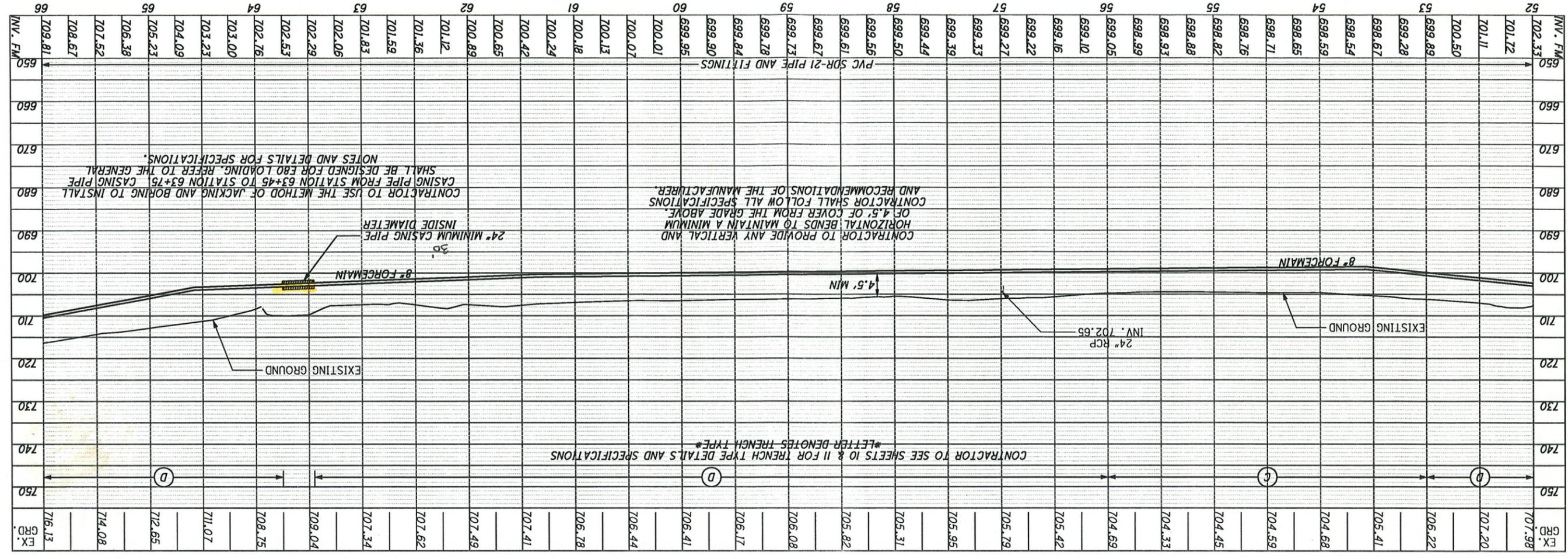
CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 76+50 AND STA 84+50 TO STA 120+24.12 FROM STA 66+50 TO STA 76+50 AND STA 84+50 TO STA 120+24.12 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50

*NOTE - 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.

Handwritten notes:
HDP
Hsn Densy
Polyethylene
47-25

MATCHLINE STA 38+00 (SEE PREVIOUS SHEET)

MATCHLINE STA 52+00 (SEE NEXT SHEET)



CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 76+50 AND STA 84+50 TO STA 120+24.12
 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50
 *NOTE- 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.

CONTRACTOR TO PROVIDE ANY VERTICAL AND HORIZONTAL BENDS TO MAINTAIN A MINIMUM OF 4.5' OF COVER FROM THE GRADE ABOVE. CONTRACTOR SHALL FOLLOW ALL SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER.
 CONTRACTOR TO USE THE METHOD OF JACKING AND BORING TO INSTALL CASING PIPE FROM STATION 63+45 TO STATION 63+75. CASING PIPE SHALL BE DESIGNED FOR E80 LOADING. REFER TO THE GENERAL NOTES AND DETAILS FOR SPECIFICATIONS.

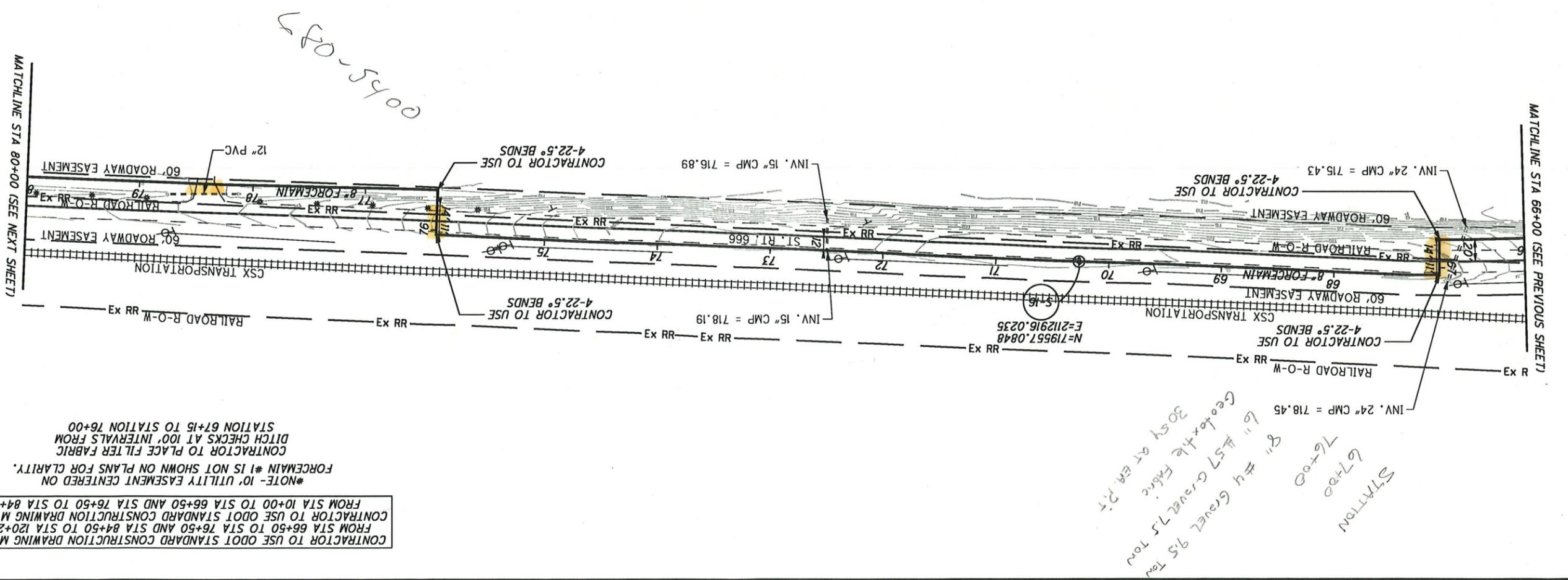
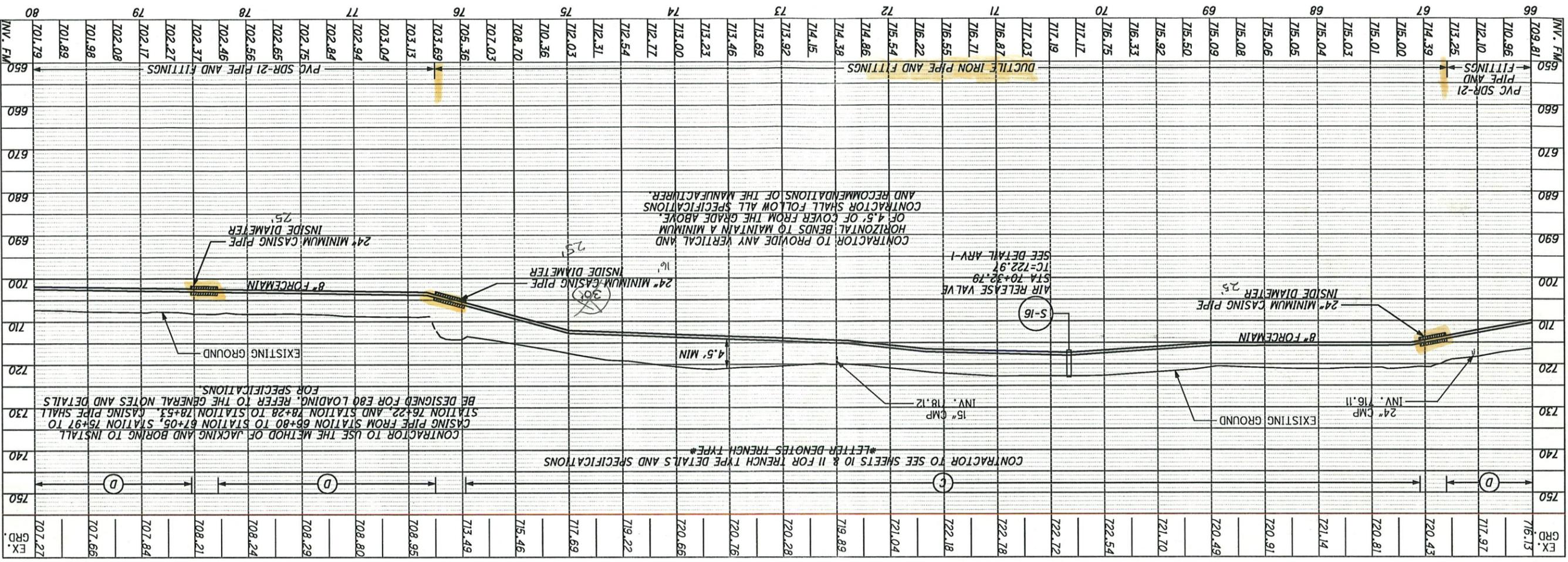
CONTRACTOR TO SEE SHEETS 10 & 11 FOR TRENCH TYPE DETAILS AND SPECIFICATIONS *LETTER DENOTES TRENCH TYPE*

24" MINIMUM CASING PIPE INSIDE DIAMETER

24" RCP INV. 702.65

MATCHLINE STA 66+00 (SEE NEXT SHEET)

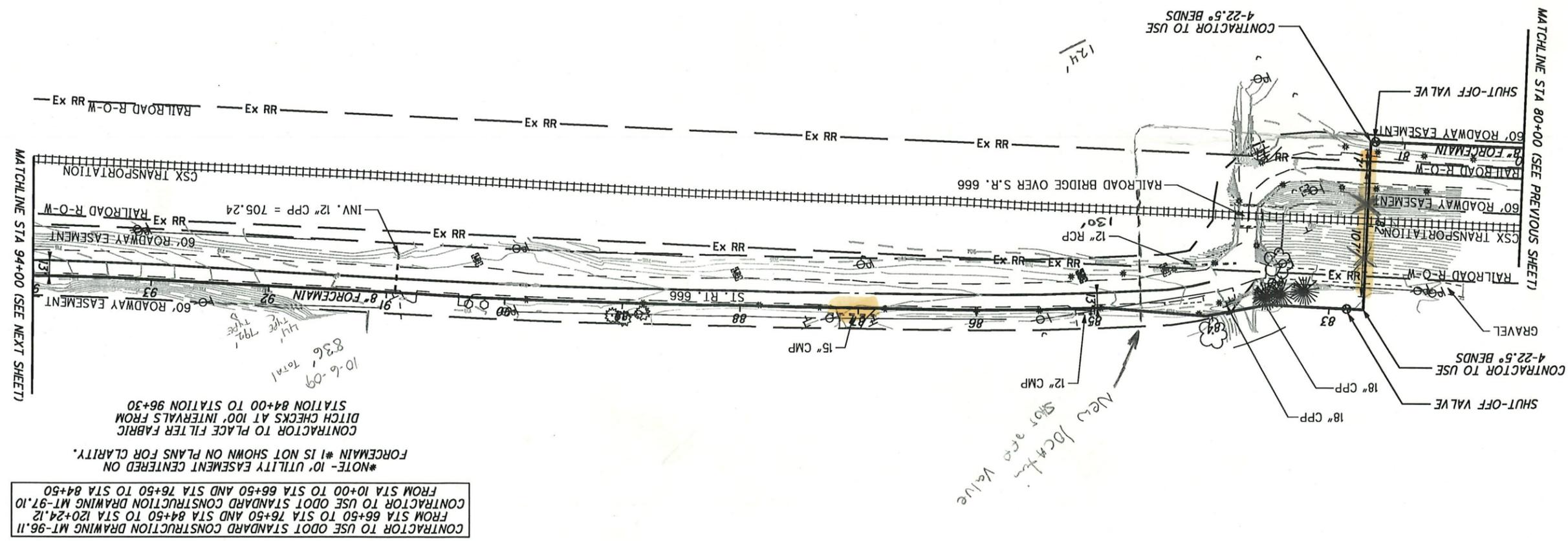
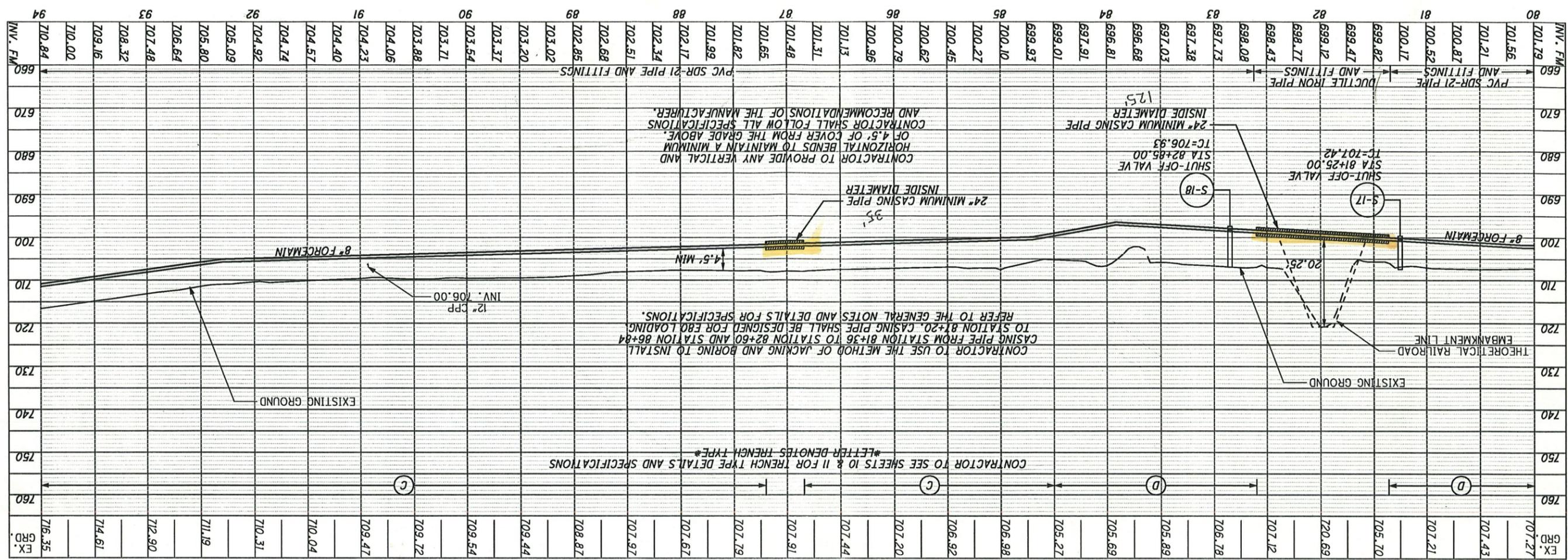
MATCHLINE STA 52+00 (SEE PREVIOUS SHEET)



CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 76+50 AND STA 84+50 TO STA 120+24.12 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50

*NOTE- 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY. CONTRACTOR TO PLACE FILTER FABRIC DITCH CHECKS AT 100' INTERVALS FROM STATION 67+15 TO STATION 76+00

STATION 67+00
67+00
67+00
8" #4 Gravel 9.5 Ton
6" #57 Gravel 7.5 Ton
Geo-textile Fabric
30' at ea. pt



CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 76+50 AND STA 84+50 TO STA 120+24.12 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50

*NOTE - 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.

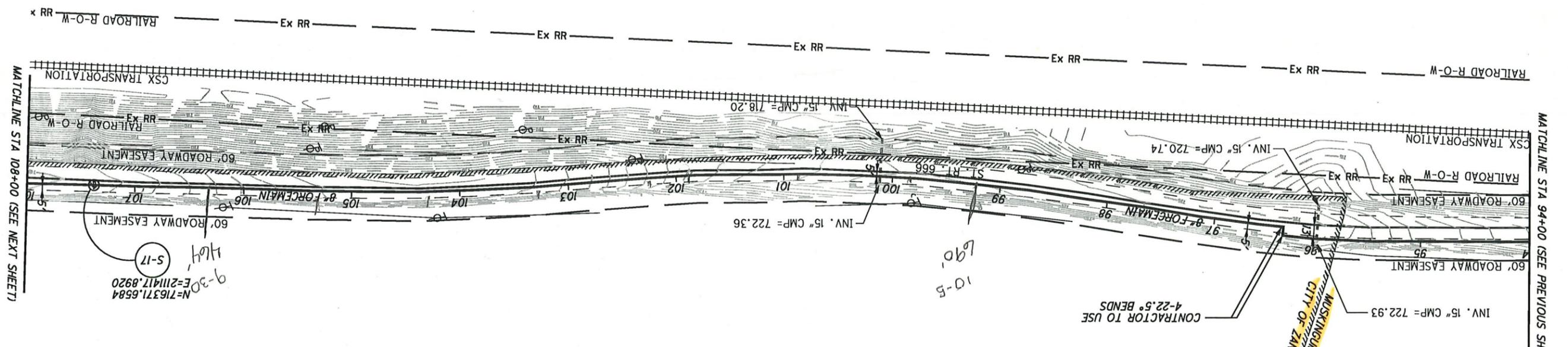
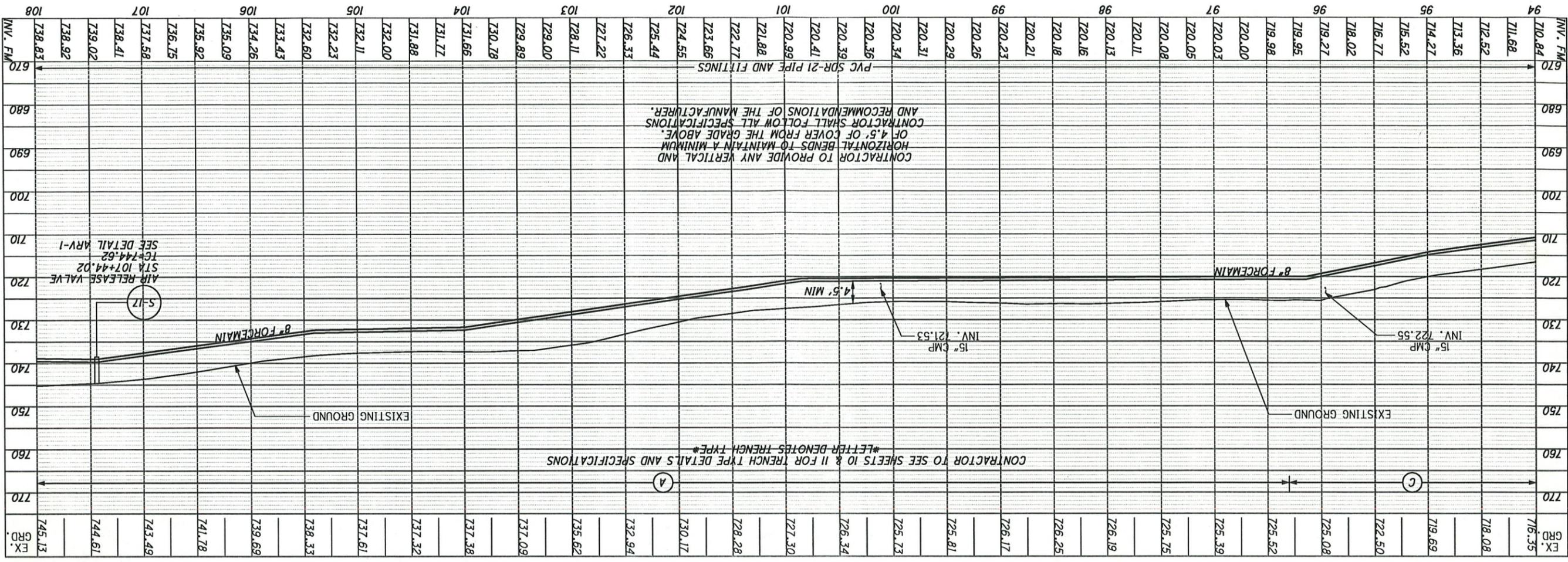
CONTRACTOR TO PLACE FILTER FABRIC DITCH CHECKS AT 100' INTERVALS FROM STATION 84+00 TO STATION 96+30

10'-6"-09
836' total
44' type 194
44' type 194
93'

MATCHLINE STA 94+00 (SEE NEXT SHEET)

MATCHLINE STA 80+00 (SEE PREVIOUS SHEET)





CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 120+24.12 AND STA 84+50 TO STA 120+24.12
 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50

*NOTE: 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.
 CONTRACTOR TO PLACE FILTER FABRIC DITCH CHECKS AT 100' INTERVALS FROM STATION 84+00 TO STATION 96+30

CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 120+24.12 AND STA 84+50 TO STA 120+24.12
 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50

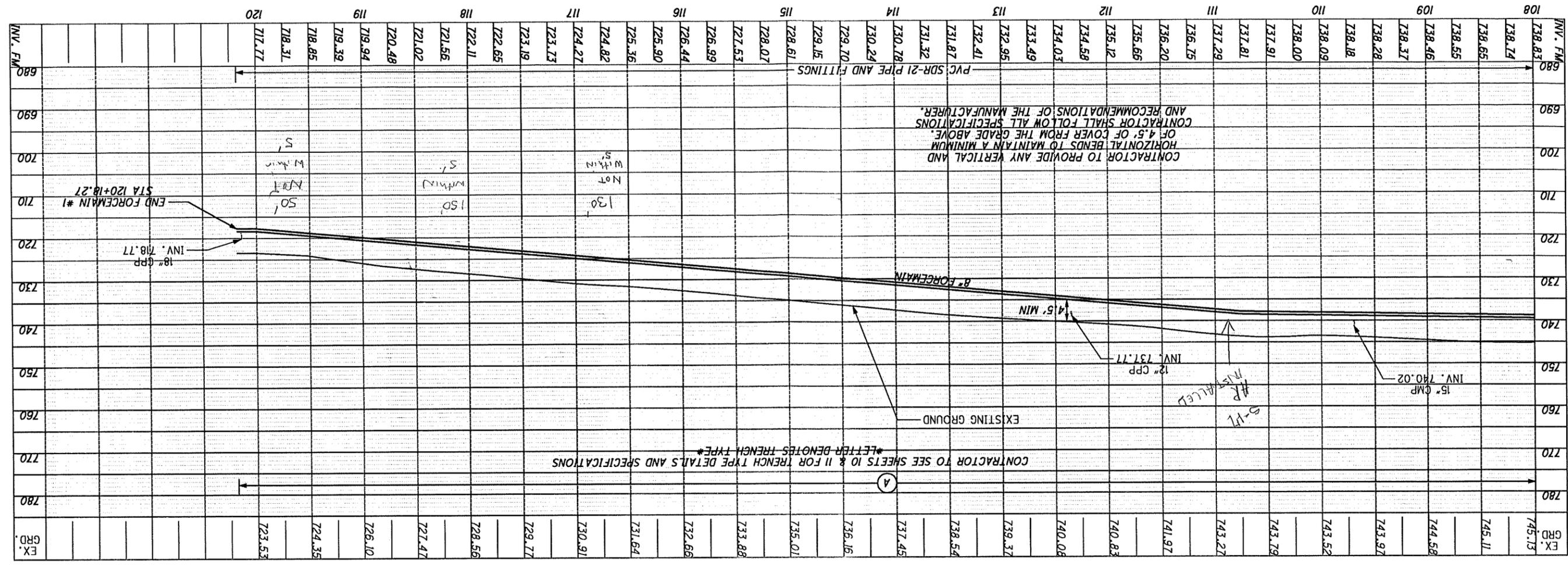
EASTPOINTE BUSINESS PARK
OFFSITE UTILITIES

FORCEMAIN 1- PLAN AND PROFILE
STA 94+00 TO STA 108+00

CALCULATED BY KEH
 CHECKED BY KBS

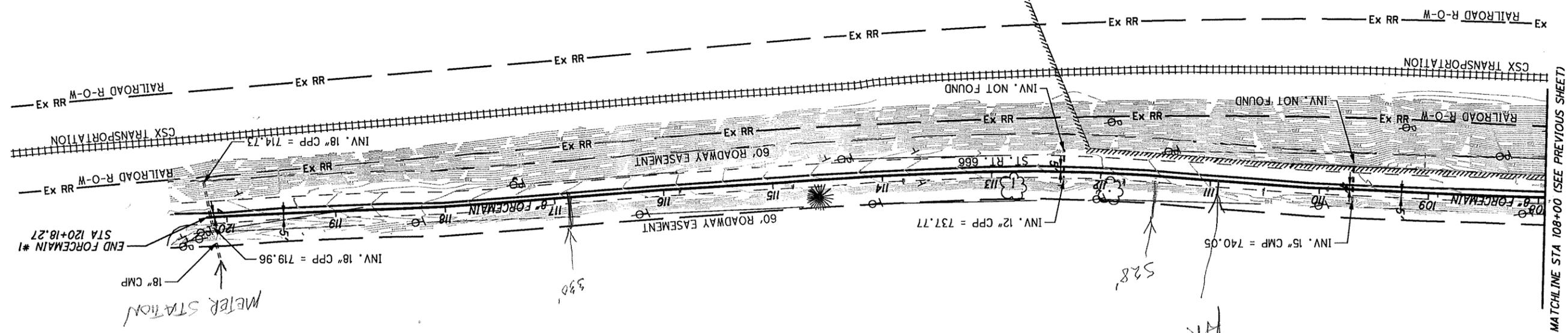
SCALE: 1" = 25' HORIZONTAL
 1" = 5' VERTICAL

28
47



CONTRACTOR TO PROVIDE ANY VERTICAL AND HORIZONTAL BENDS TO MAINTAIN A MINIMUM OF 4.5' OF COVER FROM THE GRADE ABOVE. CONTRACTOR SHALL FOLLOW ALL SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER.

CONTRACTOR TO SEE SHEETS 10 & 11 FOR TRENCH TYPE DETAILS AND SPECIFICATIONS *LETTER DENOTES TRENCH TYPE*



CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-96.11 FROM STA 66+50 TO STA 84+50 TO STA 120+24.12
 CONTRACTOR TO USE ODOT STANDARD CONSTRUCTION DRAWING MT-97.10 FROM STA 10+00 TO STA 66+50 AND STA 76+50 TO STA 84+50
 *NOTE - 10' UTILITY EASEMENT CENTERED ON FORCEMAIN #1 IS NOT SHOWN ON PLANS FOR CLARITY.
 STA 110+97.5
 S-17

MATCHLINE STA 108+00 (SEE PREVIOUS SHEET)

Day 1 - 330'

SELF-PRIMING LIFT STATION TO WATER TREATMENT PLANT

(SEE LIFT STATION SPEC. BOOK AND DETAILS IN PLANS
FOR FURTHER INFORMATION)

NOTE- ALL LIFT STATION EQUIPMENT SHALL BE PROVIDED BY GORMAN-
RUPP PER MUSKINGUM COUNTY SEWER DEPT. REQUIREMENTS

MODULAR ENCLOSURE: SIZE: 10' X 16' COLOR: TAN

SECONDARY POWER: BASE MOUNTED AUTO START (NATURAL GAS)

ENGINEERING DATA

2 EACH RATED:
400 GPM @ 36.2' TDH
20.0 FT REPRIME LIFT
22.5 FT MAX STATIC LIFT
23.1 FT TDSL (4" SUCTON PIPE)
WETWELL SIZE: 8 FT DIAMETER

MANUFACTURER: GORMAN-RUPP

PUMP MODEL: T4A3S-B @ 1550 RPM

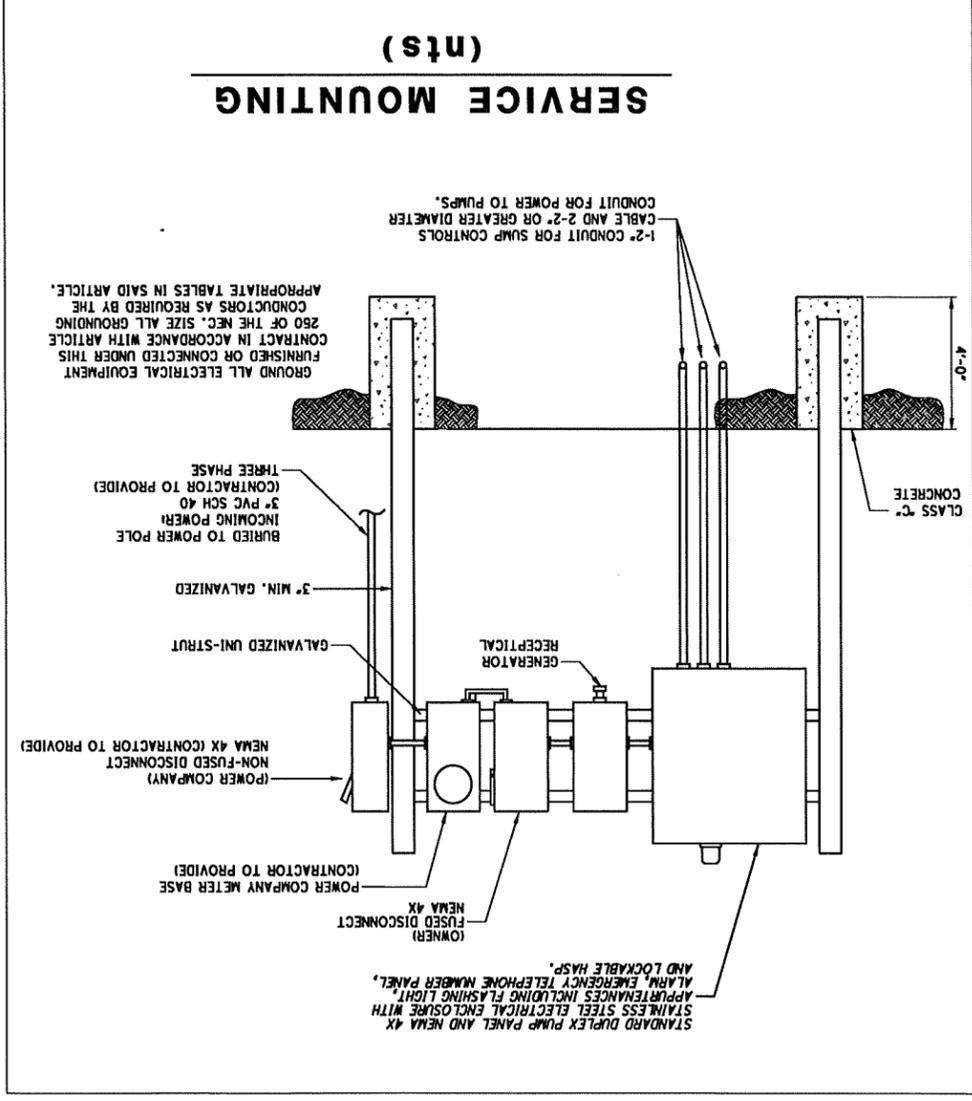
MOTOR: 15 HP, 1750 RPM, MIN. SOLID SIZE 3"

PIPING: 6" SUCTON LINES, 6" DISCHARGE LINES, 6" COMMON
HEADER

ELEVATIONS: C/L PUMP SUCTON: 771.00 +/-
STATION PAD: 768.50
8" F/M EXITING W/W: 762.43
INFLUENT INVERT: 752.43
HIGH WATER ALARM: 751.50
LAG PUMP ON: 751.50
LEAD PUMP ON: 751.00
PUMP(S) OFF: 748.50
LOW WATER ALARM: 747.50
WET WELL BOTTOM: 745.50

ELECTRICAL: 3 PHASE, 60 CYCLE (HERTZ), 480 VOLTS

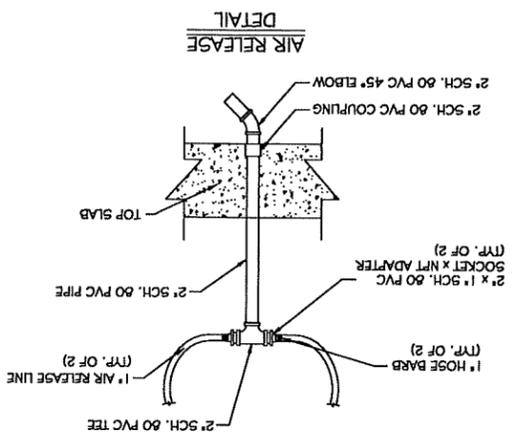
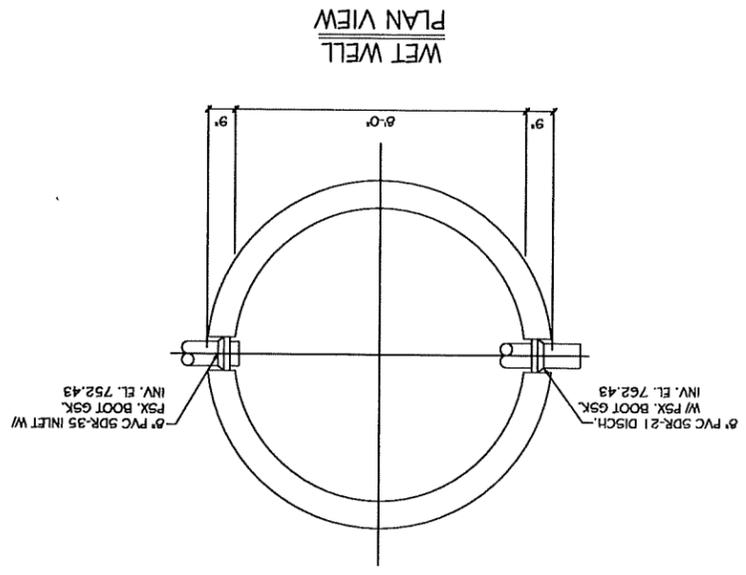
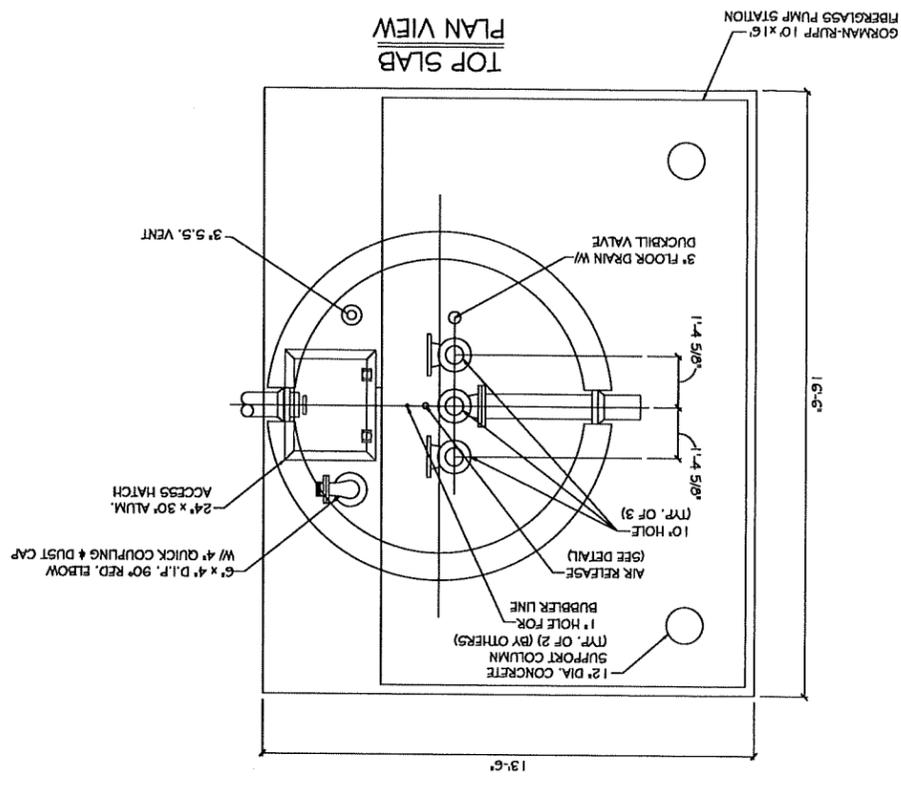
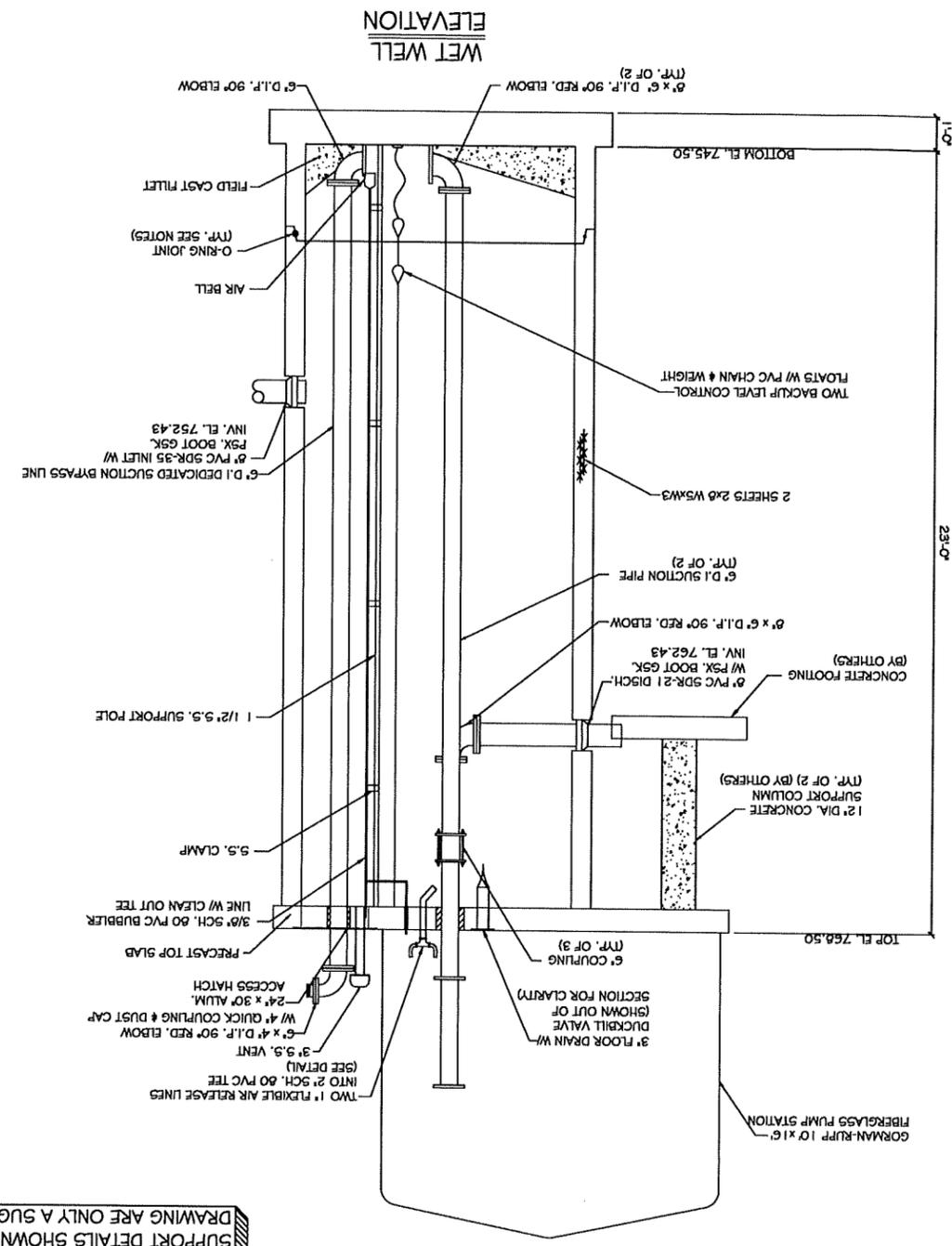
SERVICE MOUNTING SHALL BE IN ACCORDANCE WITH
GURNSEY MUSKINGUM ELECTRIC COOPERATIVE STANDARDS



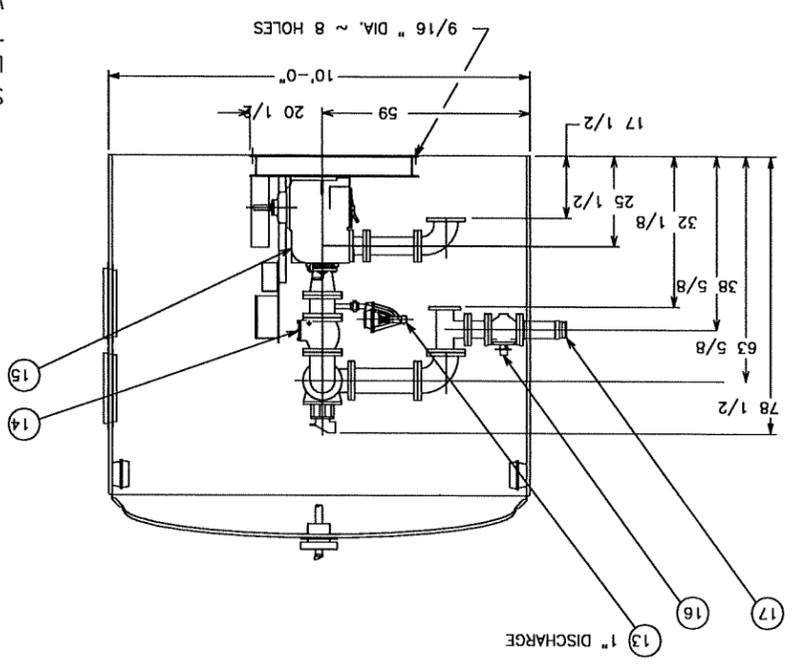
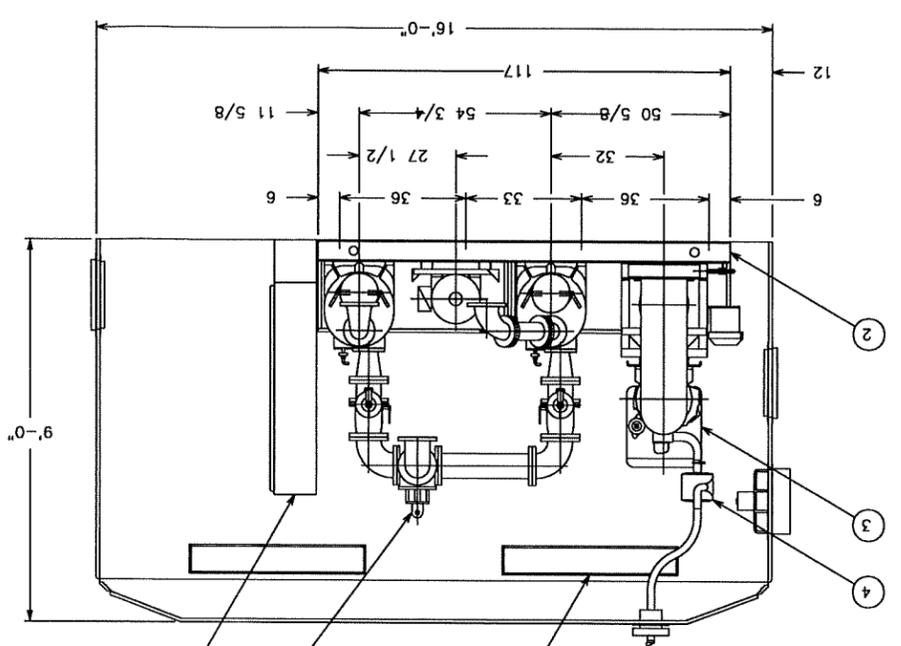
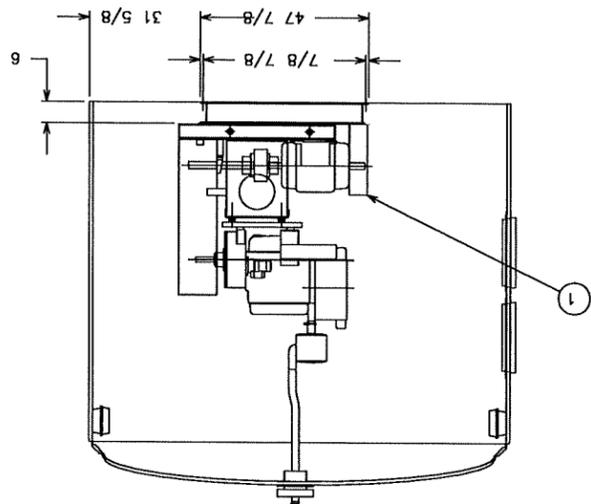
- GENERAL NOTES
- 1) BARREL SECTIONS PER ASTM C-478.
 - 2) O-RING JOINTS PER ASTM C-443.
 - 3) CONCRETE: 5,000 PSI @ 28 DAYS W/ 6% AIR +/- 1%
 - 4) STEEL: GRADE 60
 - 5) AGGREGATE BACKFILL IS RECOMMENDED (#57 LIMESTONE)
 - 6) DYNAMIC COMPACTION COULD CAUSE DAMAGE INCLUDING LEAKS

LEVEL CONTROL SCHEDULE:
 HIGH WATER ALARM: 751.50
 LAG PUMP ON: 751.50
 LEAD PUMP ON: 751.00
 PUMPS OFF: 748.50
 LOW WATER ALARM: 747.50

DESIGN AND PROVISION OF SUPPORT
 SUPPORT DETAILS SHOWN ON THIS
 DRAWING ARE ONLY A SUGGESTION.

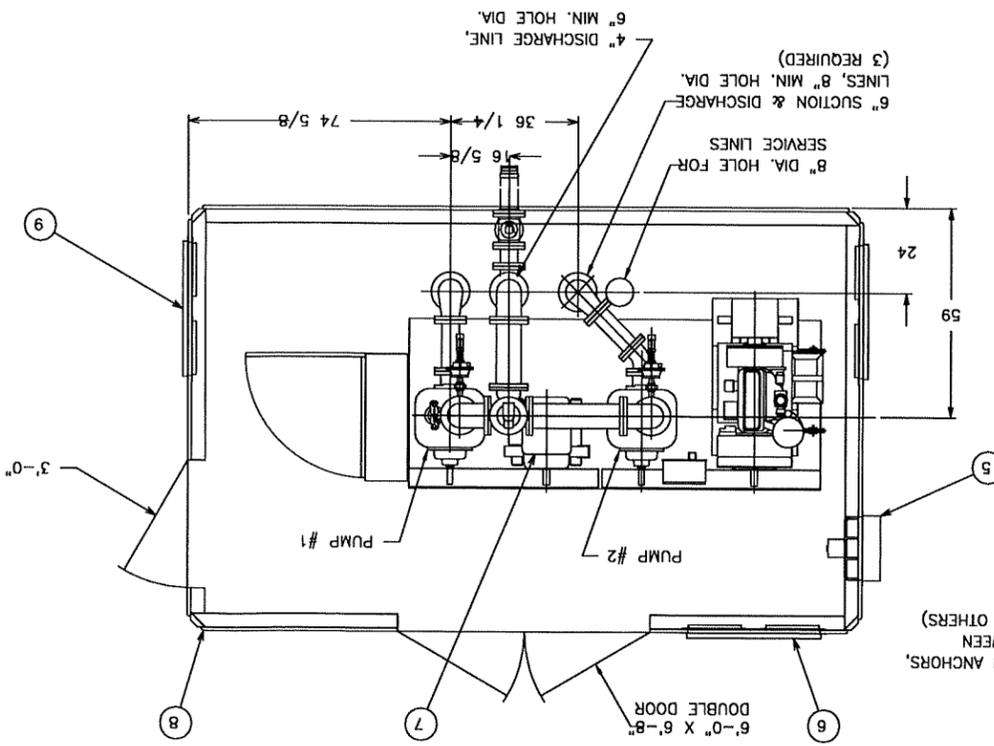
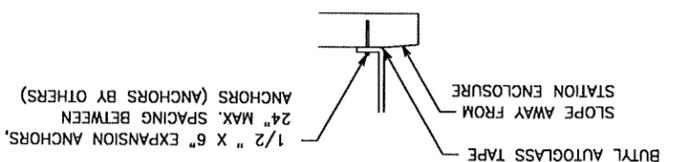


(NTS) NOT TO SCALE



NOTE:
 SEAL ALL OPENINGS THRU CONCRETE PAD INTO STATION ENCLOSURE GAS TIGHT. GAS TIGHT FLOOR DRAIN RECOMMENDED FOR PUMP MAINTENANCE. CONTROL PANEL ATTACHED TO BASE FOR SHIPPING ONLY, FASTENERS TO BE REMOVED AFTER INSTALLATION. PANEL TO BE ANCHORED TO CONCRETE PAD.

MOUNTING DETAIL
 SCALE: NONE



(NTS) NOT TO SCALE

STANDBY PUMP UNIT
 LEFT HAND DRIVE UNIT
 T4A-B, 6" X 6" X 6"
 WITH 10' X 16' FIBERGLASS
 ENCLOSURE

ITEM	DESCRIPTION	MATERIAL & SIZE
1	BELT GUARD ASSY	STEEL
2	PUMP & MOTOR BASE ASSY	STEEL
3	ENGINE (NISSAN)	LIQUID COOLED
4	EXHAUST SILENCER	STAINLESS STEEL
5	EXHAUST FAN ASSY	1600 CFM
6	EXHAUST VENT ASSY	ALUMINUM (4 SHUTTERS)
7	MOTOR	CAST IRON
8	STATION ENCLOSURE	FIBERGLASS 10' X 16'
9	INTAKE VENT ASSY	ALUMINUM (4 SHUTTERS)
10	FLUORESCENT LIGHT FIXTURE	80 WATT FIXTURE
11	DISCHARGE PLUG VALVE	CAST IRON 6" 3-WAY
12	CONTROL PANEL	STEEL
13	AIR RELEASE VALVE	CAST IRON 1" (SHIPPED LOOSE)
14	DISCHARGE CHECK VALVE	CAST IRON 6"
15	PUMP	CAST IRON T4A-B
16	BY-PASS PLUG VALVE	CAST IRON 4"
17	OPW ADAPTER	ALUMINUM 4"

THE GORMAN-RUPP CO. ST. THOMAS, ONTARIO	
NAME: BASE MOUNTED DUPLEX WITH SIMPLEX STANDBY, T4A-B PUMPS	
DWN. BM	CHK. BM
DATE: 1-12-09	APP. BM
SERIAL NO.: 60-2233	

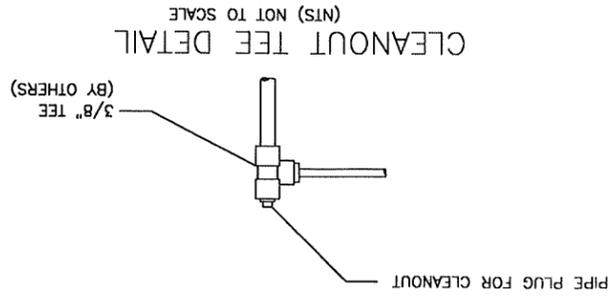
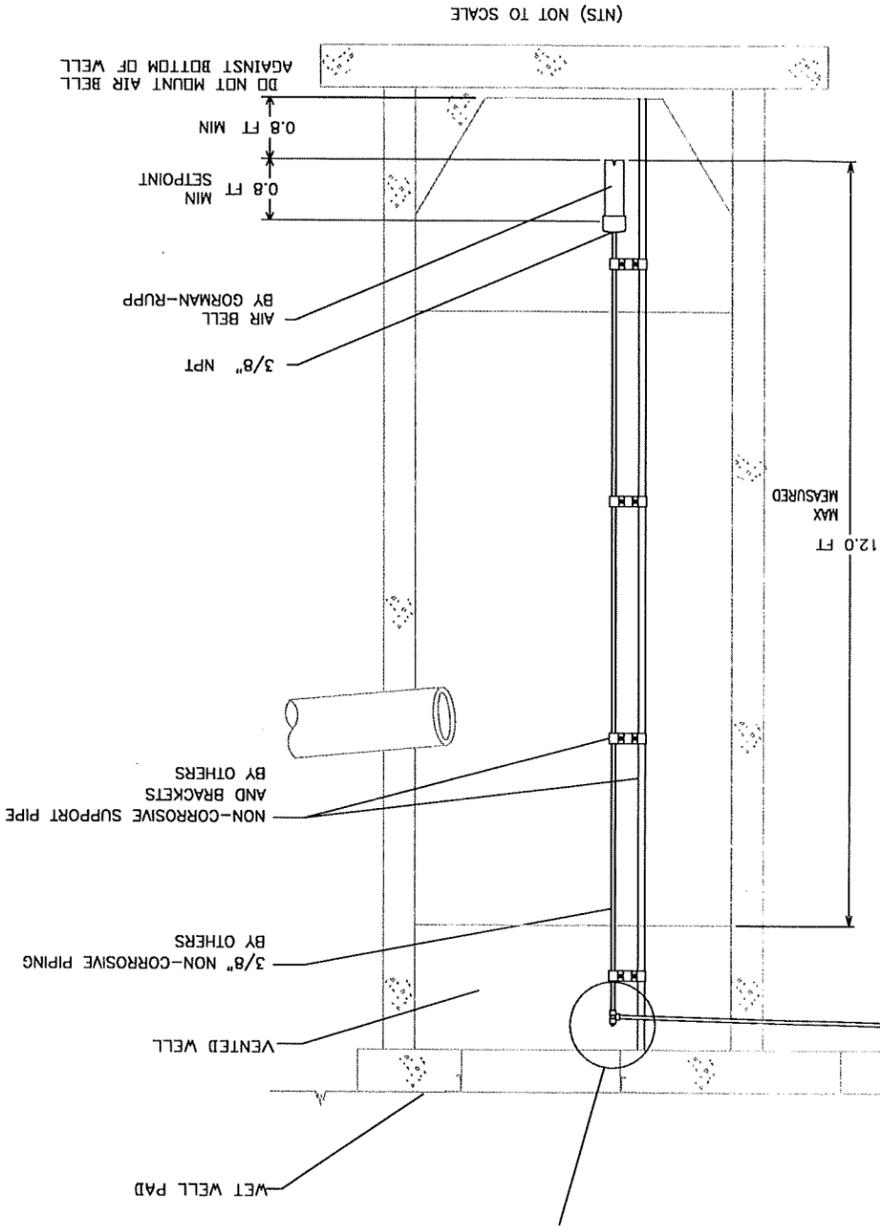
602233.S01.DGN

EASTPOINTE BUSINESS PARK
 OFFSITE UTILITIES

LIFT STATION DETAILS

SERIAL NO.	GW-009228	DRN.	GH
DATE	7/9/98	CHK.	APR.
TYPICAL AIR BUBBLER LINE INSTALLATION			
MAKE			
THE GORMAN-RUPP CO. ST. THOMAS, ONTARIO		GORMAN-RUPP	

FILE: W009228.S01



- NOTES:
1. ALL WET WELL HARDWARE, BRACKETS AND SUPPORTS TO BE NON-CORROSIVE.
 2. AIR BUBBLER LINE MUST BE AIR TIGHT.

REVISIONS	DATE	BY

CALCULATED
CTM
CHECKED
KBS

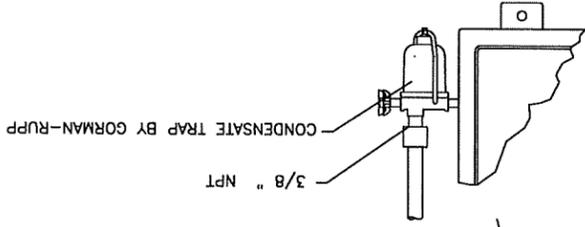
PRIMARY SYSTEM

CAUTION:
DO NOT INSTALL LINE WITH LOW POINTS WHERE MOISTURE MAY ACCUMULATE

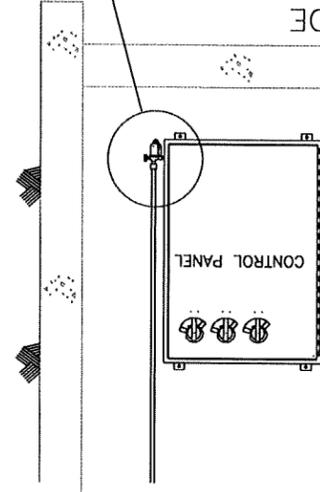
TO ALLOW CONDENSATE DRAINAGE
SLOPE LINE TOWARD WET WELL

3/16" TO 1/4" ID
150' MAX LENGTH
OF RUN TO WET WELL
FITTINGS AND LINE BY OTHERS

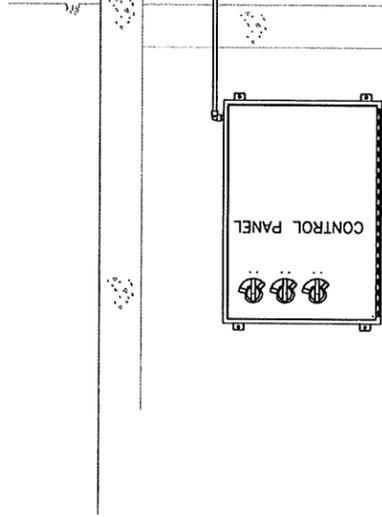
CONDENSATE TRAP DETAIL

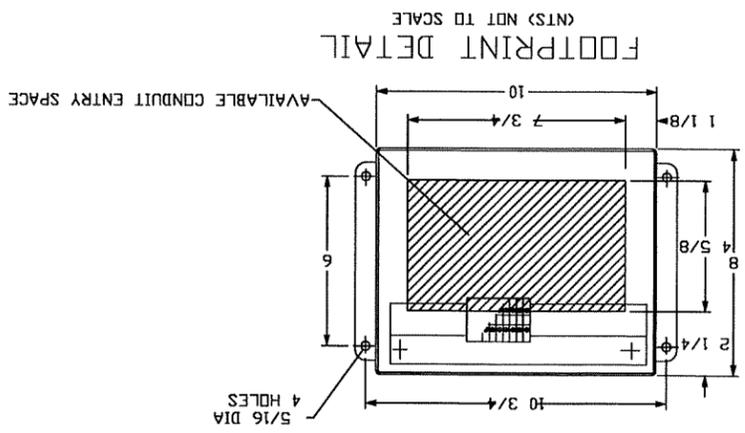
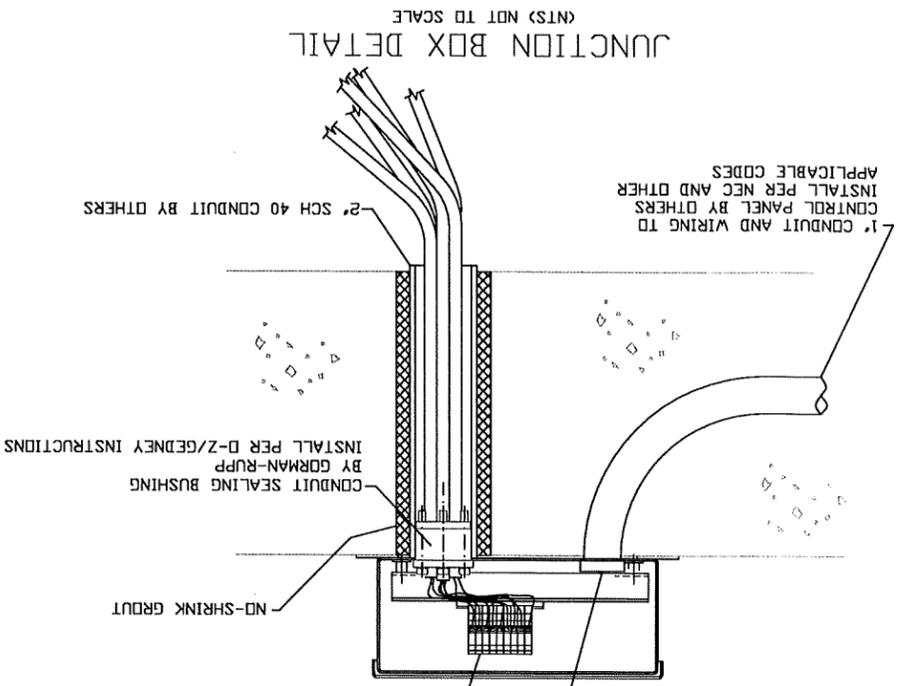
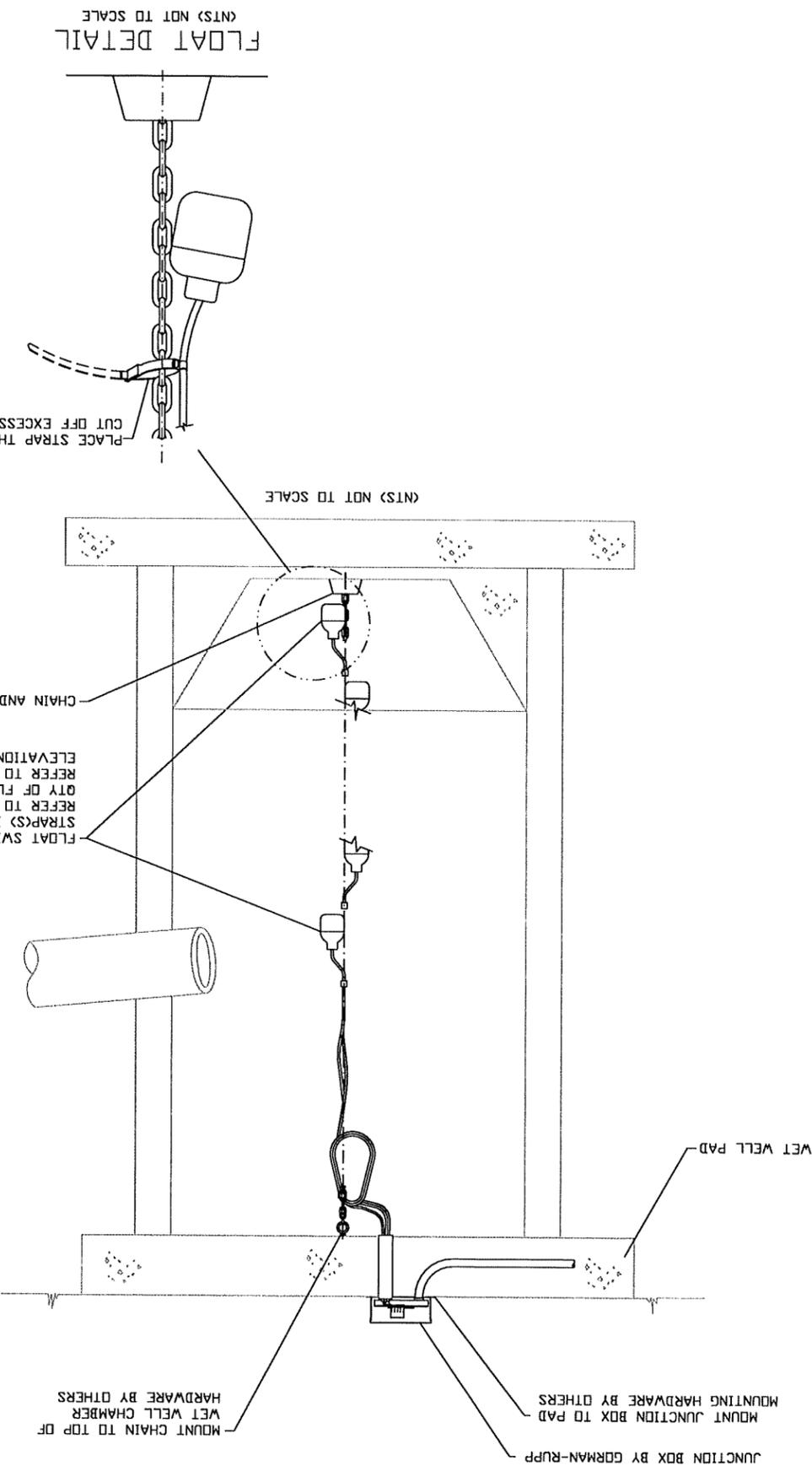


TYPICAL BELOW GRADE INSTALLATION



TYPICAL ABOVE GRADE INSTALLATION





NOTES:
 1. ALL WET WELL HARDWARE, BRACKETS AND SUPPORTS TO BE CORROSION RESISTANT.

WARNING

JUNCTION BOX AND CONNECTING CONDUIT TO BE USED FOR FLOAT CABLES ONLY.
 INSTALLATION OF CONDUCTORS FOR DIFFERENT SYSTEMS WILL IMPAIR INTRINSIC SAFETY.
 INSTALL PER NEC 504 AND OTHER APPLICABLE CODES.

FILE: W00882.s01

THE GORMAN-RUPP CO.
 ST. THOMAS, ONTARIO

GORMAN-RUPP

NAME: WET WELL JUNCTION BOX INSTALLATION
 FLOOD SWITCH CONTROL

DRN. GH
 DATE: 2/3/98

SERIAL NO. W-00882

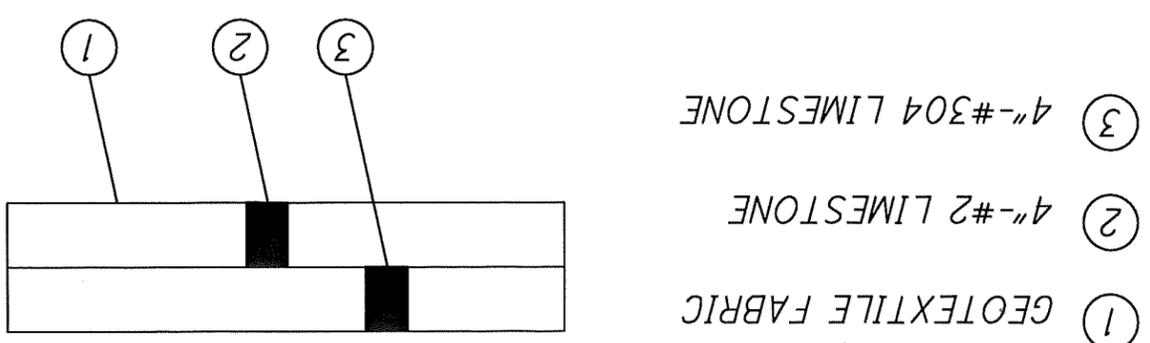
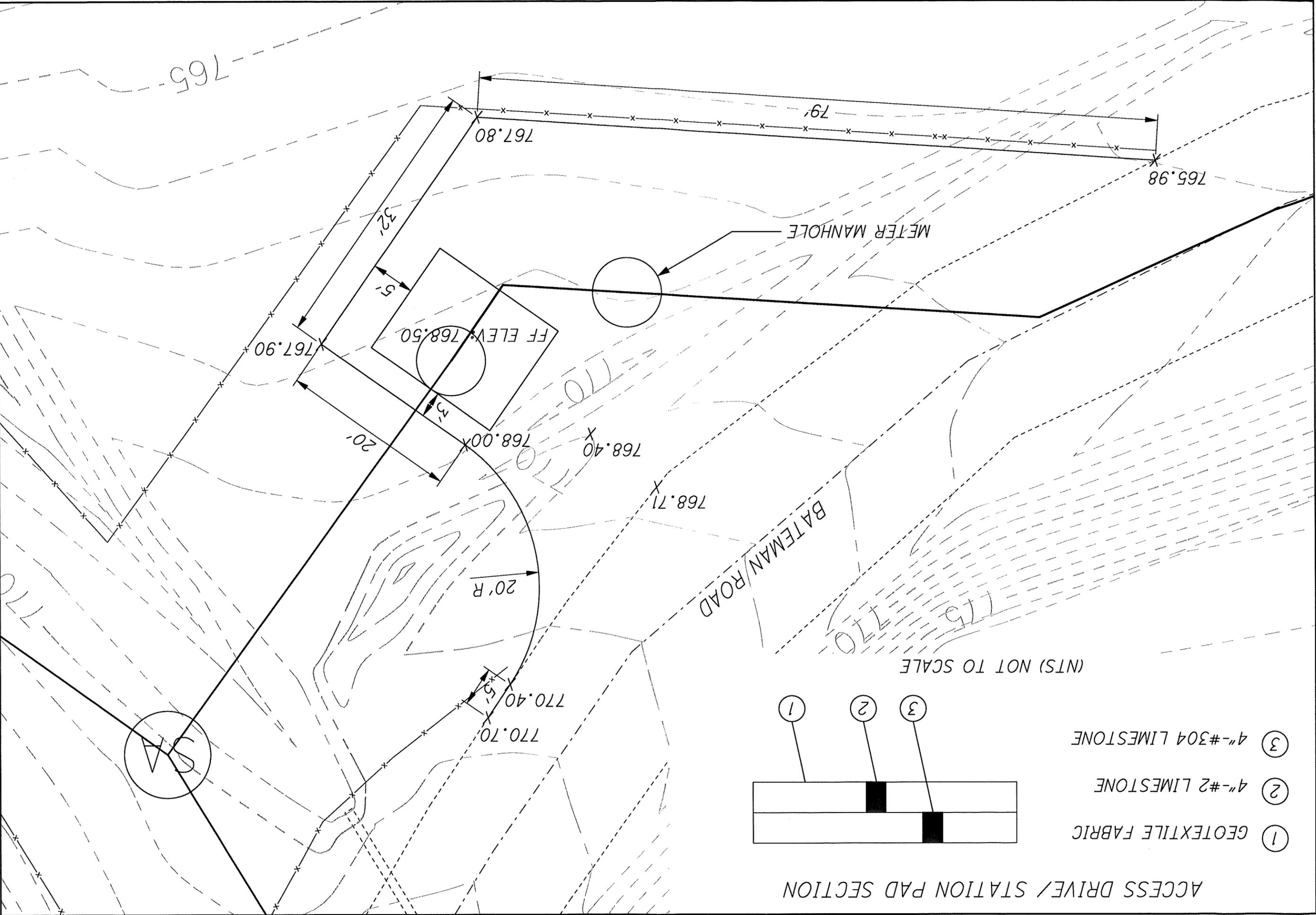
REV	DATE	BY	CHK	REVISIONS

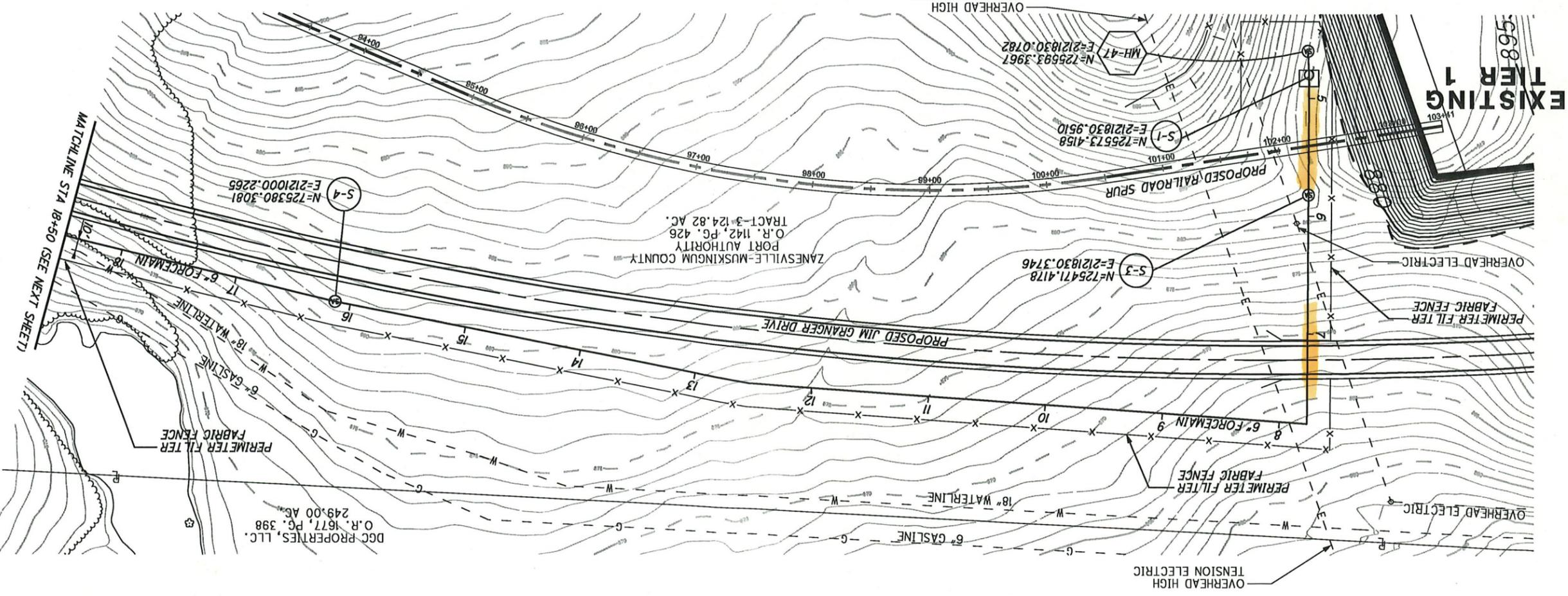
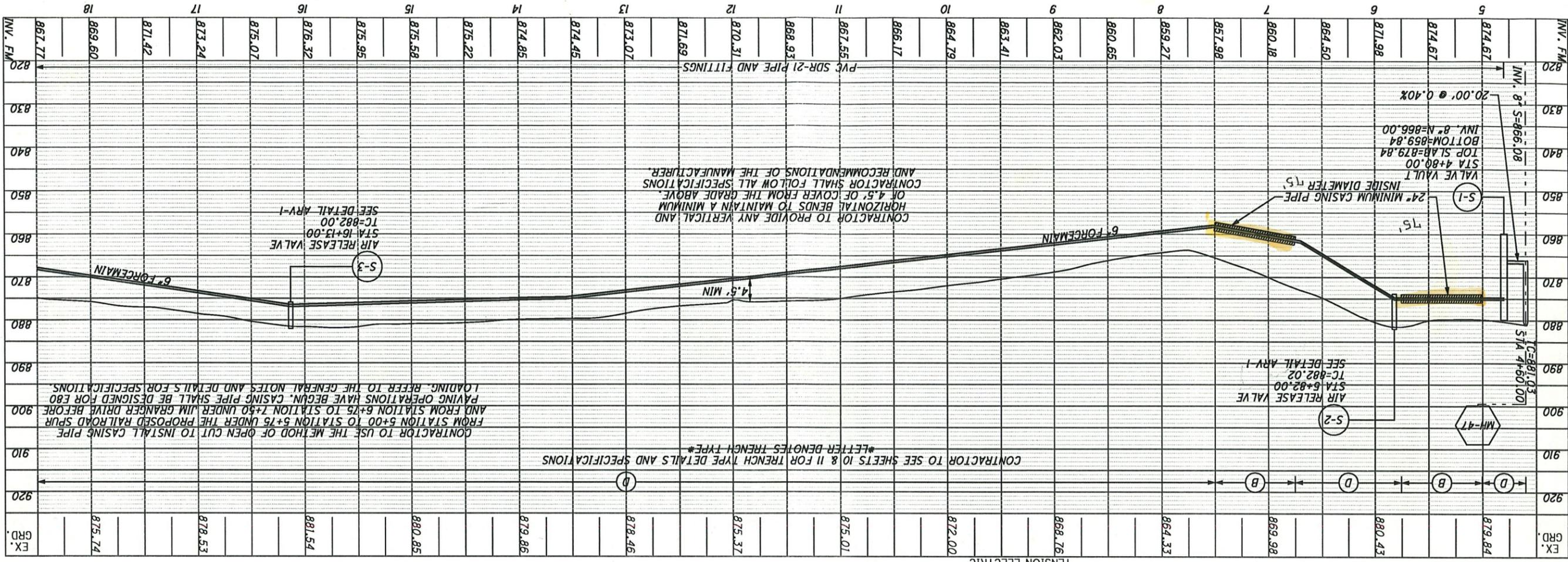
EASTPOINTE BUSINESS PARK
OFFSITE UTILITIES

LIFT STATION DETAILS

34
 47

CALCULATED
 CTM
 CHECKED
 KBS





37
47

EASTPOSITE BUSINESS PARK
OFFSITE UTILITIES

FORCEMAIN 2- PLAN AND PROFILE
STA 4+60 TO STA 18+50

CALCULATED BY
CTM
CHECKED
KBS

25
HORIZONTAL
SCALE IN FEET

CONTRACTOR TO USE THE METHOD OF OPEN CUT TO INSTALL CASING PIPE FROM STATION 5+00 TO STATION 7+75 UNDER THE PROPOSED RAILROAD SPUR AND FROM STATION 7+75 TO STATION 18+50 UNDER JIM GRANGER DRIVE BEFORE PAVING OPERATIONS HAVE BEGUN. CASING PIPE SHALL BE DESIGNED FOR 800 LBS. PER LINEAL FOOT. REFER TO THE GENERAL NOTES AND DETAILS FOR SPECIFICATIONS.

CONTRACTOR TO PROVIDE ANY VERTICAL AND HORIZONTAL BENDS TO MAINTAIN A MINIMUM OF 4.5' OF COVER FROM THE GRADE ABOVE. CONTRACTOR SHALL FOLLOW ALL SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER.

PVC SDR-21 PIPE AND FITTINGS

AIR RELEASE VALVE
STA 16+13.00
TC=882.00
SEE DETAIL ARV-1

AIR RELEASE VALVE
STA 6+82.00
TC=882.02
SEE DETAIL ARV-1

CONTRACTOR TO SEE SHEETS 10 & 11 FOR TRENCH TYPE DETAILS AND SPECIFICATIONS
LETTER BENDS TRENCH TYPE

CONTRACTOR TO SEE SHEETS 10 & 11 FOR TRENCH TYPE DETAILS AND SPECIFICATIONS
LETTER BENDS TRENCH TYPE

CONTRACTOR TO PROVIDE ANY VERTICAL AND HORIZONTAL BENDS TO MAINTAIN A MINIMUM OF 4.5' OF COVER FROM THE GRADE ABOVE. CONTRACTOR SHALL FOLLOW ALL SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER.

INV. 8'-866.08
20.00' @ 0.40%

INV. 8" N=866.00
BOTTOM=859.84
TOP SLAB=879.84
STA 4+80.00

VALVE VAULT
INSIDE DIAMETER 15'

24" MINIMUM CASING PIPE

15'

10=881.03
STA 4+60.00

EXISTING
TIER 1

DGC PROPERTIES, LLC.
O.R. 1677, PG. 398
249.00 AC.

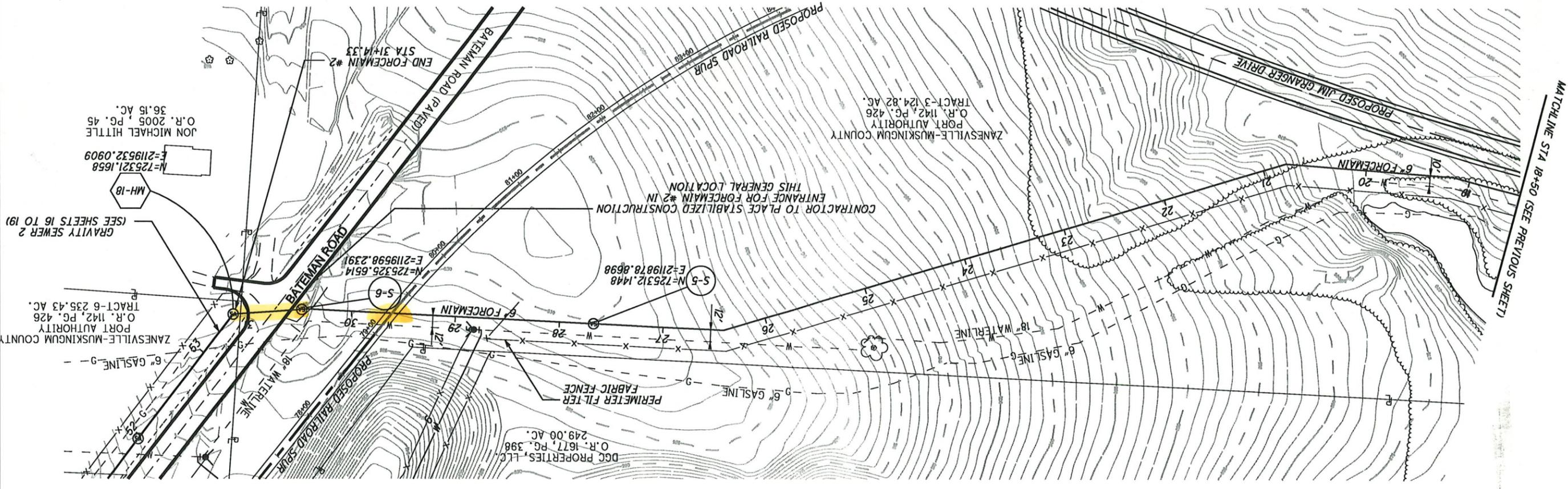
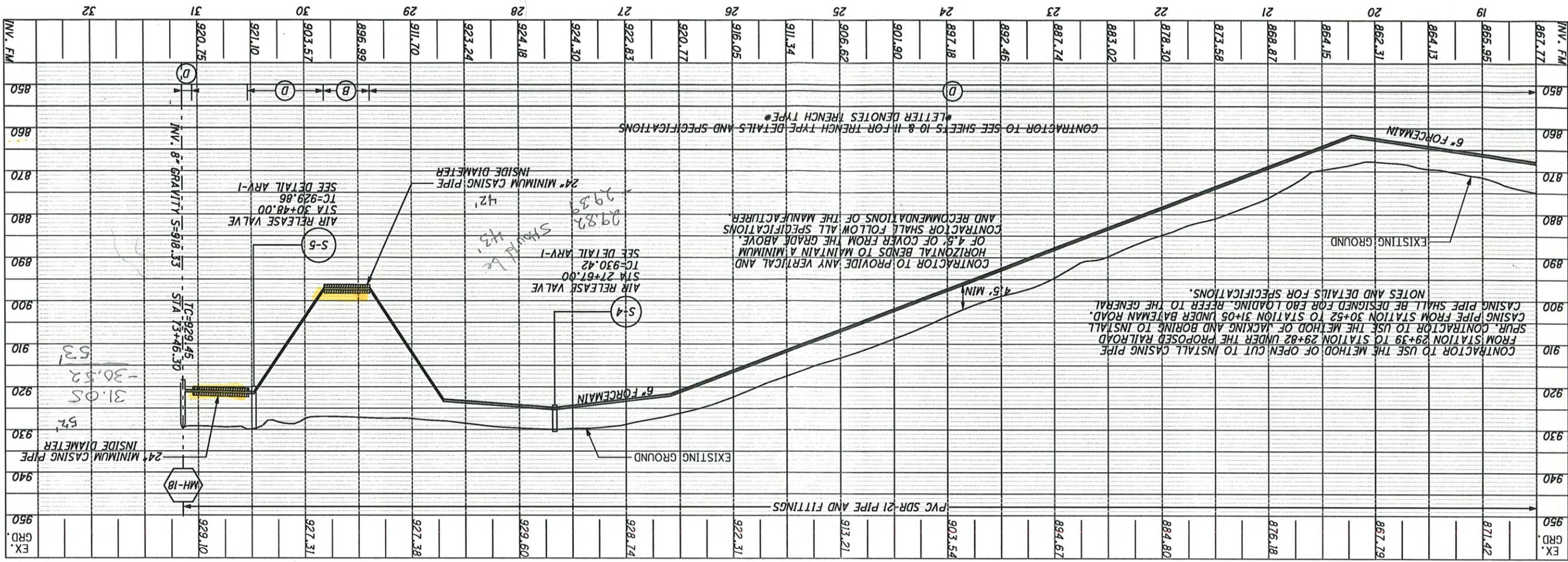
ZANESVILLE-MUSKINGUM COUNTY
O.R. 1142, PG. 426
TRACT-3-124.82 AC.

S-4
N=725380.3081
E=2121000.2265

S-3
N=725471.4178
E=2121830.3746

S-1
N=725573.4158
E=2121830.9510

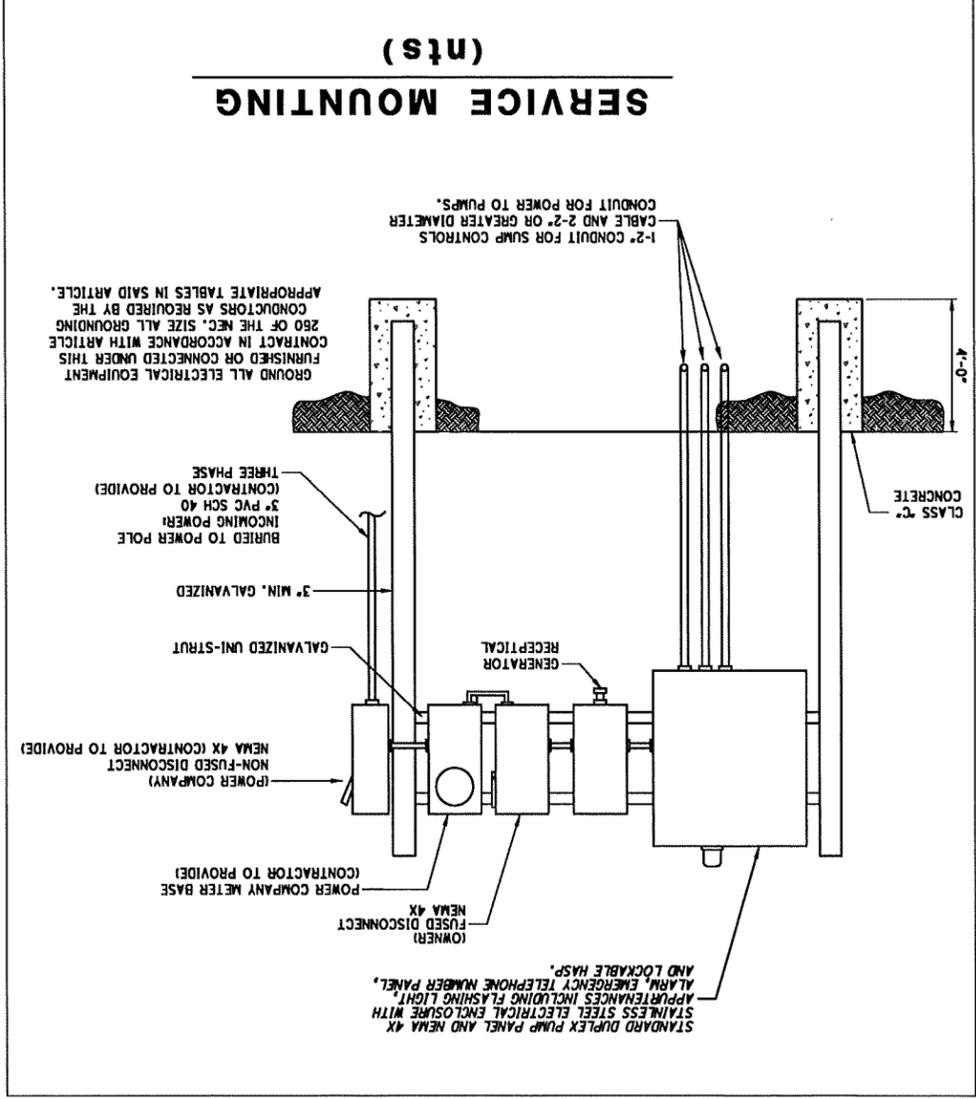
MH-47
N=725593.3967
E=2121830.0782



EASTPOINTE BUSINESS PARK OFFSITE UTILITIES
 FORCE MAIN 2- PLAN AND PROFILE
 STA 18+50 TO STA 31+14.33
 CALCULATED BY CTM
 CHECKED BY KES
 HORIZONTAL SCALE IN FEET
 25' SCALE
 50'
 100'
 NORTH ARROW

MATCHLINE STA 18+50 (SEE PREVIOUS SHEET)

SERVICE MOUNTING SHALL BE IN ACCORDANCE WITH
 GUERNSEY MUSKINGUM ELECTRIC COOPERATIVE STANDARDS



SELF-PRIMING LIFT STATION JOB READY SITE

(SEE LIFT STATION SPEC. BOOK AND DETAILS IN PLANS
 FOR FURTHER INFORMATION)

NOTE- ALL LIFT STATION EQUIPMENT SHALL BE PROVIDED BY GORMAN-
 RUPP PER MUSKINGUM COUNTY SEWER DEPT. REQUIREMENTS

MODULAR ENCLOSURE: SIZE: 10' X 16' COLOR: TAN

SECONDARY POWER: BASE MOUNTED AUTO START (NATURAL GAS)

ENGINEERING DATA

2 EACH RATED: 205 GPM @ 82' TDH
 18.0 FT REPRIME LIFT
 20.0 FT MAX STATIC LIFT
 20.9 FT TDSL (4" SUCTON PIPE)
 WETWELL SIZE: 8 FT DIAMETER

MANUFACTURER: GORMAN-RUPP

PUMP MODEL: T3A3S-B @ 1900 RPM

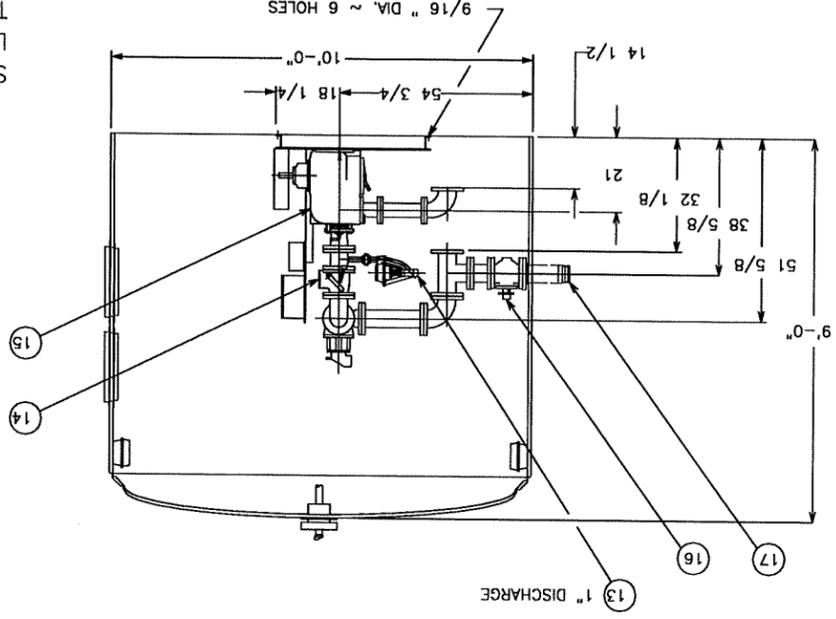
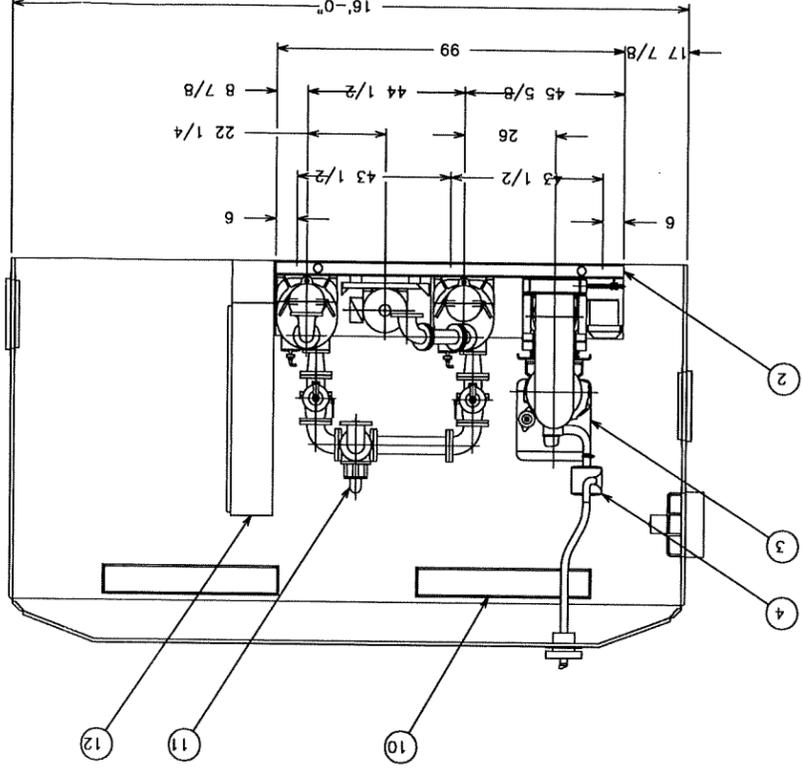
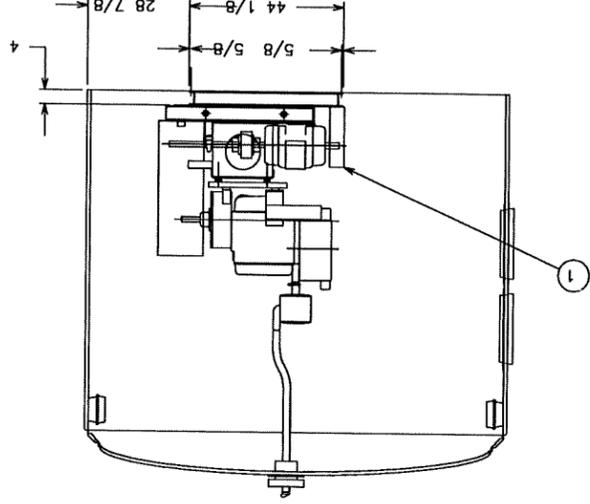
MOTOR: 15 HP, 2150 RPM

PIPING: 4" SUCTON LINES, 4" DISCHARGE LINES, 4" COMMON
 HEADER

ELEVATIONS:

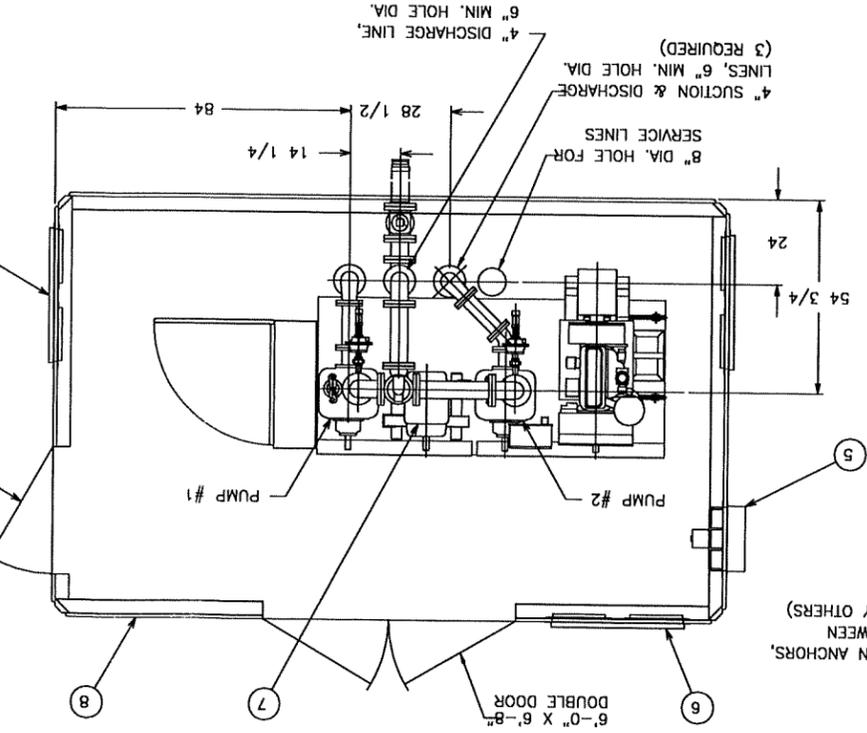
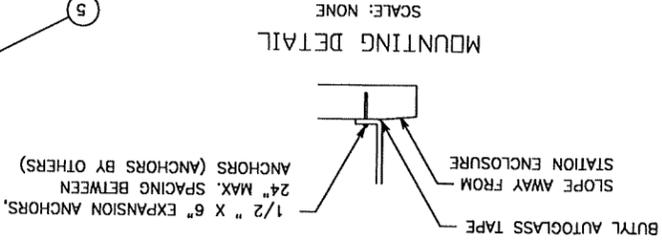
C/L PUMP SUCTON:	882.00 +/-
STATION PAD:	880.00
6" FM EXITING W/W:	874.67
INFLEUNT INVERT:	866.00
HIGH WATER ALARM:	865.00
LAG PUMP ON:	865.00
LEAD PUMP ON:	864.00
PUMP(S) OFF:	862.00
LOW WATER ALARM:	861.50
WET WELL BOTTOM:	859.84

ELECTRICAL: 3 PHASE, 60 CYCLE (HERTZ), 480 VOLTS



NOTE:
SEAL ALL OPENINGS THRU CONCRETE PAD INTO STATION ENCLOSURE GAS TIGHT.
GAS TIGHT FLOOR DRAIN RECOMMENDED FOR PUMP MAINTENANCE.
CONTROL PANEL ATTACHED TO BASE FOR SHIPPING ONLY, FASTENERS TO BE REMOVED AFTER INSTALLATION. PANEL TO BE ANCHORED TO CONCRETE PAD.

MOUNTING DETAIL



(NTS) NOT TO SCALE

ITEM	DESCRIPTION	MATERIAL & SIZE
1	BELT GUARD ASSY	STEEL
2	PUMP & MOTOR BASE ASSY	STEEL
3	ENGINE (NISAN)	LIQUID COOLED
4	EXHAUST SILENCER	STAINLESS STEEL
5	EXHAUST FAN ASSY	1600 CFM
6	EXHAUST VENT ASSY	ALUMINUM (4 SHUTTERS)
7	MOTOR	CAST IRON
8	STATION ENCLOSURE	FIBERGLASS 10' X 16'
9	INTAKE VENT ASSY	ALUMINUM (4 SHUTTERS)
10	FLUORESCENT LIGHT FIXTURE	80 WATT FIXTURE
11	DISCHARGE PLUG VALVE	CAST IRON 4" 3-WAY
12	CONTROL PANEL	STEEL
13	AIR RELEASE VALVE	CAST IRON 1" (SHIPPED LOOSE)
14	DISCHARGE CHECK VALVE	CAST IRON 4"
15	PUMP	CAST IRON T3A-B
16	BY-PASS PLUG VALVE	CAST IRON 4"
17	OPW ADAPTER	ALUMINUM 4"

STANDBY PUMP UNIT
LEFT HAND DRIVE UNIT
T3A-B, 4" X 4" X 4"
WITH 10' X 16' FIBERGLASS
ENCLOSURE

		THE GORMAN-RUPP CO. ST. THOMAS, ONTARIO	
NAME: BASE MOUNTED DUPLEX WITH SIMPLEX STANDBY, T3A-B PUMPS			
DRN.	BW	CHK.	BM
DATE	1-12-09	APP.	BM
SERIAL NO.	60-2234		

602234.S01.DGN

LIFT STATION DETAILS

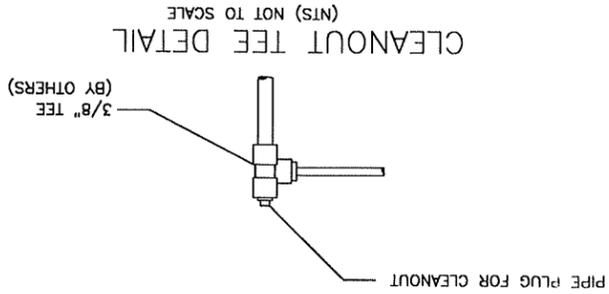
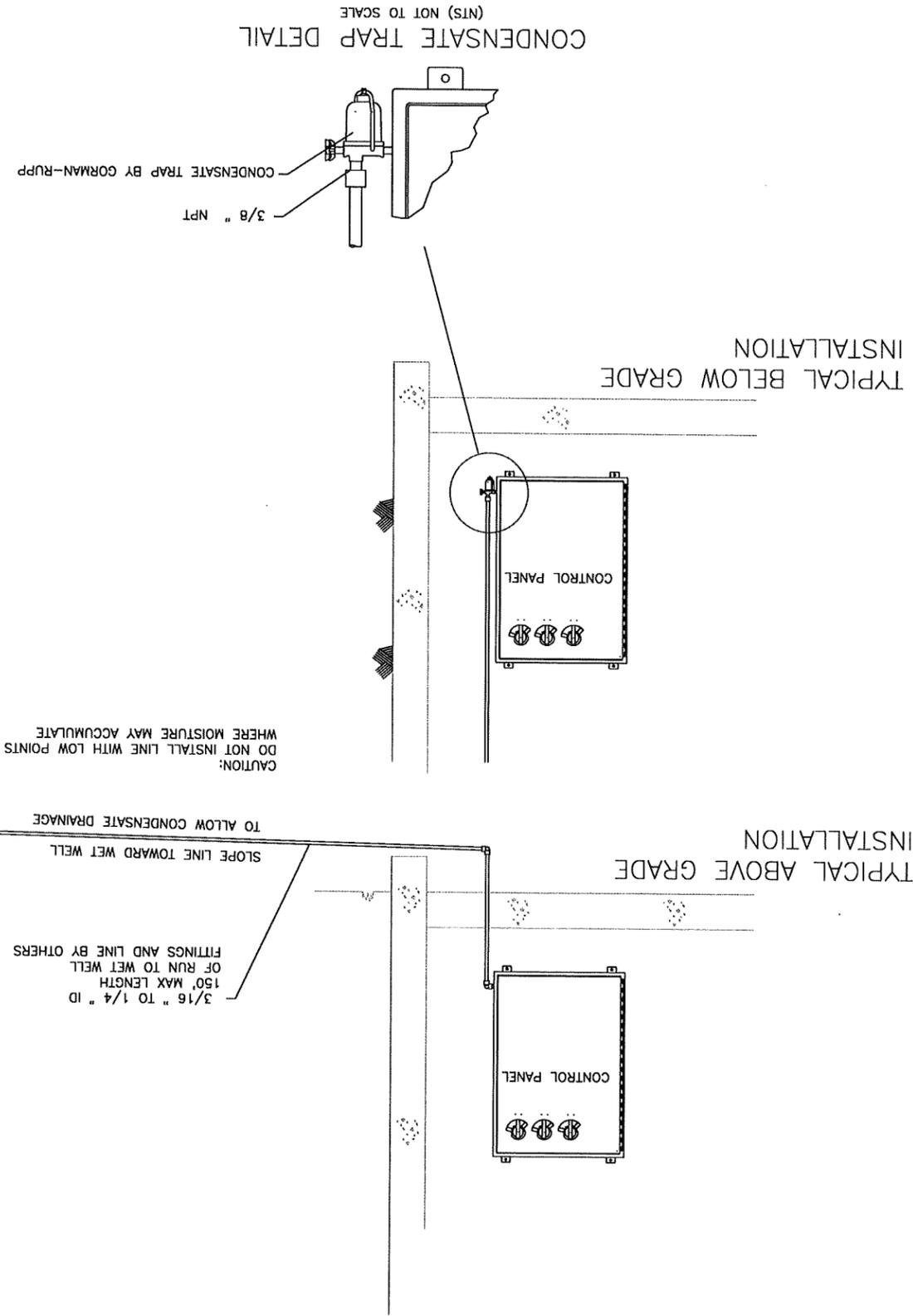
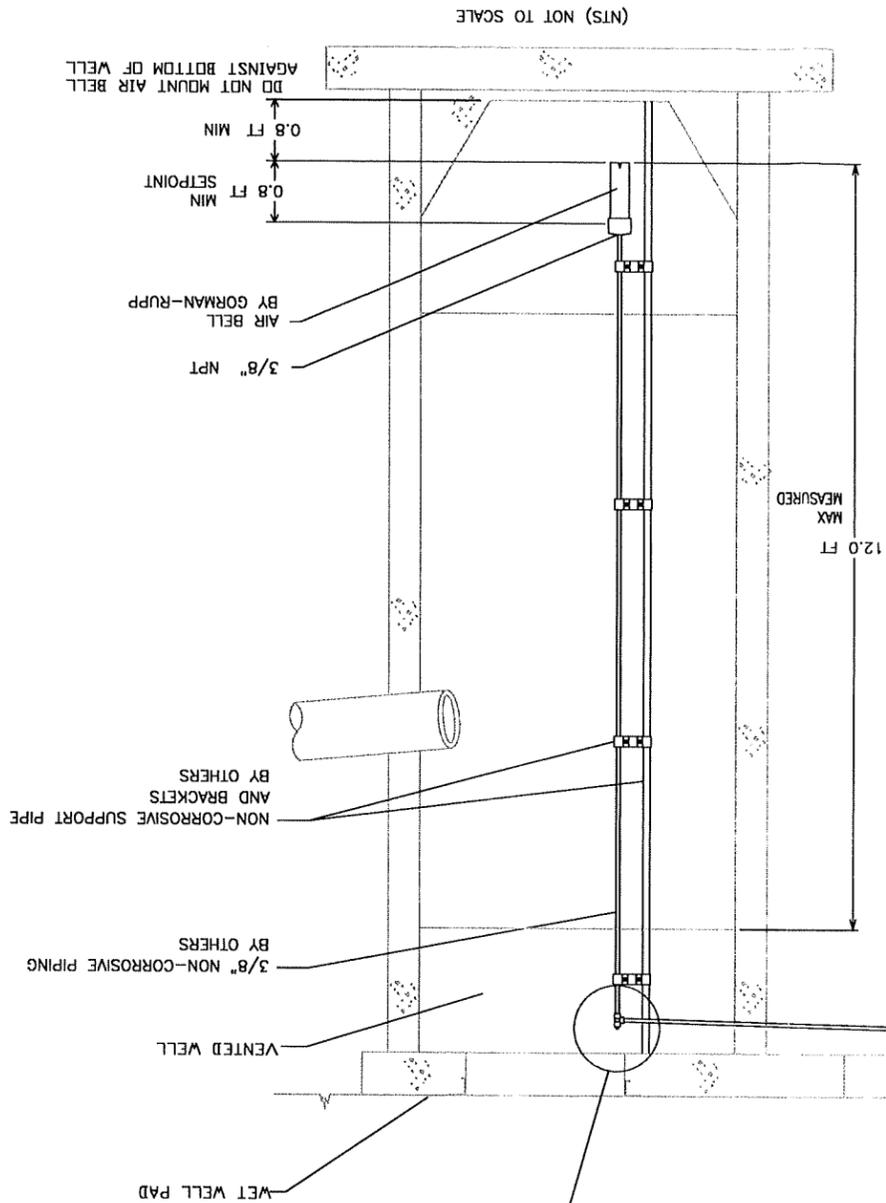
EASTPOINTE BUSINESS PARK
OFFSITE UTILITIES

REVISIONS	DATE	BY	CHK

CALCULATED
CTM
CHECKED
KBS

SERIAL NO.	GW-009228	DRN.	GD
DATE	7/9/98	CHK.	
TYPICAL AIR BUBBLER LINE INSTALLATION			
MAKE			
THE GORMAN-RUPP CO.		GORMAN-RUPP	
MANSFIELD, OHIO ST. THOMAS, ONTARIO			

FILE: W009228.501

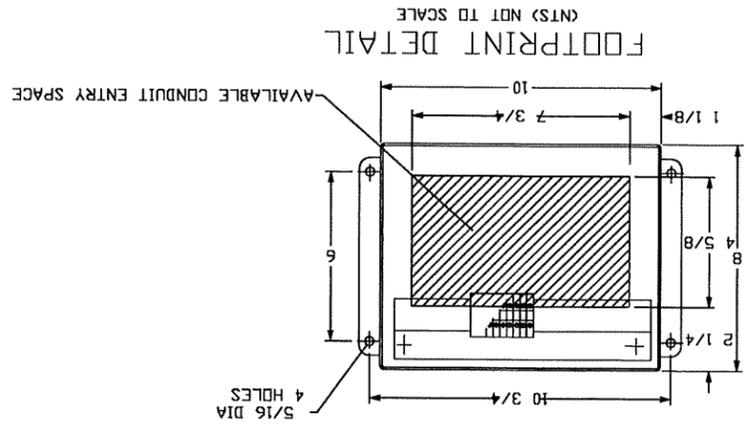
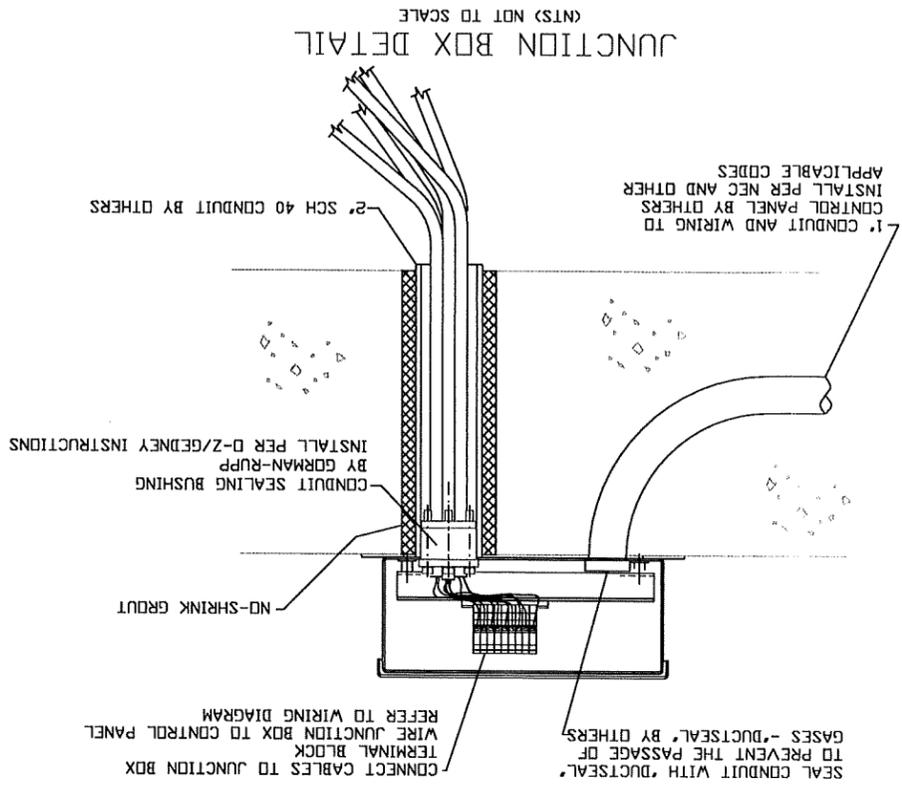
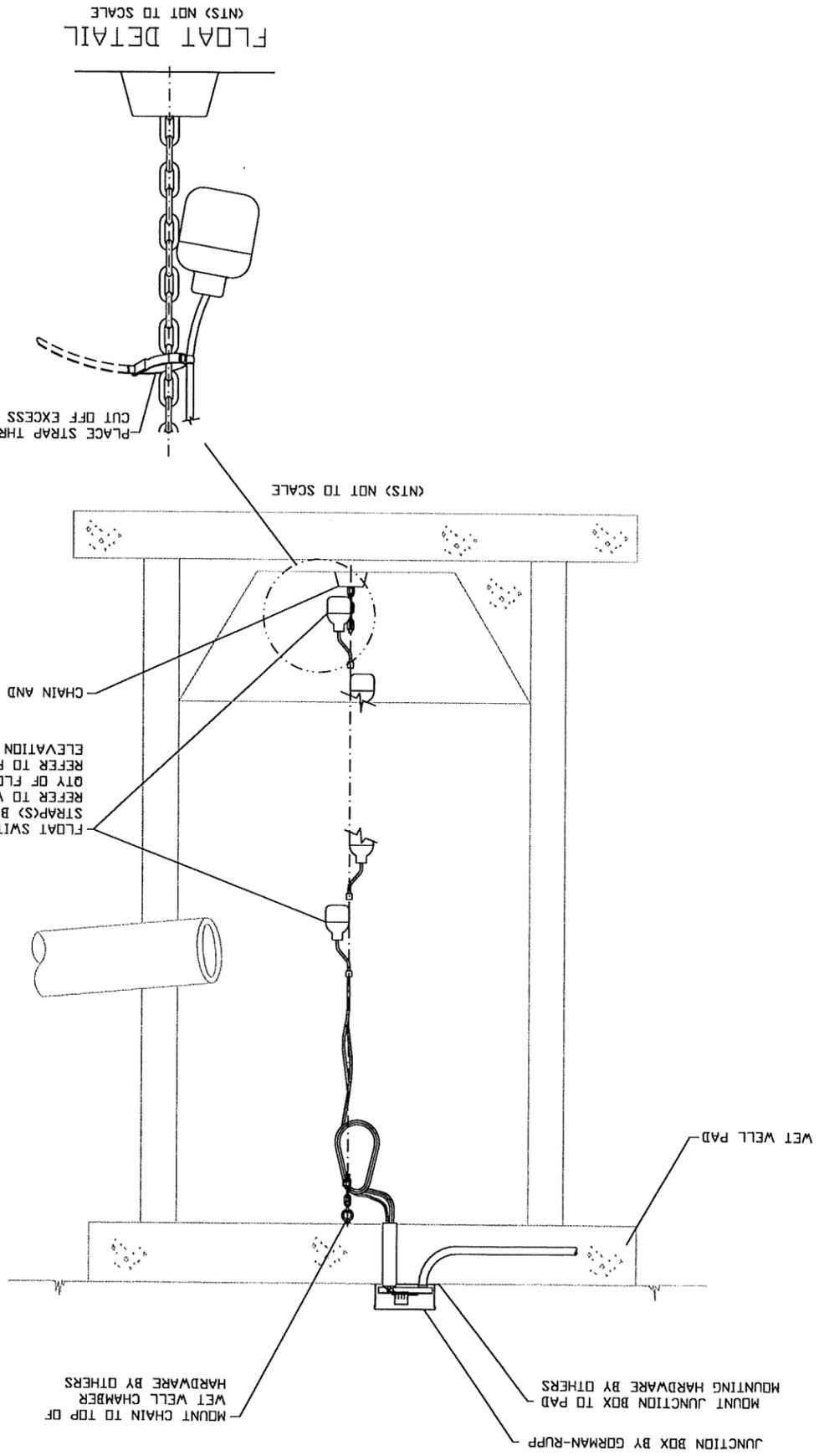


- NOTES:
1. ALL WET WELL HARDWARE, BRACKETS AND SUPPORTS TO BE NON-CORROSIVE.
 2. AIR BUBBLER LINE MUST BE AIR TIGHT.

PRIMARY SYSTEM

REVISIONS	DATE	BY	CHK.

CALCULATED
CTM
CHECKED
KBS



FILE: W00882.S01

DRN. GH	CHK.	APP.	DATE
			2/3/98

SERIAL NO. W-00882

NAME: WET WELL JUNCTION BOX INSTALLATION
FLAT SWITCH CONTROL

THE GORMAN-RUPP CO. ST. THOMAS, ONTARIO

NOTES:

- ALL WET WELL HARDWARE, BRACKETS AND SUPPORTS TO BE CORROSION RESISTANT.

WARNING

JUNCTION BOX AND CONNECTING CONDUIT TO BE USED FOR FLAT CABLES ONLY. INSTALLATION OF CONDUCTORS FOR DIFFERENT SYSTEMS WILL IMPAIR INTRINSIC SAFETY. INSTALL PER NEC 504 AND OTHER APPLICABLE CODES.

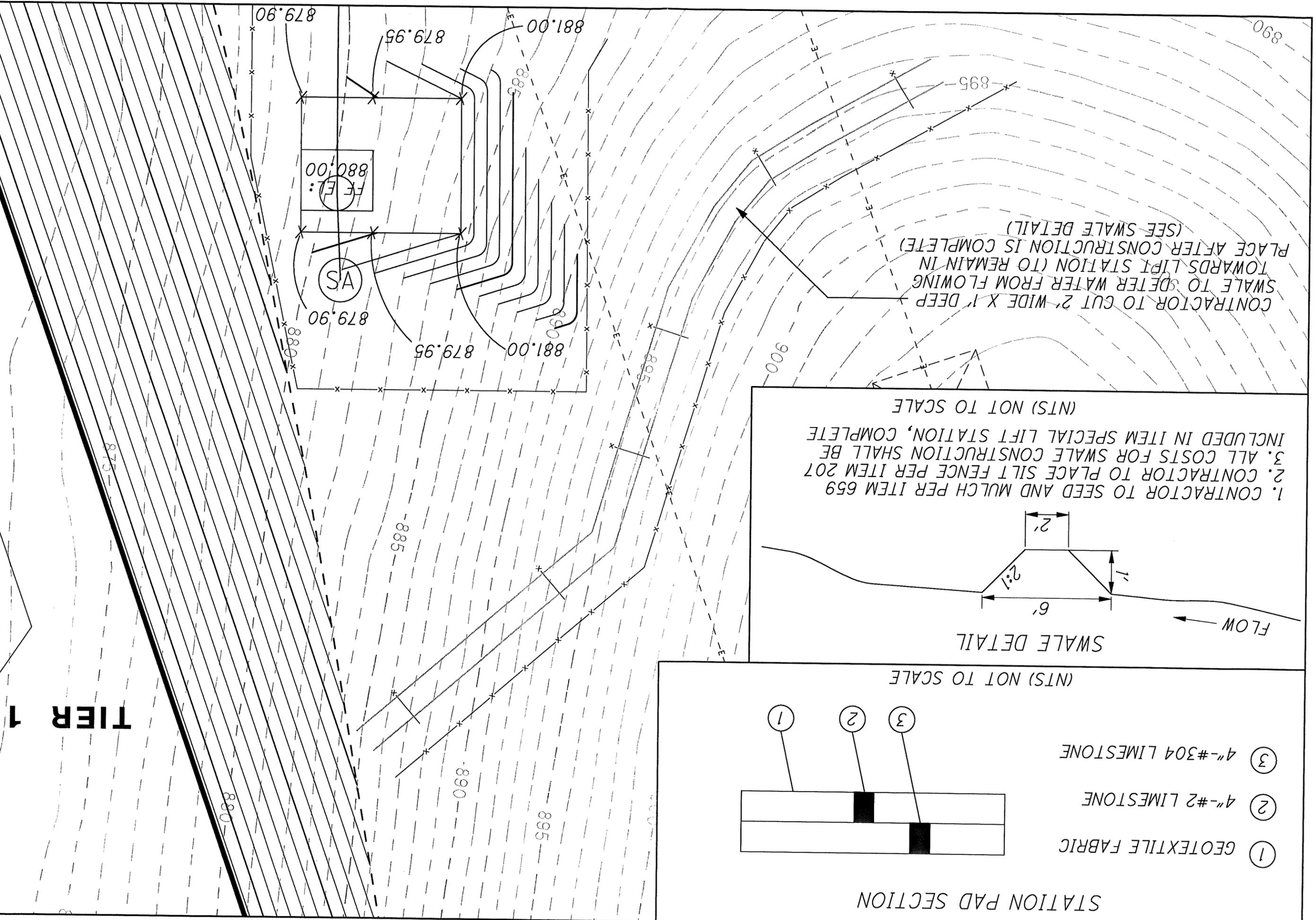
EASTPOINTE BUSINESS PARK
OFFSITE UTILITIES

LIFT STATION DETAILS

43
47

REVISIONS	SYMBOL	DATE	BY	CHK.

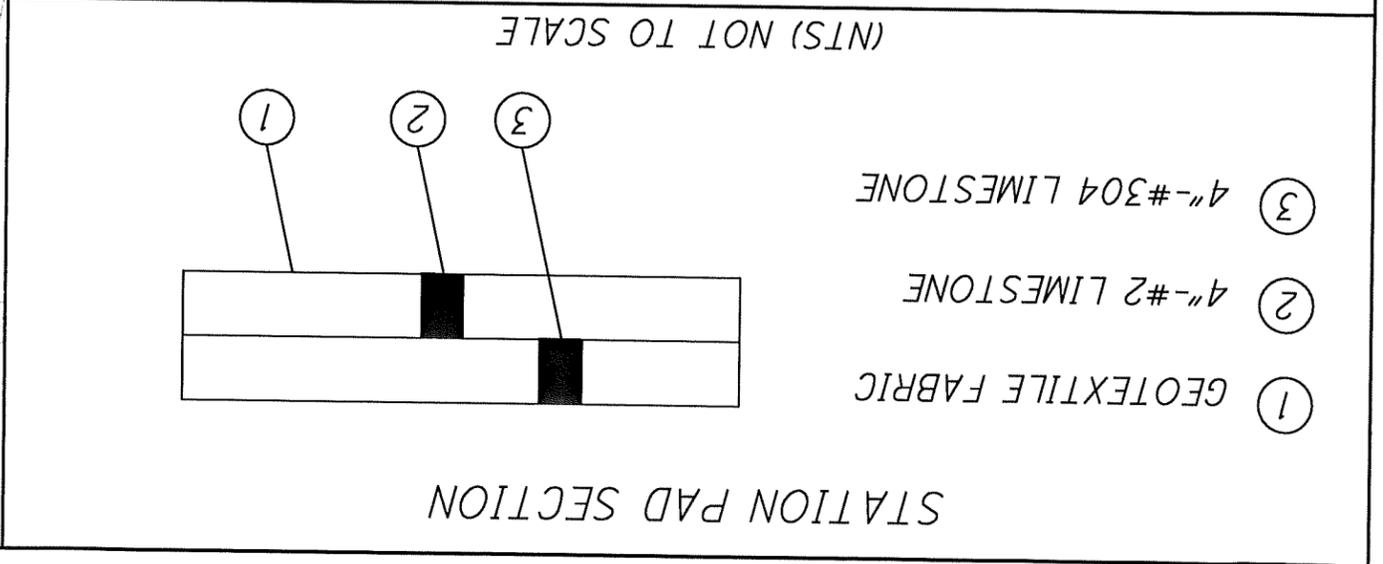
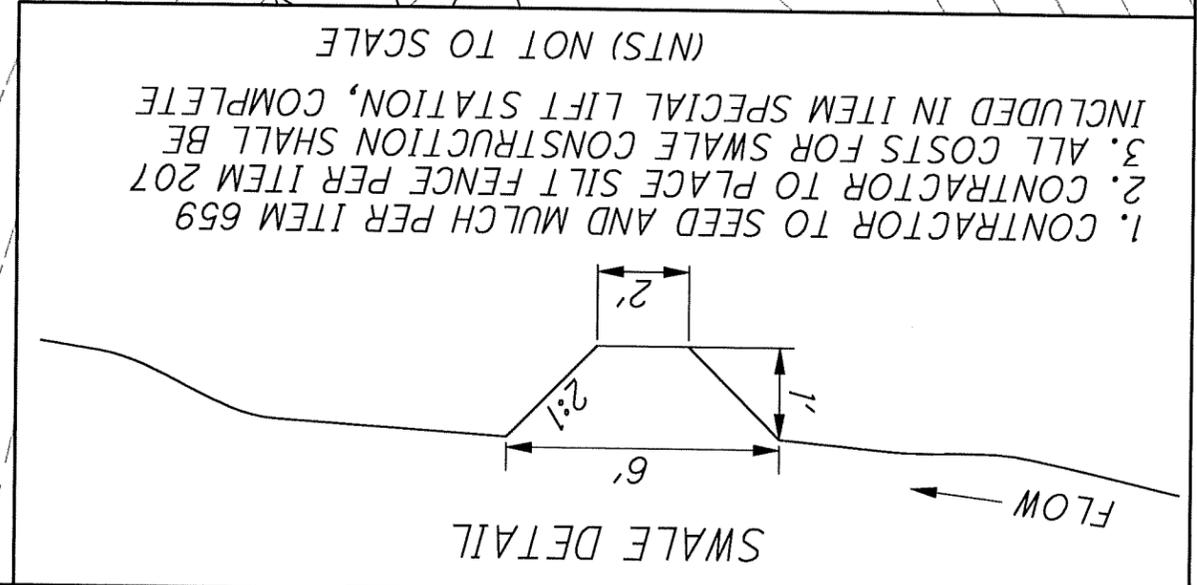
CALCULATED
CTM
CHECKED
KBS



TIER 1

LIFT STATION
880.00

SA

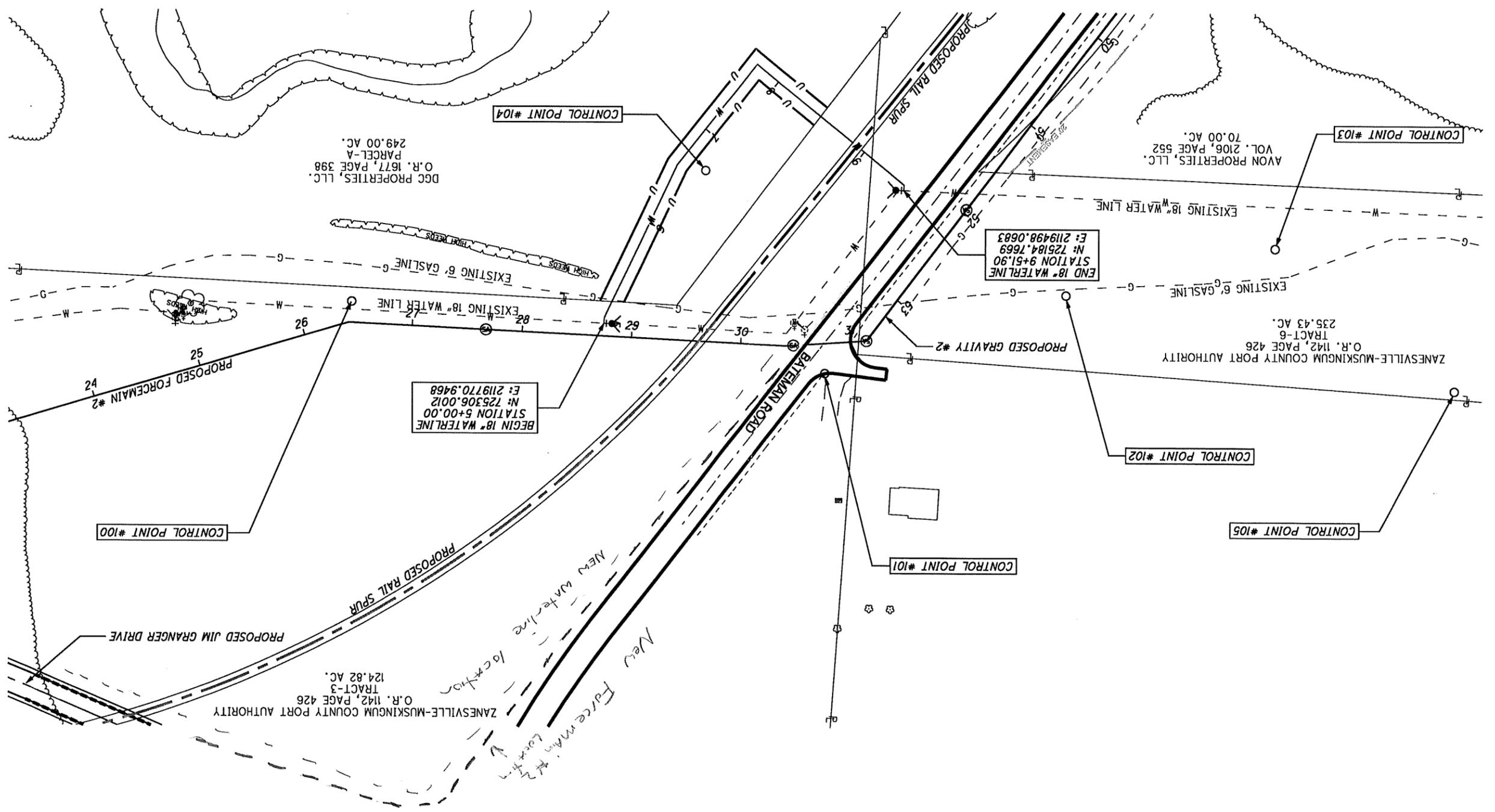


- (NTS) NOT TO SCALE
1. CONTRACTOR TO SEED AND MULCH PER ITEM 659
 2. CONTRACTOR TO PLACE SILT FENCE PER ITEM 207
 3. ALL COSTS FOR SWALE CONSTRUCTION SHALL BE INCLUDED IN ITEM SPECIAL LIFT STATION, COMPLETE
- (NTS) NOT TO SCALE

CONTRACTOR TO CUT 2' WIDE X 1' DEEP SWALE TO DETER WATER FROM FLOWING TOWARDS LIFT STATION (TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETE) (SEE SWALE DETAIL)

CONTROL POINT #105 IRON PIN SET N: 725364.4500 E: 2118995.0407 ELEV.: 873.95	CONTROL POINT #104 IRON PIN SET N: 7251673.3563 E: 2119678.5640 ELEV.: 948.37	CONTROL POINT #103 IRON PIN SET N: 725236.0204 E: 2119159.0658 ELEV.: 882.67	CONTROL POINT #102 IRON PIN SET N: 725279.3931 E: 2119349.5252 ELEV.: 917.60	CONTROL POINT #101 MAG NAIL SET N: 725350.9588 E: 2119569.7193 ELEV.: 929.17	CONTROL POINT #100 IRON PIN SET N: 725286.9119 E: 2120001.3743 ELEV.: 926.34
--	---	--	--	--	--

HORIZONTAL & VERTICAL CONTROL
HORIZONTAL-STATE PLANE, NAD83, OHIO SOUTH, SURVEY FEET
VERTICAL-NAVD 88, SURVEY FEET



WATER WORK

ALL WATER PIPE, FITTINGS, METHODS OF CONSTRUCTION, AND WORKMANSHIP FOR WATER LINES AND APPURTENANCES SHOWN ON THESE PLANS SHALL CONFORM TO THE RULES AND REGULATIONS OF MUSKINGUM COUNTY, DIVISION OF WATER, AND ODOT ITEM 638 CURRENT ON THE DATE OF CONTRACT UNLESS THE REQUIREMENTS OF SUCH RULES AND REGULATIONS ARE UPGRADED BY THE FOLLOWING NOTES OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

OPERATION OF IN SERVICE VALVES SHALL BE BY WATER DIVISION PERSONNEL ONLY. A 24 HOUR NOTICE SHALL BE REQUIRED FOR SHUT DOWNS.

ALL WATER LINES SHALL BE INSTALLED WITH AT LEAST 10 FEET HORIZONTAL SEPARATION FROM SANITARY SEWER AND STORM SEWER LINES. WHENEVER A WATER LINE AND SEWER MUST CROSS, THE SEWER MAIN (STORM OR SANITARY) SHALL BE LAID SUCH THAT THE CROWN IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER LINE MEASURED BETWEEN THE OUTSIDE PIPE WALLS. IN CASES WHERE THE REQUIRED SEPARATION CANNOT BE MAINTAINED, CLOSER INSTALLATION MAY BE PERMITTED ON A CASE-BY-CASE BASIS ONLY AFTER RECEIPT OF WRITTEN CONCURRENCE FROM THE OHIO EPA DIVISION OF DRINKING WATER. 2003 RECOMMENDED STANDARDS FOR WATER WORKS, SECTIONS 8.8.2 AND 8.8.3 SHALL GOVERN AS TO THE SEPARATION OF WATER LINE FROM CONTAMINATION SOURCES.

THE NORMAL WORKING PRESSURE IN THE WATER MAINS SHALL NOT BE LESS THAN 35 PSI.

INDIVIDUAL BOOSTER PUMPS WILL NOT BE ALLOWED FOR ANY SERVICE.

MATERIALS

ALL WATER MAIN MATERIALS MUST MEET AWWA SPECIFICATIONS AND A STATEMENT OF VERIFICATION MUST BE FURNISHED TO THE COUNTY.

ALL BENDS, JOINTS, DEFLECTIONS AND FITTINGS SHALL BE APPROPRIATELY BLOCKED WITH CONCRETE, AS PER ODOT SPECIFICATION 638.06.

ALL VALVES SHALL BE APPROPRIATELY BLOCKED WITH CONCRETE, AS PER ODOT SPECIFICATION 638.06. THE TOP OF ALL VALVE BOXES SHALL BE ENCASED IN 6" OF CONCRETE.

ALL WATER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE, CLASS 52.

ALL FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT. ALL FITTINGS SHALL COMPLY WITH AWWA SPECIFICATIONS.

WHEREVER A NON-METALLIC WATER MAIN IS INSTALLED ABOVE THE LINE SHALL BE REQUIRED. TAPE SHALL HAVE 18" OF COVER.

A TRACER WIRE OF 12 GAUGE COATED COPPER WIRE SHALL BE INSTALLED ON TOP OF THE WATER LINE. SPLICES SHALL BE MINIMIZED AN WHEN NECESSARY SHALL BE DRYCONN WATERPROOF ANODE SPLICE BOX OR APPROVED EQUAL. THE TRACER WIRE SHALL RUN ALONG THE OUTSIDE OF VALVE BOX WITH A MINIMUM OF 3' COILED WIRE AND THEN BROUGHT INSIDE THE VALVE BOX APPROXIMATELY 4" BELOW GRADE THROUGH A 1/4" HOLE.

VALVES SHALL BE AWWA C-509 RESILIENT WEDGE, NON RISING STEM (NRS), GATE VALVES.

MATERIALS (CONT)

LINE MARKERS SHALL BE INSTALLED AT ALL VALVE BOXES. THE LINE MARKER SHALL BE SIXTY-TWO INCH, UL TRAVIOLLET STABLE, FIBER REINFORCED COMPOSITE, INDUSTRY STANDARD COLORED POST WITH WHITE 360 DEGREE VISIBILITY ENHANCER, CARSONITE UTILITY MARKER AS MANUFACTURED BY CARSONITE INTERNATIONAL CORPORATION, CUM-375 POST AND CVE-360, VISIBILITY ENHANCER, OR APPROVED EQUAL.

A DECAL SHALL BE FACTORY INSTALLED AS PER RFA AND OFFICE OF SAFETY OPERATIONS. THE DECAL SHALL BE BLUE WITH WHITE LETTERING AS PER AMERICAN PUBLIC WORKS ASSOCIATION COLOR CODING AND READ, "CAUTION WATER PIPELINE"

A SECOND DECAL SHALL BE AS DESCRIBED ABOVE AND READ; CAUTION WATER PIPELINE
MUSKINGUM COUNTY WATER UTILITIES PROTECTION SERVICE
1-800-362-2764

WATER LINE DEPTH

WATER LINES SHALL BE LAID WITH A MINIMUM OF 4'-6" DEPTH FROM THE TOP OF FUTURE FINISHED GRADE TO THE TOP OF THE WATER LINE.

BACKFILL

ALL TRENCH BACKFILL SHALL BE COMPACTED BACKFILL AS PER ODOT ITEM 603.08. BACKFILL MATERIAL AND COMPACTION FOR WATERMAIN NOT UNDER PAVEMENT SHALL MEET THE SAME REQUIREMENTS AS FOR 603, TYPE C CONDUITS. BACKFILL MATERIAL AND COMPACTION FOR WATERMAIN UNDER RAILROAD SHALL MEET THE SAME REQUIREMENTS AS FOR 603, TYPE B CONDUITS. THE COST OF ALL COMPACTED BACKFILL SHALL BE INCLUDED IN THE PRICE BID FOR FURNISHING AND INSTALLING PIPE. WHERE SPECIFICALLY CALLED OUT IN THE PLANS 36" STEEL CASING PIPE SHALL BE PLACED BY THE METHOD OF OPEN CUT. SEE WATERLINE PLAN AND PROFILE SHEET FOR DETAILS.

WATER MAIN PROTECTION

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL WATER LINES, SERVICES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT HIS DETAILS AND METHODS OF SUPPORTING THE WATER LINES ACROSS THE SEWER TRENCH TO THE ENGINEER FOR APPROVAL BY THE WATER DEPARTMENT. SUPPORT METHOD AND DETAIL APPROVAL SHALL BE SECURED PRIOR TO THE COMMENCEMENT OF EXCAVATION OPERATIONS.

ITEM 638 - FIRE HYDRANT ASSEMBLY

THIS ITEM SHALL COMPLY WITH ODOT ITEM 638. PAYMENT FOR LEAD, AND 6" GATE VALVE AND VALVE BOX. THE FIRE HYDRANT SHALL BE CLOW MEDALLION WITH 5/4" BARRELS.

ITEM 638 - FIRE HYDRANT REMOVED AND RESET

THIS ITEM SHALL COMPLY WITH ODOT ITEM 638. PAYMENT FOR THIS BID ITEM SHALL INCLUDE NEW MAIN TEE, NEW PIPE BRANCH, A NEW 6" GATE VALVE AND VALVE BOX.

WATERLINE TESTING

ALL WATER LINES SHALL BE PRESSURE TESTED AT 150 PSI FOR 2 HOURS PRIOR TO ACCEPTANCE BY THE MUSKINGUM COUNTY. THE COST OF THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE WATER MAIN. THIS TESTING MUST BE IN ACCORDANCE WITH AWWA C-600-93.

ANY TESTING PERFORMED AGAINST EXISTING VALVES SHALL BE DONE AT THE CONTRACTOR'S RISK AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE ENGINEER. IF SATISFACTORY TEST RESULTS CANNOT BE OBTAINED AGAINST AN EXISTING VALVE, THE NEW LINE SHALL BE DISCONNECTED FROM THE EXISTING LINE, PLUGGED AND RE-TESTED. DAMAGE CAUSED TO EXISTING LINES AND VALVES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

BEFORE BEING PLACED INTO SERVICE AND AFTER HYDROSTATIC TESTING, THE COMPLETED WATER WORK SHALL BE DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS AND PROCEDURES OUTLINED IN AWWA C-651-92 STANDARD PROCEDURE FOR DISINFECTING WATER MAINS. ALL BACTERIOLOGICAL TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE COUNTY. SHOULD THE INITIAL TREATMENT RESULT IN AN UNSATISFACTORY BACTERIAL TEST, THE ORIGINAL CHLORINATION PROCEDURE SHALL BE REPEATED BY THE CONTRACTOR AT HIS EXPENSE UNTIL SATISFACTORY RESULTS ARE OBTAINED.

THE CONTRACTOR SHALL HAND SWAB ALL PIPE AND FITTINGS THAT ARE NOT OTHERWISE DISINFECTED. THE AMOUNT OF CHLORINE TO BE USED DURING HAND SWABBING OPERATIONS WILL BE DETERMINED BY THE DIVISION OF WATER.

BEDDING

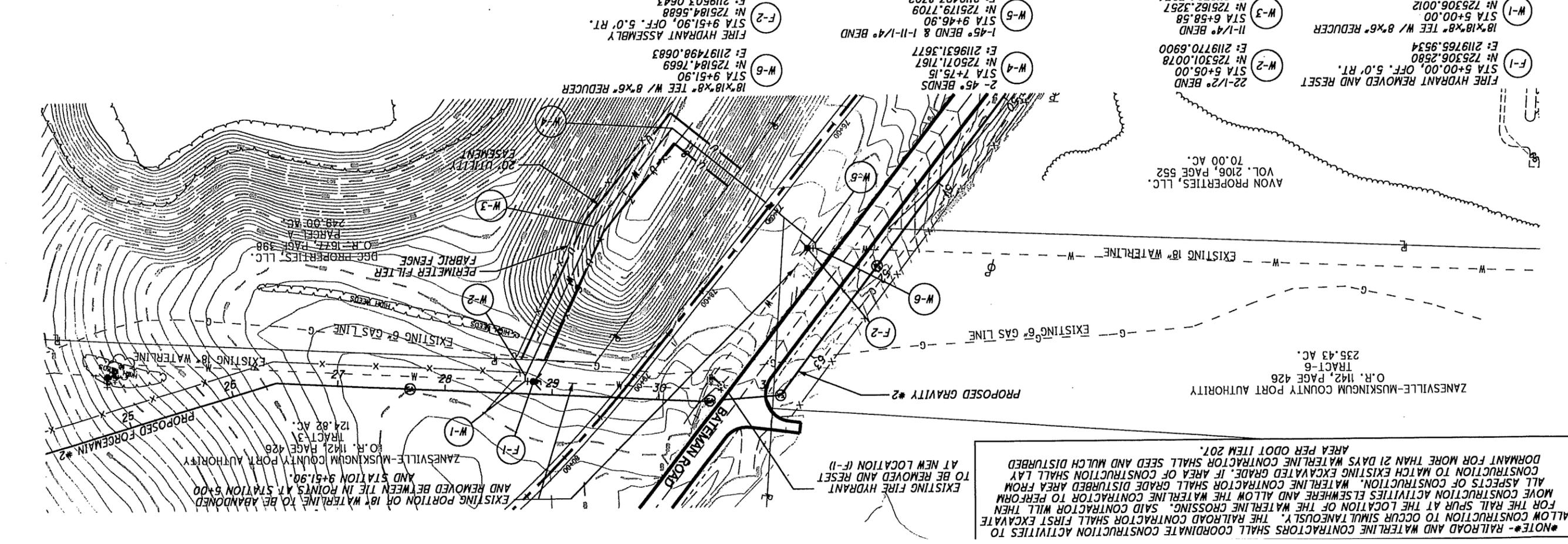
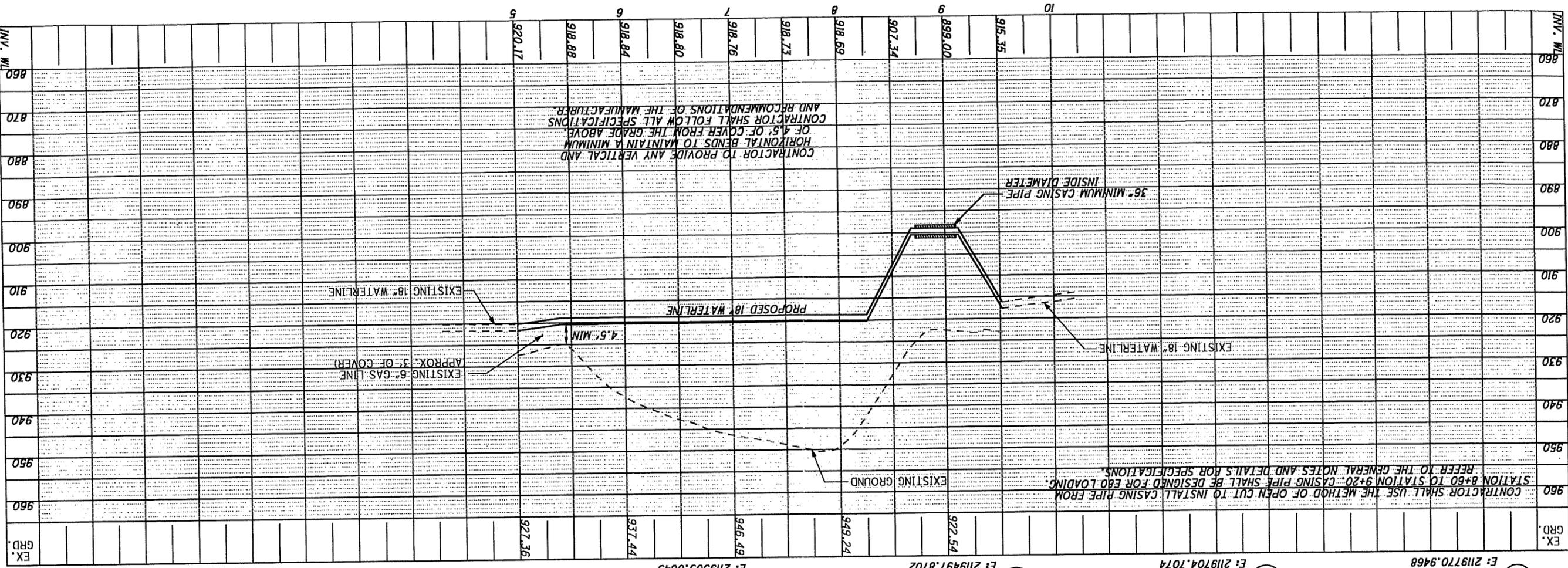
PIPE BEDDING SHALL BE PROVIDED FOR ALL WATERMANS THE BEDDING SHALL BE 4" MINIMUM THICKNESS AND EXTEND ONE THIRD OF THE WAY UP THE PIPE. MATERIALS SHALL BE DURABLE GRAVEL, SAND, OR CRUSHED STONE MEETING THE FOLLOWING GRADATION.

SIEVE	GRADING
2 1/2 INCH	100
1 INCH	90-100
No. 4	70-90
No. 16	30-45
No. 40	20-40
No. 200	5-15

THE COST OF ALL BEDDING SHALL BE INCLUDED IN THE PRICE FOR FURNISHING AND INSTALLING THE PIPE.

POLYETHYLENE ENCASEMENT

WHEREVER DUCTILE IRON PIPE IS INSTALLED THE PIPE SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PER ODOT ITEM 638.12. ALL COSTS TO BE INCLUDED IN THE PRICE FOR FURNISHING AND INSTALLING THE PIPE.



NOTE- RAILROAD AND WATERLINE CONTRACTORS SHALL COORDINATE CONSTRUCTION ACTIVITIES TO ALLOW CONSTRUCTION TO OCCUR SIMULTANEOUSLY. THE RAILROAD CONTRACTOR SHALL FIRST EXCAVATE FOR THE RAIL SPUR AT THE LOCATION OF THE WATERLINE CROSSING. SAID CONTRACTOR WILL THEN MOVE CONSTRUCTION ACTIVITIES ELSEWHERE AND ALLOW THE WATERLINE CONTRACTOR TO PERFORM ALL ASPECTS OF CONSTRUCTION. WATERLINE CONTRACTOR SHALL GRADE DISTURBED AREA FROM CONSTRUCTION TO MATCH EXISTING EXCAVATED GRADE. IF AREA OF CONSTRUCTION SHALL LAY DORMANT FOR MORE THAN 21 DAYS WATERLINE CONTRACTOR SHALL SEED AND MULCH DISTURBED AREA PER ODOT ITEM 207.

ZANESVILLE-MUSKINGUM COUNTY PORT AUTHORITY
O.R. 1142, PAGE 426
TRACT-6
235.43 AC.

AVON PROPERTIES, LLC.
VOL. 2106, PAGE 552
70.00 AC.

CONTRACTOR TO PROVIDE ANY VERTICAL AND HORIZONTAL BENDS TO MAINTAIN A MINIMUM OF 4.5' OF COVER FROM THE GRADE ABOVE. CONTRACTOR SHALL FOLLOW ALL SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER.

CONTRACTOR SHALL USE THE METHOD OF OPEN CUT TO INSTALL CASING PIPE FROM STA 8+60 TO STA 9+20. CASING PIPE SHALL BE DESIGNED FOR E80 LOADING. REFER TO THE GENERAL NOTES AND DETAILS FOR SPECIFICATIONS.

F-1
FIRE HYDRANT REMOVED AND RESET
STA 5+00.00, OFF. 5.0' RT.
N: 725306.2580
E: 2119765.9534

W-1
18"x18"x8" TEE W/ 8"x6" REDUCER
STA 5+00.00
N: 725306.0012
E: 2119770.9468

W-2
22-1/2" BEND
STA 5+05.00
N: 725301.0078
E: 2119704.6900

W-3
11-1/4" BEND
STA 6+58.58
N: 725162.3257
E: 2119704.7074

W-4
2-45° BENDS
STA 7+75.15
N: 725071.7167
E: 2119631.3677

W-5
1-45° BEND & 1-11-1/4° BEND
STA 9+46.90
N: 725179.7709
E: 2119497.8702

W-6
18"x18"x8" TEE W/ 8"x6" REDUCER
STA 9+51.90
N: 725184.7669
E: 21197498.0683

F-2
FIRE HYDRANT ASSEMBLY
STA 9+51.90, OFF. 5.0' RT.
N: 725184.5688
E: 2119503.0643

0 50 100
25
HORIZONTAL
SCALE IN FEET