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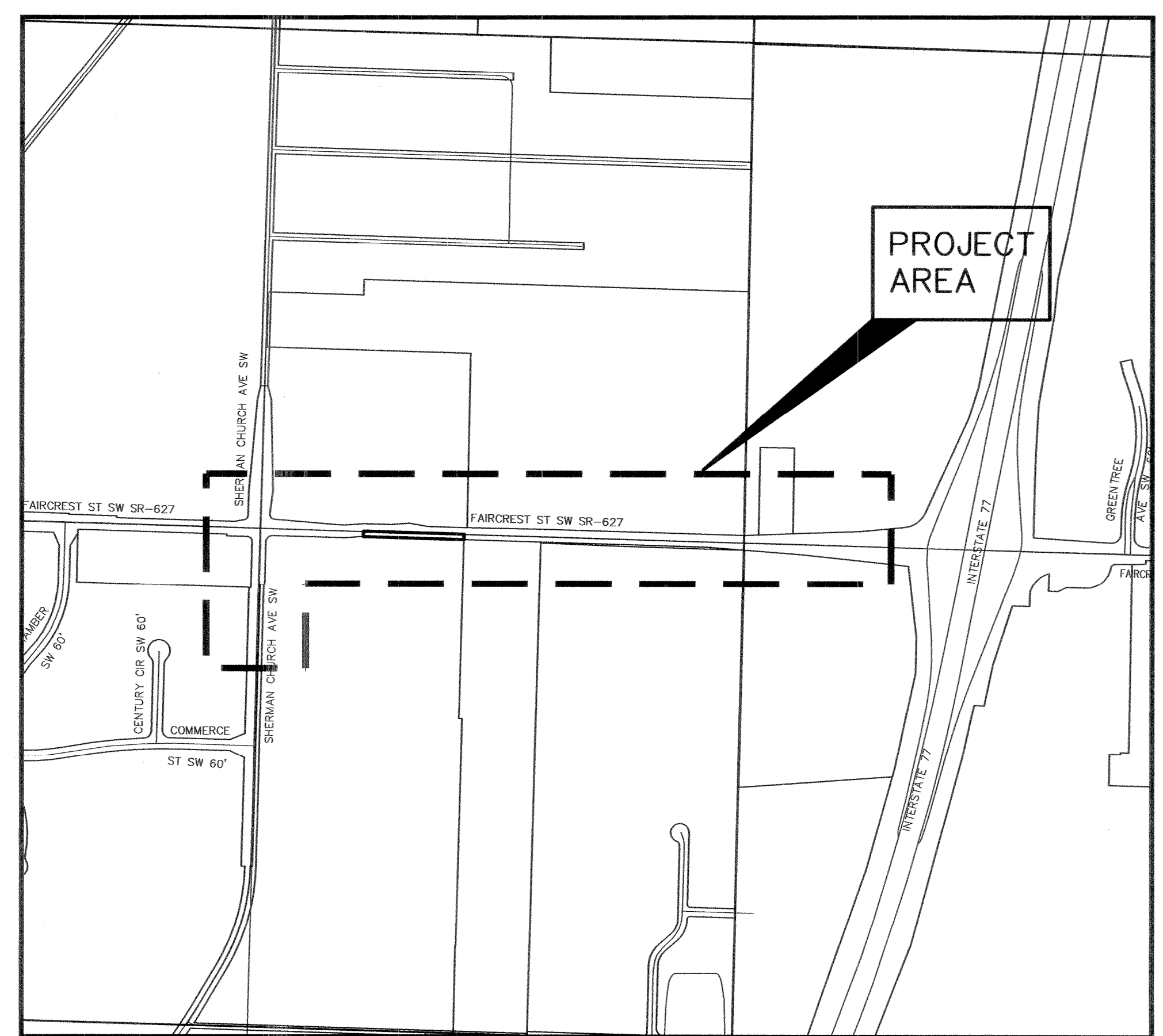
CITY OF CANTON FAIRCREST ST SW LIFT STATION AND SANITARY SEWER EXTENSION

G.P. # 1142

STARK COUNTY, STATE OF OHIO
FEBRUARY, 2014

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VICINITY MAP
SCALE: 1"=500'

CITY OFFICIALS

MAYOR	WILLIAM J. HEALY II
DIRECTOR OF PUBLIC SERVICE	WILLIAM BARTOS

APPROVAL

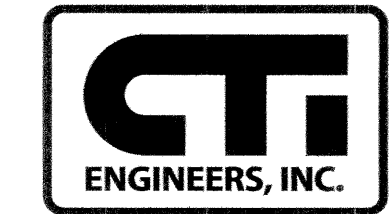
Daniel L. Moeglin 7/15/14

 DANIEL L. MOEGLIN P.E., S.I. DATE
 CITY ENGINEER



1-800-362-2764
 CALL TWO WORKING DAYS BEFORE YOU DIG
 (NON MEMBERS MUST BE CALLED DIRECTLY)

PLANS PREPARED BY



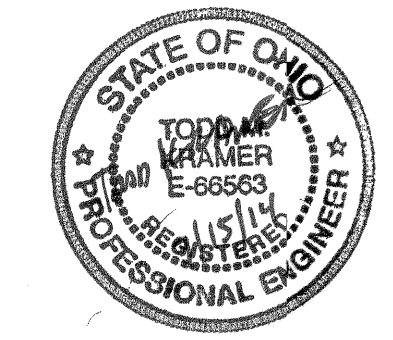
220 MARKET AVENUE SOUTH, SUITE 750
 CANTON, OH 44702
 330-456-7733

Todd M. Kramer

 TODD M. KRAMER
 REG. ENGINEER NO. 66563

7/15/14

 DATE



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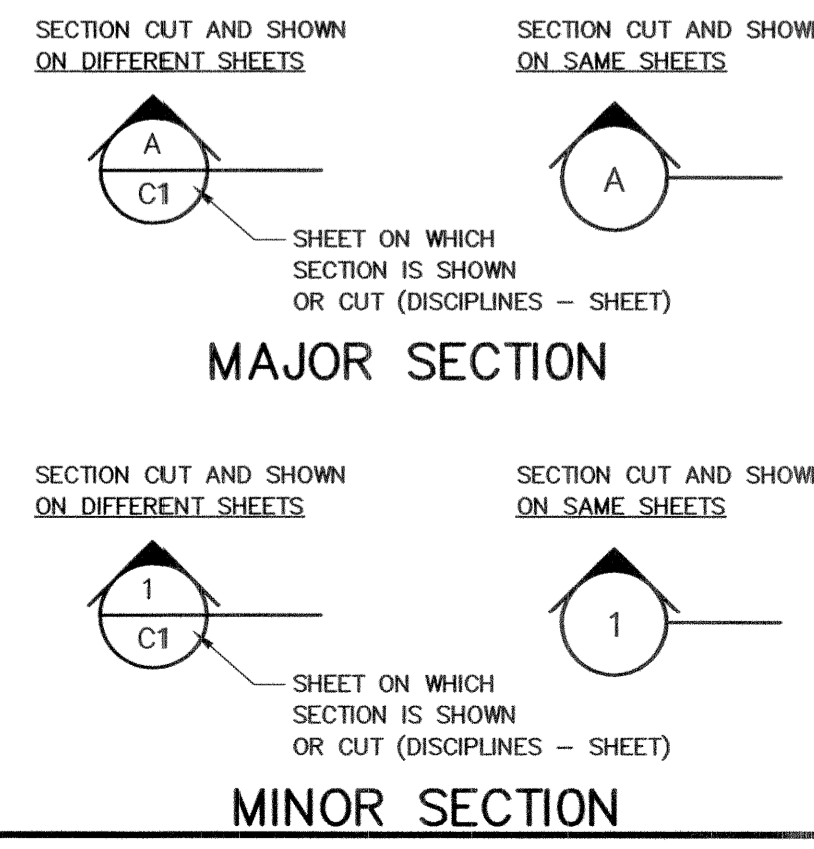
ABBREVIATIONS

A	ANCHOR BOLT ASBESTOS CEMENT PIPE ADJUSTABLE ABOVE FINISHED FLOOR ALTERNATIVE ALUMINUM AT ASPH AUTO AVG
B	BOND BEAM BLACK IRON PIPE BLIND FLANGE OR BOTTOM FACE BELT FILTER PRESS BUILDING BLOCK BENCHMARK BOTTOM OF SLAB BOT BRG
C	CHEMICAL CATCH BASIN CUBIC FEET CFM CI CIP C/L C/C CL CLG CMP CMU CO COL CON CONC CONN CPR CJ CONTR JT CONST CONT CORP CPLG CTRL CW CY
D	DRAIN DEMO DIA, Ø DIAG DIG DIM DIP DISCH D.L. DO DSL DS DTL DWG
E	EAST EACH ECC ED EF EFL EJ ELEC EL ELB EOP EQ EW EX EXP EXT
F	FRESH AIR FLOOR BOX OR FOUNDATION BEAM FD FDN FE FF FH FIBREINFP FIG FIN FL FLR FLRET FM FRP FT FTG
G	GAS GA GAL GALV GBT GEN GRD
H	HOSE BIBB HOLLOW CORE HDPE HE HK HM HORIZ HP HS HT HU HVAC
I	INSIDE DIAMETER INSIDE FACE ISOLATION JOINT INCHES INFL INT INV IP
J	JOINT
L	POUND LENGTH LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL LPT LR LS LT LTG LWL
M	MAXIMUM MCC MFR MG MGD MH MISC MIN MJ MK MO
N	NORTH NC NF NO No. NPW NTS NWL
O	ON CENTER OUTSIDE DIAMETER OUTSIDE FACE OVERHEAD OPENING OPPOSITE OUNCE
P	POUNDS PER CUBIC FOOT PUMP CONTROL PANEL PLAIN END PREMOLDED EXP. JT. MATERIAL PLATES PLCS PLT PNL POT PP P.P. PRCP
PROF	PROPOSED
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
PWD	PLYWOOD

Q	QUAN QUANTITY
R	RISE RADIUS RETURNED ACTIVATED SLUDGE ROOF BEAM REINFORCED CONCRETE PIPE ROOF DRAIN RECIRC RECIRCULATION REDUCER REINFC REQ'D RM RT R/W
S	SLAB, SOUTH SANITARY SCHEDULE SECTION SQUARE FEET SHT SHEET S/J SAW JOINT SIM SPE SPECIFICATION SPG SPACING SQ SQUARE S STL STAINLESS STEEL ST STRAIGHT STA STATION STD STANDARD STIR STIRRUPS STL STEEL STR STRUCTURAL STM STORM SEWER SUP SUPERNATENT SY SQUARE YARD SYM SYMMETRICAL SW SWITCH
T	TEMPORARY BENCHMARK TOP FACE THK THICKNESS THKD THICKENED TOP TOB TOP OF BANK OR TOP OF BLOCK TOC TOP OF CONCRETE TOS TOP OF SLAB T&B TOP AND BOTTOM TC TOP OF COVER T&G TONGUE AND GROOVE TP TURNING POINT OR TANGENT POINT
TRANS	TRANSFER
TYP	TYPICAL
U	UNDERGROUND ELECTRIC UNDRGROUND TELEPHONE
UE	UNDERGROUND ELECTRIC
UT	UNDRGROUND TELEPHONE
V	VACUUM
VAR	VARIABLES
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WASTE ACTIVATED SLUDGE WATER OR WIDE WITH WITHOUT WATER CLOSET WOOD WATER HEATER WATER HAMMER ARRESTER WATER LEVEL OR WATER LINE WELDED WIRE FABRIC
Y	YARD
YH	YARD HYDRANT

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Y	YARD
YH	YARD HYDRANT

SECTION DESIGNATIONS



SCHEMATIC PIPING SYMBOLS

VALVES	OPERATORS (CONT'D)
	MISCELLANEOUS

STRUCTURAL/ARCHITECTURAL LEGEND

TEXT LEGEND

<i>EXISTING TEXT</i>	SLANTED AND LIGHTER TEXT - EXISTING FEATURES
PROPOSED TEXT	UPRIGHT AND BOLDER TEXT - PROPOSED WORK

SITE PLAN SYMBOLS

	SOIL BORING NUMBER		DRILL HOLE FOUND
	EXISTING FENCE		MAG NAIL FOUND
	EXISTING GUARDRAIL		P.K. NAIL FOUND
	PROPOSED FENCE		IRON BAR/PIPE FOUND
	PROPOSED GUARDRAIL		MINE SPIKE FOUND
	PROPERTY LINE		CONTROL POINT
	CENTERLINE LINE		MONUMENT FOUND
	RIGHT OF WAY LINE		AXLE FOUND
	PROPOSED CONTOUR		STORM MANHOLE
	EXISTING CONTOUR		CATCH BASIN
	NEW GRADE SPOT ELEVATION		SANITARY MANHOLE
	EXISTING GRADE SPOT ELEVATION		POWER POLE
	EDGE OF WATER		POWER/LIGHT POLE
	DRAINAGE FLOW		TELEPHONE POLE
	UNDERGROUND GAS LINE		GUY WIRE ANCHOR
	STORM SEWER LINE		TELEPHONE PEDESTAL
	SANITARY SEWER LINE		TELEPHONE MANHOLE/VAULT
	OVERHEAD LINES		PAY TELEPHONE
	C = CABLE		ELECTRIC METER
	E = ELECTRIC		GAS LINE MARKER
	T = TELEPHONE		GAS VALVE
	CT = CABLE, TELEPHONE		GAS METER
	CET = CABLE, ELECTRIC, TELEPHONE		WATER VALVE
	UNDERGROUND CATV		HYDRANT
	FIBER OPTIC LINE		WATER LINE MARKER
	TREE LINE		POST/BOLLARD
	EXISTING CATCH BASIN, MANHOLE		TRAFFIC PULL-BOX
	PROPOSED CATCH BASIN, MANHOLE		SIGNAL SUPPORT POLE
	ADJUST TO GRADE CATCH BASIN, MANHOLE		TRAFFIC CONTROL PEDESTAL
	GAS, WATER VALVE BOX		SIGN
			DECIDUOUS TREE
			BUSH/SHRUB
			LIGHT POLE
			UTILITY POLE
			UTILITY POLE W/STREET LIGHT, STREET LIGHT, & TELEPHONE
			UTILITY POLE W/CATV, ELECTRIC, & TELEPHONE
			UTILITY POLE W/CATV, & TELEPHONE
			ELECTRIC BOX
			MAILBOX

TWO LINE PIPING SYMBOLS

	FLANGE JOINT		GATE VALVE
	MECHANICAL JOINT		GLOBE VALVE
	BELL & SPIGOT JOINT		MAGNETIC FLOW METER
	PVC PIPE JOINT		"S" SIZE MAGNETIC METER
	SLEEVE COUPLING		PLUG VALVE
	ANGLE VALVE		CONCENTRIC REDUCER
	CHECK VALVE		ECCENTRIC REDUCER
	BUTTERFLY VALVE		GROOVED COUPLING
			WELD JOINT

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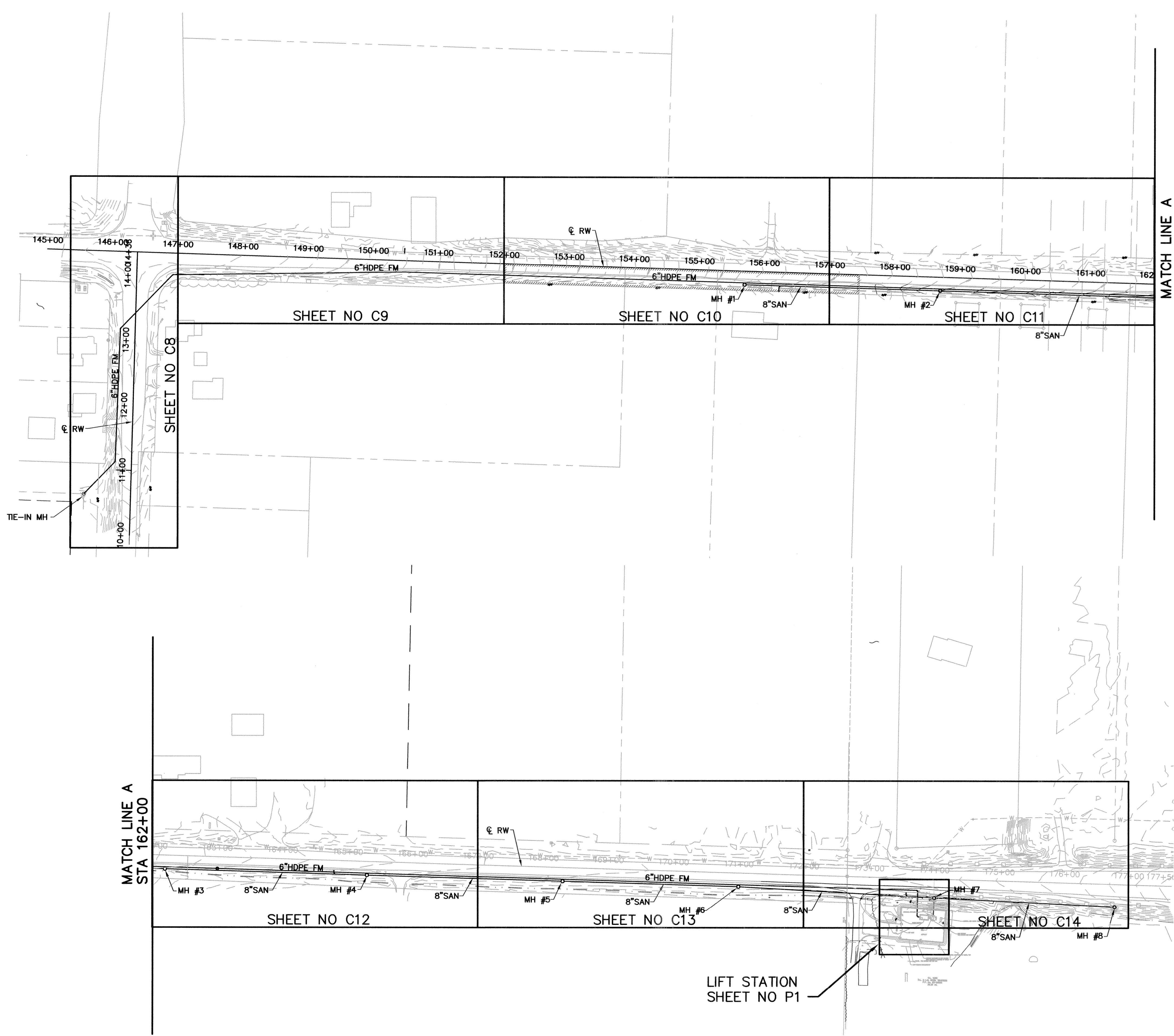
DESIGNED BY: **TMK** DRAWN BY: **AJP** CHECKED BY: **TMK** APPROVED BY: **WAD**

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142


ABBREVIATIONS AND SYMBOLS

CFI ENGINEERS, INC.
220 MARKET AVENUE SOUTH, SUITE 150
CANTON, OH 44702
330-455-7733

JOB NO. E 12022-2
DATE 2/2014
SCALE NONE
SHEET NO. C2



<p>CANTON, OHIO FAIRCREST ST SW LIFT STATION AND SANITARY SEWER EXTENSION G.P. #1142 GENERAL PLAN</p>		<p>DESIGNED BY TMK</p>		<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 65%;">DESCRIPTIONS</th> <th style="width: 15%;">DATE</th> <th style="width: 15%;">BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		NO.	DESCRIPTIONS	DATE	BY																				
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<p>DRAWN BY AJP</p>		<p>CHECKED BY TMK</p>		<p>APPROVED BY WAD</p>																									

 <p style="font-size: 8px;">220 MARKET AVENUE SOUTH, SUITE 750 CANTON, OH 44702 330-485-7233</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">JOB NO. E 12022-2</td> <td style="width: 50%;">DATE 2/2014</td> </tr> <tr> <td colspan="2" style="text-align: center;">SCALE 1" = 80'</td> </tr> <tr> <td colspan="2" style="text-align: center;">SHEET NO C3</td> </tr> </table>	JOB NO. E 12022-2	DATE 2/2014	SCALE 1" = 80'		SHEET NO C3	
JOB NO. E 12022-2	DATE 2/2014						
SCALE 1" = 80'							
SHEET NO C3							

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REF. NO.	ITEM SPEC NO.	SHEET NUMBER								N/A	ITEM SPEC NO.	GRAND TOTAL	UNIT	DESCRIPTION
		C8	C9	C10	C11	C12	C13	C14						
1	ODOT 624								1	ODOT 624	1	LUMP SUM	MOBILIZATION/DEMOBILIZATION	
2	02110								1	02110	1	LUMP SUM	SITE CLEARING	
3	ODOT 623								1	ODOT 623	1	LUMP SUM	CONSTRUCTION STAKING	
4	02270								1	02270	1	LUMP SUM	EROSION CONTROL	
5	02485								1	02485	1	LUMP SUM	SEEDING AND MULCHING	
6	ODOT 614								1	ODOT 614	1	LUMP SUM	MAINTAINING TRAFFIC	
7	02200								100	02200	100	C.Y.	ROCK EXCAVATION, CONTINGENCY	
8	02500	150								02500	150	S.Y.	PAVEMENT REMOVAL INCLUDING SAW CUTTING	
9	02567	30							22	02567	52	V.F.	MANHOLE AND LIFT STATION WET WELL SEALING WITH A PROTECTIVE POLYMER LINING	
10	02830							240		02830	240	L.F.	CHAIN LINK FENCE AND GATES, COMPLETE	
11	11313							1		11313	1	LUMP SUM	FAIRCREST LIFT STATION, COMPLETE	
12	16010							1		16010	1	LUMP SUM	FAIRCREST LIFT STATION ELECTRICAL, COMPLETE	
13	ODOT 304	43						101		ODOT 304	144	C.Y.	LIMESTONE, 6 INCHES FOR PUMP STATION AND ROAD CROSSING	
14	ODOT 301							84		ODOT 301	84	C.Y.	ASPHALT CONCRETE BASE COARSE, VARIABLE THICKNESS	
15	ODOT 448	1.5	1	1.5	1.5	2.5				ODOT 448	8	C.Y.	ASPHALT CONCRETE INTERMEDIATE COARSE, 1.75 INCHES	
16	ODOT 448	0.75	0.5	0.75	0.75	1.25		17		ODOT 448	21	C.Y.	ASPHALT CONCRETE SURFACE, VARIABLE THICKNESS	
17	ODOT 604							100		ODOT 604	100	V.F.	MANHOLE WATERPROOFING, COAL TAR	
18	ODOT 611							15		ODOT 611	15	L.F.	MISC. DRAIN REPLACEMENT CONTINGENCY, 4-6 INCH	
19	ODOT 611							15		ODOT 611	15	L.F.	MISC. DRAIN REPLACEMENT CONTINGENCY, 8-10 INCH	
20	ODOT 611							15		ODOT 611	15	L.F.	MISC. DRAIN REPLACEMENT CONTINGENCY, 12-18 INCH	
21	02620							278		02620	278	L.F.	SANITARY SEWER, 8 INCH HDPE, DIRECTIONALLY DRILLED	
22	02630			130	500	500	500	226		02630	1856	L.F.	SANITARY SEWER, 8 INCH PVC	
23	02630			15						02630	15	L.F.	SANITARY LATERAL, 6 INCH PVC	
24	02630			1	1	1		1		02630	3	EA.	SANITARY WYE 8 IN. x 6 IN. AND LATERAL CAP, 6 INCH, PVC	
25	02560			1	1	1	2	2		02560	8	EA.	STANDARD SANITARY MANHOLE, 4 FEET DIAMETER	
26	02620	396	151	500	500	500	500	553		02620	3100	L.F.	FORCE MAIN, 6 INCH, HDPE	
27	11280					1				11280	1	EA.	AIR/VACUUM RELEASE VALVE WITH 5 FOOT MANHOLE	
28	ODOT 703							5		ODOT 703	5	C.Y.	#57 LIMESTONE FOR DRIVEWAY REPLACEMENT, AS REQUIRED	
29	SPECIAL							5		SPECIAL	5	TON	PETROLEUM CONTAMINATED SOIL REMEDIATION, CONTINGENCY	
30	ODOT 611							1856		ODOT 611	1856	L.F.	SEWER TELEVISION INSPECTION AND DOCUMENTATION	
31	VARIOUS							1		VARIOUS	1	LUMP SUM	REMOVE AND RESTORE MAILBOXES, HIGHWAY SIGNAGE, AND GUARDRAIL	

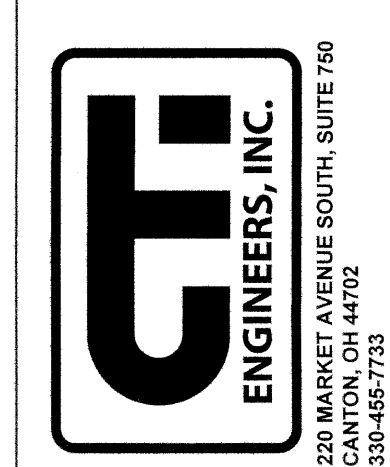
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REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			
1	MODIFIED BID ITEMS	7/29/14	RMB	

DESIGNED BY: TMK
 DRAWN BY: AJP
 CHECKED BY: TMK
 APPROVED BY: WAD

CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 GENERAL SUMMARY

JOB NO. E 12022-2
 DATE 2/2014
 SCALE NONE
 SHEET NO C3A



I. PRECONSTRUCTION INCIDENTALS

(A) PROJECT SPECIFICATIONS/REQUIREMENTS:

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS/REQUIREMENTS OF THE CITY OF CANTON AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF CANTON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE CITY OF CANTON REQUIREMENTS WILL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL COMPLY WITH THE CITY OF CANTON SUPPLEMENTAL SPECIFICATION 01-00 PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS.

(B) ADMINISTRATIVE REQUIREMENTS:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUTIES HEREIN CONTAINED.

THE DEVELOPER/CONTRACTOR SHALL DESIGNATE TO THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTINENT TO THE PROJECT.

(C) PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING WITH THE DEVELOPER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT AND THE CITY OF CANTON WATER DEPARTMENT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

FOR SUBDIVISION DEVELOPMENTS, THE DEVELOPER SHALL CONTACT THE CITY ENGINEER'S OFFICE TO ARRANGE A MEETING DATE. THE DEVELOPER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

FOR CITY GENERAL PROJECTS, THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

IF THE PROPOSED PROJECT LAND-DISTURBANCE AREA IS ONE (1) OR MORE ACRES, A SEPARATE PRE-CONSTRUCTION MEETING IS ALSO REQUIRED. THIS MEETING SHALL OCCUR ON-SITE BETWEEN THE CONTRACTOR AND THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THIS MEETING. NO LAND-DISTURBANCE ACTIVITIES SHALL START UNTIL SAID MEETING HAS OCCURRED AND APPROVAL HAS BEEN GRANTED BY STARK SWCD.

(D) PROJECT SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING AND CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

(E) UNDERGROUND UTILITIES:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

(F) UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED, EXCLUDING SATURDAYS, SUNDAYS AND OTHER LEGAL HOLIDAYS; STAKE, MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION.

NO EXCAVATION ACTIVITY IS PERMITTED WITHIN 50 FEET OF MARATHON PIPE LINE AND ENVEREST GAS LINES WITHOUT A REPRESENTATIVE FROM THE RESPECTIVE COMPANY ON SITE. MARATHON PIPE LINE AND ENVEREST GAS ARE RESPONSIBLE FOR ALL COSTS RELATED TO THEIR ON SITE.

(F) UTILITY NOTIFICATION (CONT'D):

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION EAST OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM AND DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK McDONALD (330-266-2122), OR AL HUMRICHOUER (330-478-3757).

OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

NATURAL GAS DIST./TRANS.

DOMINION EAST OHIO GAS
320 SPRINGSIDE DR.
AKRON, OHIO 44333
330-664-2409
ATTN: MARY LONG
RELOCATION@DOM.COM
EMERGENCY NO.
1-800-362-7557

ENVEREST GAS
125 S.R. 43 SUITE 100
HARTVILLE, OHIO 44632
330-587-1221
ATTN: ED HAAS

MARATHON PIPE LINE
8930 MAPLEHURST AVE
EAST SPARTA, OHIO 44626
330-866-5625 EXT 31 (OFFICE)
330-866-3039 (CELL)
ATTN: JASON JEFFERY

COMMUNICATIONS CABLE

TIME WARNER CABLE
5520 WHIPPLE AVE N.W.
NORTH CANTON, OHIO 44720
330-494-9200, EXT. 3305553192
ATTN: JUSTIN FREUDEMAN

SANITARY AND STORM SEWER

CITY ENGINEER'S OFFICE
2436-30TH ST. N.E.
CANTON, OHIO 44705
330-489-3381
ATTN: DAN MOEGLIN

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381.

(G) PROPOSED PUBLIC UTILITY LOCATION IN PROPOSED SUBDIVISIONS:

THE DEVELOPER/CONTRACTOR AND REPRESENTATIVES OF THE CITY OF CANTON SHALL MEET WITH REPRESENTATIVES OF THE VARIOUS PUBLIC UTILITY COMPANIES (EAST OHIO GAS, AMERICAN ELECTRIC POWER, AMERITECH, WARNER CABLE, ETC.) TO DETERMINE THE APPROPRIATE LOCATION FOR THESE UTILITIES WITHIN THE PROJECT SITE. ONCE AN AGREEMENT HAS BEEN REACHED, IT SHALL BE THE RESPONSIBILITY OF THE UTILITY OWNERS TO INSPECT THE INSTALLATION OF THE VARIOUS PUBLIC UTILITY LINES WITHIN THE ROAD RIGHT-OF-WAY TO ENSURE THAT CONFLICTS ARE AVOIDED AND ADEQUATE CLEARANCE AND OFFSETS WITH OTHER UTILITIES ARE MAINTAINED. UTILITY COMPANIES SHALL SUBMIT PLANS INDICATING THEIR PROPOSED IMPROVEMENTS AND FACILITIES TO THE CITY OF CANTON FOR APPROVAL. THE SITE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE INSTALLATION OF THE OTHER UTILITIES NOT OWNED BY THE CITY.

(H) EXPLORATORY BORINGS:

EXPLORATORY SOIL BORING INFORMATION IS NOT THE RESPONSIBILITY OF THE CITY OF CANTON. IT IS THE DEVELOPER/CONTRACTOR RESPONSIBILITY TO REVIEW ANY AND ALL INFORMATION AVAILABLE. IF DEVELOPER/CONTRACTOR REQUESTS TO DRILL AND OR EXCAVATE WITHIN THE CITY'S R/W, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THIS WORK. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY NOTIFICATION, AS SPECIFIED, ALL TRAFFIC CONTROL, PREMIUM BACKFILL, AND COMPACTION AND RESTORATION, AS NECESSARY.

(I) CONTINGENCY QUANTITIES:

WHEN SPECIFIED ON PLANS OR SPECIFICATIONS, CONTINGENCY QUANTITIES ARE TO BE PERFORMED ONLY UNDER DIRECTION OF THE CITY ENGINEER. THE DEVELOPER/CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY WORK UNTIL DIRECTED BY THE ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE DEVELOPER/CONTRACTOR AND THE ENGINEER.

II. CONSTRUCTION INCIDENTALS

(A) PLAN DISCREPANCIES:

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME.

FAILURE BY THE DEVELOPER/CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

(B) VERIFICATION OF UNDERGROUND UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT.

(C) PROTECTION OF UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AS APPROVED BY THE OWNERS OF THE UTILITY AND THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES; ANY POTENTIAL DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY.

THE CONTRACTOR SHOULD EXPECT AT A MINIMUM ONE SANITARY SEWER LATERAL, ONE ROOF DRAIN, ONE WATER SERVICE, AND ONE GAS SERVICE FOR EACH LOT. ANY OF THE ABOVE UTILITIES DAMAGED DUE TO THE CONTRACTOR'S WORK SHALL BE RESTORED TO THE UTILITY OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(D) MAINTENANCE OF UTILITY SERVICES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES.

WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT WRITTEN PERMISSION OF THE CITY OF CANTON WATER DEPARTMENT. PROPERTY OWNERS AFFECTED BY APPROVED INTERRUPTED SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR.

STORM SEWER AND SANITARY SEWER SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION, UNLESS APPROVED BY THE CITY ENGINEER.

IN THE EVENT THAT CONSTRUCTION DISRUPTS THE FLOW OF A SANITARY SEWER, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE DISRUPTED SEWER BY EITHER TEMPORARILY FLUMING WITH MATERIALS ACCEPTABLE TO THE ENGINEER OR BYPASSING WITH PUMPS. COST OF MAINTAINING AND REPAIR OF SANITARY SEWERS DISTURBED BY CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(E) CONSTRUCTION NOISE:

CONSTRUCTION NOISE ASSOCIATED WITH ANY IMPROVEMENT PROJECT SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY ENGINEER. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. UNLESS AUTHORIZED BY THE CITY ENGINEER.

(F) OPEN TRENCH CONSTRUCTION:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION/TRENCHING PRACTICES FOR THE PROPOSED IMPROVEMENT, OR AS FURTHER SHOWN ON THE PLANS AND SPECIFICATIONS.

THE DEVELOPER/CONTRACTOR SHALL FOLLOW ALL APPLICABLE LOCAL AND STATE SAFETY REGULATIONS, INCLUDING CODE OF FEDERAL REGULATIONS, PART 1926 (SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION), SUBPART P (EXCAVATIONS), FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

PRIOR TO COMMENCING CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

(G) TRENCH CLOSING AND TEMPORARY TOPPING:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON.

FOR TRENCH SURFACE REQUIREMENTS, REFER TO NOTE 4 ON CITY STANDARD DRAWING NO. 19.

(H) DUST CONTROL:

THE DEVELOPER/CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.

(I) TESTING OF UTILITIES:

ALL NEWLY CONSTRUCTED WATERLINES, SANITARY SEWERS (INCLUDING LATERALS AND FORCE MAINS) MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS (AWWA, ETC.) PER THE OHIO ENVIRONMENTAL PROTECTION AGENCY, AND PER THE REQUIREMENTS OF THE CITY OF CANTON WATER AND ENGINEERING DEPARTMENTS.

SANITARY SEWERS SHALL BE TESTED BY DEVELOPER/CONTRACTOR IN ACCORDANCE WITH THE CITY OF CANTON'S SUPPLEMENTAL SPECIFICATIONS:

02-00 TESTING FOR EXCESSIVE DEFLECTION FOR NON-PRESSURE THERMOPLASTIC SEWER PIPE.

03-00 TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESURE, THERMOPLASTIC SEWER PIPE.

04-01 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST.

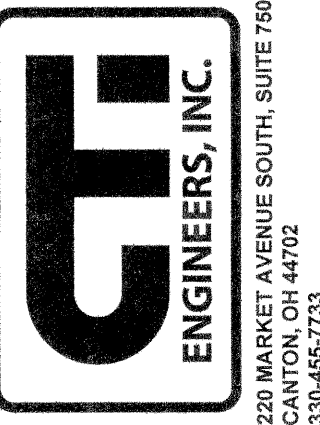
SANITARY AND STORM SEWERS CONSTRUCTED WITH THIS PROJECT SHALL BE TESTED BY THE DEVELOPER/CONTRACTOR ONLY WHEN A PAY ITEM IS PROVIDED IN ACCORDANCE WITH CITY OF CANTON'S SUPPLEMENTAL SPECIFICATION:

05-01 SEWER TELEVISION INSPECTION AND DOCUMENTATION PROCEDURE.

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF GTF ENGINEERS, INC. AND SHALL BE LOANED TO THE CLIENT AND NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF GTF ENGINEERS, INC. IT IS NOT RESPONSIBLE FOR CONSEQUENCES RELATED TO UNAUTHORIZED USE OR REUSE OF THIS DRAWING OR PORTIONS THEREOF.

DESIGNED BY	TMK	DRAWN BY	AJP	CHECKED BY	TMK	APPROVED BY	WAD	REVISIONS				
								NO.	DESCRIPTIONS	DATE	BY	APP'D
								1	UTILITY CONTACT UPDATES	7/30/14	RMB	

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
GENERAL NOTES



JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS SHOWN
SHEET NO	C5

CITY PROJECT: ---, DRAWING: CTT-2010 (187278v21/7/30/14 9:30AM), LAYOUT: C5GN

DATE OF PRINT

CTI PROJECT: ---, DRAWING: CTI-2010 (18727921/2/2B/14 2:10PM), LAYOUT: C6GN (2)

II. CONSTRUCTION INCIDENTALS (continued)

(J) PRESERVATION AND RESTORATION OF DISTURBED FEATURES:

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE DEVELOPER/CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE COMPLETE SATISFACTION OF THE CITY ENGINEER.

RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.

(K) SALVAGED CASTINGS:

WHEN DIRECTED BY THE CITY ENGINEER, ALL METAL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

(L) PLUG EXISTING CONDUIT:

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT TO BE ABANDONED.

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PAYMENT FOR PLUGGING OF EXISTING CONDUIT FOR ABANDONMENT SHALL BE INCLUDED IN THE UNIT BID OF THE VARIOUS ITEMS OF THE PROJECT.

(M) CONSTRUCTION LAYOUT:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT UTILIZING PERTINENT PLAN DATA. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. CONSTRUCTION LAYOUT SHALL BE IN ACCORDANCE WITH ODOT 623 CONSTRUCTION LAYOUT STAKES.

AT THE CITY ENGINEER'S REQUEST, THE CONTRACTOR SHALL MAKE AVAILABLE ALL SURVEY FIELD NOTES FOR REVIEW.

(N) EXISTING MONUMENTATION:

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND/OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE/RESET ANY DISTURBED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

(O) ELEVATION DATUM:

ALL ELEVATIONS ARE BASED ON THE **NAVD 1988 DATUM.**

(P) DEWATERING OPERATIONS:

WHEN DEEMED NECESSARY, THE DEVELOPER/CONTRACTOR MAY INSTALL DEWATERING EQUIPMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE PROPOSED LOCATION OF WELL POINTS, HEADER PIPE, ELECTRICAL DISTRIBUTION, GENERATORS AND DISCHARGE PIPES, ETC. SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS WELL AS PROPER WATER DISCHARGE PROCEDURES AS MAY BE REQUIRED PER STATE AND LOCAL GOVERNING AGENCIES.

INSTALLATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING GROUNDING AND PROTECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

DEVELOPER/CONTRACTOR SHALL PROVIDE ALL COMBUSTIBLE ENGINE DRIVEN GENERATORS WITH "HOSPITAL GRADE" MUFFLERS. MUFFLERS SHALL BE RATED, AT A MAXIMUM OF 67 dB AT 23 FEET AWAY RUNNING FULL LOAD.

(Q) INSPECTION:

FOLLOWING THE PRE-CONSTRUCTION MEETING(S) AND ESTABLISHMENT OF AN APPROVED SCHEDULE, THE CONTRACTOR SHALL GIVE A MINIMUM 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

(R) FIELD OFFICE:

IF A PAY ITEM IS PROVIDED, THE DEVELOPER/CONTRACTOR SHALL PROVIDE A FIELD OFFICE IN ACCORDANCE WITH ODOT 619. THE FIELD OFFICE SHALL BE TYPE 'A', UNLESS OTHERWISE SPECIFIED.

III. EARTHWORK / SITE WORK

(A) EASEMENTS AND RIGHT-OF-WAY:

THE DEVELOPER/CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, AND/OR RIGHT-OF-WAY PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE CITY ENGINEER/PROPERTY OWNER.

(B) SUITABILITY OF SITE:

THE CITY OF CANTON SHALL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE DEVELOPER/CONTRACTOR MUST APPRAISE THEMSELVES OF ANY EXISTING SITE CONDITIONS WHICH MAY AFFECT THEIR BID OR THE PERFORMANCE OF THE REQUIRED WORK. THE DEVELOPER/CONTRACTOR SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THEIR SATISFACTION ALL SITE CONDITIONS WHICH COULD AFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC.

REFER TO CITY STANDARD DRAWING NO. 19 FOR ADDITIONAL DETAILS.

(C) REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:

THE DEVELOPER/CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY IN ACCORDANCE WITH CITY STANDARD DRAWING NO. 19.

IV. ROADWAY / DRIVE APPROACHES / WALK / CURB

(A) PAVEMENT STANDARDS:

PAVEMENTS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE CITY STANDARD DRAWINGS AND SPECIFICATIONS (LISTED BELOW) AND ODOT SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

CITY STANDARD DRAWING NO.:

- DRIVEWAYS, CURBS, AND PAVEMENT**
- 27 "DRIVE APPROACH WITH LAWNSTRIP BETWEEN SIDEWALK & CURB"**
- 28 "DRIVE APPROACH WITH SIDEWALK AGAINST CURB"**
- 29 "COMBINED CURB & WALK"**
- 30 "CONCRETE CURB AND COMBINED CURB & GUTTER"**
- 31 "BRICK PAVEMENT REPAIR & REPLACEMENT OVER TRENCHES/ALONG CURB"**
- 32 "TYPICAL SECTION - LOCAL STREET"**
- 33 "WHEELCHAIR RAMP"**
- 34 "PAVEMENT TRANSITION, BRICK-ASPHALT"**

CITY STREETScape

- 40 "TYPICAL STREETScape CORRIDOR"**
- 41 "ROADWAY BRICK & CROSSWALK PAVEMENT DETAILS"**
- 42 "STREETScape CONCRETE WALK PAVEMENT DETAILS"**
- 44 "CONCRETE WALK OVER VAULT CONSTRUCTION DETAILS"**
- 45 "BRICK WALK OVER VAULT CONSTRUCTION DETAILS"**

CITY SPECIFICATIONS:

"CITY OF CANTON SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR, AND REPLACEMENT OF SIDEWALKS, CURBS, AND DRIVEWAYS"

(B) RESTRICTED WORK SCHEDULE:

NO CONCRETE FINISH WORK OR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.

(C) ASPHALT/CONCRETE:

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF BEGINNING WORK WHICH REQUIRES COMPACTION TESTING AND/OR PRE-POUR INSPECTION PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE. WORK SHALL NOT PROCEED UNTIL TESTING AND/OR INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.

V. SANITARY SEWERS / STORM SEWERS

(A) SEWER STANDARDS:

ALL SANITARY/STORM SEWER CONDUITS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO APPLICABLE CITY STANDARD DRAWINGS AND SPECIFICATIONS (LISTED BELOW) AND ODOT SPECIFICATIONS EFFECTIVE AT THE TIME OF CONSTRUCTION, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

CITY STANDARD DRAWING NO.:

- CATCH BASINS**
- 1 "CURB INLET CATCH BASIN"**
- 2 "CURB INLET WATER QUALITY CATCH BASIN"**
- 3 "HILLSIDE CURB INLET CATCH BASIN"**
- 4 "SQUARE-TOP CATCH BASIN"**
- 5 "SQUARE-TOP WATER QUALITY CATCH BASIN"**

MANHOLES

- 10 "PRECAST STORM OR SANITARY MANHOLE"**
- 11 "OUTSIDE DROP CONNECTION FOR SANITARY MANHOLE"**
- 12 "MANHOLE COVER"**

CONDUITS AND TRENCHES

- 18 "HOUSE CONNECTION STACK"**
- 19 "UTILITY TRENCH REQUIREMENTS"**
- 20 "SANITARY SEWERS AND LATERALS"**
- 21 "CONCRETE ENCASEMENT DETAIL"**
- 22 "DOWNSPOUT OUTLET (NON-CURBED STREET)"**
- 23 "DOWNSPOUT OUTLET (CURBED STREET)"**
- 24 "GROUNDWATER DRAIN LINE CONNECTION"**

DRIVEWAYS, CURBS, AND PAVEMENT

- 32 "TYPICAL SECTION - LOCAL STREET"**

VI. STORM WATER POLLUTION PREVENTION:

(A) FOR PROJECTS ONE (1) ACRE OR MORE OF TOTAL LAND-DISTURBANCE:

THE OWNER/DEVELOPER SHALL APPLY FOR AND OBTAIN AN OHIO EPA NPDES PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. SAID PERMIT REQUIRES THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWP3) TO ADDRESS CONSTRUCTION SITE STORM WATER RUNOFF AS WELL AS POST-CONSTRUCTION STORM WATER MANAGEMENT. THE SWP3 MUST BE REVIEWED AND APPROVED BY THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT (SWCD).

THE OWNER/DEVELOPER AND HIS REPRESENTATIVES SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE PERMIT AS WELL AS THE SWP3. ALL ACTIVITIES AND PRACTICES SHALL ALSO COMPLY WITH THE CURRENT EDITIONS OF THE CITY OF CANTON STORM WATER MANAGEMENT MANUAL AND THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AS APPLICABLE. SUCH PROJECTS ARE ALSO SUBJECT TO INSPECTION BY THE CITY OF CANTON AND/OR ITS AUTHORIZED REPRESENTATIVES (I.E. STARK SWCD) TO ENSURE COMPLIANCE WITH PERMIT AND SWP3 REQUIREMENTS AND LOCAL STORM WATER QUALITY REGULATIONS.

A PRE-CONSTRUCTION MEETING INITIATED BY THE DEVELOPER/CONTRACTOR IS REQUIRED ON-SITE WITH THE STARK SWCD PRIOR TO ANY LAND-DISTURBING ACTIVITIES. THE DEVELOPER/CONTRACTOR SHALL ABIDE BY ALL ORDERS ISSUED BY THE CITY AND/OR STARK SWCD PURSUANT TO INSPECTION OF THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT CO-PERMITTEE APPLICATION TO OHIO EPA PRIOR TO BEGINNING WORK ON THE PROJECT. AS APPLICABLE, THE CONTRACTOR SHALL OBTAIN A COPY OF THE SWP3 AND FAMILIARIZE HIMSELF WITH IT, IMPLEMENTING ALL ITEMS AND ABIDING BY ALL PERMIT REQUIREMENTS AND REGULATIONS.

(B) FOR PROJECTS LESS THAN ONE (1) ACRE OF TOTAL LAND-DISTURBANCE:

AN EPA NPDES CONSTRUCTION STORM WATER PERMIT AND SWP3 IS NOT REQUIRED. HOWEVER, THE DEVELOPER/ CONTRACTOR SHALL STILL ENSURE THAT APPROPRIATE PRACTICES ARE IN PLACE TO PROVIDE CONSTRUCTION RUNOFF AND EROSION AND SEDIMENT CONTROLS WITHIN THE PROJECT LIMITS. SUCH PRACTICES MAY INCLUDE THE USE OF SILT FENCE, STORM DRAIN INLET PROTECTION, JUTE MATTING, TEMPORARY SEEDING, MULCHING, CHECK DAMS, CONSTRUCTION ENTRANCES, CONCRETE WASHOUT AREAS, ETC. ALL PRACTICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AS APPLICABLE.

EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL PRACTICES AND WILL BE HELD RESPONSIBLE FOR ADDRESSING ANY ON- OR OFF-SITE EROSION/SEDIMENT ISSUES RELATED TO THE PROJECT. THE OWNER/DEVELOPER/CONTRACTOR SHALL ABIDE BY ALL ORDERS ISSUED BY THE CITY PURSUANT TO INSPECTION OF THE PROJECT SITE.

VII. TRAFFIC:

(A) MAINTAINING TRAFFIC:

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO AND THROUGH THE PROJECT AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES.

ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED IN WRITING BY THE CITY TRAFFIC ENGINEER AND ANY OTHER PUBLIC AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEER AT LEAST 72 HOURS IN ADVANCE OF ANY SUCH CLOSINGS FOR PUBLICATION AND EMERGENCY AGENCY NOTIFICATION.

(B) RESIDENTIAL AND BUSINESS AREAS:

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IN THE EVENT A DRIVE ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER 24 HOURS IN ADVANCE. CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.

(C) EXISTING STREET NAME AND TRAFFIC CONTROL SIGNS:

WHERE WORK REQUIRES THE MOVEMENT OF EXISTING SIGNS (STOP SIGNS, SPEED LIMIT SIGNS, NO PARKING SIGNS, ETC.) THE CONTRACTOR IS REQUIRED TO MAINTAIN THE FUNCTION OF ALL TRAFFIC CONTROL SIGNS. ALL SIGNS REMOVED BY THE CONTRACTOR SHALL BE STORED ON SITE AND REINSTALLED BY THE CONTRACTOR.

(D) NEW STREET NAME & TRAFFIC CONTROL SIGNS:

ALL STREET NAME AND TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE HI-INTENSITY SHEETING AND BE MADE WITH .080 50/52 ALUMINUM. STREET NAME SIGNS SHALL BE MADE WITH WHITE UPPER AND LOWER CASE LETTERING ON GREEN BACKGROUND USING 9" BLANKS, BE DOUBLED SIDED W/RADIUS CORNERS AND HAVE 6" NAME AND 3" SUFFIXES. ALL SIGN RELATED HARDWARE IS TO BE INCLUDED, SUCH AS 6" HEAVY DUTY U-CHANNEL CAPS AND STREET NAME CROSSES.

FOR SUBDIVISION DEVELOPMENTS, ALL PERMANENT STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER/CONTRACTOR.

(E) EXISTING TRAFFIC SIGNALS:

WHERE WORK REQUIRES INTERFERENCE WITH EXISTING SIGNALIZATION IN THE INTERSECTIONS, ALL WORK SHALL BE COORDINATED THROUGH THE CITY ENGINEER. THE CONTRACTOR SHALL NOT ALTER ANY SIGNALIZATION WITHOUT THE CITY ENGINEER'S AUTHORIZATION.

(F) NEW TRAFFIC SIGNALIZATION:

ALL NEW OR MODIFIED TRAFFIC SIGNALIZATION AT INTERSECTIONS SHALL BE IN ACCORDANCE WITH CITY TRAFFIC ENGINEERING TRAFFIC CONTROL GENERAL NOTES AND ODOT SPECIFICATIONS; WITH SPECIAL EMPHASIS ON ODOT ITEMS 625, 632, 633, 732, AND 733 WHICH DEALS WITH TRAFFIC CONTROL.

(G) TRAFFIC CONTROL PLAN:

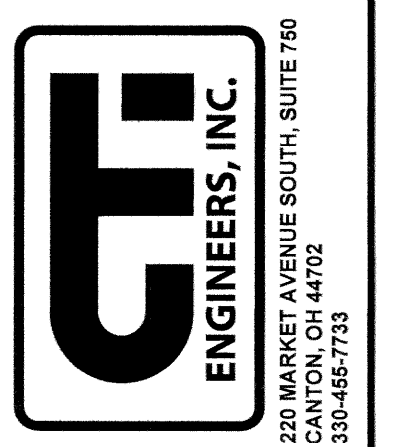
THE DEVELOPER/CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH CITY SUPPLEMENTAL SPECIFICATION 01-00. DETOURS, IF NECESSARY, SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PLAN SUBMISSION.

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NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY	TMK
DRAWN BY	AJP
CHECKED BY	TMK
APPROVED BY	WAD

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
GENERAL NOTES



JOB NO.
E 12022-2
DATE
2/2014
SCALE
AS SHOWN
SHEET NO
C6

DATE OF PRINT

CTI PROJECT: -----, DRAWING: CTI-2010 (187279v21/7/30/14 10:22AM), LAYOUT: CTGN (3)

IX. POST CONSTRUCTION INCIDENTALS

(A) AS-BUILT DRAWINGS:

AS-BUILT REPRODUCIBLE MYLARS SHALL BE PROVIDED TO THE CITY OF CANTON BY THE DESIGN ENGINEER AT THE COMPLETION OF THE PROJECT. AS-BUILT INFORMATION CONSISTS OF POST-CONSTRUCTION FIELD SURVEY DATA OF THE LOCATION, FLOWLINE ELEVATIONS, AND TOP-OF-GRATE/RIM ELEVATIONS FOR ALL STORM AND SANITARY STRUCTURES CONSTRUCTED AND/OR IMPACTED BY THE PROJECT.

FOR PRIVATE PROJECTS, THE CONSTRUCTION BOND WILL NOT BE RELEASED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN ACCEPTED.

(B) PROPOSED MONUMENTATION:

THE DEVELOPER'S/CONTRACTOR'S SURVEYOR SHALL NOTIFY THE CITY ENGINEER IN WRITING UPON THE COMPLETION OF MONUMENTS BEING SET AS PER PLAN OR RECORD PLAT.

(C) RELEASE OF RETAINER/BONDS:

PRIOR TO THE RELEASE OF RETAINER/CONSTRUCTION BOND BY THE CITY OF CANTON, THE CONTRACTOR SHALL HAVE COMPLETED THE ENGINEER'S PROJECT PUNCHLIST AND SUBMIT FINAL WAIVER OF LIEN, IN ACCORDANCE WITH CITY SS 01-00.

ENVIRONMENTAL WORK

ITEM SPECIAL -- WORK INVOLVING PETROLEUM CONTAMINATED SOIL

1.1 INTRODUCTION

UTILITY LOCATION WORK HAS SHOWN THAT THERE IS A POTENTIAL FOR ENCOUNTERING PETROLEUM CONTAMINATED SOILS (PCS) DURING EXCAVATION FOR CONSTRUCTION OF THE SANITARY SEWER FORCE MAIN AND GRAVITY SEWER IN THE VICINITY OF THE MARATHON PETROLEUM PIPELINES.

IN THE EVENT THESE MATERIALS ARE ENCOUNTERED WITHIN THE AFOREMENTIONED AREAS, THE CONTRACTOR SHALL MANAGE THESE MATERIALS ACCORDING TO THE FOLLOWING NOTES.

ALL EXCAVATIONS WITHIN THE AFOREMENTIONED AREAS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

1.2 MATERIAL HANDLING

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FIVE (5) DAYS NOTICE PRIOR TO ANY EXCAVATIONS WITHIN THE AFOREMENTIONED AREAS TO PERMIT ARRANGING FOR THE NECESSARY TESTING SERVICES. ALL MATERIALS EXCAVATED BY THE CONTRACTOR BETWEEN THE AFOREMENTIONED AREAS SHALL BE SUBJECT TO SUPPLEMENTAL TESTING BY AN INSPECTOR PROVIDED BY THE CITY ENGINEER.

ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN THE AFOREMENTIONED AREAS MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL STOCKPILE THE MATERIALS IN A LEAKPROOF, COVERED CONTAINER PROVIDED BY THE CONTRACTOR.

THE CITY ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE REGULATED MATERIALS ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THESE MATERIALS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUNOFF.

AS AN ALTERNATIVE, THE CITY ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THESE EXCAVATED MATERIALS FROM THE AFOREMENTIONED AREAS INTO TRUCKS FOR SUBSEQUENT DISPOSAL.

1.3 MATERIALS SAMPLING AND DISPOSAL

THE CONTRACTOR SHALL PROPERLY TEST (FOR DISPOSAL), TRANSPORT AND DISPOSE OF THE REGULATED MATERIALS IN A LICENSED (BY THE LOCAL DEPARTMENT OF HEALTH) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING SAMPLING AND ANALYSIS (FOR DISPOSAL PURPOSES) OF THE EXCAVATED MATERIALS WITHIN THE AFOREMENTIONED LIMITS. COPIES OF THE ANALYTICAL TEST RESULTS SHALL BE PROVIDED TO THE CITY ENGINEER.

1.4 GENERAL NOTES

ALL TRANSPORT VEHICLES USED FOR THE MOVEMENT OF REGULATED MATERIALS SHALL MEET ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN RECORDS (SUCH AS MANIFESTS, LANDFILL TICKETS, DAILY LOGS, ETC.) TO DOCUMENT THE SOURCE, MOVEMENT, AND DESTINATION OF EACH TRUCKLOAD OF CONTAMINATED MATERIAL. ONE COPY OF EACH OF THESE RECORDS SHALL BE SUBMITTED TO THE CITY ENGINEER.

1.5 BASIS OF PAYMENT

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE, TEST (FOR DISPOSAL), TRANSPORT AND DISPOSAL, INCLUDING ANY REQUIRED PERMITS, APPROVALS OR FEES, OF REGULATED MATERIALS WITHIN THE AFOREMENTIONED AREAS. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE PER METRIC TON/TON. THE BASIS FOR CONVERSION FROM (CUBIC METER TO METRIC TON IS 2 METRIC TON/CUBIC METER) OR (CUBIC YARD TO TON IS 1.5 TON/CUBIC YARD). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL -- WORK INVOLVING PETROLEUM CONTAMINATED SOIL 5 TONS

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY FLOW LINE ELEVATIONS OF EXISTING SANITARY SEWERS AND SANITARY LATERALS PRIOR TO WORK. ANY ADJUSTMENT OF GRADES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
2. ALL DISTURBED EARTH SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO PRECLUDE EROSION. JUTE MATTING SHALL BE PLACED IN AREAS WHERE GRASS COVER CANNOT BE ESTABLISHED DUE TO STEEP SLOPES.
3. ROOF DRAINS, FLOOR DRAINS, AND ALL CLEAN WATER CONNECTIONS SHALL BE PROHIBITED FROM CONNECTING TO THE SANITARY SYSTEMS.
4. NO GROUND OR SURFACE WATER ENCOUNTERED DURING SEWER LINE EXCAVATION WILL BE ALLOWED TO ENTER THE SANITARY SEWER COLLECTION SYSTEM.
5. A MINIMUM 10-FOOT HORIZONTAL SEPARATION (MEASURED OUT-TO-OUT CLEAR) BETWEEN THE SANITARY SEWER AND EXISTING WATER LINES SHALL BE MAINTAINED.
6. A MINIMUM 18" VERTICAL CLEARANCE (MEASURED OUT-TO-OUT CLEAR) BETWEEN THE SANITARY SEWER AND EXISTING WATER LINES SHALL BE MAINTAINED.
7. ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. ALL OPEN TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING SANITARY PIPE SIZES PRIOR TO CONNECTING TO EXISTING TO ENSURE PROPER MATERIAL AND SIZE ARE UTILIZED.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE PILED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS, OR OTHER CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS BEING COMPLETED. SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE, AND NATURAL WATERCOURSES SHALL NOT BE OBSTRUCTED. DURING THE PROGRESS OF THE WORK, ALL MATERIAL PILES SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER. ALL EXCAVATED WASTE SOIL AND MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE, AS DIRECTED BY THE OWNER.

LIFT STATION ELECTRIC SERVICE

THE CONTRACTOR'S ELECTRICIAN MUST BE REGISTERED TO WORK IN THE CITY OF CANTON AND HAVE THEIR CANTON-LICENSED JOURNEYMAN ACQUIRE A NO-FEE PERMIT FROM THE CANTON BUILDING DEPARTMENT PRIOR TO COMMENCING ELECTRICAL WORK. FAIRCREST LIFT STATION PLANS HAVE BEEN PROVIDED TO THE BUILDING DEPT. BY THE CITY ENGINEER.

THE CONTRACTOR AND/OR THEIR ELECTRICIAN ARE RESPONSIBLE FOR COORDINATING WITH AMERICAN ELECTRIC POWER(AEP), AND PROCURING NECESSARY PERMIT AND WORK TO MAKE A POINT OF SERVICE CONNECTION TO THE AEP ELECTRIC DISTRIBUTION SYSTEM.

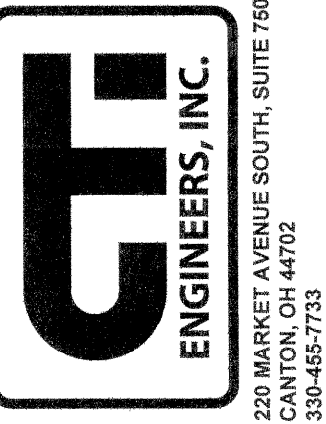
ALL COSTS ASSOCIATED WITH THE ABOVE SHALL BE INCLUSIVE WITH THE LUMP SUM BID ITEM, FAIRCREST LIFT STATION ELECTRICAL, COMPLETE.

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APPROVED BY	WAD

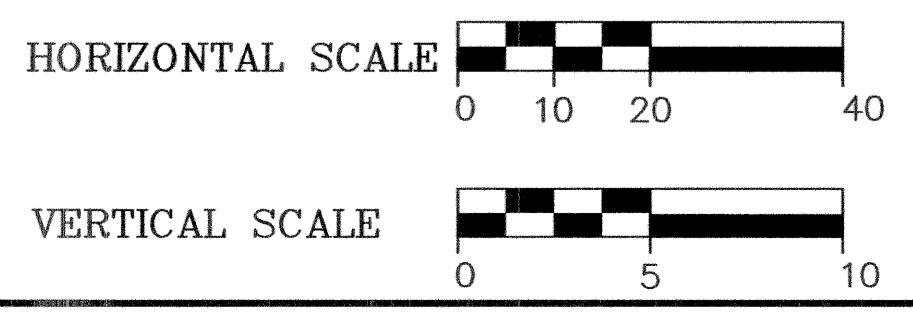
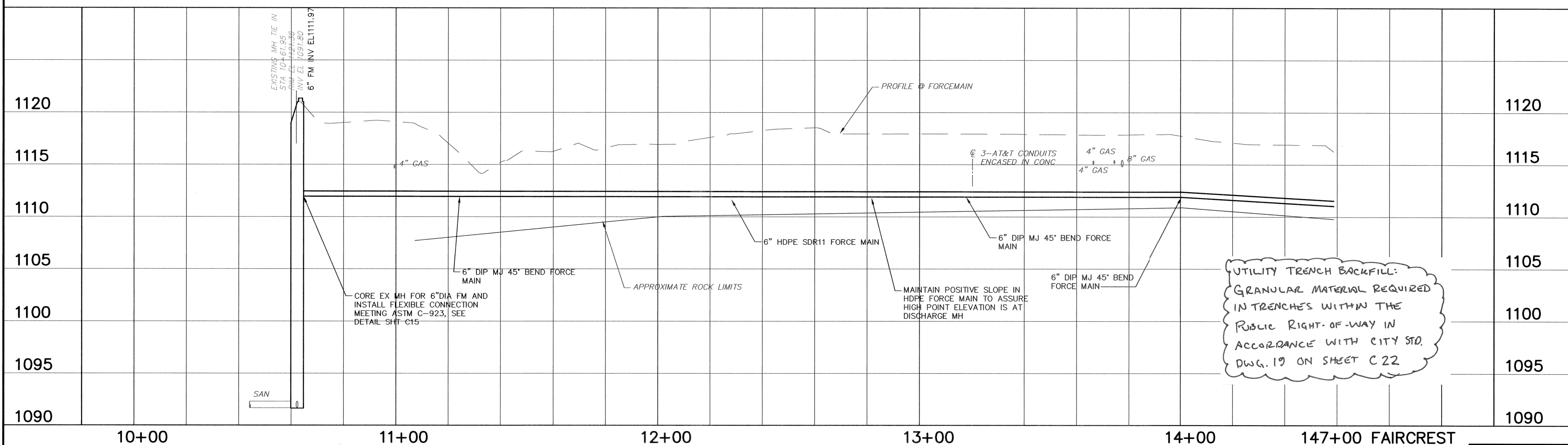
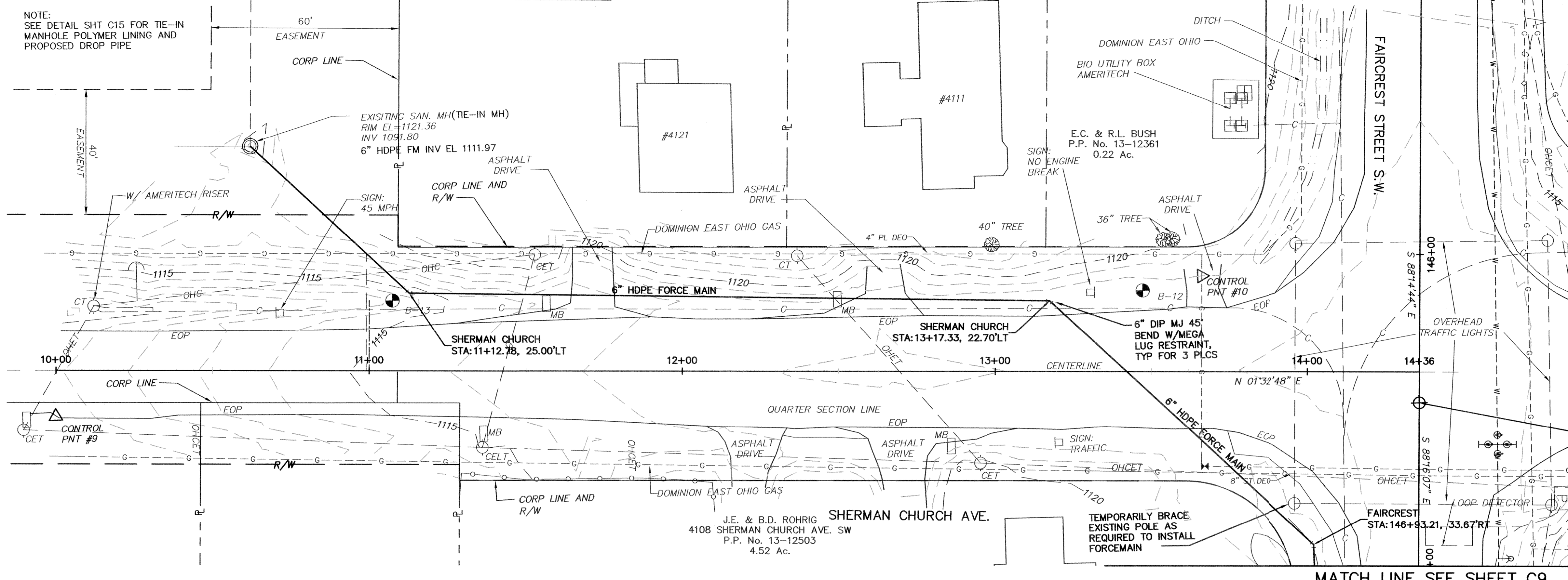
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
GENERAL NOTES



JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS SHOWN
SHEET NO	C7

DATE OF PRINT

CTI PROJECT: -----, DRAWING: CTI-2010 (187229v2.7/10/14 3:39PM), LAYOUT: C8 SHERMAN CHURCH PP



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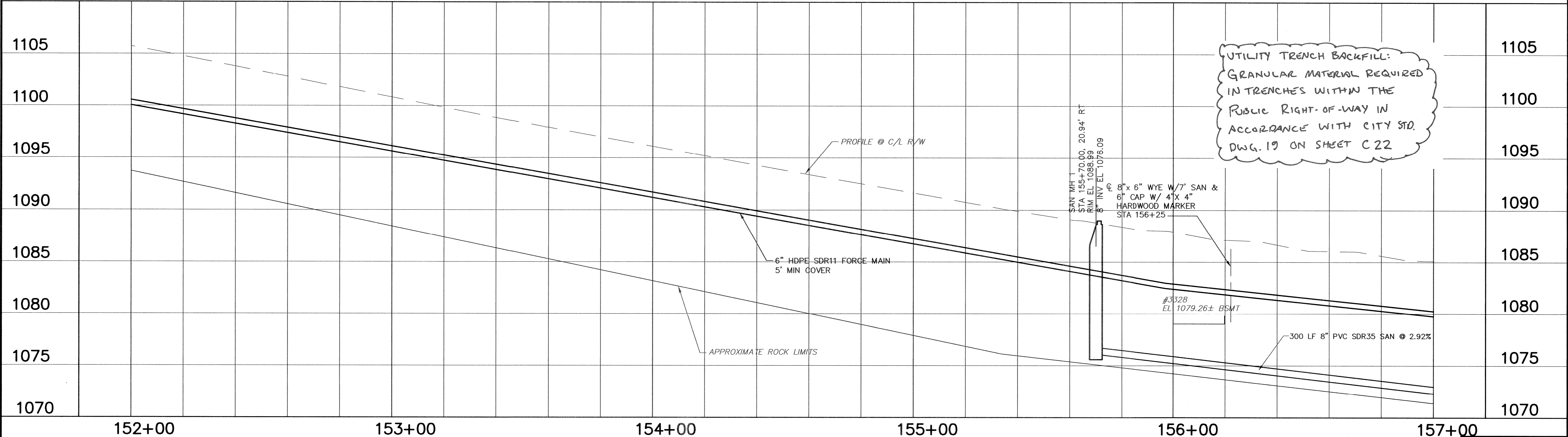
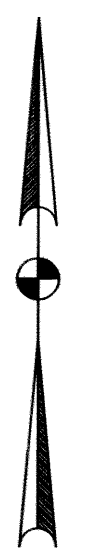
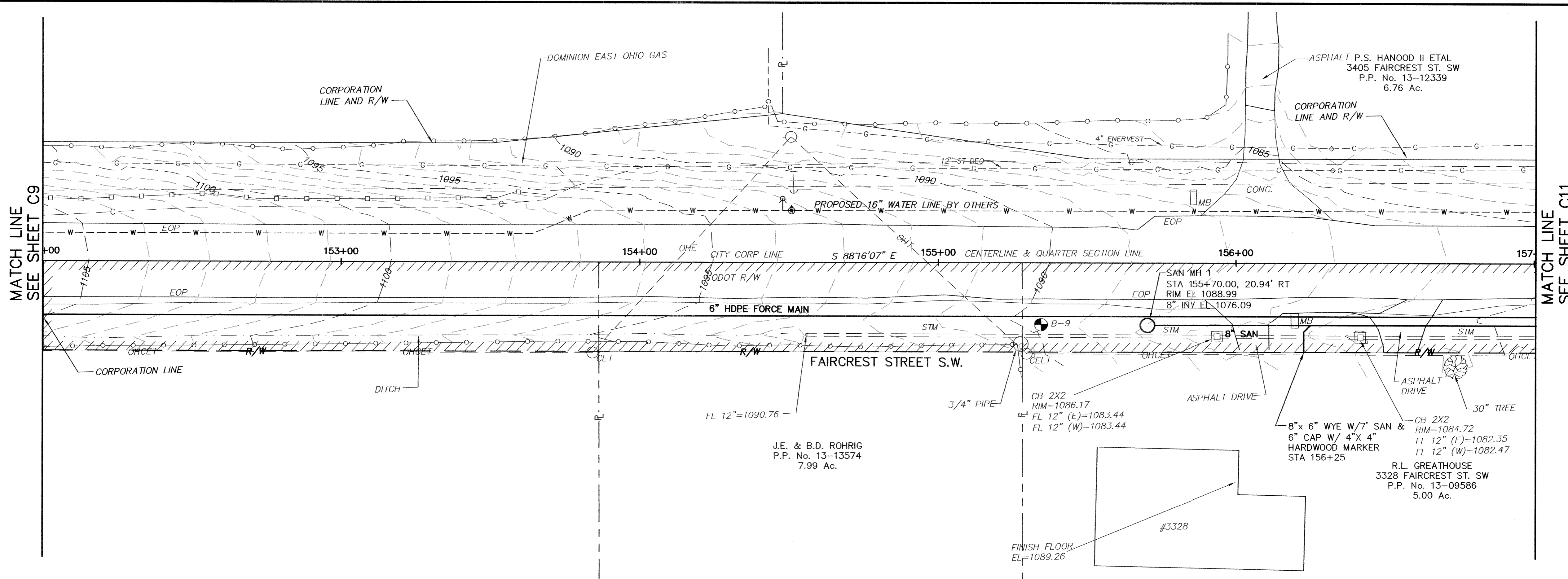
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
SHERMAN CHURCH AVE
PLAN AND PROFILE

GFI
ENGINEERS, INC.
220 MARKET AVENUE SOUTH, SUITE 750
CANTON, OH 44702
330-485-7733

JOB NO. E 12022-2
DATE 2/2014
SCALE AS SHOWN
SHEET NO C8

DATE OF PRINT

CTI PROJECT: ---, DRAWING: C1-2010 (187279v2)/7/10/14 3:39PM, LAYOUT: C10 FAIRCRESS PP 152 157



BENCHMARK NO 5:
 STA 151+04.77 29.98' RT
 SOUTH BOLT AT END OF GUARD RAIL
 EL=1067.00

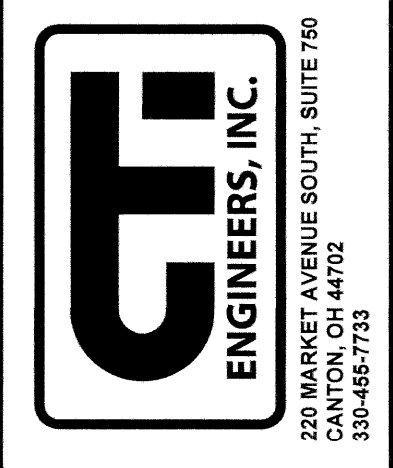


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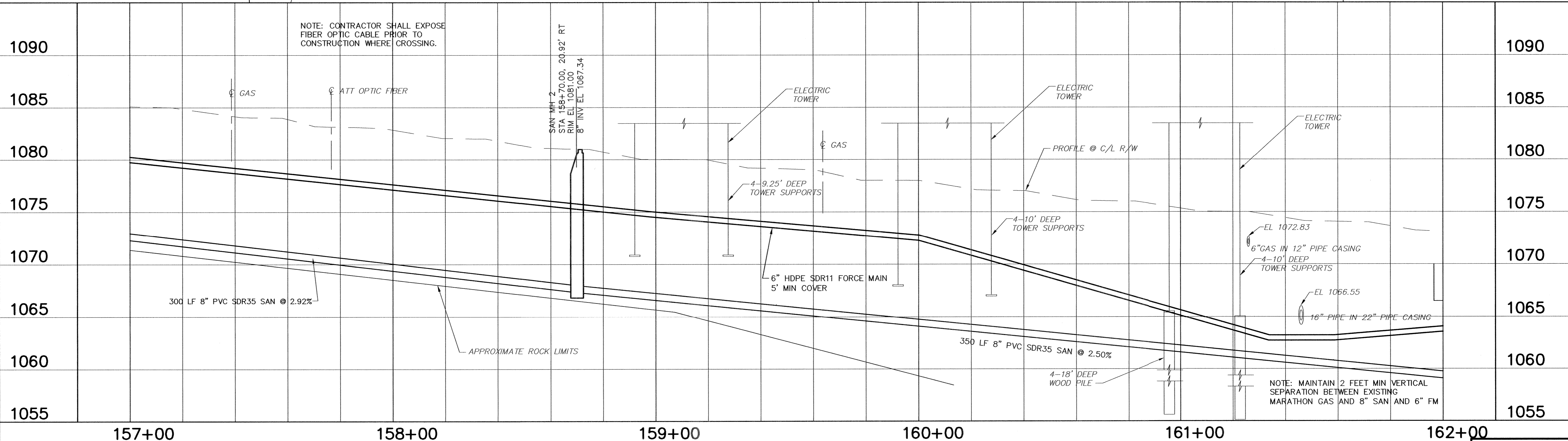
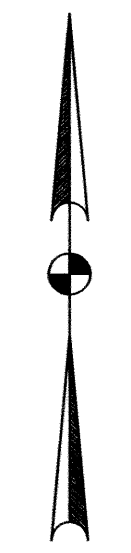
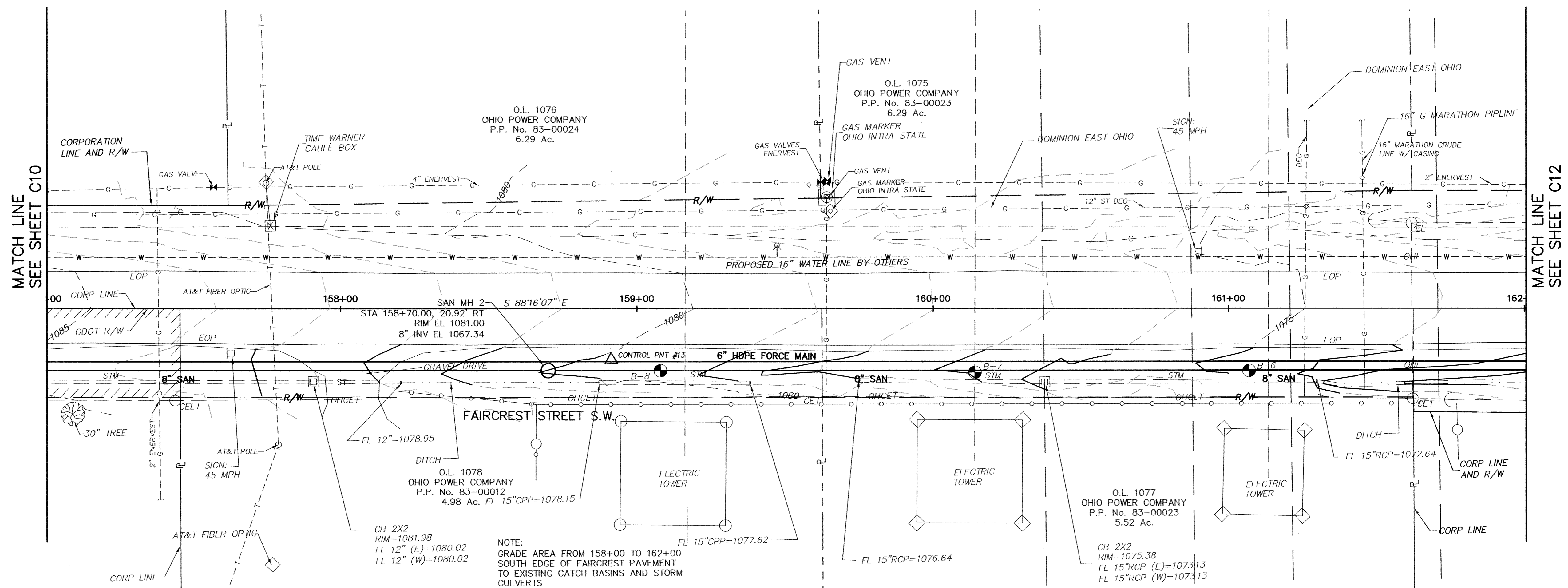
CANTON, OHIO
 FAIRCRESS ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 FAIRCRESS ST SW
 PLAN AND PROFILE



JOB NO. E 12022-2
 DATE 2/2014
 SCALE AS SHOWN
 SHEET NO C10

DATE OF PRINT

CTI PROJECT: --- DRAWING: CTI-2010 (167279v217/10/14 3:39PM) LAYOUT: C11FAIRCRESS PP 157-162



HORIZONTAL SCALE
VERTICAL SCALE

BENCHMARK NO 4:
 STA 162+54.65 32.35' RT
 RR SPIKE IN UTILITY POLE
 EL=1072.40

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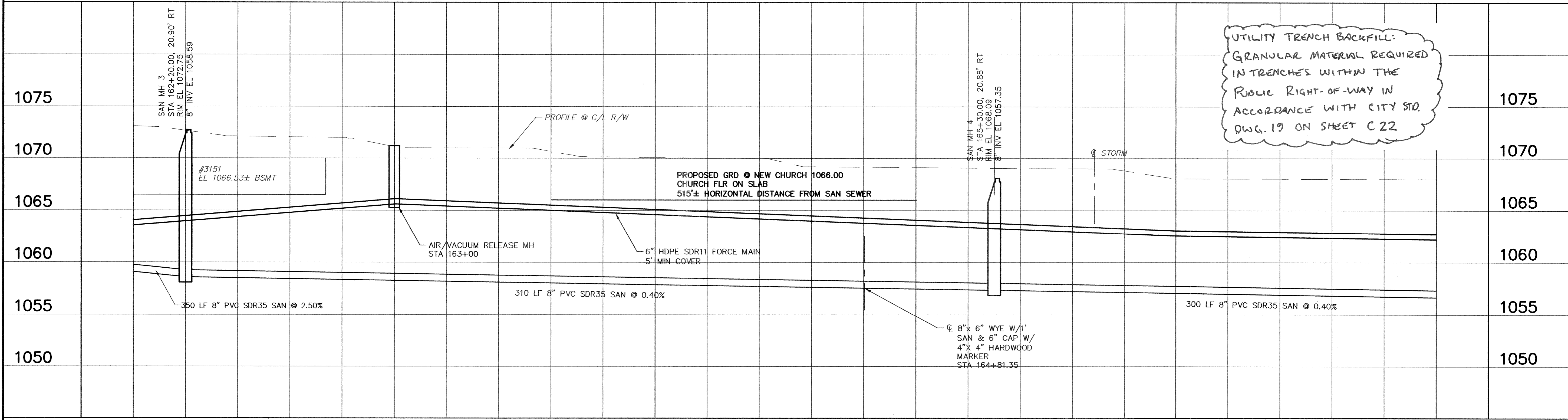
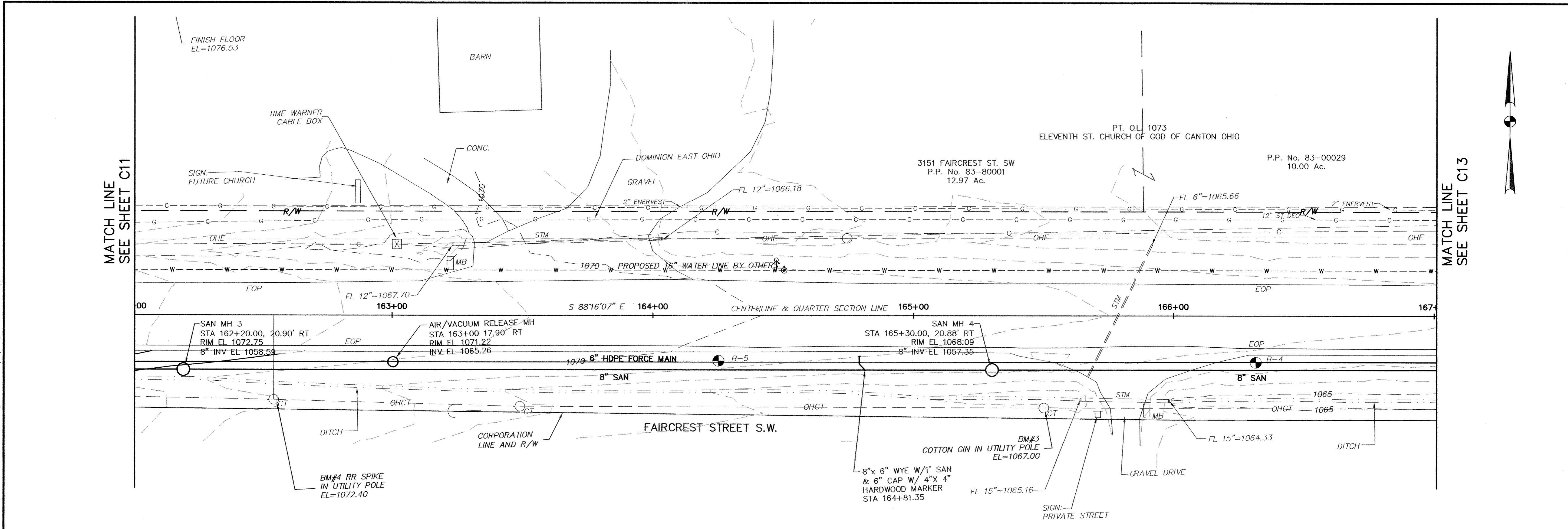
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 CANTON, OH 44702
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SCALE AS SHOWN	
SHEET NO. C11	

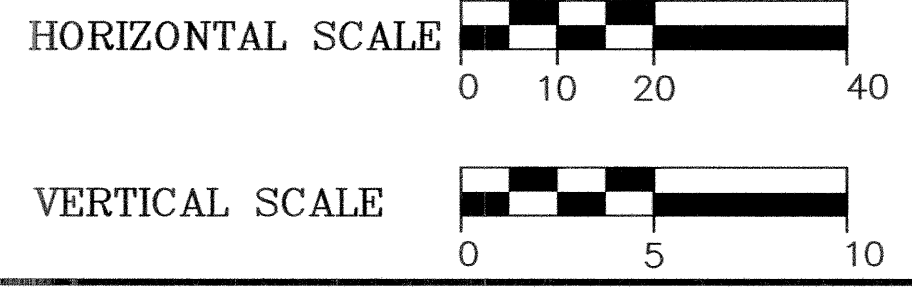
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UTILITY TRENCH BACKFILL:
GRANULAR MATERIAL REQUIRED
IN TRENCHES WITHIN THE
PUBLIC RIGHT-OF-WAY IN
ACCORDANCE WITH CITY STD.
DWG. 19 ON SHEET C 22

BENCHMARK NO 4:
STA 162+54.65 32.35' RT
RR SPIKE IN UTILITY POLE
EL=1072.40



BENCHMARK NO 3:
STA 165+49.87 35.37' RT
COTTON GIN IN UTILITY POLE
EL=1067.00

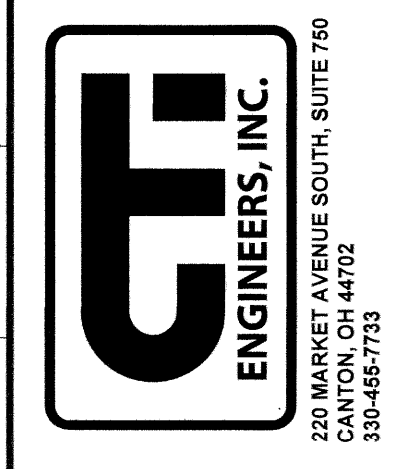
NOTE:
IF STORM CULVERT REPLACEMENT IS
NECESSARY, STORM CULVERTS SHALL
BE POLYETHYLENE ADS-N12
WATERTIGHT TYPE "WT" OR EQUAL AND
SHALL BE INSTALLED WITH A MINIMUM
18 INCHES OF COVER UNLESS INDICATED
OTHERWISE. JOINTS SHALL MEET ASTM
D3212 AND ASTM F1417.

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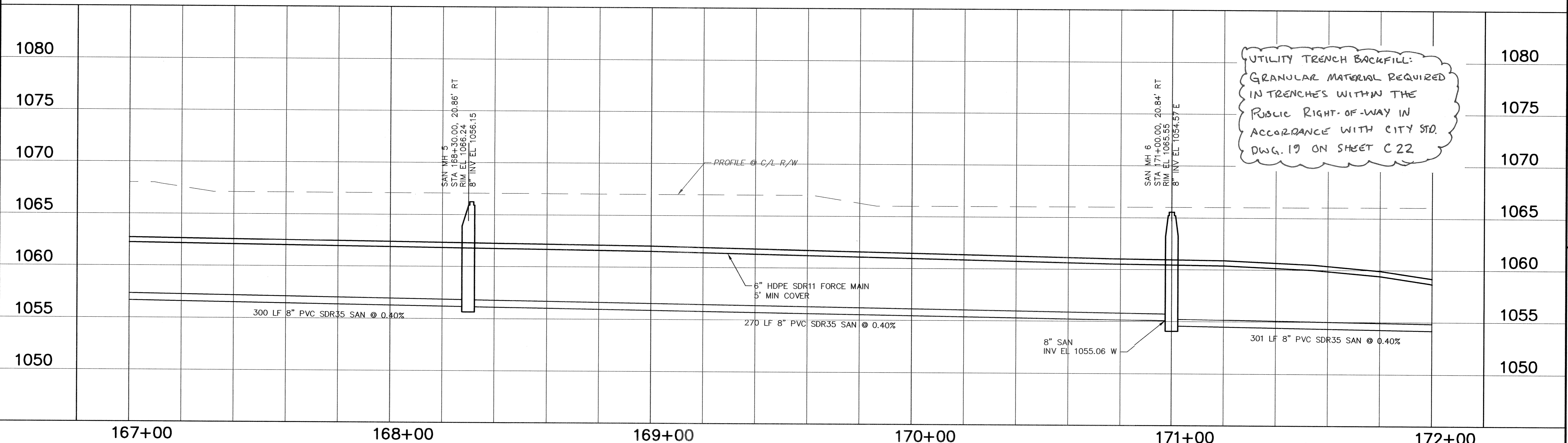
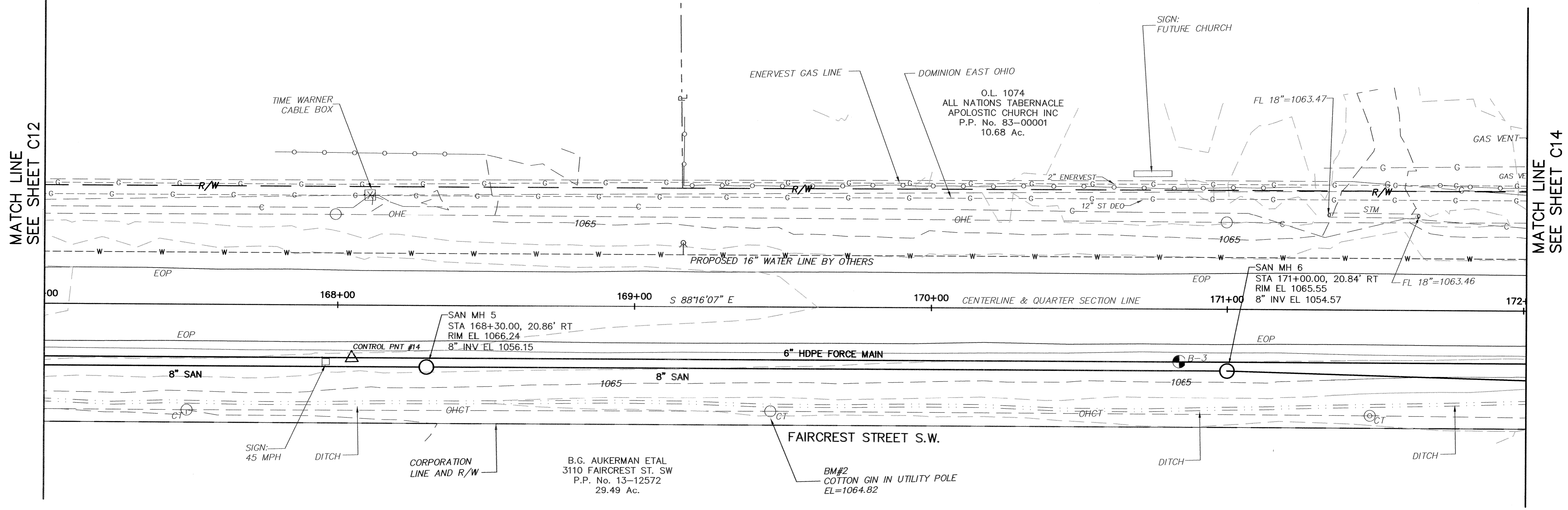
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
FAIRCREST ST SW
PLAN AND PROFILE



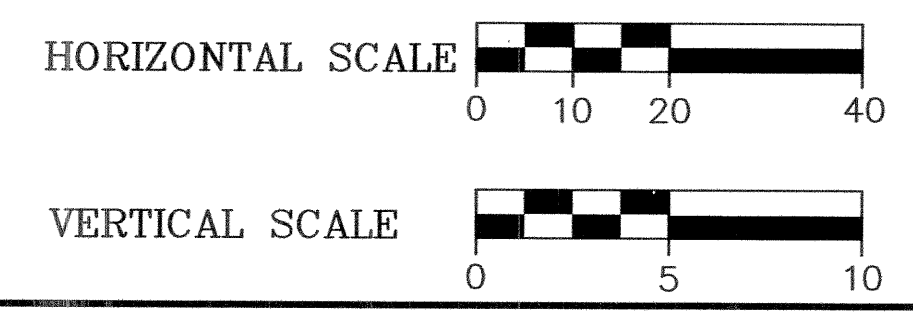
JOB NO.
E 12022-2
DATE
2/2014
SCALE
AS SHOWN
SHEET NO
C12

DATE OF PRINT

CITY PROJECT: ---, DRAWING: C1-2010 (1872792/17/10/14 3:39PM), LAYOUT: C13FAIRCRESS.PP 167-172



UTILITY TRENCH BACKFILL:
 GRANULAR MATERIAL REQUIRED
 IN TRENCHES WITHIN THE
 PUBLIC RIGHT-OF-WAY IN
 ACCORDANCE WITH CITY STD.
 DWG. 19 ON SHEET C 22



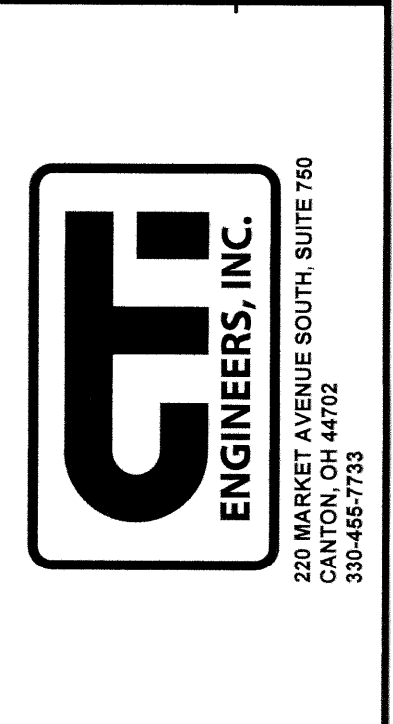
BENCHMARK NO 2:
 STA 169+45.90 35.28' RT
 COTTON GIN IN UTILITY POLE
 EL=1064.82

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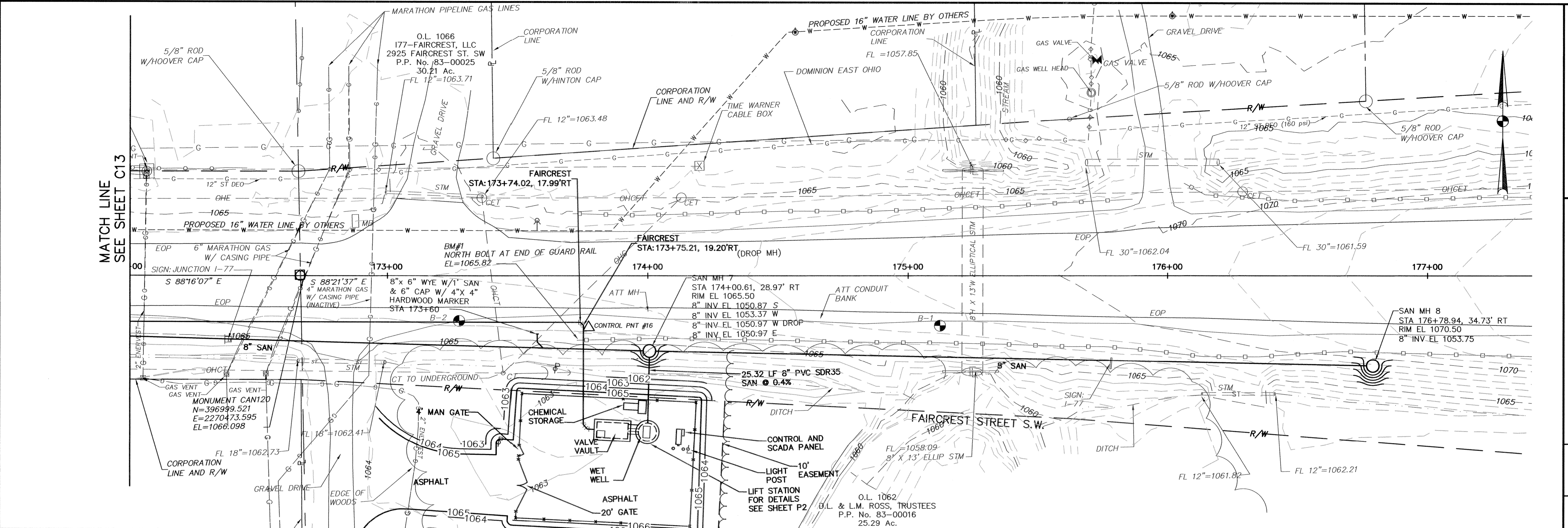
CANTON, OHIO
 FAIRCRESS ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 FAIRCRESS ST SW
 PLAN AND PROFILE



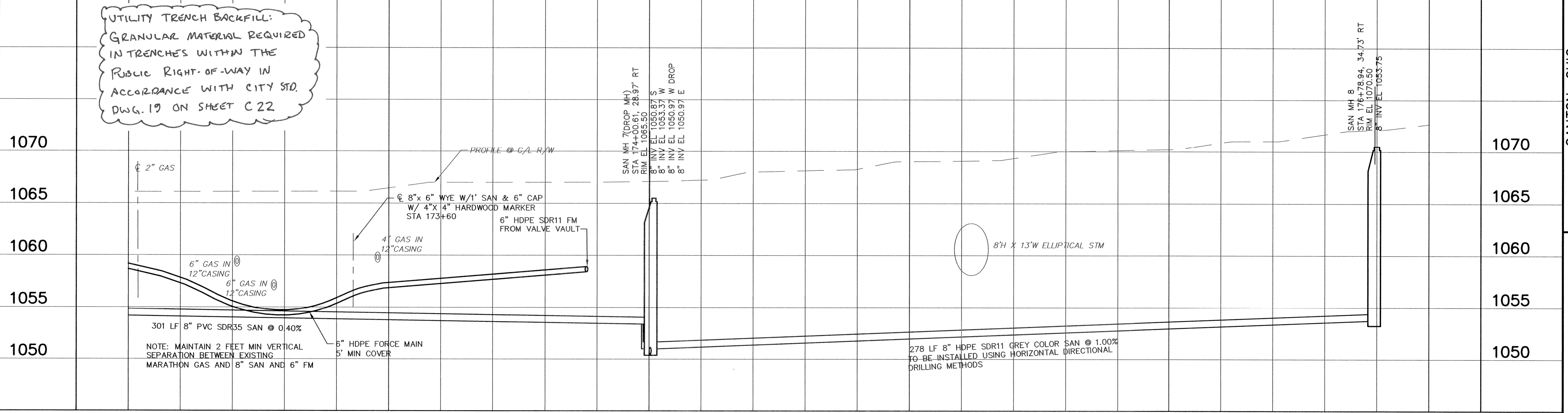
JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS SHOWN
SHEET NO.	C13

DATE OF PRINT

CITY PROJECT: ---, DRAWING: C11-2010 (187279,21,17,11,14, 3:00PM), LAYOUT: C14FAIRCREST_PP_172_END



UTILITY TRENCH BACKFILL:
 GRANULAR MATERIAL REQUIRED
 IN TRENCHES WITHIN THE
 PUBLIC RIGHT-OF-WAY IN
 ACCORDANCE WITH CITY STD.
 DWG. 19 ON SHEET C22



BENCHMARK NO 1:
 STA 173+72.78 24.89' RT
 NORTH BOLT AT END OF GUARD RAIL
 EL=1065.82



- NOTES:
- ALL SAN SEWER IS PVC SDR35 WITH THE EXCEPTION OF MH 7 TO MH 8 WHICH IS HDPE
 - SEE ENVIRONMENTAL WORK NOTE SH7 C7
 - GRADE A 7' DIA AREA AROUND MANHOLES #7 AND #8 WITH A 1:1 SLOPE TO EXISTING GRADE.

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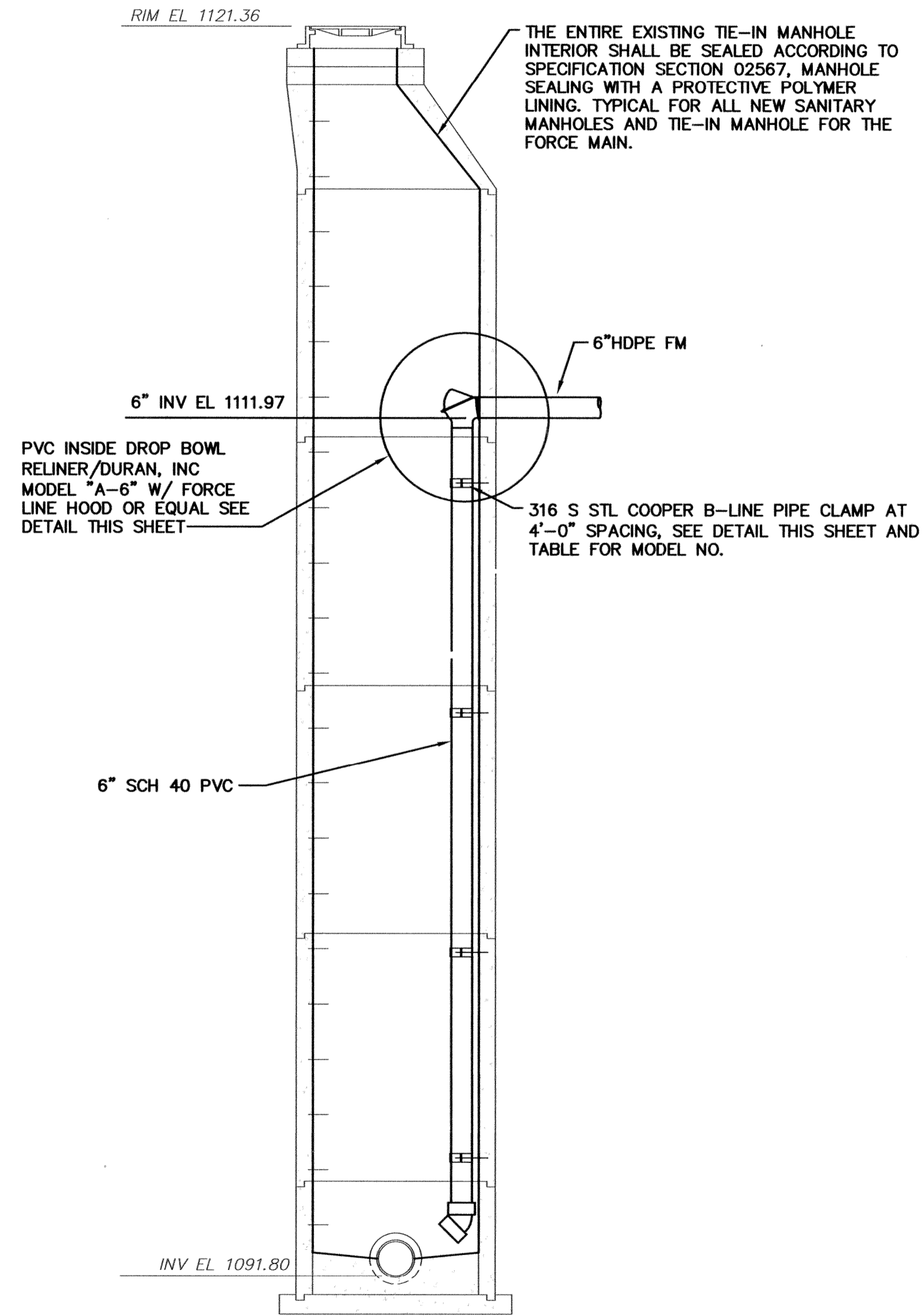
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CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 FAIRCREST ST SW
 PLAN AND PROFILE

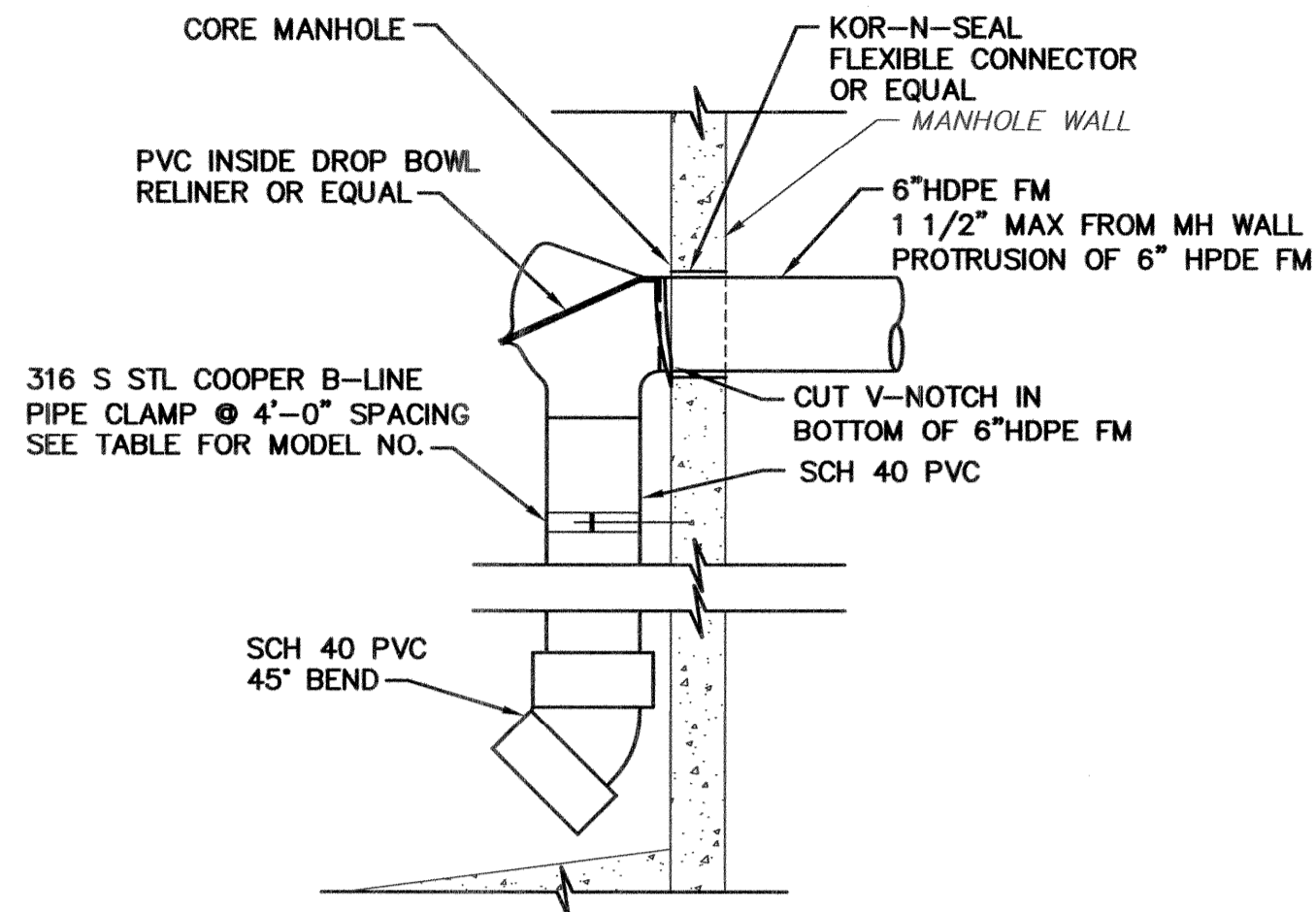


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DATE 2/2014
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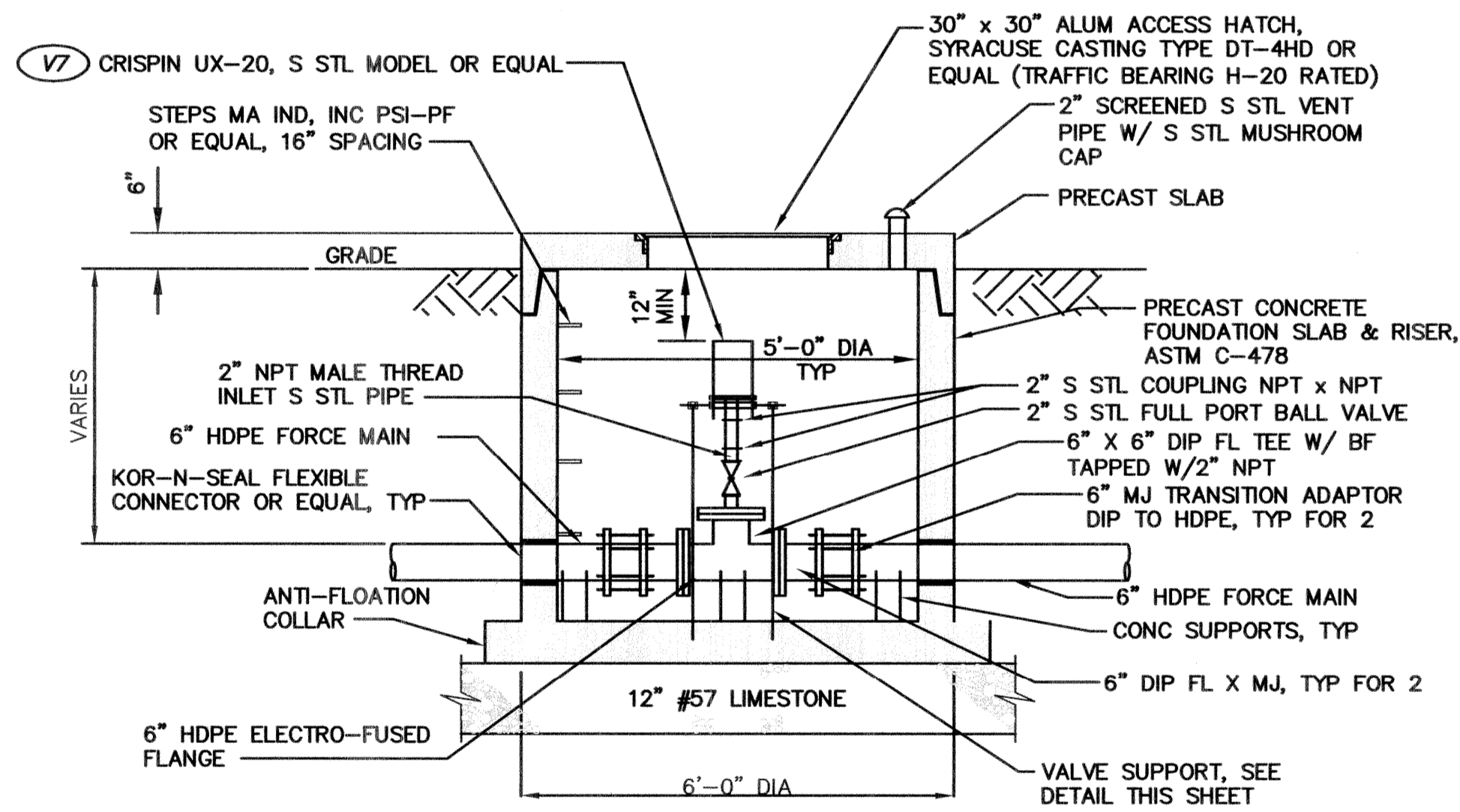
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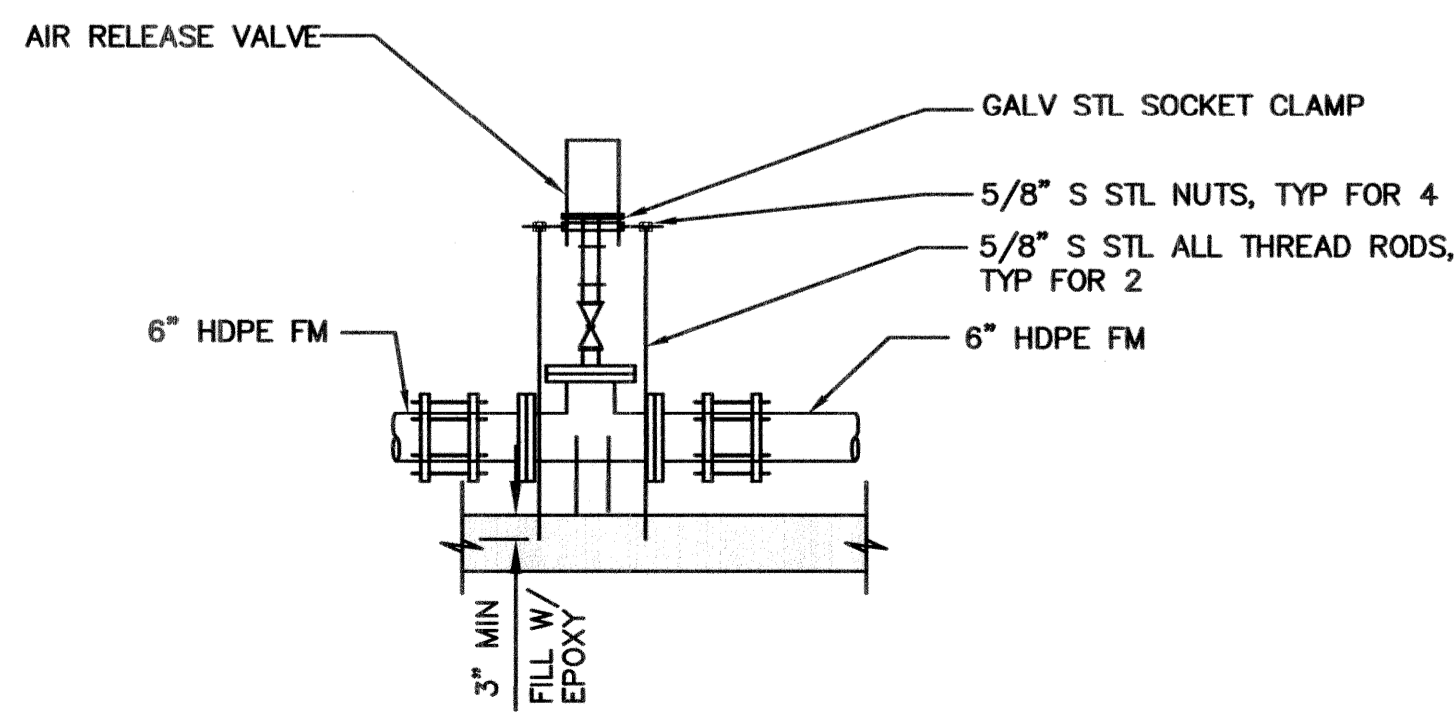
**EXISTING TIE-IN MANHOLE W/
PROP DROP PIPE AND SEALING DETAIL**
SCALE: 3/8"=1'-0"



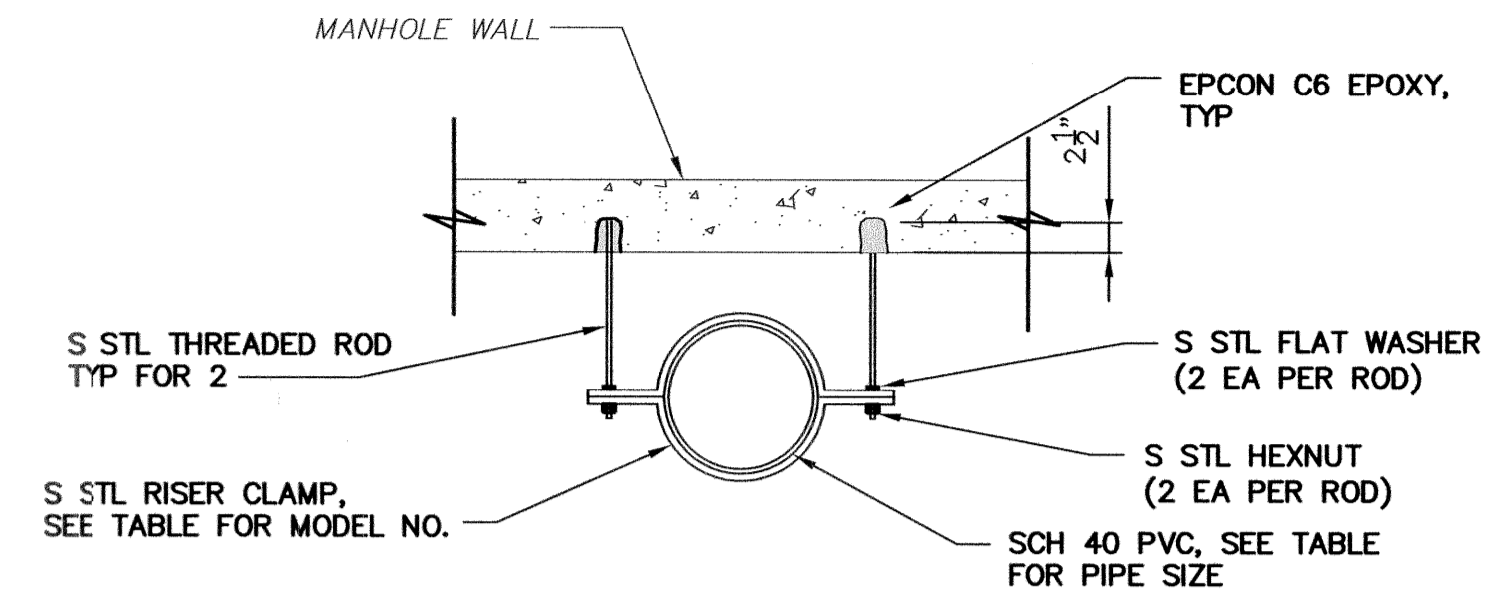
DROP PIPE DETAIL
SCALE: 1/2"=1'-0"



**AIR RELEASE AND VACUUM
BREAK VALVE MANHOLE DETAIL**
SCALE: 1/2" = 1'-0"



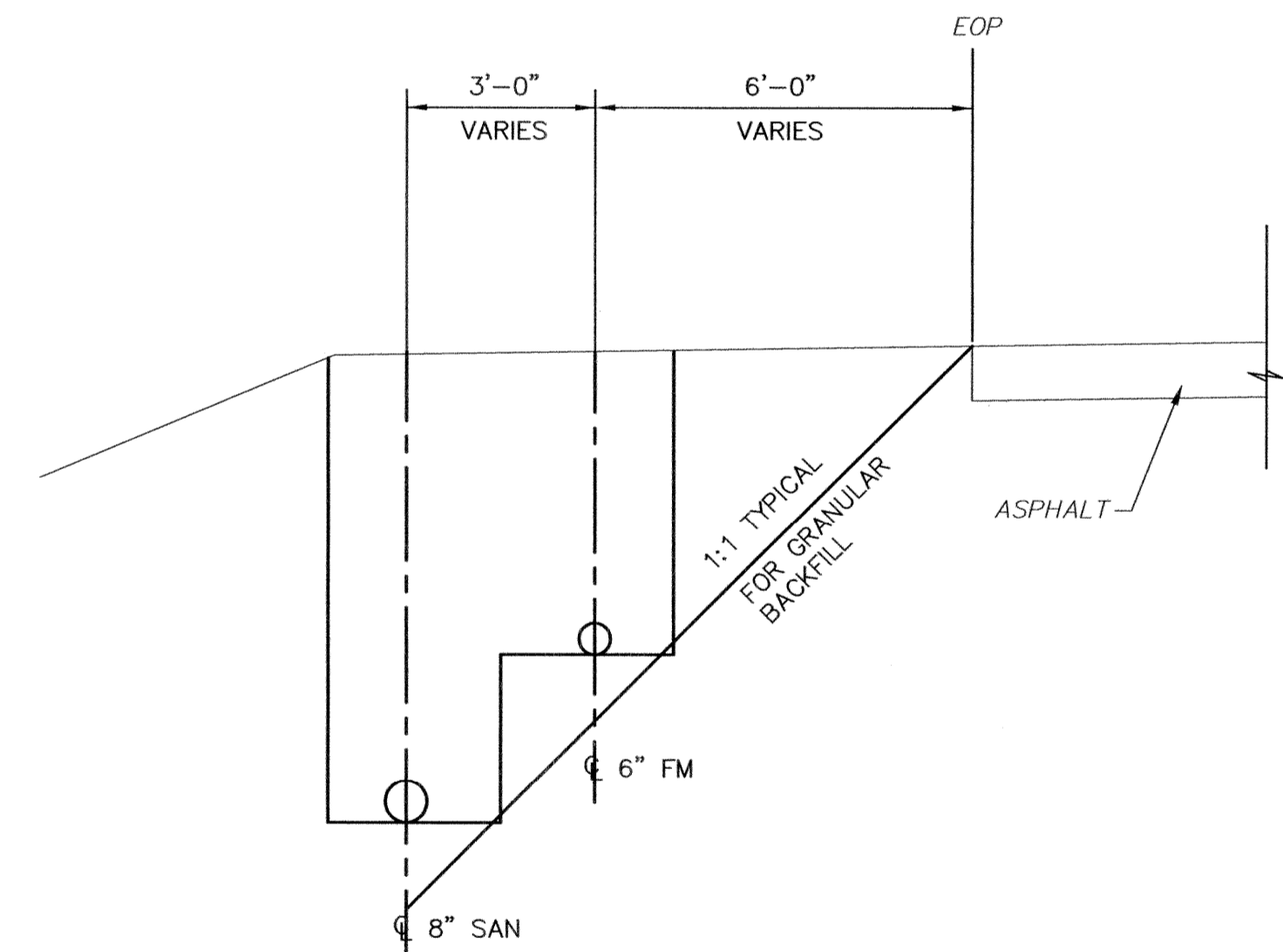
**AIR RELEASE
VALVE SUPPORT DETAIL**
SCALE: 1/2" = 1'-0"



PIPE CLAMP TABLE FOR DROP PIPES

PIPE SIZE	PIPE MATERIAL	PIPE CLAMP MODEL NO.
6"	SCH 40	B3373-6

CLAMP DETAIL
SCALE: 3/4"=1'-0"



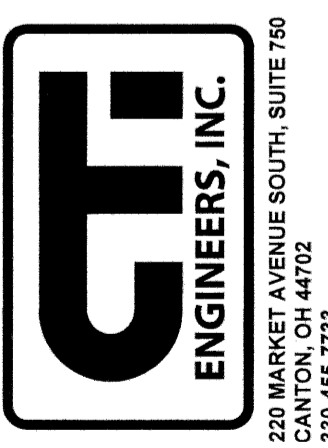
TYPICAL TRENCH LAYOUT DETAIL
SCALE: 3/8"=1'-0"

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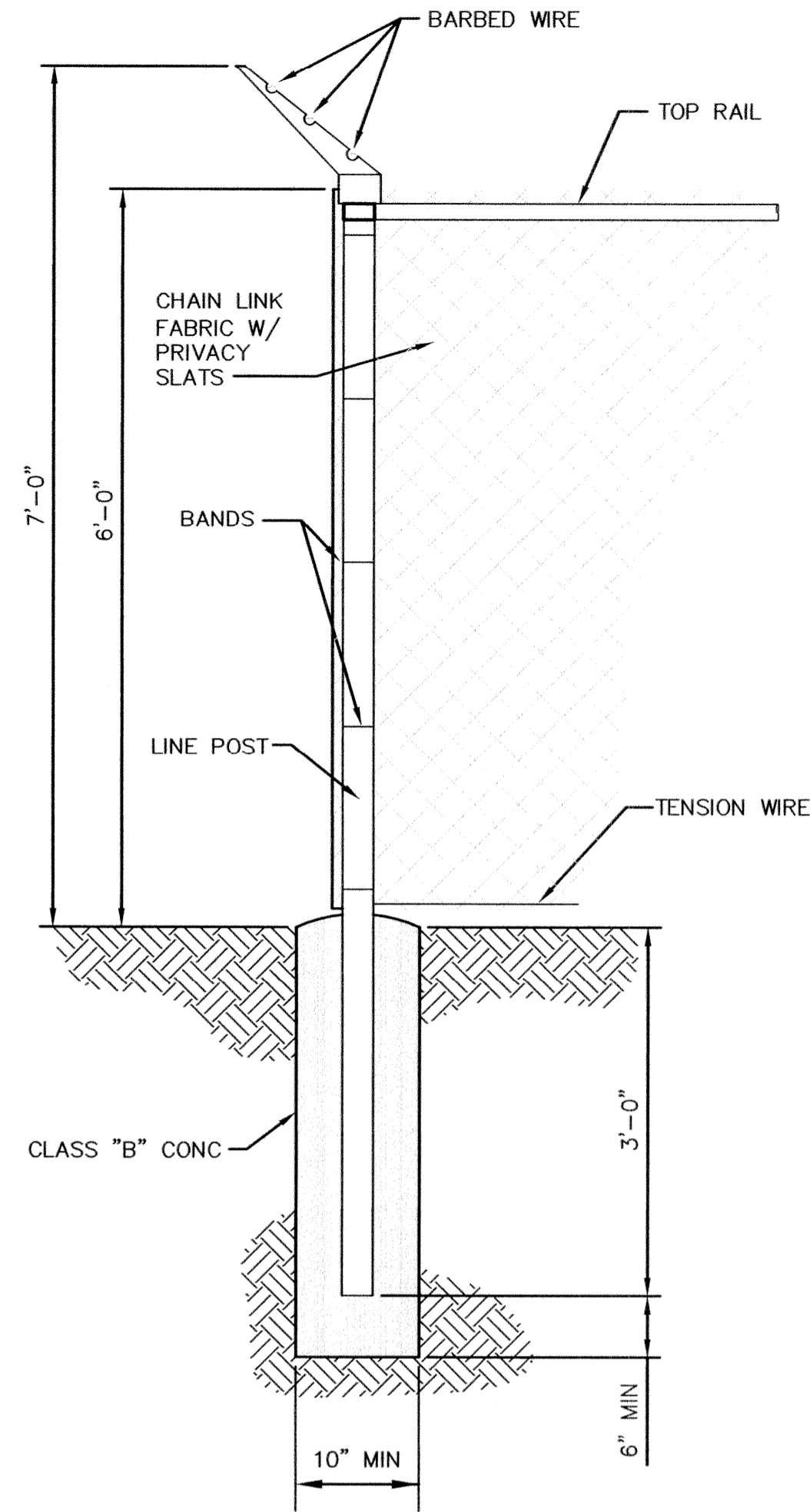
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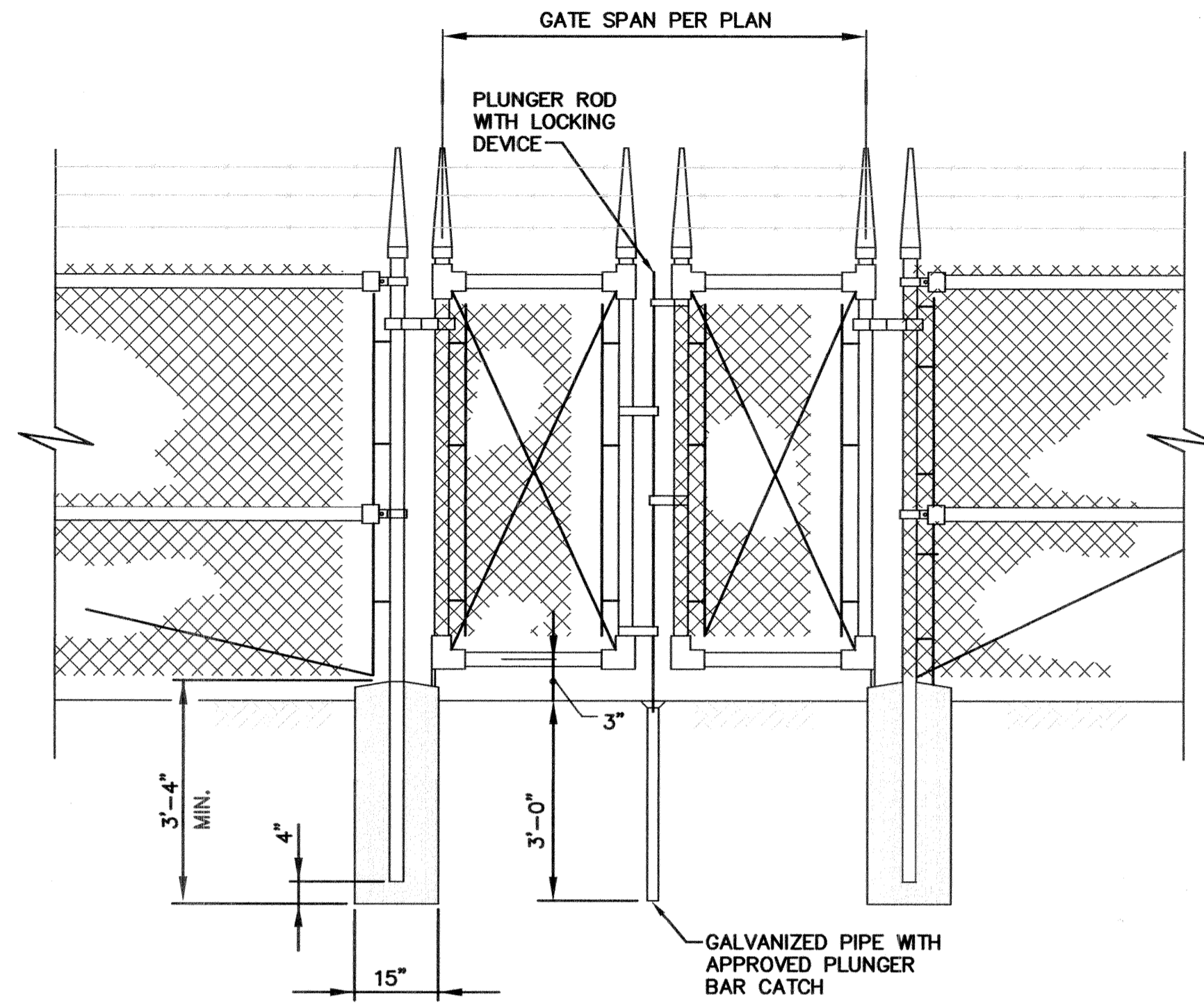
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FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
MISCELLANEOUS DETAILS



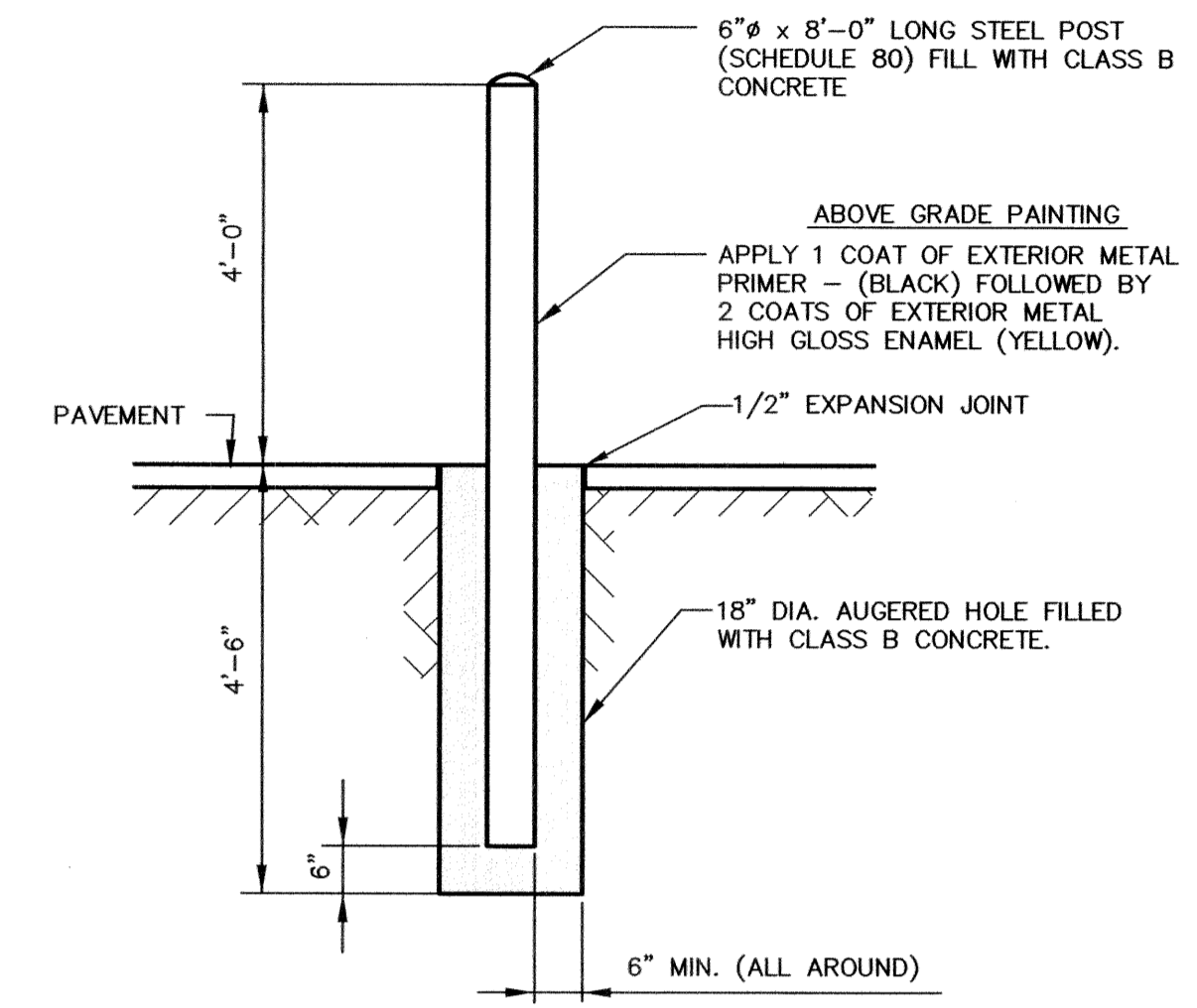
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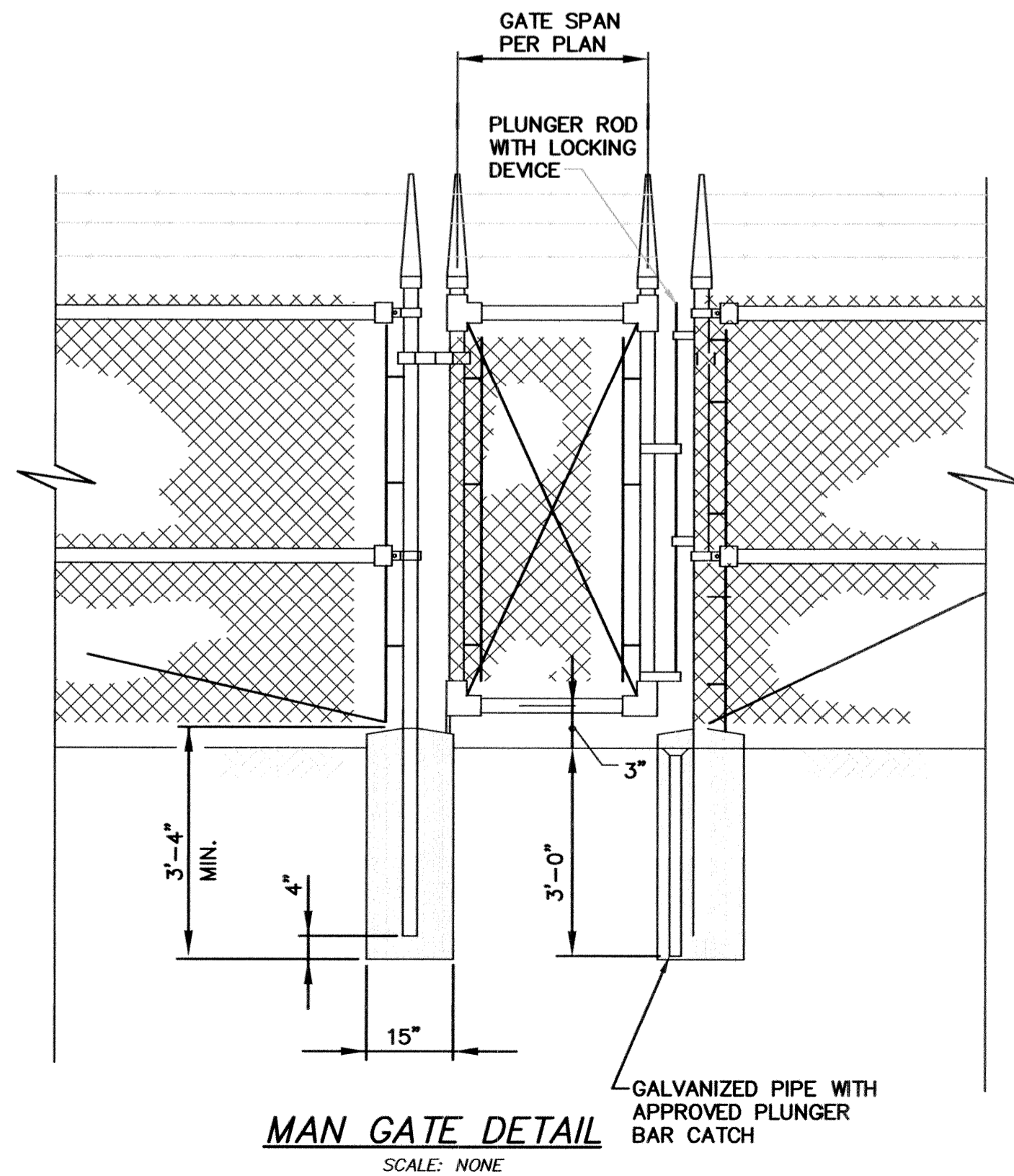
CHAIN LINK FENCE DETAIL
SCALE: NONE



GATE DETAIL
SCALE: NONE



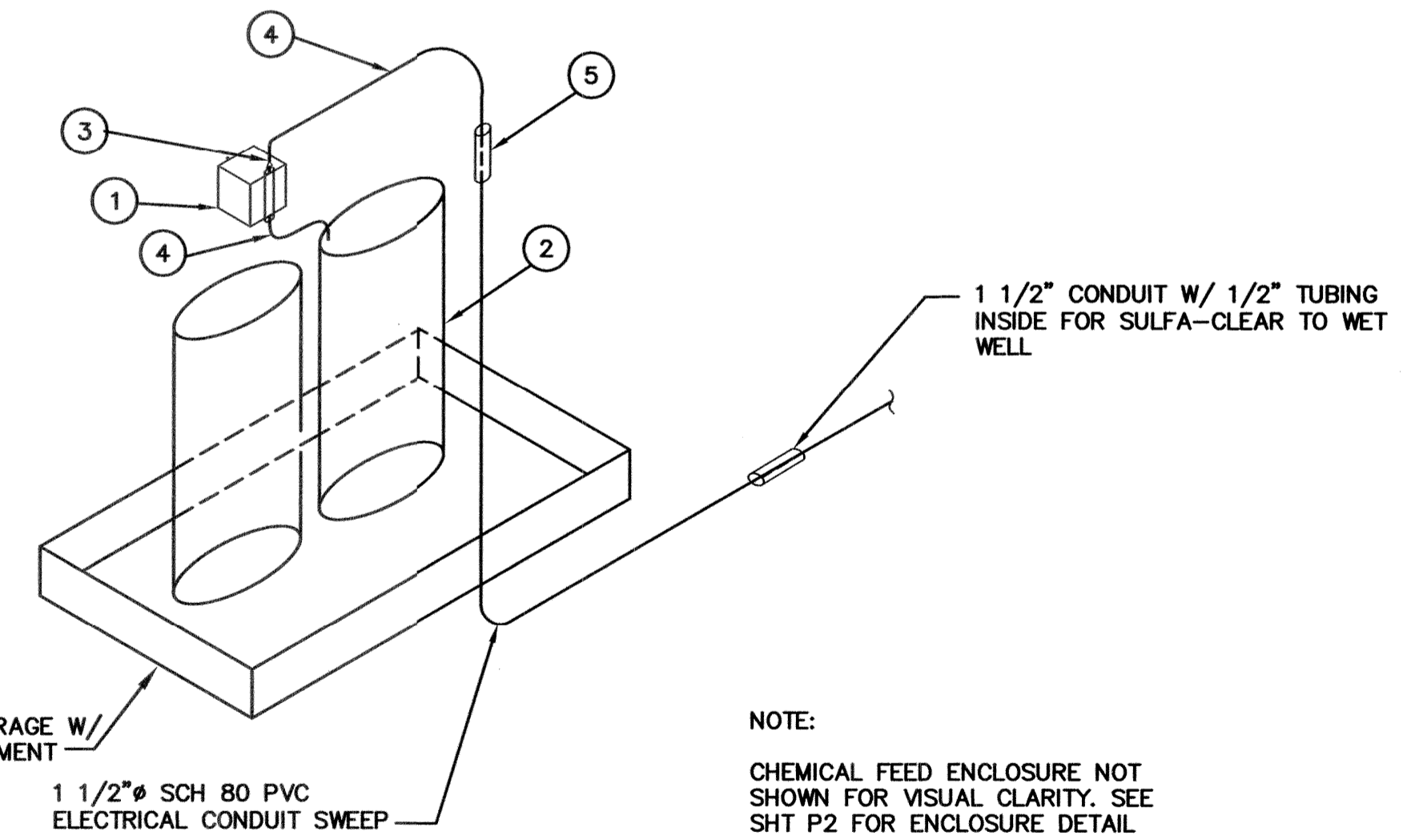
PIPE BOLLARD DETAIL
NOT TO SCALE



MAN GATE DETAIL
SCALE: NONE

LEGEND

- ① CHEMICAL METERING PUMP
- ② SULFA-CLEAR TANK
- ③ 3/8" X 1/2" INCREASER
- ④ 1/2" PE TUBING
- ⑤ 1 1/2" PVC CONDUIT FOR PUMP DISCHARGE TUBING



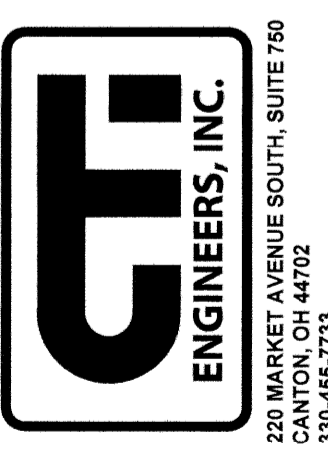
CHEMICAL FEED DETAIL
SCALE: NONE

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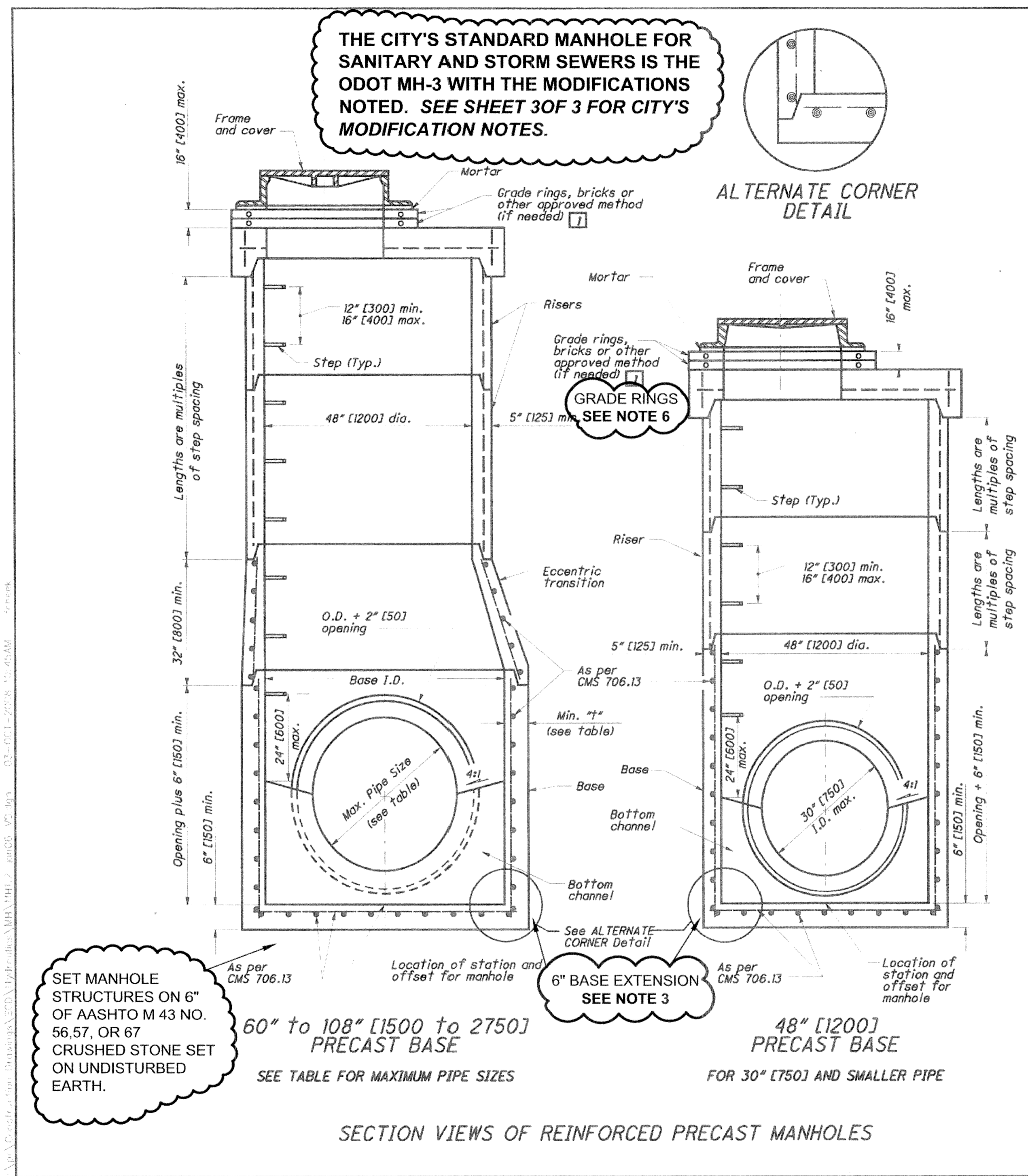
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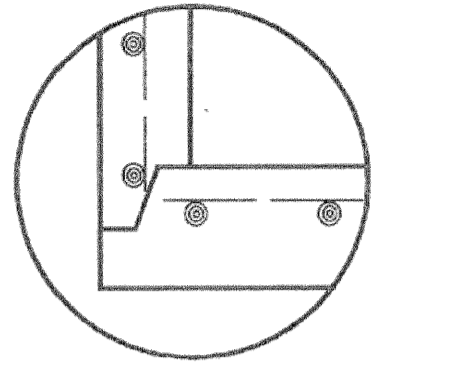
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
MISCELLANEOUS DETAILS



JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS SHOWN
SHEET NO.	C16



THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED. SEE SHEET 30F 3 FOR CITY'S MODIFICATION NOTES.



NOTES

GENERAL: With normal soil and site conditions, this standard precast manhole may be used for any required manhole depth. Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling. Handling device for the flat slab shall be left in place.

TOP: This section shall be a flat slab, unless an eccentric cone is specified.

TRANSITION (OR REDUCER): This section can be either eccentric cone or flat slab.

BASE: Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Openings for inlet and outlet pipes shall be provided, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on SCD MH-1.1 and MH-3.1.

RISER SECTIONS: Openings for 18\" [450] and smaller inlet pipes may be either prefabricated, or cut in the field provided the sides of the pipe at the springline do not project into the manhole.

CONNECTIONS: Connections between precast manhole sections, and pipes on sanitary sewers, may be sealed with resilient connectors conforming to ASTM C 923.

JOINT SEAL: Seal between precast manhole sections on sanitary sewers shall be resilient and flexible gasket joints per CMS 706.11.

OPENINGS: The maximum pipe opening shall be the O.D. of the pipe being supplied plus 2\" [50] when fabricated or field cuts. Fill any voids per CMS 601.

MATERIALS: Materials for bases and other precast sections, including reinforcement not specified hereon, shall comply with the requirements of CMS 706.13.

DROP PIPE: When specified on the plans, drop pipe shall be constructed as shown on SCD MH-3.1.

STEPS, FRAMES AND COVERS: Shall comply with the requirements set forth on SCD MH-1.1.

TOP SLAB REBAR: Reinforcing steel used within the top slab shall be epoxy coated.

- SEE NOTE 1
- SEE NOTE 2
- SEE NOTE 2
- SEE NOTE 3
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 4
- SEE NOTE 5

LEGEND

1 Reconstruction to grade only. Approved materials are kept on file by the Office of Materials Management.

MAXIMUM PIPE SIZES		
BASE I.D.	MIN. #"	MAX. PIPE SIZE
60\" [1500]	5\" [125]	36\" [900]
72\" [1800]	6\" [150]	48\" [1200]
84\" [2100]	7\" [175]	54\" [1350]
90\" [2250]	7 1/2\" [190]	60\" [1500]
96\" [2400]	8\" [200]	66\" [1650]
108\" [2750]	9\" [230]	72\" [1800]

SET MANHOLE STRUCTURES ON 6\" OF AASHTO M 43 NO. 56, 57, OR 67 CRUSHED STONE SET ON UNDISTURBED EARTH.

60\" to 108\" [1500 to 2750] PRECAST BASE
SEE TABLE FOR MAXIMUM PIPE SIZES

48\" [1200] PRECAST BASE
FOR 30\" [750] AND SMALLER PIPE

SECTION VIEWS OF REINFORCED PRECAST MANHOLES

DESIGNED BY	TMK	DATE	7-20-01
DRAWN BY	AJP	DATE	7-19-02
CHECKED BY	TMK	DATE	7-15-05
APPROVED BY	WAD	DATE	1-20-06
DESCRIPTIONS			
NO.			
ALL METRIC DIMENSIONS (IN BRACKETS) TO BE IN MILLIMETERS UNLESS OTHERWISE NOTED.			
OFFICE OF STRUCTURAL ENGINEERING			
MANHOLE No. 3			
MH-1.2			
1 / 2			

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AJP	7-19-02		
TMK	7-15-05		
WAD	1-20-06		

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
CITY OF CANTON
STANDARD DRAWINGS



OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

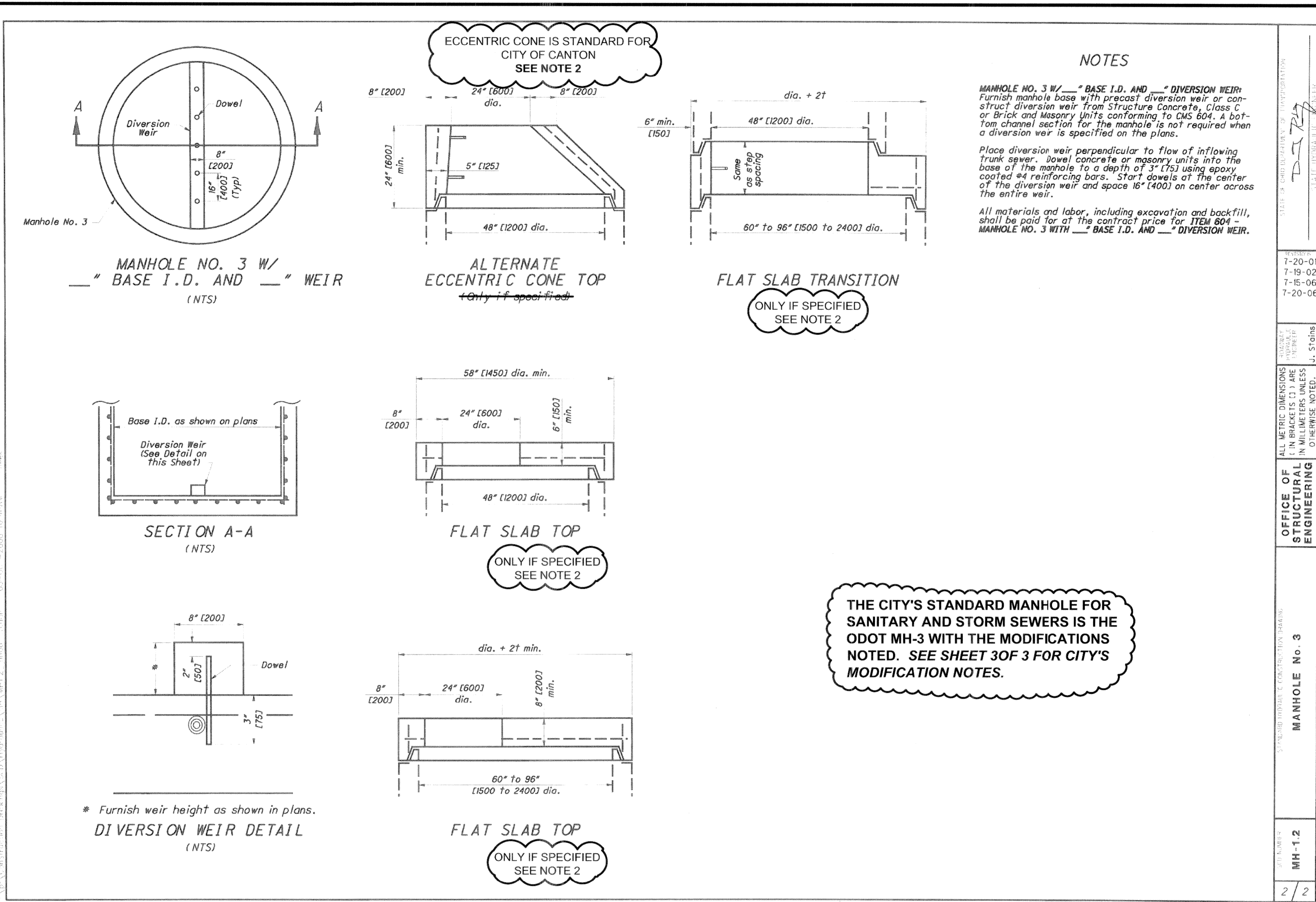
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APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_10.dwg

REVISIONS		
DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 10
PRECAST STORM OR
SANITARY MANHOLE
SHEET 1 OF 3

JOB NO.	E 12022-2
DATE	2/2014
SCALE	NONE
SHEET NO	C17

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7-19-02							
7-15-06							
7-20-06							

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
 PROJECT NO. 12022-2
 SHEET NO. 2/2

ALL METRIC DIMENSIONS (IN BRACKETS) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

OFFICE OF STRUCTURAL ENGINEERING

MANHOLE No. 3

J. J. Stains



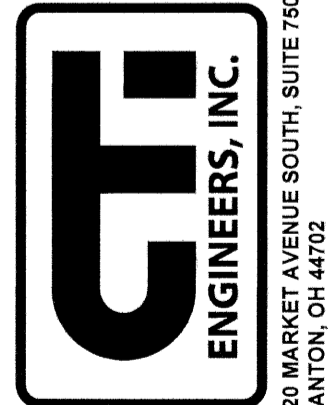
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APPROVED DATE: JAN 2012
 APPROVED BY: CDB, RMB, SLH
 DRAWING FILE NAME: ce_10.dwg

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DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 10
PRECAST STORM OR
SANITARY MANHOLE

SHEET 2 OF 3



228 MARKET AVENUE SOUTH, SUITE 190
 CANTON, OH 44702
 330-486-7733

JOB NO.
 E 12022-2
 DATE
 2/2014
 SCALE
 NONE
 SHEET NO
 C18

CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 CITY OF CANTON
 STANDARD DRAWINGS

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7-19-02							
7-15-06							
7-20-06							

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CANTON CONSTRUCTION STANDARDS NOTES FOR MODIFIED ODOT MANHOLE 3 (SCD MH-1.2)

- NOTE 1. LIFT HOLES INSIDE THE MANHOLES MUST BE SEALED WITH GROUT.
- NOTE 2. TOP AND TRANSITION SECTIONS MUST BE ECCENTRIC CONE ONLY. USE FLAT SLAB FOR SHALLOW MANHOLE APPLICATIONS OR SPECIAL CIRCUMSTANCES AS DIRECTED BY THE CITY.
- NOTE 3. 6" EXTENDED BASE IS STANDARD FOR ALL SANITARY AND STORM MANHOLES. SET MANHOLE BASE ON 6" OF AASHTO M 43 NO. 56, 57, OR 62 CRUSHED STONE SET ON UNDISTURBED EARTH.
- NOTE 4. PIPE CONNECTIONS INTO THE MANHOLES MUST NOT EXTEND INTO THE MANHOLE MORE THAN 2" AT THE SIDES OF THE PIPE AT THE SPRING-LINE OF SAID PIPE.

SANITARY CONNECTIONS

SANITARY SEWER PIPE INLETS, WITH FLOWLINES MORE THAN 2' HIGHER THAN THE CHANNEL BENCH MUST BE OUTSIDE DROP CONNECTIONS. DROP CONNECTIONS MUST BE FABRICATED AND CAST INTEGRALLY WITH THE MANHOLE SECTIONS OR INSTALLED PER CITY STANDARD DWG. 11, OUTSIDE DROP CONNECTION FOR SANITARY MANHOLES. NO INSIDE DROPS PERMITTED FOR PRIVATE SEWER CONNECTIONS. INSIDE DROP FOR CITY-OWNED SEWERS ARE SUBJECT TO THE CITY ENGINEER'S APPROVAL.

SANITARY PIPE INLETS MUST BE FLUMED OVER THE BENCH, DIRECTING FLOW INTO THE CHANNEL, USING CONCRETE AND/OR CLAY SEWER BRICK AND MORTAR.

CAST OPENINGS MUST BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 2 INCHES WITH A BUTYL RUBBER A-LOK, X-CEL GASKET, OR APPROVED EQUAL.

CORED OPENINGS MUST BE MACHINE CORED, THE OPENING SHALL BE PER PIPE-TO-MANHOLE CONNECTOR SPECS. USE "KOR-N-SEAL" FLEXIBLE PIPE-TO-MANHOLE CONNECTOR WITH STAINLESS WEDGE ASSEMBLY OR APPROVED EQUAL CONFORMING TO ASTM C-930 OR ASTM C-923.

STORM CONNECTION

OPENINGS FOR STORM PIPE INLETS MAY BE CAST OR MACHINE CORED. OPENINGS SHALL NOT EXCEED THE O.D. OF PIPE + 2". MAKE WATER-TIGHT JOINTS WITH NON-SHRINK CEMENT OR CLASS 'C' CONCRETE APPLIED FROM INSIDE AND OUTSIDE OF MANHOLE.

- NOTE 5. STEPS SHALL BE 1/2" STEEL REINFORCED POLYPROPYLENE STEPS 12" W X 5-3/4" BY AMERICAN STEP CO., INC. OR APPROVED EQUAL, MEETING ASTM 478.

FRAMES AND COVER SHALL CONFORM WITH CITY OF CANTON STD. DWG. NO. 12.

- NOTE 6. GRADE RINGS FOR NEW MANHOLES MAY BE PRECAST CONCRETE, RUBBER COMPOSITE, OR CLAY BRICK AND MORTAR. CONCRETE BRICK IS NOT PERMITTED.

HEIGHT OF GRADE RINGS COLLECTIVELY SHALL NOT EXCEED 12".

PRECAST CONCRETE GRADE RINGS MUST BE REINFORCED CLASS 'C' CONCRETE AND CONNECTED USING TWO CONCENTRIC RINGS OF 1/2" TO 1" BEADS OF BUTYL RUBBER SEALANT CON-SEAL OR APPROVED EQUAL. SEAL OUTSIDE JOINTS WITH 1/2" NON SHRINK CEMENT PLASTER.

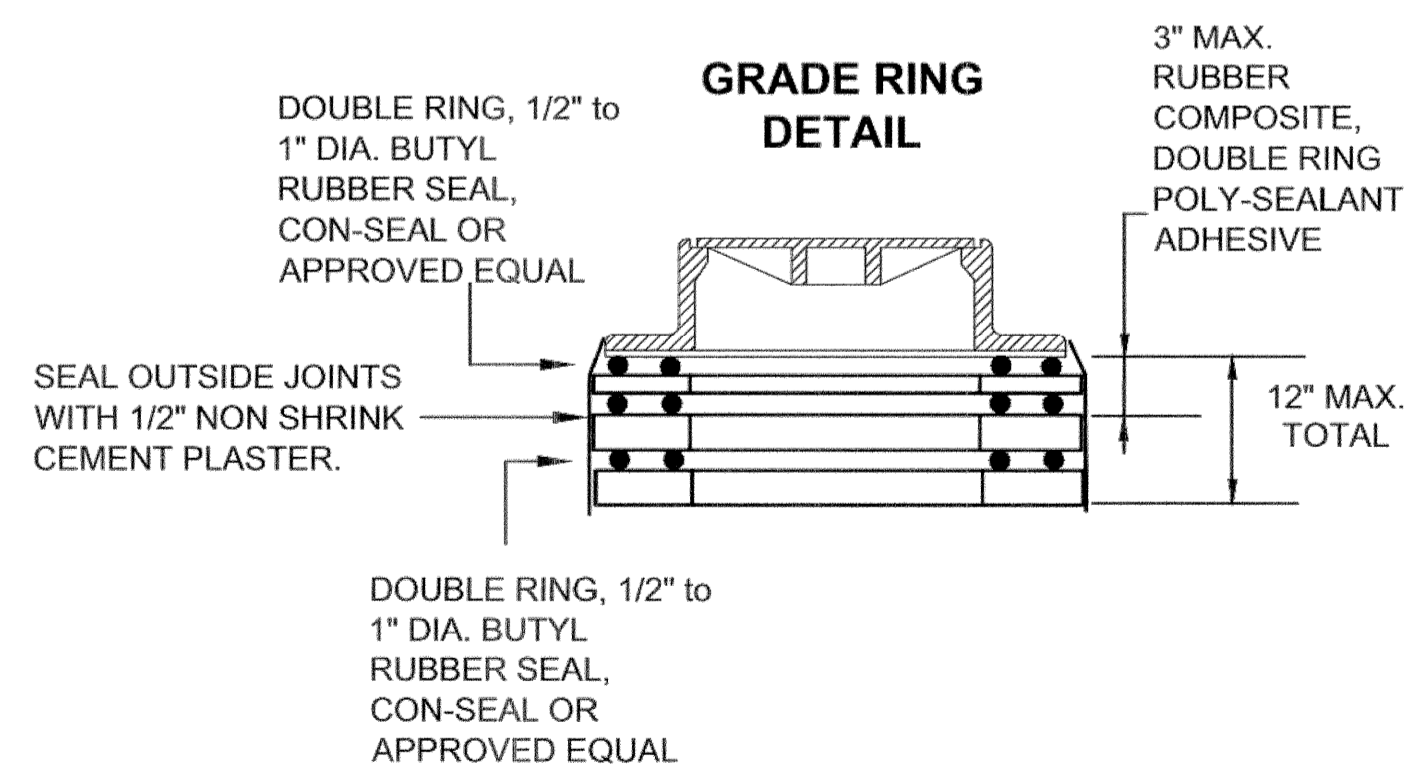
RUBBER COMPOSITE GRADE RINGS MUST BE "INFRA-RISER" BY EJIW OR APPROVED EQUAL, AND CONNECTED USING TWO PARALLEL BEADS OF POLY-SEALANT ADHESIVE PER MANUFACTURER RECOMMENDATION. RUBBER COMPOSITE GRADE RINGS HEIGHT MUST NOT EXCEED 3" AND MUST BE PLACED DIRECTLY UNDER MANHOLE FRAME.

BRICK AND MORTAR RINGS MUST BE BELDEN BRICK, FINE GRIND, ASTM C32-90, OR APPROVED EQUAL WITH HIGH STRENGTH, AIR ENTRAINED, MORTAR. SEAL OUTSIDE JOINTS WITH 1/2" NON SHRINK CEMENT PLASTER.

USE TWO PARALLEL 3/4" BEADS OF BUTYL RUBBER SEALANT CON-SEAL OR APPROVED EQUAL, BETWEEN GRADE RINGS OF DIFFERENT MATERIAL AND BETWEEN GRADE RINGS AND MANHOLE FRAME.

- NOTE 7. FOR BACKFILL MATERIAL AND COMPACTION, AND ROCK EXCAVATION, IF APPLICABLE, REFER TO CITY STD.DWG. NO. 19.

- NOTE 8. SANITARY MANHOLES TO BE TESTED ACCORDING TO CITY ENGINEER'S SPECIFICATION 04-01 (NEGATIVE AIR PRESSURE TEST).



OPTIONAL MANHOLE BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION OPTION "A"
604		V.F.	MH WATERPROOFING, COAL TAR, A.P.P.

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR WATERPROOFING THE EXTERIOR OF DESIGNATED MANHOLES. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OF EACH MANHOLE WATERPROOFED AS DIRECTED BY THE ENGINEER. THIS OPTION IS A CONTINGENCY BID ITEM UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A COAL TAR EPOXY TO THE OUTSIDE OF THE MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS FROM THE TOP OF THE EXTENDED BASE TO THE BOTTOM OF THE MANHOLE COVER CASTING.

ITEM	QTY.	UNIT	DESCRIPTION OPTION "B"
604		EACH	NEW MH, POLYMER LINING, A.P.P.
604		V.F.	EXISTING MH, POLYMER LINING, A.P.P.

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR CORROSION RESISTANT POLYMER LININGS AS DESIGNATED. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OR PER EACH MANHOLE LINED AS DIRECTED BY THE ENGINEER. THE UNIT COST FOR THIS ITEM INCLUDES ALL COSTS FOR LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR SUPPLYING AND INSTALLING THE LININGS INCLUDING THE COST FOR BYPASSING EXISTING SEWER FLOWS FOR THE DURATION OF THE INSTALLATION AND CURING TIME AS SPECIFIED. THIS OPTION IS INCLUDED AS A CONTINGENCY BID ITEM. UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A CORROSION RESISTANT POLYMER LINING (PLASITE 5371 BY CARBOLINE OR APPROVED EQUAL) TO THE INSIDE OF THE NEW OR EXISTING MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. APPLY FROM THE TOP OF THE BENCH TO THE BOTTOM OF THE MANHOLE COVER CASTING.

FOR EXISTING MANHOLES, PRIOR TO POLYMER LINING APPLICATION, RESTORE INSIDE WALLS AS PER LINING MANUFACTURER'S RECOMMENDATIONS OR AS DIRECTED BY THE CITY ENGINEER.

THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED.

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 CITY OF CANTON
 STANDARD DRAWINGS



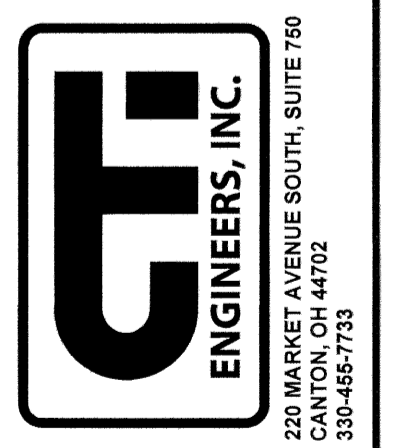
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 APPROVED BY: CDB, RMB, SLH
 DRAWING FILE NAME: ce_10.dwg

REVISIONS		
DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 10
PRECAST STORM OR
SANITARY MANHOLE

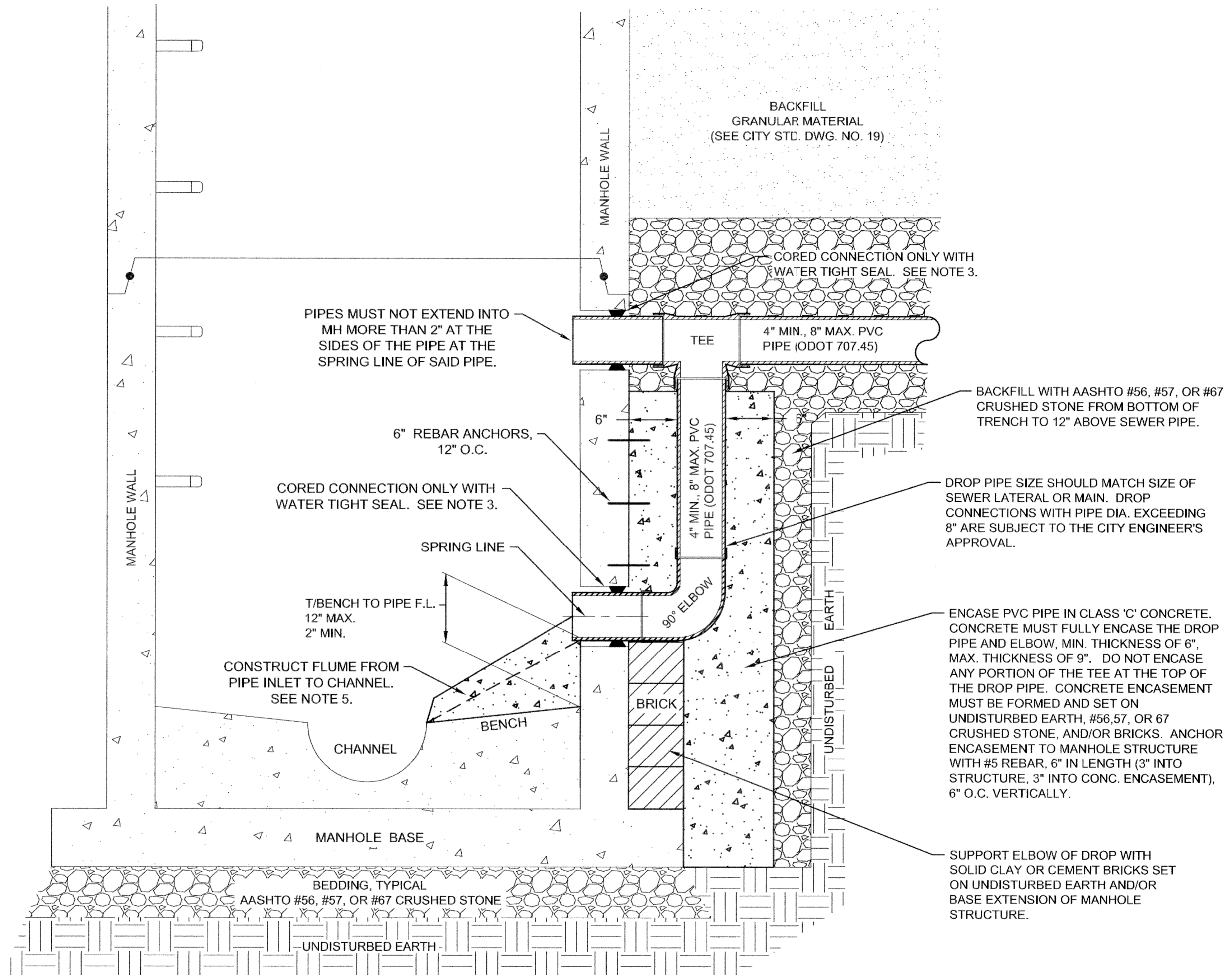
SHEET 3 OF 3



JOB NO.
 E 12022-2
 DATE
 2/2014
 SCALE
 NONE
 SHEET NO.
 C19

NOTES:

1. DROP CONNECTIONS INSTALLED WITH NEW MANHOLE STRUCTURES MUST BE CAST INTEGRAL WITH PRECAST CONCRETE MANHOLES.
2. DROP CONNECTIONS INSIDE MANHOLE STRUCTURES ARE NOT PERMITTED FOR SANITARY SEWER LATERALS. DROP CONNECTIONS INSIDE MANHOLE STRUCTURES FOR SANITARY SEWER MAINS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
3. CORED OPENINGS MUST BE MACHINE CORED, THE OPENING SHALL BE PER PIPE-TO-MANHOLE CONNECTOR SPECS. USE "KOR-N-SEAL" FLEXIBLE PIPE-TO-MANHOLE CONNECTOR WITH STAINLESS WEDGE ASSEMBLY OR APPROVED EQUAL CONFORMING TO ASTM C-930 OR ASTM C-923.
4. PIPE CONNECTIONS INTO THE MANHOLE MUST NOT EXTEND INTO THE MANHOLE MORE THAN 2" AT THE SIDES OF THE PIPE AT THE SPRING-LINE OF SAID PIPE. PIPE CONNECTIONS ARE NOT PERMITTED WITHIN 3" OF JOINTS BETWEEN MANHOLE RISER SECTIONS.
5. SANITARY PIPE INLETS MUST BE FLUMED OVER THE BENCH, DIRECTING FLOW INTO THE CHANNEL, USING CONCRETE AND/OR CLAY SEWER BRICK AND MORTAR.
6. ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.



OFFICE OF THE CITY ENGINEER
CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012

APPROVED BY: CDB, RMB, SLH

DRAWING FILE NAME: ce_11.dwg

REVISIONS		
DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 11
OUTSIDE DROP CONNECTION
FOR SANITARY MANHOLE

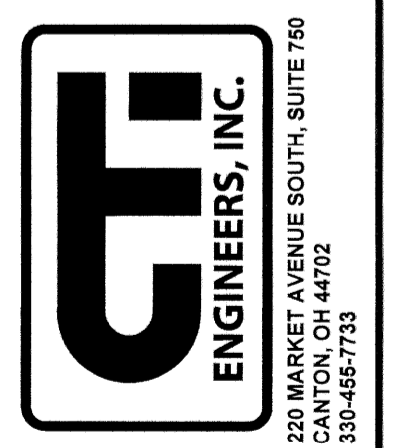
SHEET 1 OF 1

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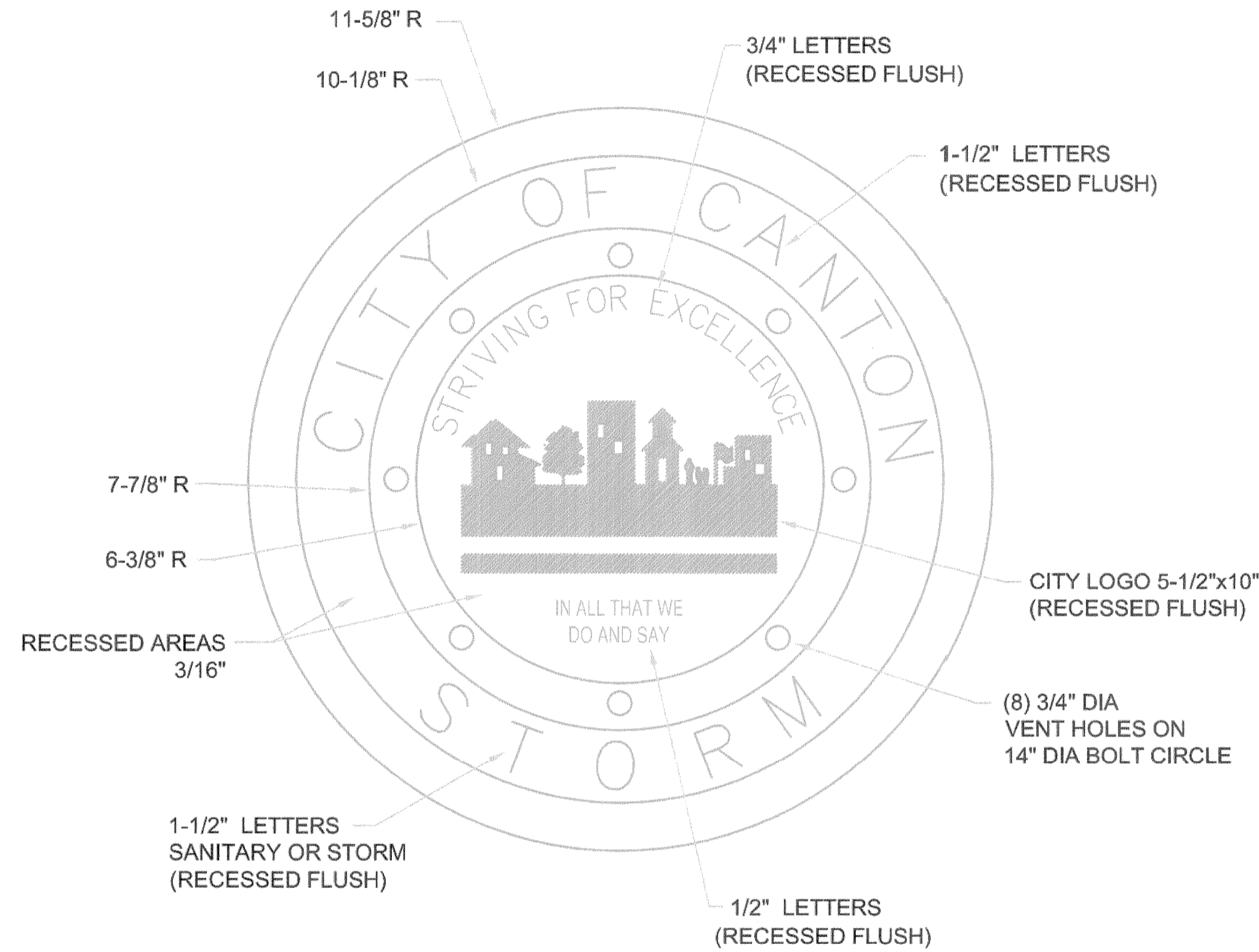
DESIGNED BY: **TMK**
 DRAWN BY: **AJP**
 CHECKED BY: **TMK**
 APPROVED BY: **WAD**

CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 CITY OF CANTON
 STANDARD DRAWINGS

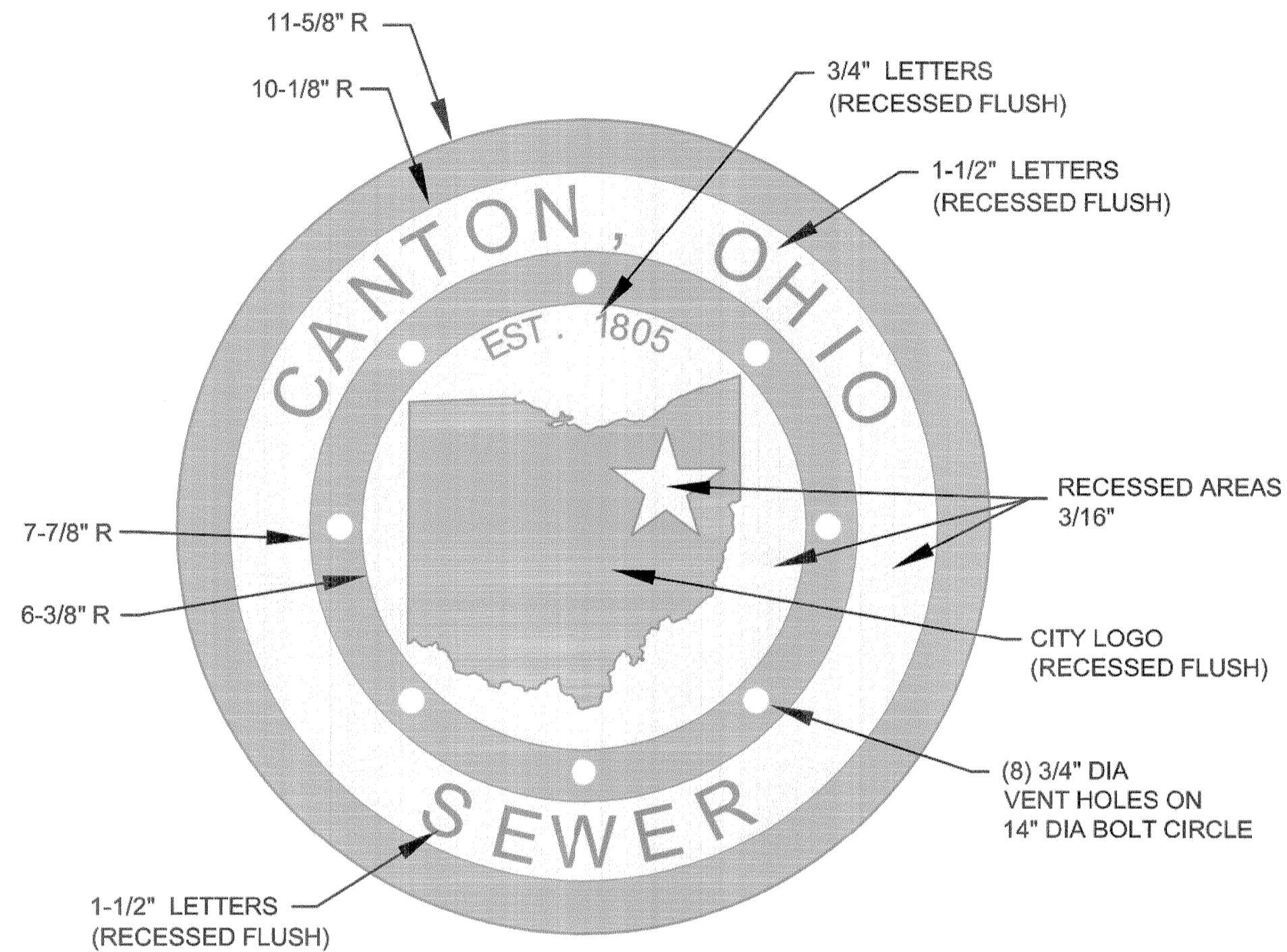


JOB NO.
E 12022-2
 DATE
2/2014
 SCALE
NONE
 SHEET NO.
C20

TOP OF MANHOLE COVER (OLD)
(prior to 2014)



TOP OF MANHOLE COVER (NEW)
(2014 Projects and Forward)



NOTES:

- COVER AND FRAME TO BE CAST OF GRAY IRON IN COMPLIANCE WITH ASTM SPEC. ASTM A-48 CLASS 35. CASTINGS SHALL BE OF THE HEAVY DUTY RATING.
- EAST JORDAN 1850 B COVER (PRODUCT NO. 185026) AND 1850 FRAME, OR NEENAH R-1654 FRAME AND LID, OR EQUAL APPROVED BY CITY ENGINEER.
- MACHINE BEARING SURFACES BETWEEN LID AND FRAME.
- CONTACT CITY ENGINEER FOR CAD DRAWING OF CITY LOGO.
- CONTRACTORS/SUPPLIER MAY USE COVERS IN STOCK WITH OLD CITY LOGO AS PERMITTED BY THE CITY ENGINEER. OTHERWISE, PROJECTS MUST USE COVERS WITH NEW LOGO.



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APPROVED DATE: JAN 2012

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DESCRIPTION	DATE	BY
MH COVER CITYLOGO	2/28/2014	RMB

STANDARD DRAWING NO. 12

MANHOLE COVER

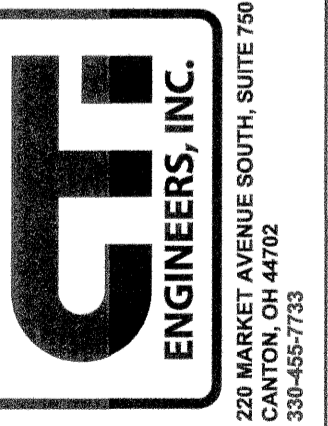
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NO.	DESCRIPTIONS	REVISIONS		
		DATE	BY	APP'D
1	UPDATED STD. DWG. 12	7/29/14	RMB	

DESIGNED BY: TMK
DRAWN BY: AJP
CHECKED BY: TMK
APPROVED BY: WAD

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
CITY OF CANTON
STANDARD DRAWINGS



JOB NO. E 12022-2
DATE 2/2014
SCALE NONE
SHEET NO C21

NOTES:

1. BEDDING:

MATERIALS SHALL BE AASHTO M 43 NO. 56, 57, OR 67 CRUSHED STONE. NO ALTERNATES UNLESS APPROVED BY THE CITY ENGINEER. PRIVATE UTILITIES MAY TYPICALLY PROVIDE ALTERNATIVE BEDDING MATERIAL AS APPROVED BY THE CITY ENGINEER.

BEDDING WIDTH TABLE

PIPE TYPE	MIN. WIDTH, TYP.	MAX. WIDTH, TYP.
NON-RIGID PIPE (PVC, HDPE, CMP, ALUMINUM)	PIPE I.D. x 1.25 + 1'-0"	PIPE O.D. + 2'-0"
RIGID PIPE (CONC., VIT. CLAY, DUCTILE IRON)	PIPE I.D. x 1.33	PIPE O.D. + 2'-0"

CENTER PIPE HORIZONTALLY WITHIN BEDDING AREA. ANY DEVIATION TO TYPICAL BEDDING REQUIREMENTS ARE SUBJECT TO THE DISCRETION OF THE CITY ENGINEER.

THE BEDDING LIMITS SHOWN APPLY IN ALL CASES EXCEPT FOR WHEN PIPE MANUFACTURER SPECIFIES A BEDDING WIDTH DIFFERENT FROM THAT SHOWN AND THE CITY ENGINEER PERMITS SAME.

2. BACKFILL:

BACKFILL WITHIN THE PUBLIC STREET R/W:

MATERIALS SHALL BE ODOT 703.11, TYPE '1' GRANULAR MATERIAL (304, 411, or 617 AGGREGATE GRADATION) OR TYPE '2' GRANULAR MATERIAL, OR ODOT 613, LOW STRENGTH MORTAR; DEVIATIONS FROM THIS ARE AS FOLLOWS:

- A) NO FOUNDRY SAND OR SLAG IS PERMITTED.
- B) ALTERNATE GRANULAR MATERIAL SHALL BE PERMITTED ONLY WITH THE SUPPLEMENTAL APPROVAL OF THE CITY ENGINEER. TO PETITION FOR SUCH SUPPLEMENTAL APPROVAL, THE DEVELOPER/CONTRACTOR SHALL SUBMIT IN WRITING THE FOLLOWING:
 - * SOURCE OF THE ALTERNATE BACKFILL MATERIAL.
 - * GRADATION REPORT IN ACCORDANCE WITH AASHTO T II AND T 27.
 - * PROCTOR CURVE ANALYSIS IN ACCORDANCE WITH ASTM D 698.
 - * PROPOSED COMPACTION METHOD.

THE CITY ENGINEER RESERVES THE RIGHT TO REFUSE ANY ALTERNATE BACKFILL MATERIAL, REGARDLESS OF APPROVAL OF SIMILAR MATERIAL ON A PREVIOUS PROJECT.

THE CITY ENGINEER FURTHER RESERVES THE RIGHT TO REFUSE ANY ALTERNATE BACKFILL MATERIAL THE CITY FINDS NOT CONSISTENT WITH THE APPROVED SOURCE, GRADATION REPORT, PROCTOR REPORT, OR COMPACTION METHOD.

- C) ODOT 703.11, TYPE 2, OR ALTERNATE MATERIALS ARE NOT PERMITTED WITHIN 4 FEET OF THE TRENCH SURFACE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

BACKFILL OUTSIDE OF THE PUBLIC STREET R/W:

FOLLOW MATERIAL AND METHODS FOR BACKFILL IN ACCORDANCE WITH ODOT 603.

NOTES: (CONTINUED)

3. COMPACTION:

ALL BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12-INCHES LOOSE DEPTH AND COMPACTED BY APPROVED MECHANICAL MEANS. JETTING IS NOT APPROVED WITHOUT THE CITY ENGINEER'S APPROVAL. BUCKET COMPACTION MUST BE SUPPLEMENTED WITH VIBRATION OR TAMPING EQUIPMENT AS DIRECTED. ANY MODIFICATIONS TO THESE REQUIREMENTS MUST BE APPROVED BY THE CITY ENGINEER.

4. SURFACE:

TRENCHES SHALL BE TOPPED WITH 4" OF ODOT 304 LIMESTONE OR ASPHALT GRINDINGS WITHIN EXISTING STREET PAVEMENTS WHEN THE STREET WILL BE OPENED TO VEHICULAR TRAFFIC PRIOR TO PAVEMENT REPLACEMENT. THE TRENCH TOPPING MATERIAL SHALL BE ROLLED OR OTHERWISE COMPLETED FLUSH WITH THE ADJOINING PAVEMENT.

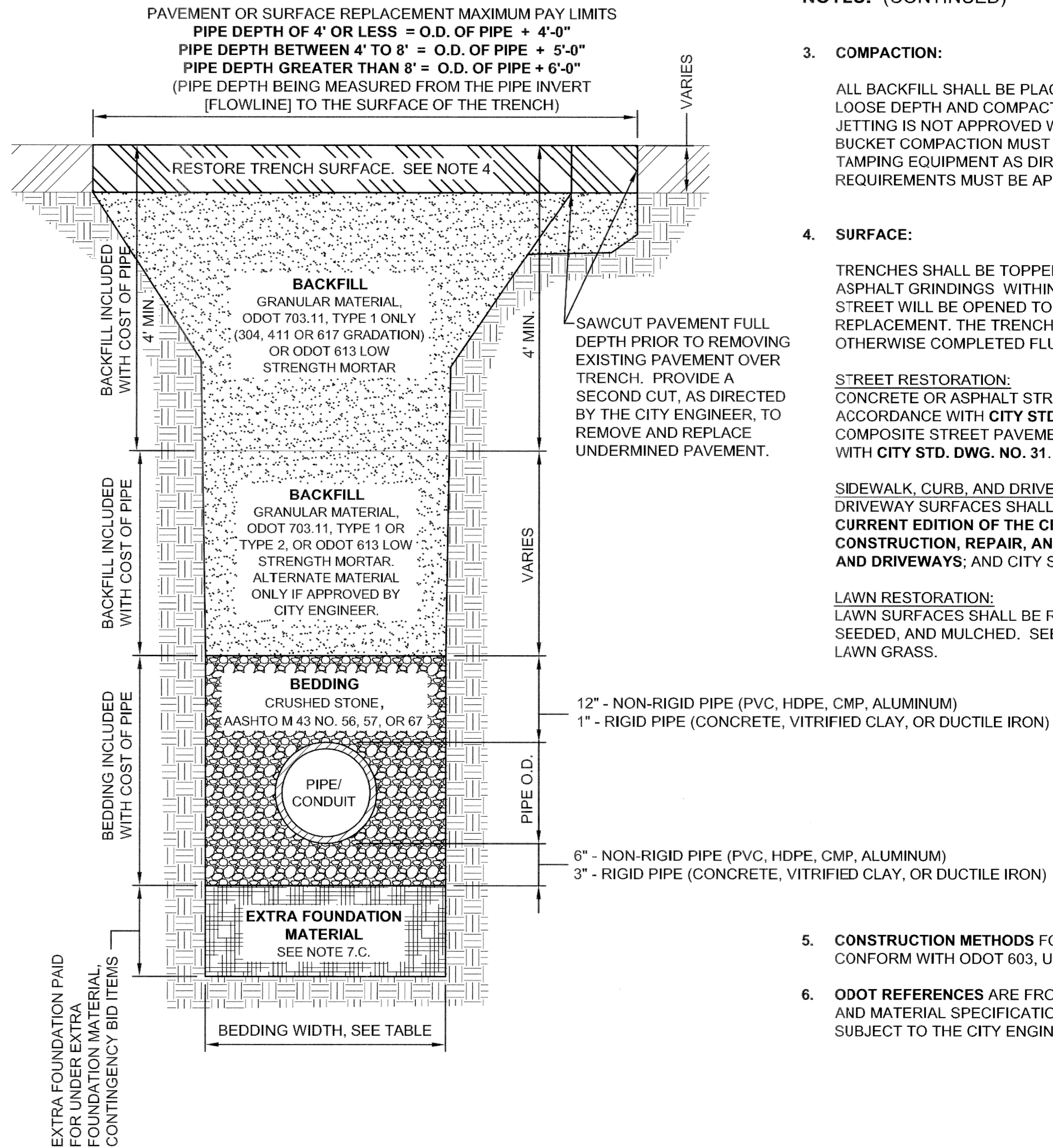
STREET RESTORATION:
CONCRETE OR ASPHALT STREET PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CITY STD. DWG. NO. 32. BRICK OR ASPHALT-BRICK COMPOSITE STREET PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CITY STD. DWG. NO. 31.

SIDEWALK, CURB, AND DRIVEWAY RESTORATION:
DRIVEWAY SURFACES SHALL BE REPLACED IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF CANTON SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR, AND REPLACEMENT OF SIDEWALKS, CURBS, AND DRIVEWAYS; AND CITY STD. DWG. NOS. 28 THRU 33.

LAWN RESTORATION:
LAWN SURFACES SHALL BE REPLACED WITH A MINIMUM OF 4" TOPSOIL, SEEDED, AND MULCHED. SEED MIX SHALL CONFORM TO ADJOINING LAWN GRASS.

- 5. **CONSTRUCTION METHODS** FOR BEDDING AND BACKFILL SHALL CONFORM WITH ODOT 603, UNLESS STATED OTHERWISE HEREIN.

- 6. **ODOT REFERENCES** ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.



OFFICE OF THE CITY ENGINEER
CANTON, OHIO
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APPROVED DATE: JAN 2012

APPROVED BY: CDB, RMB, SLH

DRAWING FILE NAME: ce_19.dwg

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DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 19

UTILITY TRENCH REQUIREMENTS

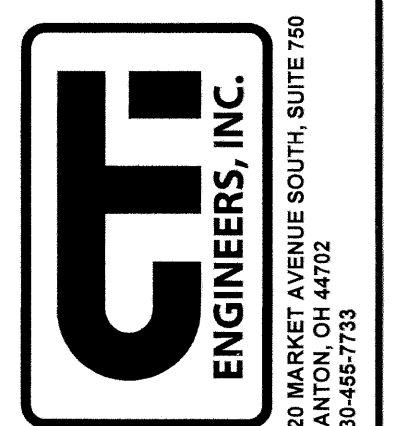
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NO.	DESCRIPTIONS	DATE	BY

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 DRAWN BY: AJP
 CHECKED BY: TMK
 APPROVED BY: WAD

CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 CITY OF CANTON
 STANDARD DRAWINGS



JOB NO. E 12022-2
DATE 2/2014
SCALE NONE
SHEET NO. C22

NOTES: (CONTINUED)

7. PAY LIMITS

- A) **BEDDING AND BACKFILL** IS INCLUDED IN WITH THE COST OF PIPE UNLESS BID OTHERWISE.
- B) **PAVEMENT RESTORATION:** THE WIDTH MEASUREMENT OVER THE TRENCH FOR PAVEMENT RESTORATION SHALL NOT EXCEED THE OUTSIDE DIAMETER (O.D.) OF PIPE PLUS A SET MEASUREMENT DEPENDENT ON DEPTH OF PIPE. AREA MEASUREMENTS AT MANHOLE AND CATCH BASIN STRUCTURES SHALL NOT EXCEED THE AREA OF THE BASE OF THE STRUCTURE + 3'-0" OFFSET AREA AROUND THE STRUCTURE'S BASE.
- C) **EXTRA FOUNDATION MATERIAL:**

WHEN IN THE OPINION OF THE CITY ENGINEER, SOFT/UNSTABLE MATERIALS ARE ENCOUNTERED WHICH ARE UNSUITABLE FOR BEDDING FOUNDATION, SAID MATERIAL SHALL BE REMOVED BY THE CONTRACTOR TO THE DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL. THE PAYABLE WIDTH OF THE EXTRA FOUNDATION MATERIAL SHALL NOT EXCEED THE LESSER OF THE APPLICABLE MINIMUM OR MAXIMUM TYPICAL BEDDING WIDTH, AS NOTED ON SHEET 1 OF STD. DWG. NO. 19. THE CONTRACTOR SHALL BE PAID FOR OVER-EXCAVATION AND BEDDING FOUNDATION MATERIAL UNDER THE CONTINGENCY BID ITEMS FOR EXTRA FOUNDATION MATERIAL.

EXTRA FOUNDATION MATERIAL, OPTION A, B, C, & D, MAY BE USED IN ANY COMBINATION AS DIRECTED BY THE CITY ENGINEER:

OPTION A: CRUSHED STONE, AASHTO M 43 NO. 1 AND/OR 2

OPTION B: CRUSHED STONE, AASHTO M 43 NO. 56, 57, OR 67

OPTION C: ODOT 703.11, TYPE 1 (304, 411 OR 617 GRADATION)

OPTION D: TENSAR GEOGRID T1100, OR APPROVED EQUAL

EXTRA FOUNDATION MATERIAL, CONTINGENCY BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION
603		C.Y.	EXTRA FOUNDATION, OPTION A (#1,#2 STONE)
603		C.Y.	EXTRA FOUNDATION, OPTION B (#56,57,67 STONE)
603		C.Y.	EXTRA FOUNDATION, OPTION C (304,411,617)
603		S.F.	EXTRA FOUNDATION, OPTION D (GEOGRID)

NOTES: (CONTINUED)

8. EXCAVATION OF ROCK OR BURIED/ABANDONED CONCRETE STRUCTURE REMOVAL

EXCAVATION FOR NEW MANHOLES AND CATCH BASINS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON CONSTRUCTION PLANS, SHALL BE MEASURED BETWEEN VERTICAL PLANES ONE (1) FOOT BEYOND THE OUTSIDE EDGE OF THE FOUNDATION OF THE STRUCTURES ON ALL SIDES, AND PARALLEL THERETO, AND FROM THE SURFACE OF THE ROCK TO THE BOTTOM OF THE ROCK OR THE NEAT LINES OF THE BOTTOM OF THE STRUCTURES PLUS THE DEPTH OF THE BASE MATERIAL, USE THE MEASUREMENT WHICH IS LESSER.

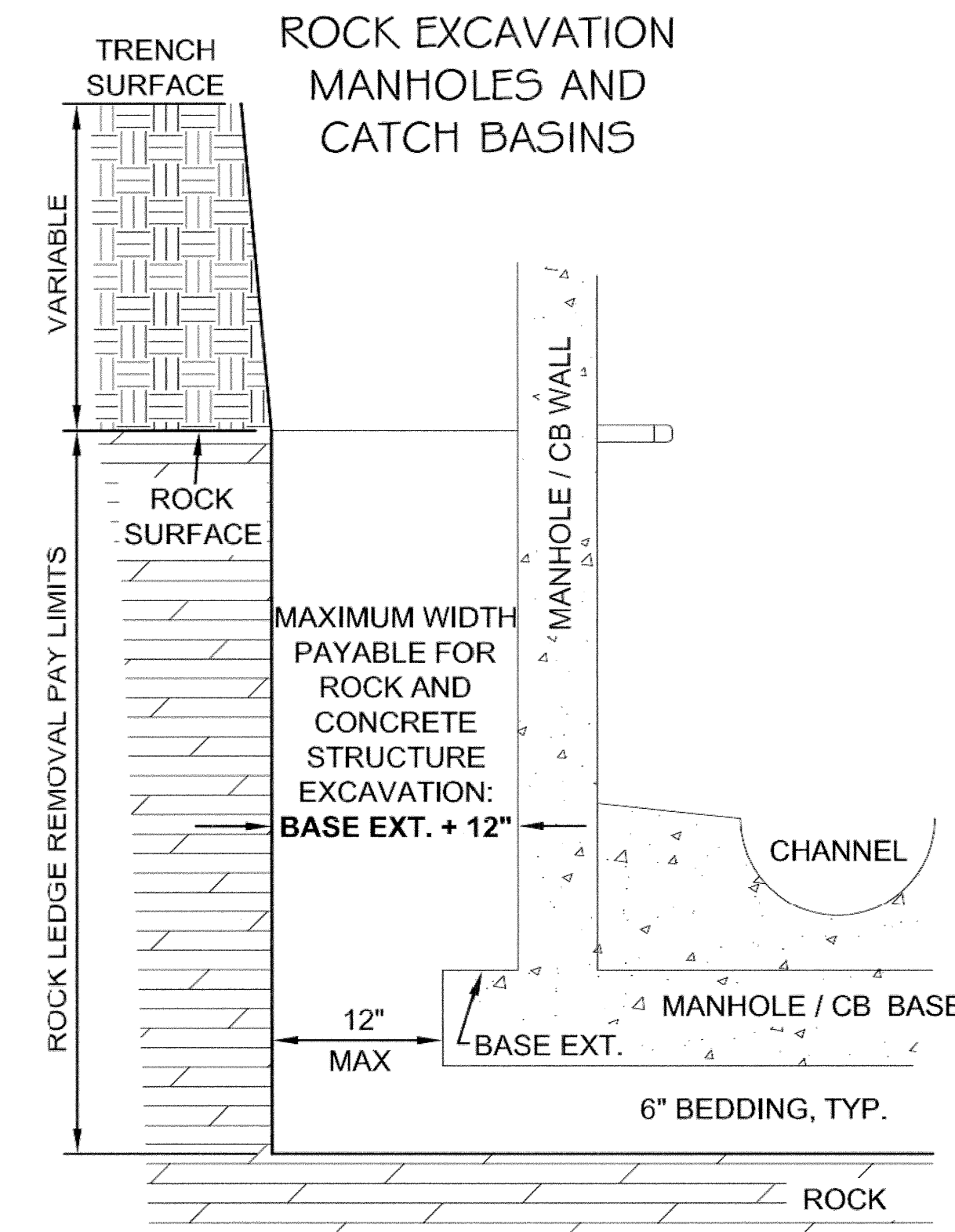
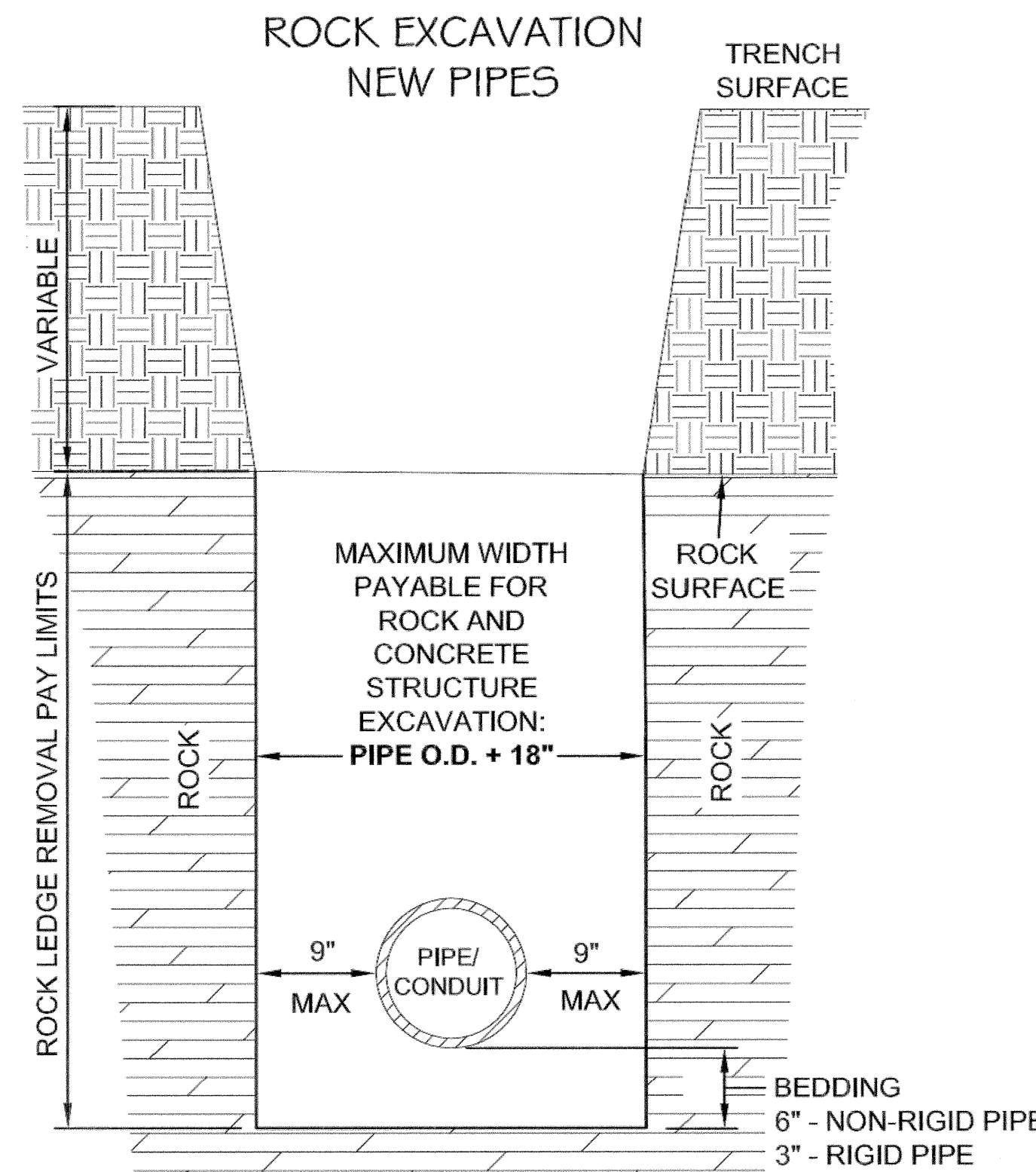
EXCAVATION FOR NEW PIPES, UNLESS OTHERWISE SPECIFIED OR SHOWN ON CONSTRUCTION PLANS, SHALL BE MEASURED BETWEEN TRENCH WALLS (NOT TO EXCEED PIPE O.D. + 18", AND FROM THE SURFACE OF THE ROCK TO THE BOTTOM OF THE ROCK OR THE BOTTOM OF THE PIPE BEDDING, USE THE MEASUREMENT WHICH IS LESSER.

EXCAVATION OF BURIED AND ABANDONED CONCRETE STRUCTURES SHALL BE MEASURED IN THE SAME MANNER AS ROCK REMOVAL.

THE CONTRACTOR SHALL BE PAID FOR ROCK REMOVAL AND CONCRETE STRUCTURE REMOVAL UNDER THE CONTINGENCY BID ITEMS FOR ROCK OR CONCRETE STRUCTURE REMOVAL. IF A CONTINGENCY BID ITEM IS NOT INCLUDED IN THE BID PROPOSAL, THE CONTACTOR MAY SUBMIT A PROPOSAL (PRIOR TO WORK BEING STARTED) TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.

ROCK AND BURIED & ABANDONED CONCRETE STRUCTURE REMOVAL, CONTINGENCY BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION
603		C.Y.	ROCK REMOVAL
603		C.Y.	CONCRETE STRUCTURE REMOVAL



OFFICE OF THE CITY ENGINEER
CANTON, OHIO

DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012

APPROVED BY: CDB, RMB, SLH

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REVISIONS

DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 19

UTILITY TRENCH
REQUIREMENTS

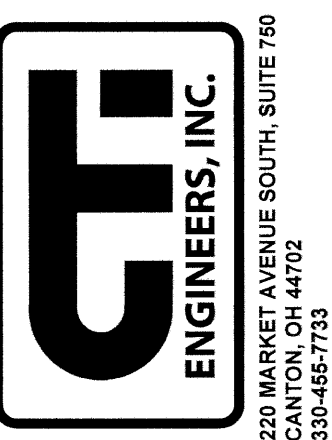
SHEET 2 OF 2

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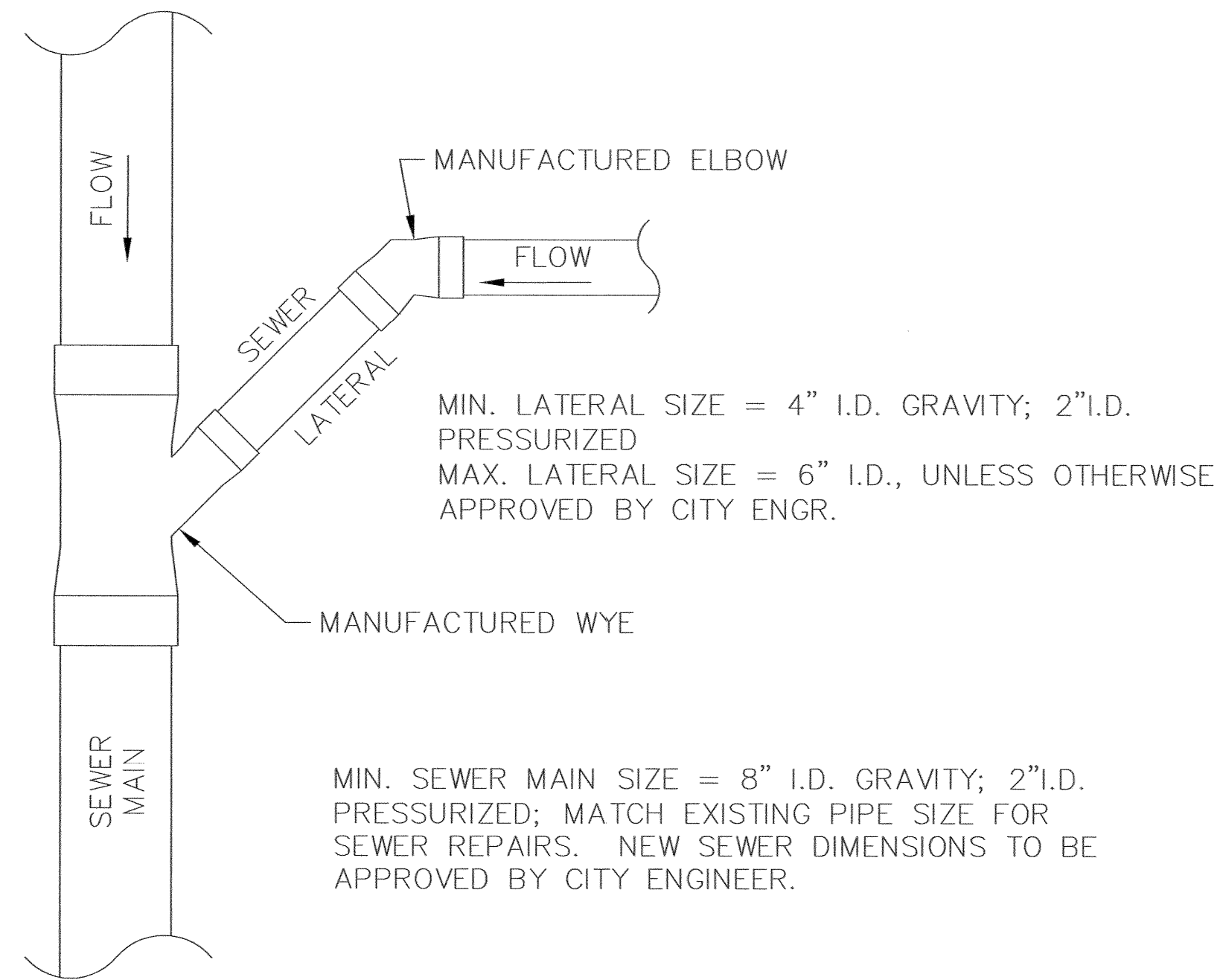
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DRAWN BY: AJP
CHECKED BY: TMK
APPROVED BY: WAD

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FAIRCREST ST SW LIFT STATION
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G.P. #1142
CITY OF CANTON
STANDARD DRAWINGS

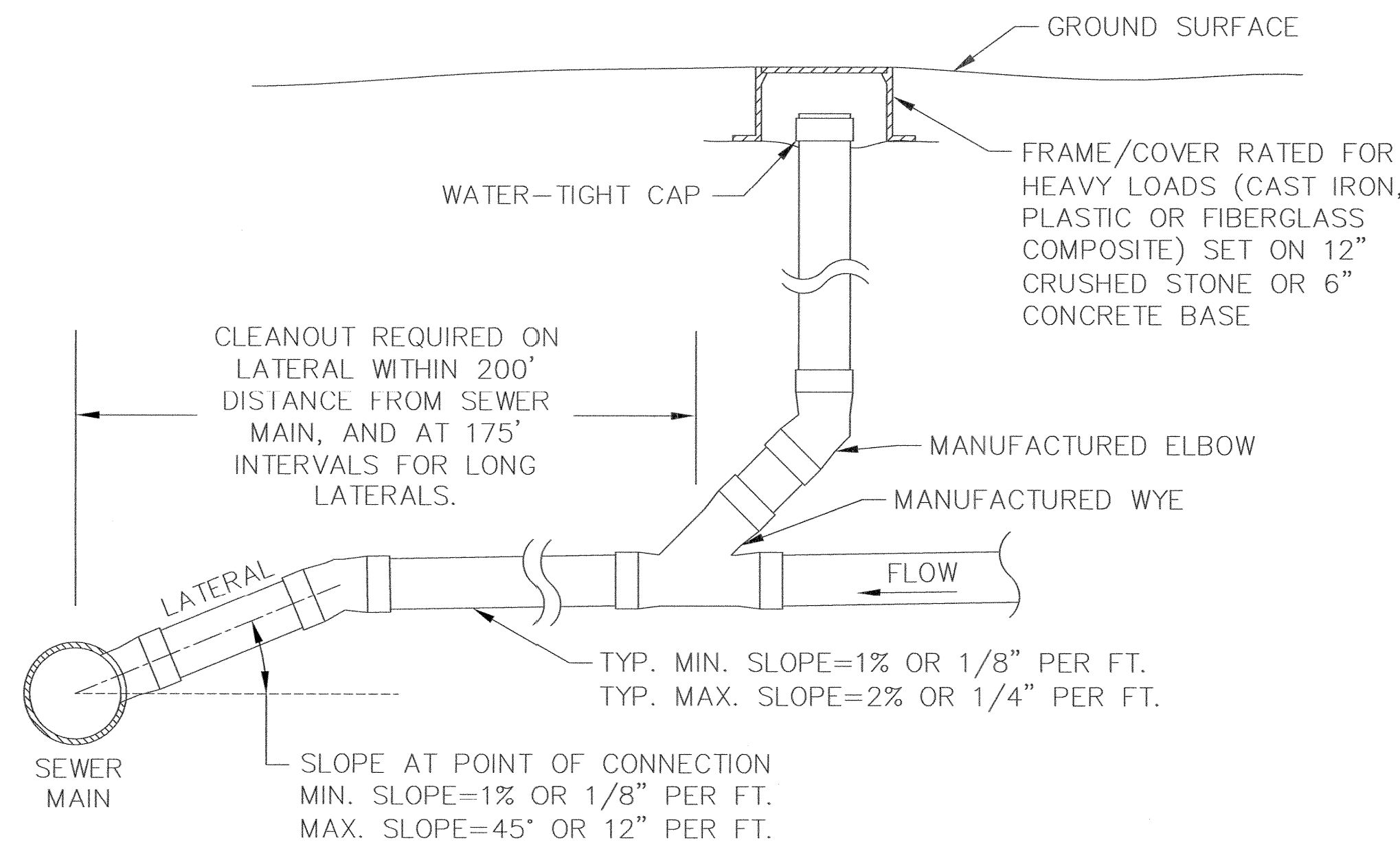


JOB NO.
E 12022-2
DATE
2/2014
SCALE
NONE
SHEET NO.
C23

PLAN VIEW
NOT TO SCALE



SECTION VIEW
NOT TO SCALE



NOTES:

- SEWER MUST BE LAID IN A MANNER TO MINIMIZE USE OF BENDS. USE TWO 45° BENDS IN LIEU OF 90° BENDS.
- SEWERS MUST BE BURIED WITH A MINIMUM 36" COVER.
- IN-LINE PIPE CONNECTIONS BETWEEN EXISTING AND NEW PIPES, 18" INSIDE DIAMETER (I.D.) AND LESS, MAY BE MADE WITH FLEXIBLE COUPLINGS (DEFINED BELOW).
- NEW WYE CONNECTIONS ON EXISTING SEWER MUST BE MANUFACTURED WYES ON SEWER MAINS 12" I.D. AND LESS. SEWER LATERAL CONNECTION METHOD/TYPE ON MAINS OVER 12" I.D. MUST BE SUBMITTED TO CITY ENGINEER FOR APPROVAL.
- REDUCERS ARE PERMITTED ON SEWER LATERALS IF THE LARGER DIAMETER PIPE IS DOWNSTREAM OF THE REDUCER. REDUCERS MUST BE MANUFACTURED PVC, VCP, OR DIP REDUCERS; FLEXIBLE REDUCERS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
- FOR SEWER LATERAL CONNECTIONS TO MANHOLES, THE MANHOLE MUST HAVE EITHER A CAST-IN-PLACE OPENING AND GASKET SUITABLE FOR THE PIPE TYPE AND SIZE (SEE CITY STD. DWG. NO. 10, PRECAST SANITARY MANHOLE) OR THE MANHOLE MUST BE MACHINE CORED AND CONNECTION SEALED WATER-TIGHT (SEE CITY STD. DWG. NO. 11, OUTSIDE DROP CONNECTION FOR SANITARY MANHOLE).
- ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

SEWER MAIN AND LATERAL PIPE, BENDS, COUPLINGS:

- LESS THAN 12' OF COVER: PVC SDR 35, ASTM D 3034 (ODOT 707.45); VITRIFIED CLAY PIPE ASTM ER-4-67; DUCTILE IRON PIPE, CLASS 52, CEMENT AND BITUMASTIC LINED AWWA C151-91.
- 12' TO 24' OF COVER: PVC SDR 25, ASTM D 3034 (ODOT 707.45); VITRIFIED CLAY PIPE ASTM ER-4-67; DUCTILE IRON PIPE, CLASS 52, CEMENT AND BITUMASTIC LINED AWWA C151-91.
- GREATER THAN 24' OF COVER: PVC SDR 11, ASTM D 3034 (ODOT 707.45); VITRIFIED CLAY PIPE ASTM ER-4-67; DUCTILE IRON PIPE, CLASS 52, CEMENT AND BITUMASTIC LINED AWWA C151-91.
- ALL JOINTS MUST BE AIR-TIGHT BELL & SPIGOT OR TONGUE & GROOVE JOINT WITH RESILIENT GASKET.

SEWER MAIN AND LATERAL FLEXIBLE COUPLINGS:

- ELASTOMERIC PVC WITH STAINLESS STEEL SHIELD AND BANDS, FERNCO STRONG BACK RC OR 5000 SERIES RC, OR APPROVED EQUAL.

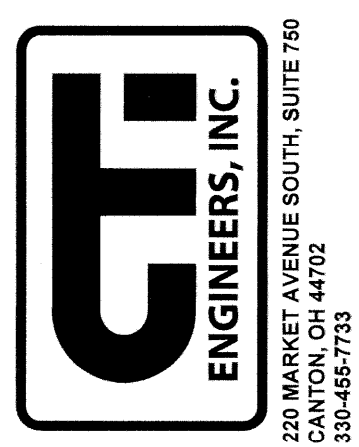
BEDDING AND BACKFILL

- BEDDING AND BACKFILL OF SEWERS MUST COMPLY WITH STANDARD DWG. NO. 19, UTILITY TRENCH REQUIREMENTS.

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CHECKED BY					
TMK					
APPROVED BY					
WAD					

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
CITY OF CANTON
STANDARD DRAWINGS



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CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
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APPROVED DATE: FEB 2014
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DESCRIPTION	DATE	BY

STANDARD DRAWING NO. 20
SANITARY
SEWERS & LATERALS
SHEET 1 OF 1

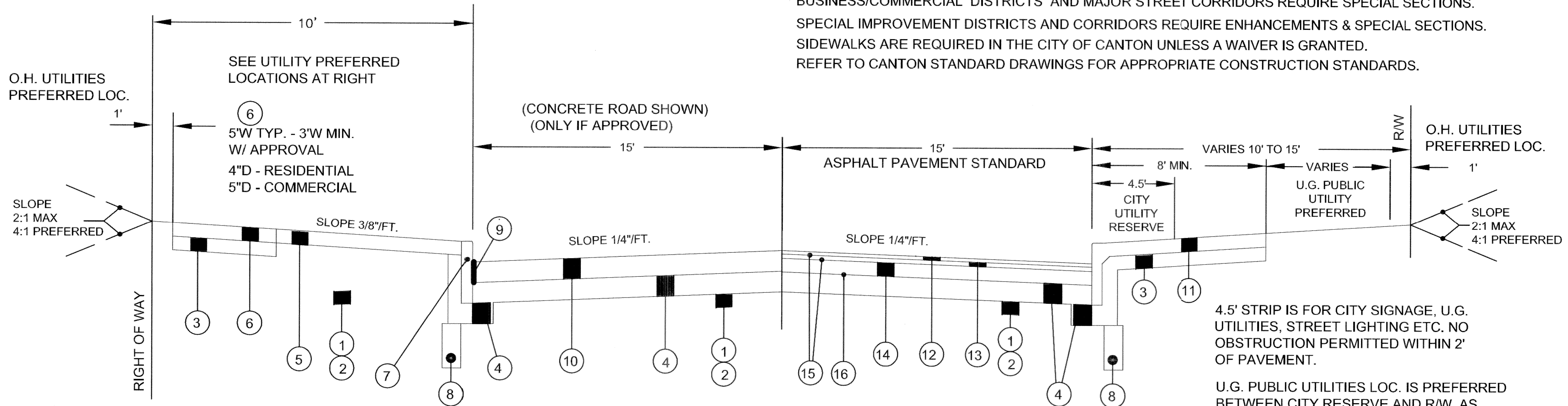
JOB NO.	E 12022-2
DATE	2/2014
SCALE	NONE
SHEET NO	C24

ODOT REFERENCES ARE 2008 CMS - CROSS REFERENCE TO CURRENT CMS AT TIME OF CONSTRUCTION. (M) DENOTES CANTON MODIFICATION TO CMS AS NOTED.

ALL CURB AND WALK CONSTRUCTION TO CONFORM TO CITY OF CANTON 2008 SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR AND REPLACING OF SIDEWALKS, CURBS AND DRIVEWAYS.

GENERAL CRITERIA

PAVEMENT WIDTHS ARE TRADITIONALLY AND TYPICALLY 3/5THS THE RIGHT OF WAY WIDTH
 LANE WIDTHS ARE 12 FT. TYP. AND PARKING WIDTHS ARE 8 FT. TYPICAL (2' - 3' APRON EA. SIDE)
 BY ORD. - MIN. 28 FT. PAVEMENT REQUIRED FOR PARKING I-SIDE - 32 FT. PREFERRED.
 BUSINESS/COMMERCIAL DISTRICTS AND MAJOR STREET CORRIDORS REQUIRE SPECIAL SECTIONS.
 SPECIAL IMPROVEMENT DISTRICTS AND CORRIDORS REQUIRE ENHANCEMENTS & SPECIAL SECTIONS.
 SIDEWALKS ARE REQUIRED IN THE CITY OF CANTON UNLESS A WAIVER IS GRANTED.
 REFER TO CANTON STANDARD DRAWINGS FOR APPROPRIATE CONSTRUCTION STANDARDS.



- ① 203 - EXCAVATION & EMBANKMENT
- ② 204 - SUBGRADE COMPACTION
- ③ 304 - 4" AGGREGATE BASE
- ④ 304 - 6" AGGREGATE BASE
(M) TYP. - NO FOUNDRY SAND, ACBFS, GRANULATED SLAG OR OTHER SLAG PERMITTED IN 304 BASE
- ⑤ 659 - 4" TOPSOIL / SEED / MULCH
CLASS 1 LAWN MIX
1 YR. WARRANTY - 90% GERMINATION
- ⑥ 608 - CONC. WALK (UNLESS VARIANCE GRANTED)
(M) TYP. - CLASS "C" #57 OR 67 LIMESTONE
OPTION 1 MAY 1 TO OCT. 15 ONLY
STEEL FORMS ONLY - SEE 2008 CITY SPECS.
FOR CURB / WALK CONST.

- ⑦ 609 - CONC. CURB - CITY STD. 30 OR ODOT TYPE 6
(M) TYP. - CLASS "C" #57 OR 67 LIMESTONE
OPTION 1 MAY 1 TO OCT. 15 ONLY
STEEL FORMS ONLY - SEE 2008 CITY SPECS.
FOR CURB / WALK CONST.
- ⑧ 605 - 4" PIPE UNDERDRAIN - (M) TYP. - NO. 8 STONE
BEDDING (NO ACBFS) - FILTER SLEEVE - AS DIRECTED
- ⑨ 705.03 - 1/2" PREFORMED JOINT W/ SEALER
- ⑩ 452 - 6" PLAIN PORTLAND CEMENT PAVEMENT
CLASS "C" - LIMESTONE AGG. ONLY
OPTION 1 MAY 1 TO OCT. 15 ONLY
- ⑪ 608 - CONC. WALK - CITY STD. 29 TYPE III
(M) TYP. - CLASS "C" #57 OR 67 LIMESTONE
OPTION 1 MAY 1 TO OCT. 15 ONLY
STEEL FORMS ONLY - SEE 2008 CITY SPECS.
FOR CURB / WALK CONST.

- ⑫ 448 1-1/4" ASPHALTIC CONC. SURFACE COURSE TYPE I
- ⑬ 448 1-3/4" ASPHALTIC CONC. INTERMEDIATE COURSE TYPE I
- ⑭ 301 4" ASPHALT BASE
- ⑮ 407 TACK COAT (USE RUBBERIZED TACK FOR ASPHALT OVER CONC. PAVEMENT)
- ⑯ 408 PRIME COAT

NOTE ⑪ LAWN STRIPS LESS THAN 3.5' WIDE ARE NOT PERMITTED UNLESS APPROVED BY THE ENGINEER. COMBINED CURB/WALK IS STANDARD IN THIS INSTANCE. USE TYP. 5' WALK SHOWN LEFT IF 3.5' MIN. IS MET.

READ FOR ALL STREET CONSTRUCTION AND IMPROVEMENT THE OWNER/DEVELOPER SHALL PROVIDE A TYPICAL SECTION PREPARED BY A PROFESSIONAL ENGINEER TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th STREET N.E. 44705 (330)489-3381

STANDARD DRAWING NO. 32
 MINIMUM PAVEMENT
 STANDARDS FOR LOCAL STREET

REVISIONS			DRAWN BY: OWG	DATE: APR 2009
DESCRIPTION	DATE	BY	APP'D BY: RMB	H. SCALE: 1" = 5'
GENERAL REVISIONS	11/09	RC	FIELD BK:	V. SCALE: N/A
GENERAL REVISIONS	06/10	MM	DWG# ce_32.DWG	SHEET 1 OF 1
GENERAL REVISIONS	10/12/11	CDB		

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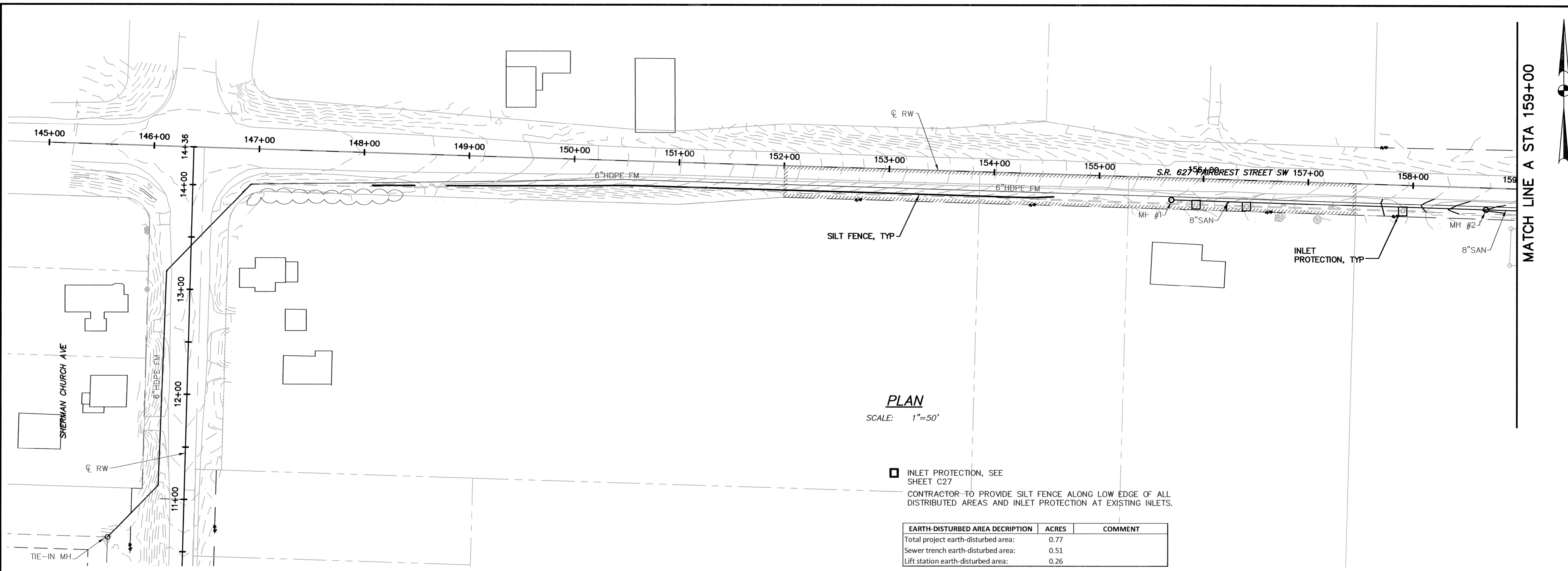
NO.	DESCRIPTIONS	DATE	BY

DESIGNED BY: TMK
 DRAWN BY: AJP
 CHECKED BY: TMK
 APPROVED BY: WAD

CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 CITY OF CANTON
 STANDARD DRAWINGS



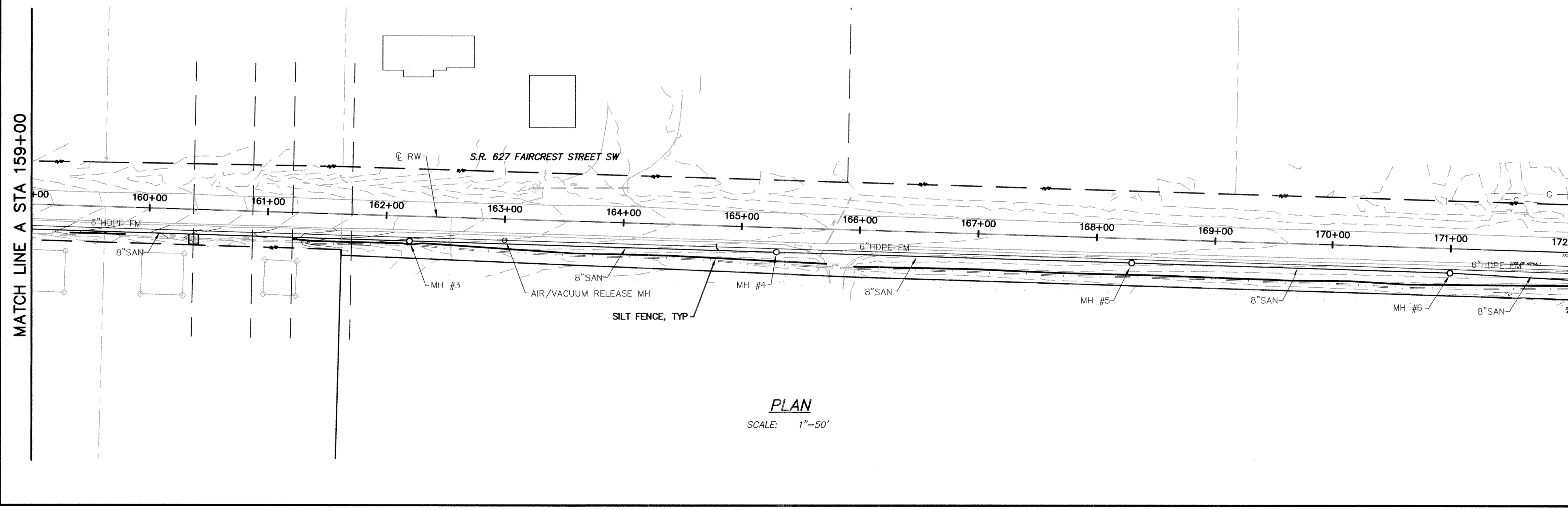
JOB NO.
 E 12022-2
 DATE
 2/2014
 SCALE
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 SHEET NO
 C25



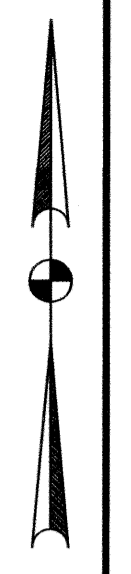
PLAN
SCALE: 1"=50'

□ INLET PROTECTION, SEE SHEET C27
CONTRACTOR TO PROVIDE SILT FENCE ALONG LOW EDGE OF ALL DISTRIBUTED AREAS AND INLET PROTECTION AT EXISTING INLETS.

EARTH-DISTURBED AREA DESCRIPTION	ACRES	COMMENT
Total project earth-disturbed area:	0.77	
Sewer trench earth-disturbed area:	0.51	
Lift station earth-disturbed area:	0.26	



PLAN
SCALE: 1"=50'

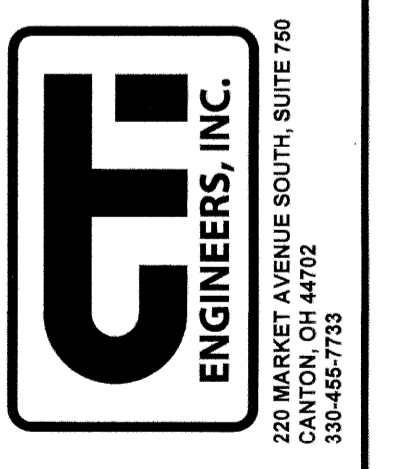


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NO.	DESCRIPTIONS	DATE	BY	APP'D

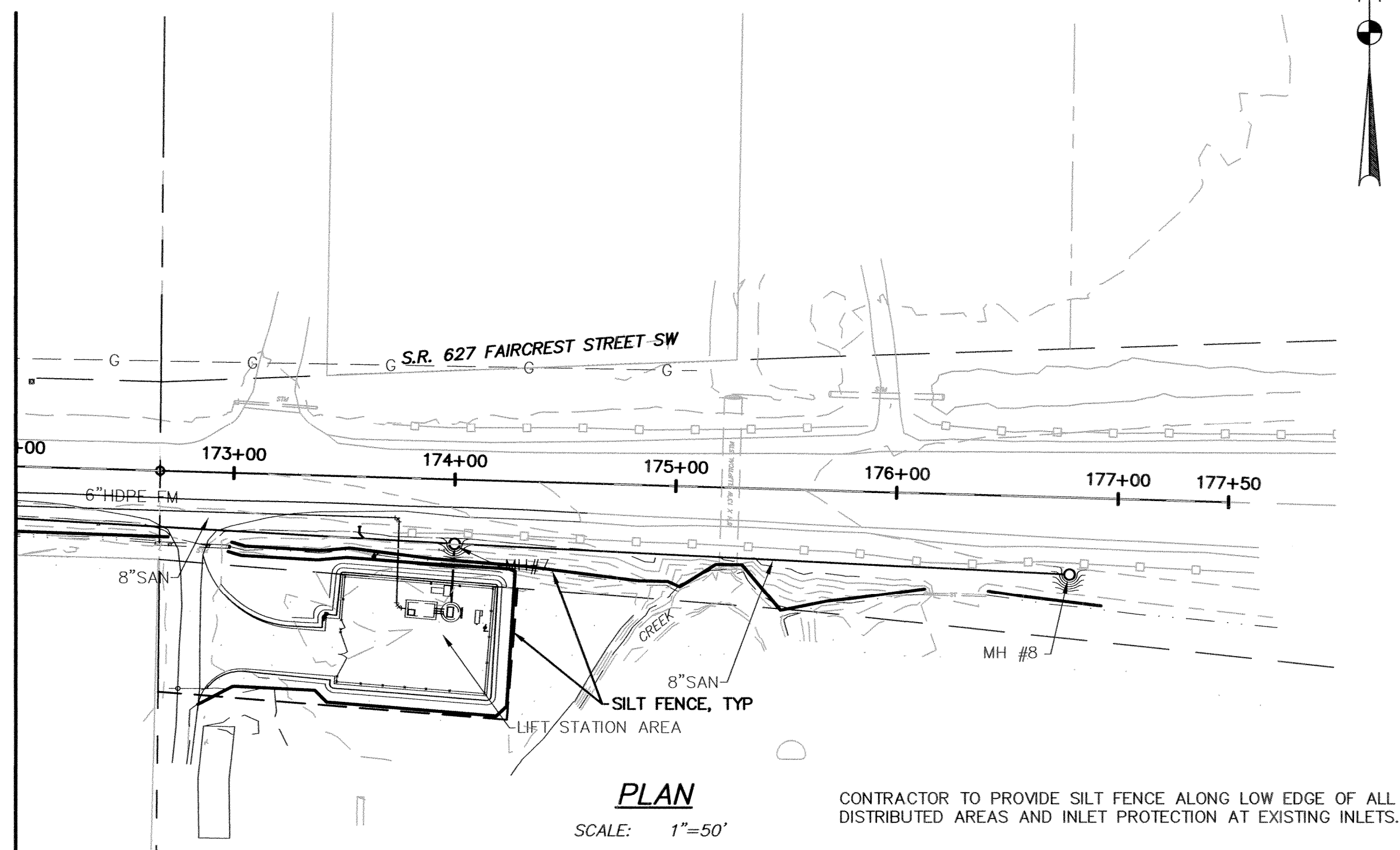
DESIGNED BY	TMK
DRAWN BY	AJP
CHECKED BY	TMK
APPROVED BY	WAD

CANTON, OHIO
FAIRCRESS ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
SWPP PLAN



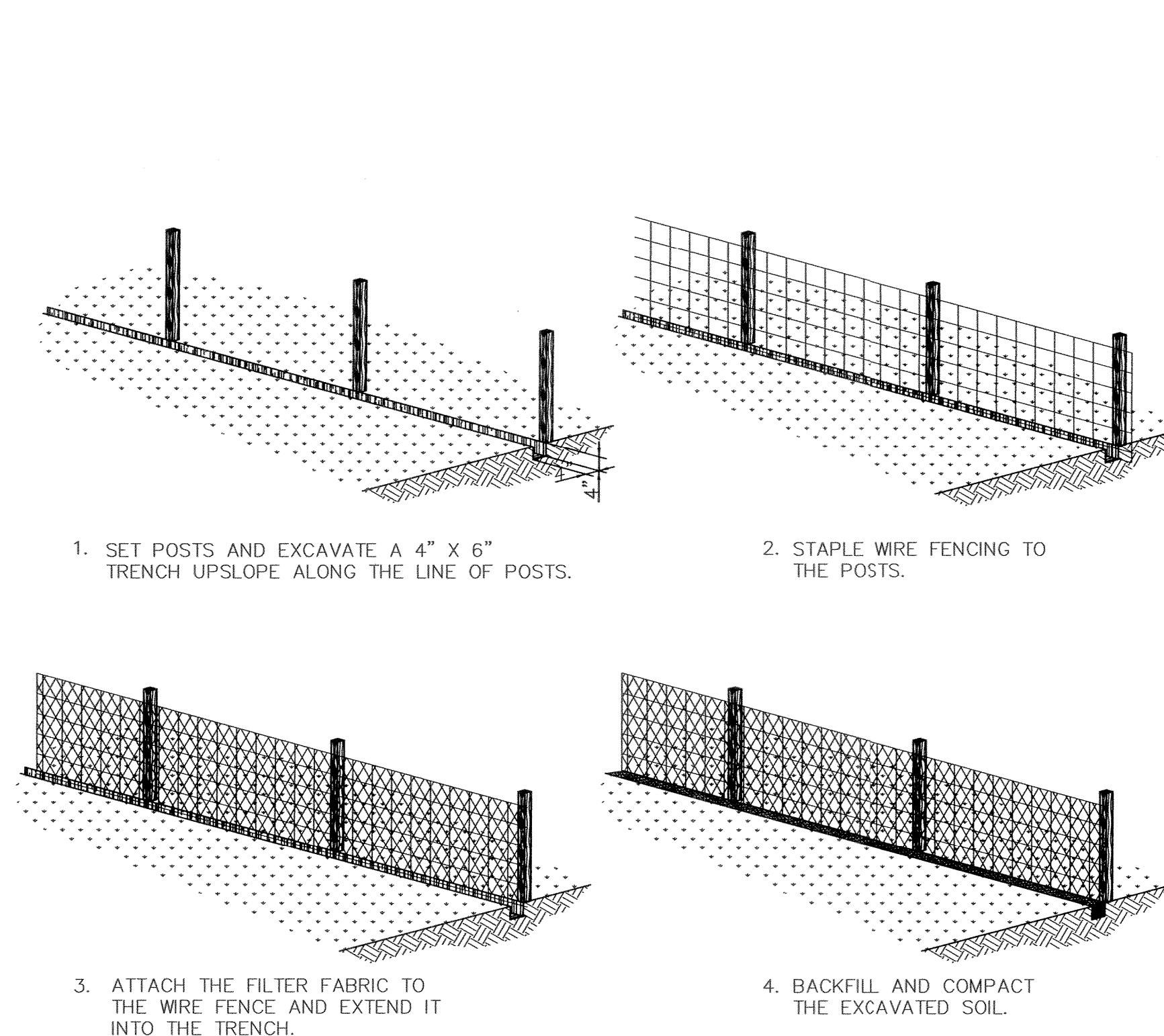
JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS NOTED
SHEET NO	C26

MATCH LINE STA 172+00
SEE SHEET C26

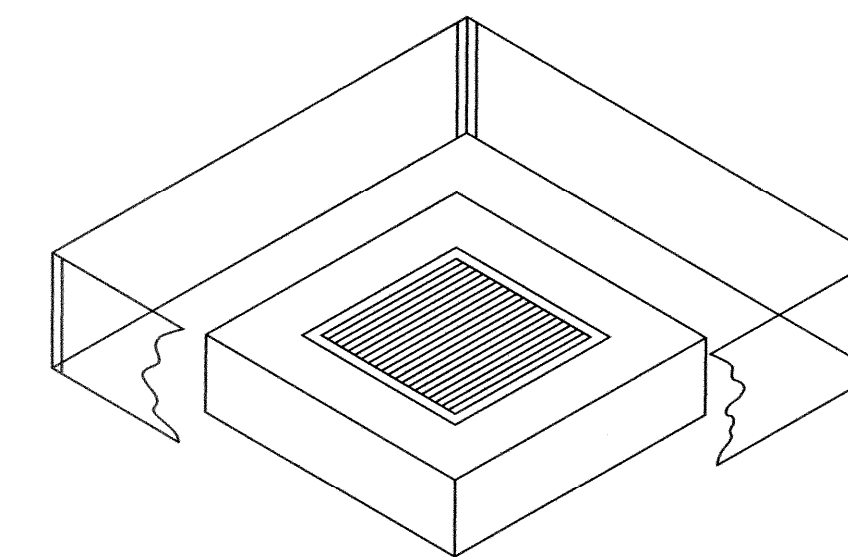


PLAN
SCALE: 1"=50'

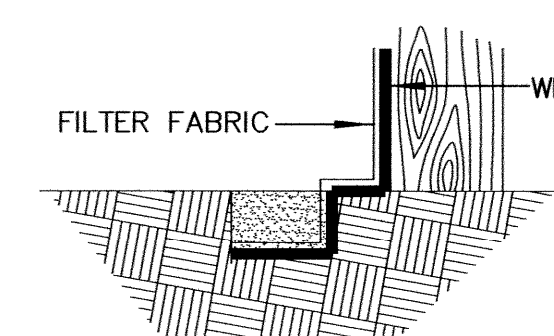
CONTRACTOR TO PROVIDE SILT FENCE ALONG LOW EDGE OF ALL DISTRIBUTED AREAS AND INLET PROTECTION AT EXISTING INLETS.



SILT FENCE DETAIL
NO SCALE



INLET PROTECTION
INLET PROTECTION TO BE PLACED AT ALL INLETS ARE INSTALLED, UNTIL SITE IS STABILIZED.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.

EROSION CONTROL GENERAL NOTES

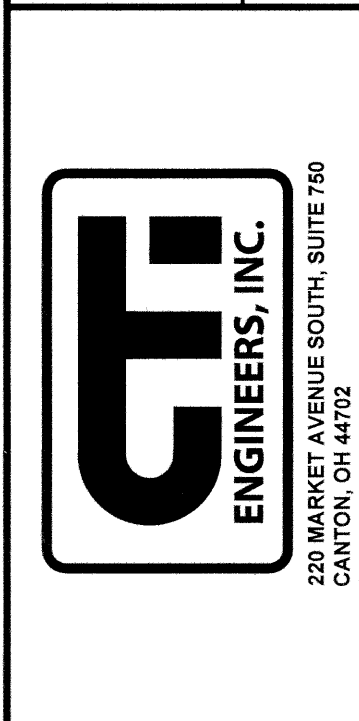
- EROSION PREVENTION AND SEDIMENT CONTROL MEASURES & PRACTICES MUST COMPLY WITH THE CONSTRUCTION GENERAL PERMIT PART III.C - SWP3 REQUIREMENTS AND BE INSTALLED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS IN THE 2006 VERSION OF THE ODNR RAINWATER AND LAND DEVELOPMENT HANDBOOK OR EQUAL APPROVED BY THE STARK COUNTY SWCD.
- MEASURES & PRACTICES SHALL BE IMPLEMENTED DURING CONSTRUCTION AS FEASIBLE, TO PRESERVE NATURAL CONDITIONS, INCLUDING: PROTECTION OF EXISTING VEGETATION (INCLUDING INDIVIDUAL TREES) AND RIPARIAN AREAS; MAINTENANCE OF VEGETATION BUFFER STRIPS ALONG ANY DRAINAGES, WATER BODIES AND WETLANDS; AND PHASING CONSTRUCTION AND CLEARING LAND IN STAGES TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY ONE TIME.
- INDIVIDUAL TREES, TREE AREAS, AND VEGETATION TO BE SAVED SHALL BE MARKED AND PROTECTED WITH A BARRIER IF NECESSARY. ENSURE THAT THERE IS NO STORAGE OF SOIL OR MATERIAL, OR CONSTRUCTION TRAFFIC WITHIN THE DRIP LINE OF THE TREES. NO TREE REMOVAL SHALL BE PERMITTED OUTSIDE THE CONSTRUCTION AREA WITHOUT SPECIFIC PERMISSION OF THE PROJECT ENGINEER.
- PRIOR TO GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING, APPROPRIATE STRUCTURAL MEASURES & PRACTICES SHALL BE IMPLEMENTED TO DIRECT RUNOFF AWAY FROM, LIMIT RUNOFF FROM, AND CONTROL RELEASE OF SEDIMENT FROM ANY AREA DISTURBED BY CONSTRUCTION OR ASSOCIATED ACTIVITY ON OR OFF THE PROJECT SITE. MEASURES & PRACTICES SUCH AS PERIMETER SEDIMENT BARRIERS, SEDIMENT BASINS AND DIVERSIONS INTO THEM, PIPE SLOPE DRAINS, ROCK CHECK DAMS, AND PROTECTIVE GRADING MAY BE USED.
- STRUCTURAL MEASURES & PRACTICES TO CONTROL EROSION AND TRAP SEDIMENT SHALL BE IMPLEMENTED ON ANY AREA THAT IS TO REMAIN DISTURBED FOR MORE THAN 14 DAYS. MEASURES & PRACTICES SUCH AS SILT FENCES, SETTLING PONDS, STORM DRAIN INLET PROTECTION, AND DIKES OR CHANNELS TO DIRECT RUNOFF FROM DISTURBED AREAS TO A SETTLING POND SHALL BE USED.
- ANY DISTURBED AREA ON OR OFF THE PROJECT SITE INCLUDING ANY SOIL STOCKPILE THAT WILL REMAIN IDLE FOR MORE THAN 21 DAYS, SHALL BE STABILIZED BY QUICKLY PROVIDING COVER TO CONTROL EROSION. DISTURBED AREAS MAY BE STABILIZED USING MEASURES & PRACTICES SUCH AS: SEEDING, DORMANT SEEDING, MULCHING, MULCH BLANKET, GEOTEXTILE, SOD, PRESERVATION OF EXISTING COVER, ALTERNATIVE GROUND COVER, AND USE OF CONSTRUCTION ENTRANCES. STABILIZATION OF SLOPES GREATER THAN 6%, FILL SLOPES, AND OTHER AREAS TENDING TO BE UNSTABLE SHALL INCLUDE MEASURES SUCH AS EROSION CONTROL BLANKET OR MATTING.
- ANY DISTURBED AREA NOT AT FINAL GRADE THAT WILL REMAIN IDLE FOR MORE THAN 14 DAYS AND LESS THAN 1 YEAR SHALL BE TEMPORARILY STABILIZED. ANY SUCH DISTURBED AREA THAT IS WITHIN 50 FEET OF A WATER BODY OR DRAINAGE COURSE, SHALL BE STABILIZED WITHIN 2 DAYS OF MOST RECENT DISTURBANCE. ANY AREA NOT WITHIN 50 FEET OF A WATER BODY OR DRAINAGE COURSE SHALL BE STABILIZED WITHIN 7 DAYS.
- DISTURBED AREAS AT FINAL GRADE SHALL BE PERMANENTLY STABILIZED TO ACHIEVE FINAL STABILIZATION USING MEASURES & PRACTICES SUCH AS: PERENNIAL VEGETATION COVER, LANDSCAPING MULCH, MATTING, SOD, RIP RAP, AND LANDSCAPING TECHNIQUES. FINAL STABILIZATION IS ACHIEVED WHEN UNIFORM PERENNIAL COVERAGE OF AT LEAST 70% IS ESTABLISHED ON ALL AREAS NOT PAVED OR LANDSCAPED, OR WHEN EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED. TRAPPED SEDIMENT SHALL BE PERMANENTLY STABILIZED AND TEMPORARY CONTROL PRACTICES REMOVED AFTER FINAL STABILIZATION.
- ANY AREA WITHIN 50 FEET OF A WATER BODY OR DRAINAGE COURSE SHALL BE PERMANENTLY STABILIZED WITHIN 2 DAYS OF REACHING FINAL GRADE. ANY AREA THAT IS MORE THAN 50 FEET FROM A WATER BODY OR DRAINAGE COURSE SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF REACHING FINAL GRADE. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED IN FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION IS ACHIEVED.
- ANY DISTURBED AREA OR PART OF ANY DISTURBED AREA THAT WILL REMAIN IDLE FOR MORE THAN 1 YEAR OR OVER THE WINTER, OR ON WHICH WORK IS TO BE SUSPENDED, SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF MOST RECENT DISTURBANCE. DISTURBED AREAS SHALL BE STABILIZED PRIOR TO THE ONSET OF WINTER. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED IN FUNCTIONAL CONDITION DURING INTERRUPTION OF CONSTRUCTION.
- AS CONSTRUCTION IS COMPLETED ON A PART OF THE PROJECT SITE OR AN AREA ON OR OFF THE SITE IS NO LONGER NEEDED FOR STORAGE OR EQUIPMENT TRAFFIC, ANY DISTURBED AREAS NOT TO BE PAVED SHALL BE FINE GRADED AND PERMANENTLY STABILIZED. THE AREAS SHALL BE GRADED TO BE CONSISTENT WITH SURROUNDING CONTOURS FOR PROPER DRAINAGE AND AESTHETICS.
- ANY SITE PREPARATION THAT WILL INVOLVE EARTH MOVING (SUCH AS CLEARING AND GRUBBING) WILL NOT BEGIN MORE THAN 2 WEEKS IN ADVANCE OF THE START OF EXCAVATION. THE PURPOSE OF THIS RESTRICTION IS TO PREVENT THE EXISTENCE OF LARGE AREAS OF EXPOSED SOILS FOR EXTENDED PERIODS OF TIME WHEN CONSTRUCTION IS NOT PROCEEDING.
- ALL DISTURBED VEGETATION IS TO BE RESEED AS PART OF RESTORATION, UNLESS THE AREA WILL BE PAVED OR OCCUPIED BY ABOVE GROUND FACILITIES. TOP SOILING FOR THE RESTORATION OF VEGETATED AREAS DISTURBED BY CONSTRUCTION SHALL AVERAGE (6) INCHES IN THICKNESS.
- ALL DEWATERING FLOWS SHALL BE SILT-FREE PRIOR TO DISCHARGE, AND DISCHARGE SHALL BE DIRECTLY TO STABILIZED SITES SUCH AS STREAMS, STORM SEWERS OR EXISTING GRASSED DRAINAGES, NOT ONTO EXPOSED SOILS OR ANY OTHER SITE WHERE FLOWS COULD CAUSE EROSION.
- IF, DUE TO WEATHER, FINAL GRADING CANNOT BE ACCOMPLISHED IMMEDIATELY, MULCHING AND TEMPORARY SEEDING, IF FEASIBLE, OR SOME OTHER TYPE OF TEMPORARY EROSION CONTROL MEASURES, MUST BE USED UNTIL LONG-TERM RESTORATION CAN OCCUR.
- STOCK PILED TOPSOIL AND FILL MATERIALS SHALL BE PROTECTED WITH EROSION CONTROL BARRIERS OR TEMPORARY SEEDING.
- IN AREAS WHERE EARTH MOVING WILL BE EXTENSIVE, A COMBINATION OF DIVERSION CHANNELS (WITH EROSION CONTROL BARRIERS) AND SEDIMENTATION BASINS SHALL BE USED TO CONTROL RUNOFF AND EROSION.
- EXCESS SOIL THAT IS STOCK PILED MUST BE EITHER REMOVED OR REGRADED WITHIN 15 DAYS OF THE COMPLETION OF THE CONSTRUCTION.
- IF TREE REMOVAL IS NECESSARY, TREES SHALL BE FELLED IN A MANNER THAT AVOIDS DAMAGE TO ADJACENT TREES TO REMAIN STANDING. WHERE ROOT DAMAGE CANNOT BE AVOIDED, PRUNING AS APPROPRIATE TO COMPENSATE FOR THE DAMAGE SHALL BE DONE BY AN AUTHORIZED ARBORIST.
- NO FILL, TOPSOIL OR HEAVY EQUIPMENT SHALL BE STORED WITHIN 200 FEET OF A STREAM BANK OR WITHIN THE DRIP LINE OF TREADED AREAS.
- CONSTRUCTION AND RESTORATION ACTIVITIES SHALL NOT SIGNIFICANTLY ALTER EXISTING DRAINAGE PATTERNS AND/OR VELOCITY OF STORM WATER FLOW.
- THE EROSION CONTROL MEASURES DESCRIBED HEREIN ARE TYPICAL THE CONTRACTOR SHALL USE THIS PLAN AS A GUIDE TO CONTROL EROSION, IN THE EVENT OF ADVERSE WEATHER CONDITIONS, ETC. ADDITIONAL MEASURES SHOULD BE TAKEN TO ESTABLISH AND MAINTAIN PROTECTIVE VEGETATION.
- CONTINUOUS MAINTENANCE WILL BE REQUIRED AS NECESSARY UNTIL PERMANENT, STABLE VEGETATIVE COVER HAS BEEN ESTABLISHED AND EROSION HAS BEEN CONTROLLED. THIS INCLUDES BUT IS NOT LIMITED TO RESEEDING, MULCHING, EARTH FILLING, ETC.
- DISTURBED AREAS SHALL BE KEPT TO A MINIMUM WITH RESPECT TO AREAS EXPOSED AND TIME OF EXPOSURE. ALL TOPSOIL SHALL BE STOCKPILED.
- TO ASSIST IN EROSION CONTROL, ALL TREES AND VEGETATION OUTSIDE OF GRADED AREAS SHALL REMAIN.
- SILT FENCE FABRIC SHALL BE EXXON GTF-100S OR APPROVED EQUAL.
- ADJACENT ROADS SHALL BE KEPT FREE OF DIRT AND DEBRIS AT ALL TIMES.
- ALL S.W.P.P.P. ITEMS MUST BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS.
- EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6.0% GRADE.
- OTHER EROSION CONTROL AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
- REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY 7 DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE AND CORRECTIVE MEASURES TAKEN.
- NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
- OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON THE PLAN.
- FILTER FABRIC AND STRAW BALES ARE NOT SUITABLE MATERIALS FOR DITCH CHECKS UNLESS PRIOR APPROVAL FOR LOCATION SPECIFIC USE IS GIVEN BY THE OEPA-DSW STORM WATER INSPECTOR.
- STRAW BALES SHALL ONLY BE USED FOR RUNOFF DIVERSION AND SEDIMENT CONTROL IN COMBINATION WITH OTHER MATERIALS. AN EXAMPLE IS AN ANCHORED BALE BERM OR BARRIER COVERED WITH FILTER FABRIC WHICH IS TRENCHED AND BACKFILLED ON THE UPSLOPE SIDE.
- UNNECESSARY OPERATION OF CONSTRUCTION MACHINERY SHALL BE AVOIDED NEAR A WATER BODY, WETLAND, DRAINAGE COURSE, OR STREAM RIPARIAN AREA. A BUFFER STRIP OF VEGETATION SHALL BE PRESERVED UNDISTURBED OR CREATED AND MAINTAINED ALONG SUCH AREAS.
- PRIOR TO STARTING WORK, FILTER FABRIC FENCING SHALL BE INSTALLED AND MAINTAINED TO MARK THE BOUNDARY OF THE AREA TO BE DISTURBED OR THE BUFFER STRIP. THE BUFFER SHALL MEET THE MOST RESTRICTIVE OF LOCAL, STATE OR FEDERAL REQUIREMENTS, BUT SHOULD BE AT LEAST 25 FEET WIDE WHERE FEASIBLE, AS MEASURED FROM THE TOP OF THE BANK OR THE ORDINARY HIGH WATER MARK.

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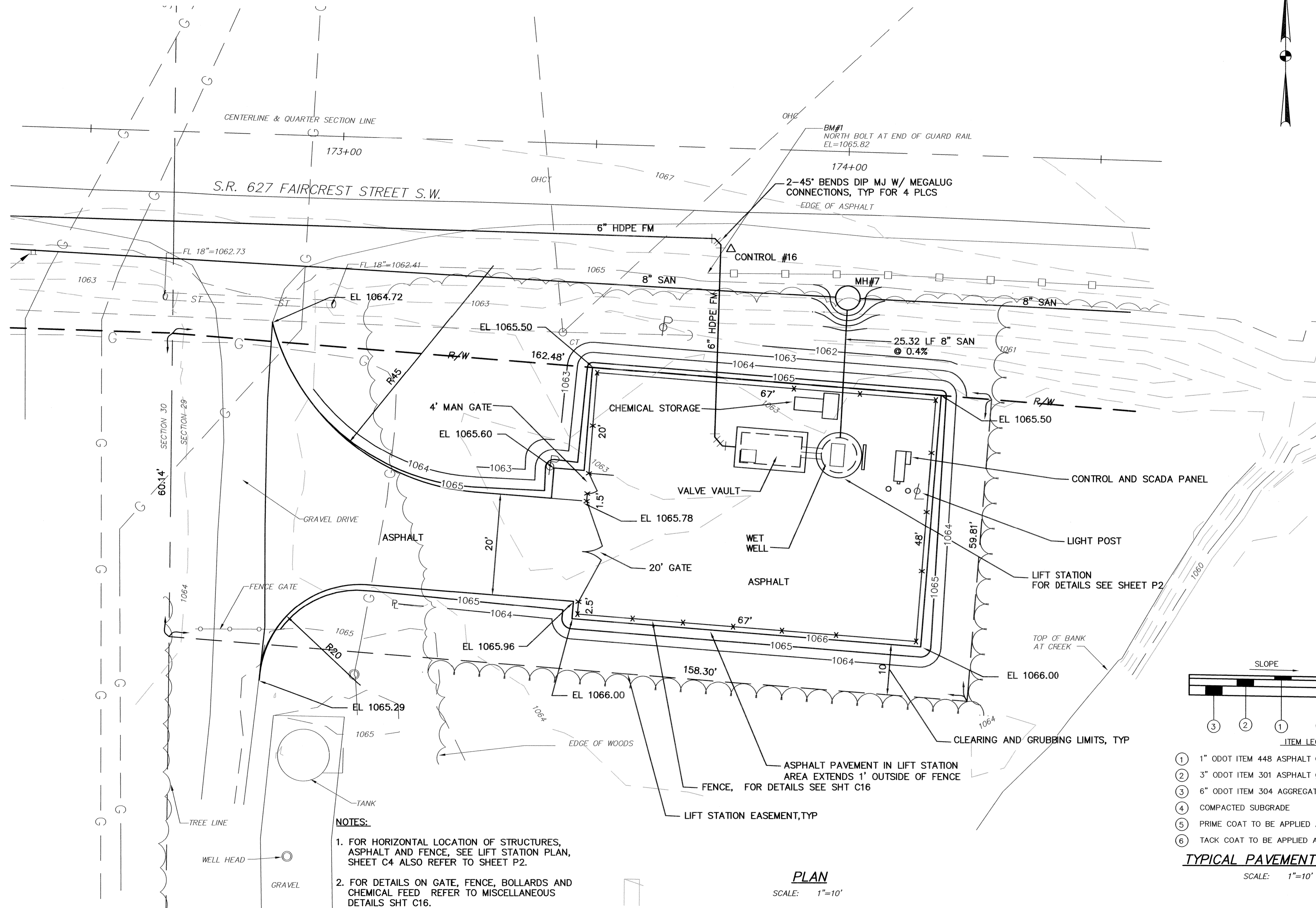
NO.	DESCRIPTIONS	DATE	BY	APP'D

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DRAWN BY: AJP
CHECKED BY: TMK
APPROVED BY: WAD

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
SWPP PLAN, NOTES AND DETAILS

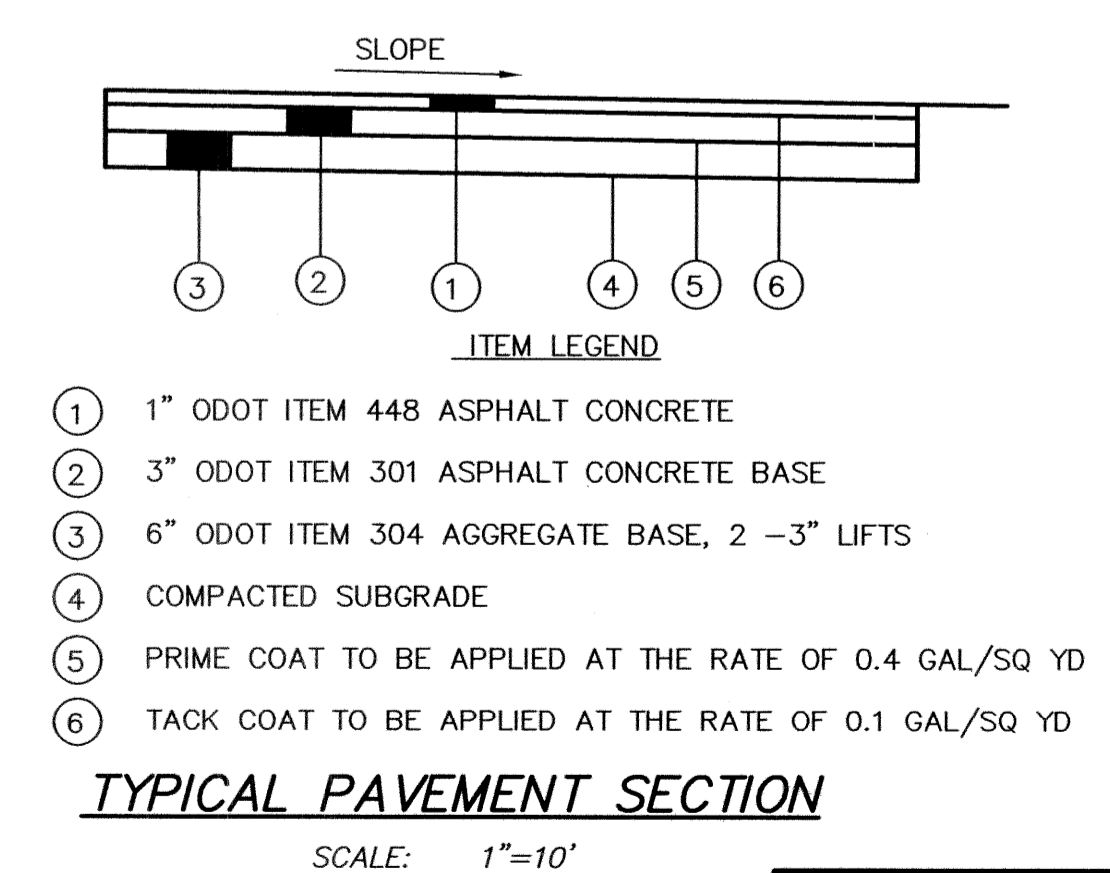


JOB NO.
E 12022-2
DATE
2/2014
SCALE
AS NOTED
SHEET NO.
C27



- NOTES:**
1. FOR HORIZONTAL LOCATION OF STRUCTURES, ASPHALT AND FENCE, SEE LIFT STATION PLAN, SHEET C4 ALSO REFER TO SHEET P2.
 2. FOR DETAILS ON GATE, FENCE, BOLLARDS AND CHEMICAL FEED REFER TO MISCELLANEOUS DETAILS SHT C16.

PLAN
SCALE: 1"=10'



100 YEAR FLOOD
ELEV = 1064.17

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 CHECKED BY: **TMK**
 APPROVED BY: **WAD**

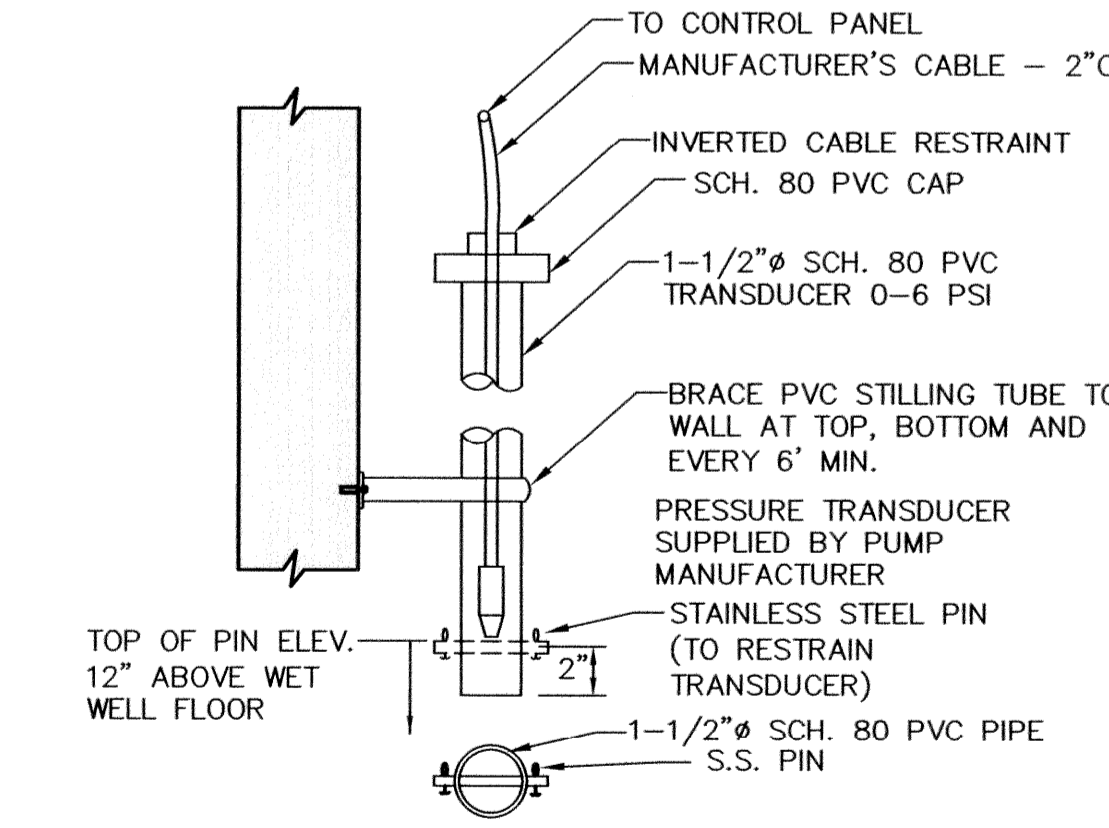
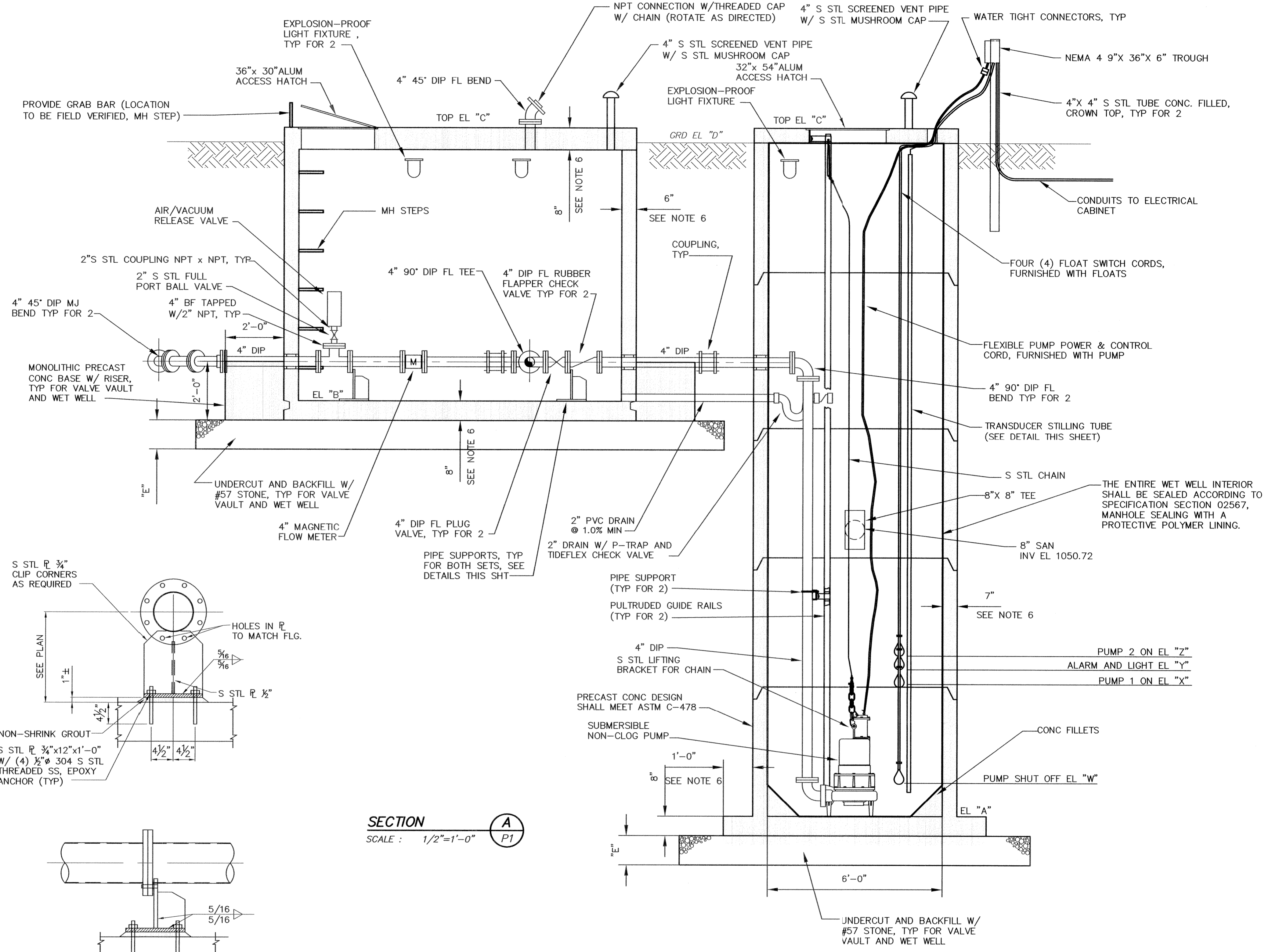
CANTON, OHIO
FAIRCRESS ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
LIFT STATION
SITE PLAN

GFI ENGINEERS, INC.
 220 MARKET AVENUE SOUTH, SUITE 150
 CANTON, OH 44702
 330-466-1735

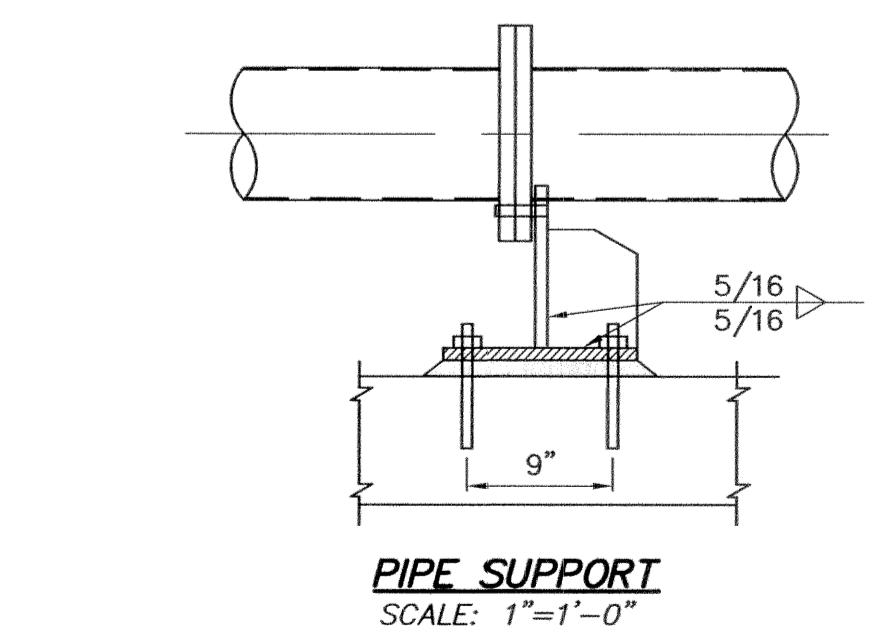
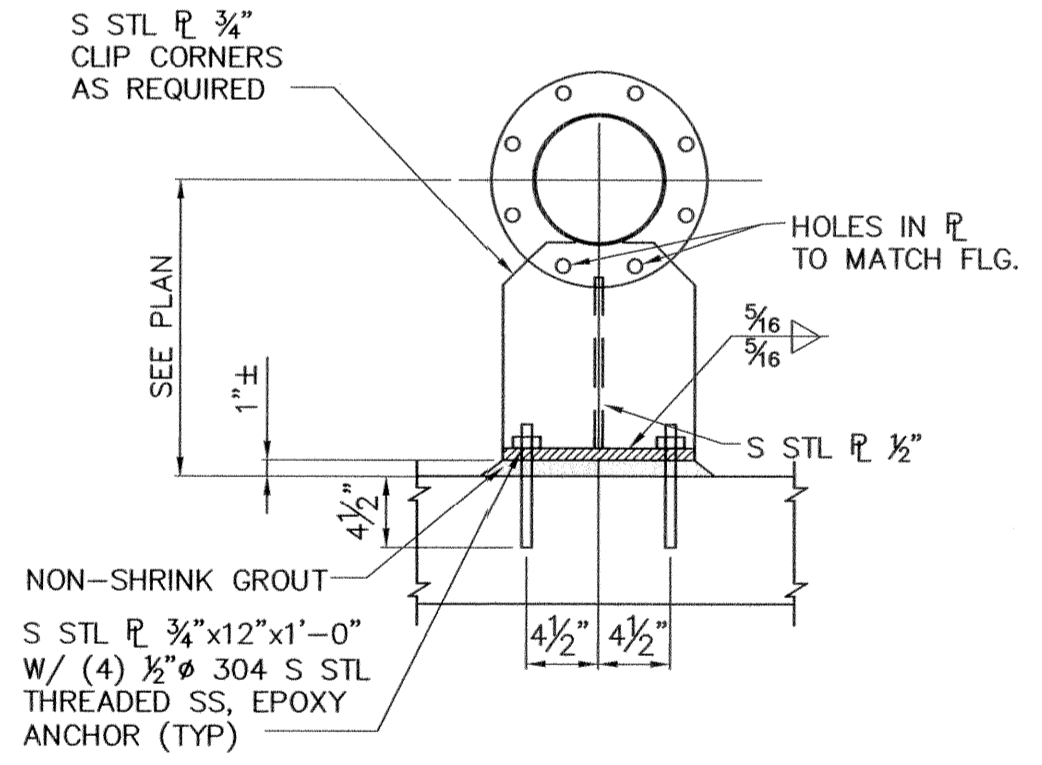
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 DATE **2/2014**
 SCALE **AS SHOWN**
 SHEET NO. **P1**

CITY PROJECT: ---, DRAWING: CTI-2010 (187279)21/7/10/14 3:14PM, LAYOUT: P3 SECTION

- NOTES:
- ALL EXISTING ELEVATIONS AND ANGLES BETWEEN PIPES PENETRATING PUMP STATION WETWELLS SHALL BE FIELD VERIFIED BY CONTRACTOR BEFORE ORDERING PRECAST CONCRETE STRUCTURES.
 - ALL PIPE PENETRATIONS THROUGH WALLS OF THE WET WELL AND VALVE VAULT SHALL BE FLEXIBLE TYPE, WATER PROOF SEAL, KOR-N-SEAL, A-LOK, OR EQUAL.
 - CONTRACTOR TO ADD REDUCERS/FITTINGS AS NEEDED TO MATCH PIPE SIZES AS LISTED IN TABLE BELOW.
 - THE CONTRACTOR SHALL DESIGN AND IMPLEMENT A BRACING AND DEWATERING SYSTEM FOR THE EXCAVATION REQUIRED. THE BRACING AND DEWATERING SYSTEM SHALL CONFORM TO A LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE BRACING AS WELL AS THE DEWATERING SYSTEM SHALL BE DESIGNED BY PROFESSIONAL ENGINEER(S) REGISTERED IN THE STATE OF OHIO. THE DESIGN DOCUMENTS SHALL BE SEALED BY ENGINEER RESPONSIBLE FOR THE DESIGN. THE DEWATERING SYSTEM SHALL BE PROPERLY DESIGNED IN ORDER TO MINIMIZE EXCESSIVE DRAWDOWNS OF THE EXISTING GROUNDWATER SURFACE. A COPY OF THE FINDINGS OF THE GEOTECHNICAL INVESTIGATION IS AVAILABLE FOR USE BY THE CONTRACTOR.
 - GEOTEXTILE FABRIC SHALL BE NONWOVEN FILTER FABRIC CONFORMING TO ODOT 712.09, TYPE D. FABRIC SHALL BE APPLIED ATOP OF THE EXCAVATED SOIL WITH #57 STONE COMPACTED ATOP OF THE FABRIC TO THE THICKNESSES INDICATED ON THE DRAWINGS.
 - THESE DIMENSIONS ARE MINIMUMS USED FOR BUOYANCY CALCULATIONS. PRECAST MANUFACTURER MUST SUBMIT CALCULATIONS IF LESS CONCRETE MATERIAL IS USED.
 - CONTRACTOR TO MAINTAIN 7" OF WATER IN WET WELL UNTIL BACKFILL OPERATIONS ARE COMPLETE TO PREVENT FLOATATION.
 - BACKFILL USED AROUND PERIMETER OF ALL PRECAST STRUCTURES SHALL BE NO. 57 LIMESTONE.
 - PREMIER BACKFILL USED FOR SITE PIPE SHALL BE ODOT 304 LIMESTONE.



TRANSUCER STILLING TUBE DETAIL
NO SCALE



PIPE SUPPORT
SCALE: 1"=1'-0"

SECTION A
SCALE: 1/2"=1'-0"

PUMP INFORMATION

WETWELL DIA.	ELEVATIONS				FORCE MAIN DIA.	PUMP DISCHARGE PIPE DIA.	ELEVATIONS				MAKE	MODEL	DISCHARGE INCH	FLOW G.P.M.	TDH FEET	HORSEPOWER HP	IMPELLER DIA	SPEED RPM	ELECTRICAL	UNDERCUT AND BACKFILL DEPTH "E"
	"A"	"B"	"C"	"D"			"W"	"X"	"Y"	"Z"										
6'-0"	1044.00	1056.67	1066.00	1065.50	4"	4"	1047.00	1049.00	1050.00	1050.00	HYDROMATIC	S4KX	4"	268	97	25	10"	1750	480V 3 PHASE	12"

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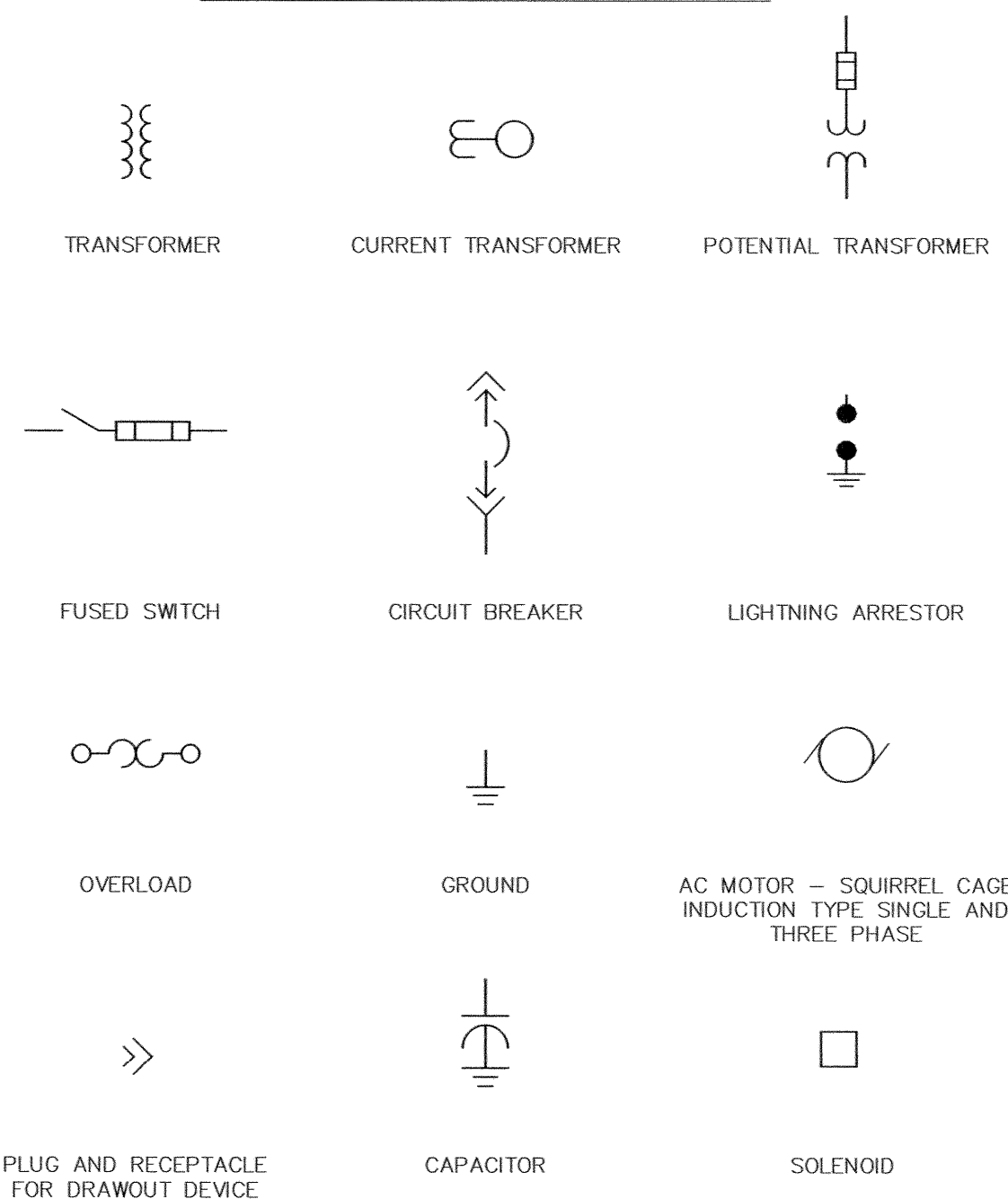
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
LIFT STATION
SECTION AND DETAILS



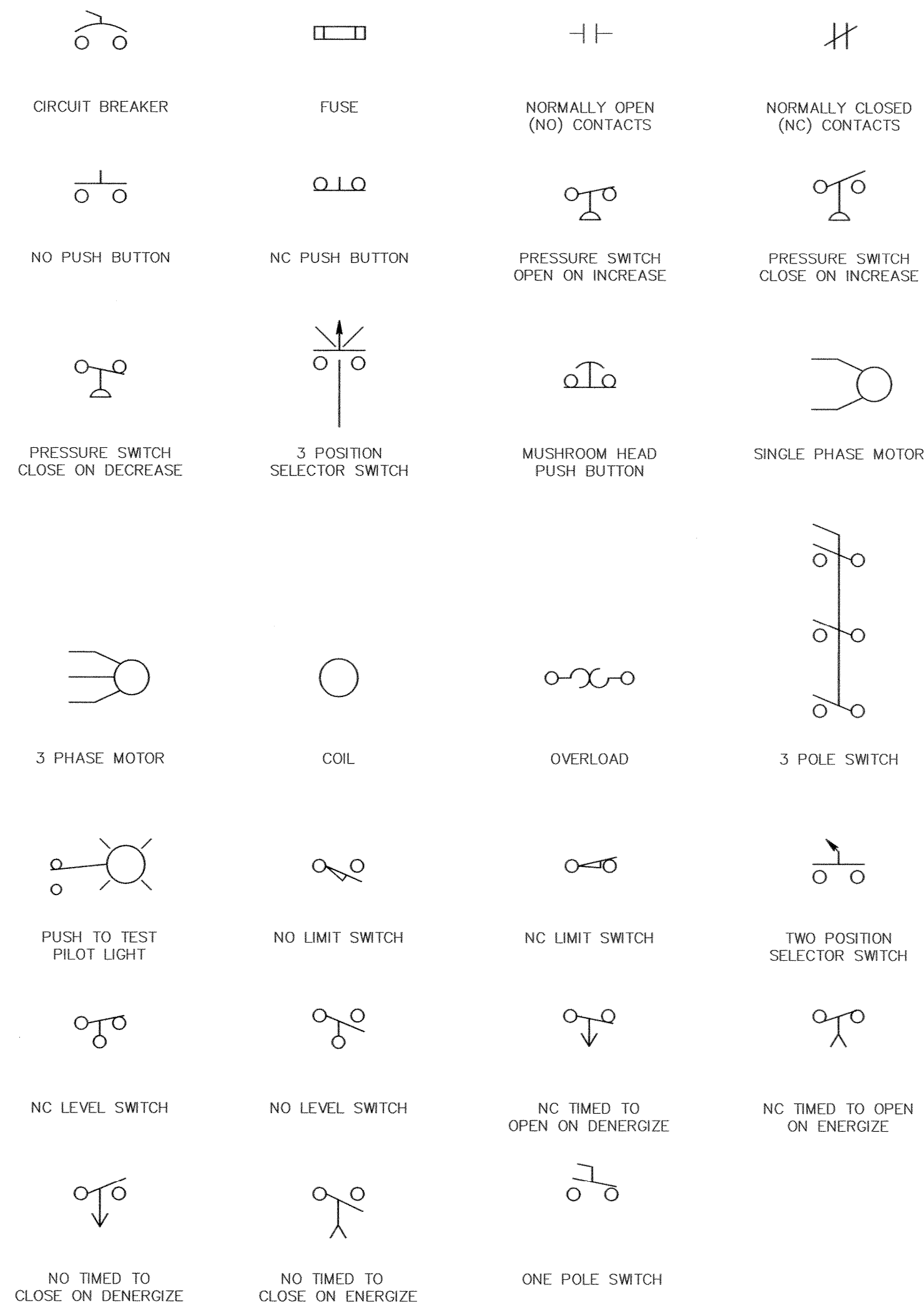
JOB NO.	E 12022-2
DATE	2/2014
SCALE	AS SHOWN
SHEET NO	P3

DATE OF PRINT

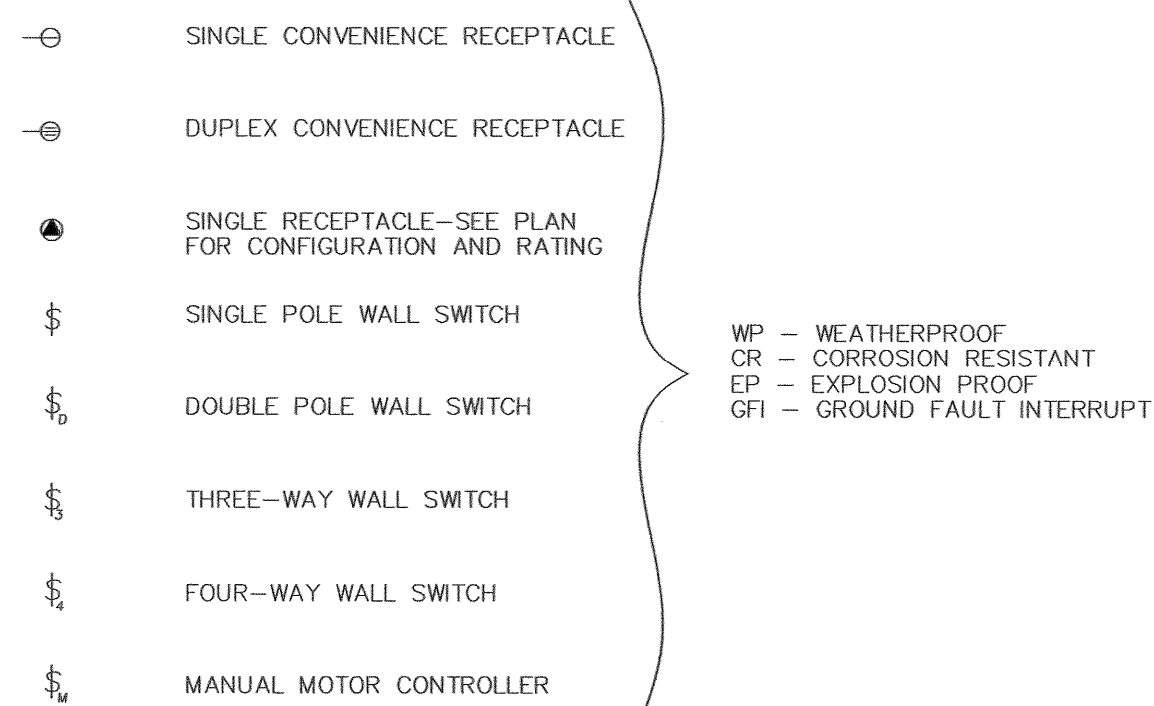
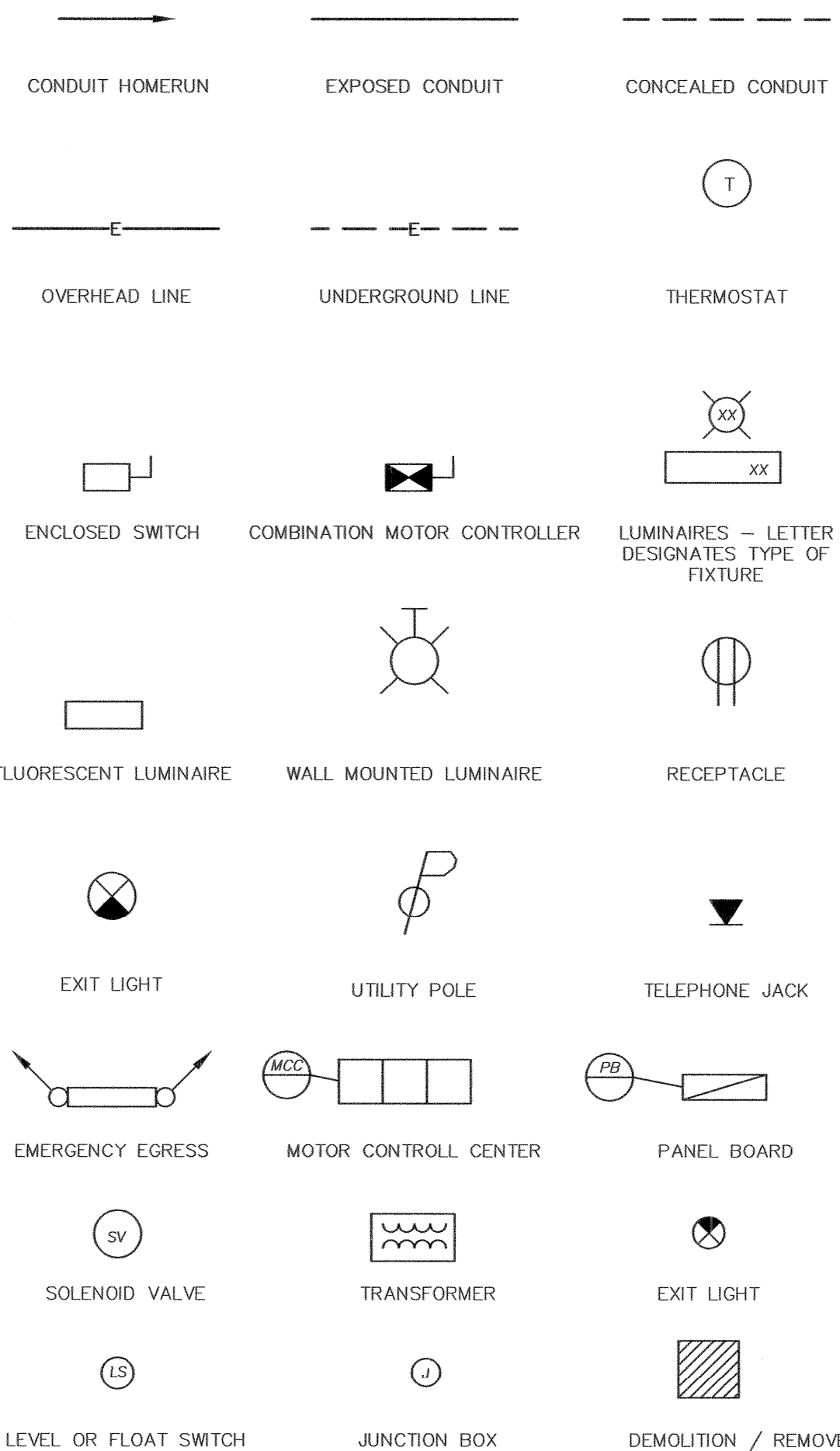
ONE LINE DIAGRAM SYMBOLS



CONTROL DIAGRAM SYMBOLS



PLAN SYMBOLS



ELECTRICAL ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
D/T	DRY TYPE TRANSFORMER
EL	ELEVATION
ES	ENCLOSED SWITCH
ETM	ELAPSED TIME METER
EX	EXISTING
FM	FLOW METER
GF	GROUND FAULT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
KVA	KILOVOLT AMPERE
KW	KILOWATT
LA	LIGHTNING ARRESTER
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OL	OVERLOAD
P	POLE
PB	PANEL OR PANELBOARD
PP	POWER PANEL
PT	POTENTIAL TRANSFORMER
P/T	PUSH TO TEST
SV	SOLENOID VALVE
TR	TIMING RELAY OR TIMER
TYP	TYPICAL
V	VOLT
W	WATT
WH	WEATHERPROOF
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER
XMTR	TRANSMITTER
XP	EXPLOSION PROOF
Ø	PHASE

GENERAL NOTES

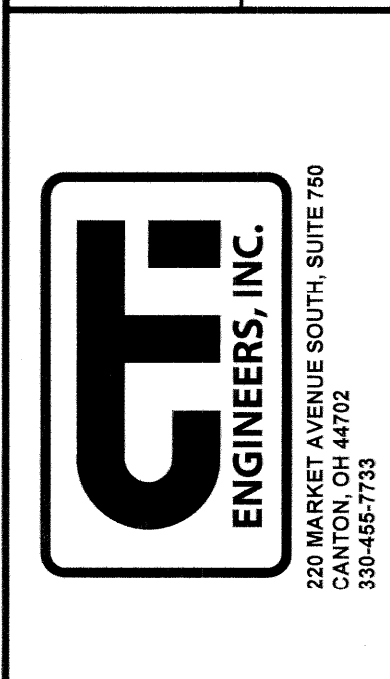
- THIS IS A GENERAL ELECTRICAL SYMBOLS AND GENERAL NOTES SHEET. SOME SYMBOLS AND/OR NOTES MAY NOT BE USED IN THIS SET OF DRAWINGS.
- LIGHT LINES (———) DESIGNATE EXISTING CONDITIONS AND EQUIPMENT.
- HEAVY LINES (———) DESIGNATE PROPOSED WORK OR EQUIPMENT.
- ALL HOMERUNS TO THE PANEL BOARDS AND SMALL POWER CENTERS AND WIRE/CONDUIT RUNS BETWEEN ALL SINGLE PHASE EQUIPMENT (TYPICALLY SMALLER THAN 1/2 HP MOTORS AND EQUIVALENT LOADS) SHALL BE 2 #12, 1 #12 GND.-3/4" C. UNLESS OTHERWISE NOTED.
- ALL HOMERUNS TO THE LOAD CENTERS, MOTOR CONTROL CENTERS AND MOTOR STARTER SWITCHBOARDS AND WIRE/CONDUIT RUNS BETWEEN ALL THREE PHASE EQUIPMENT (TYPICALLY 1/2 HP AND LARGER AND EQUIVALENT LOADS) SHALL BE 3 #12, 1 #12 GND.-3/4" C. UNLESS OTHERWISE NOTED.
- ALL SURFACE MOUNTED AND PENDANT MOUNTED LIGHTING FIXTURES SHALL BE MOUNTED SO THAT NO INTERFERENCE IS ENCOUNTERED WITH OTHER EQUIPMENT IN THE SAME LOCATION.
- ALL TABLES ARE SHOWN FOR REFERENCES ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL OF THE ITEMS SHOWN ON THE INDIVIDUAL DRAWINGS.
- ALL HOMERUNS TO PANEL BOARDS AND THE HOMERUNS TO THE INSTRUMENTATION PANELS CAN BE COMBINED IN THEIR RESPECTIVE HOMERUN CONDUITS TO MINIMIZE THE TOTAL NUMBER OF CONDUITS ENTERING THE PANEL, PROVIDED THE INTEGRITY OF REDUNDANCY IS MAINTAINED AND PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER. CONTRACTOR MUST DERATE THE CONDUCTORS IN ACCORDANCE WITH MOST RECENT NEC REQUIREMENTS.
- REFER TO APPROPRIATE SCHEDULE FOR EQUIPMENT IDENTIFIED WITH

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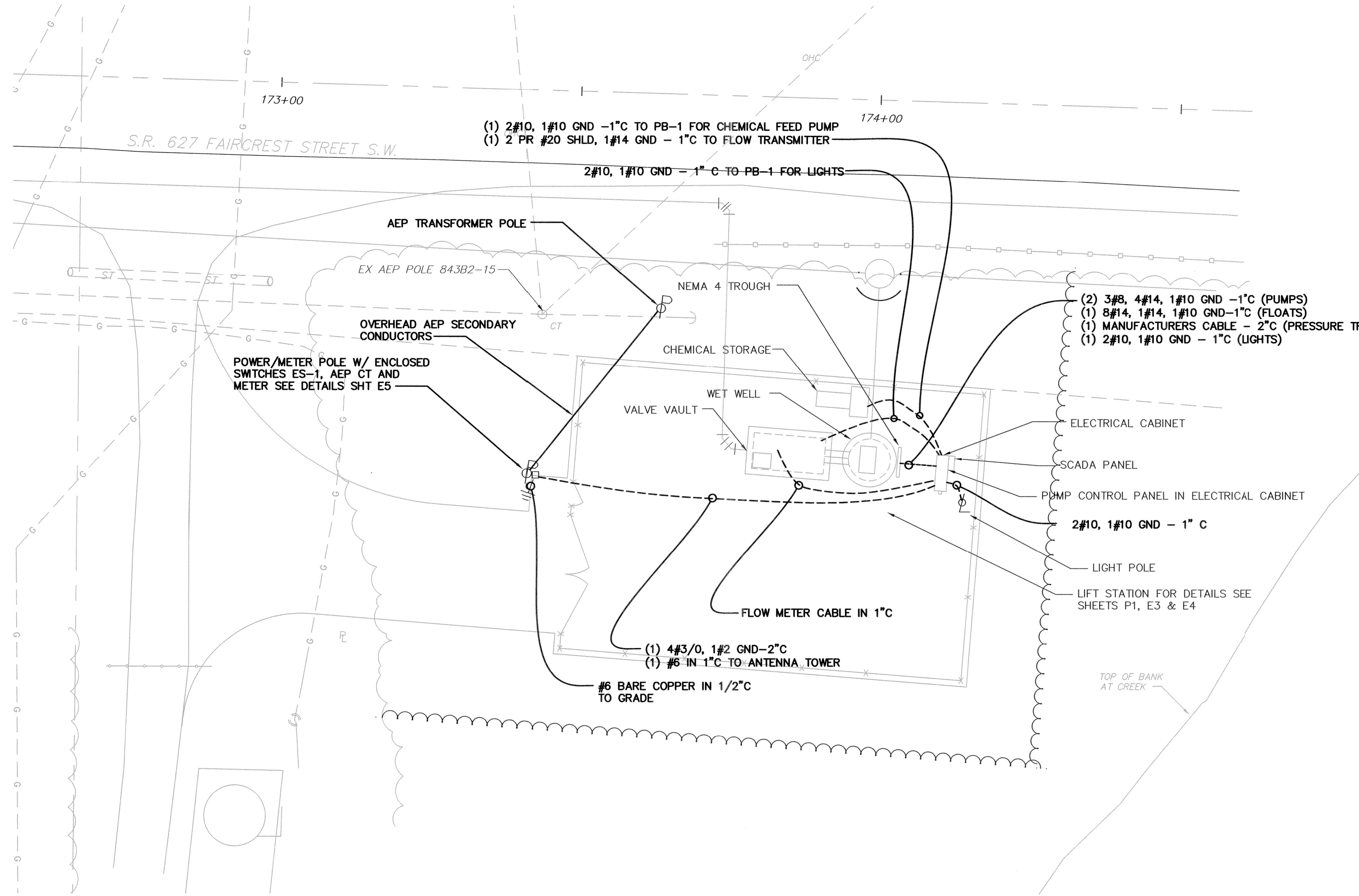
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
ELECTRICAL
ABBREVIATIONS AND SYMBOLS



JOB NO.	E 12022-2
DATE	2/2014
SCALE	NONE
SHEET NO	E1

E:\E12022-2 FAIRCREST PS\ED1 ABBREVIATIONS AND SYMBOLS.dwg

DATE OF PRINT

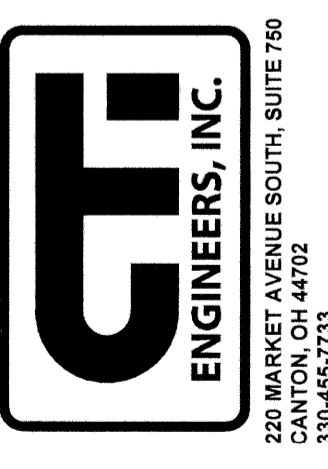


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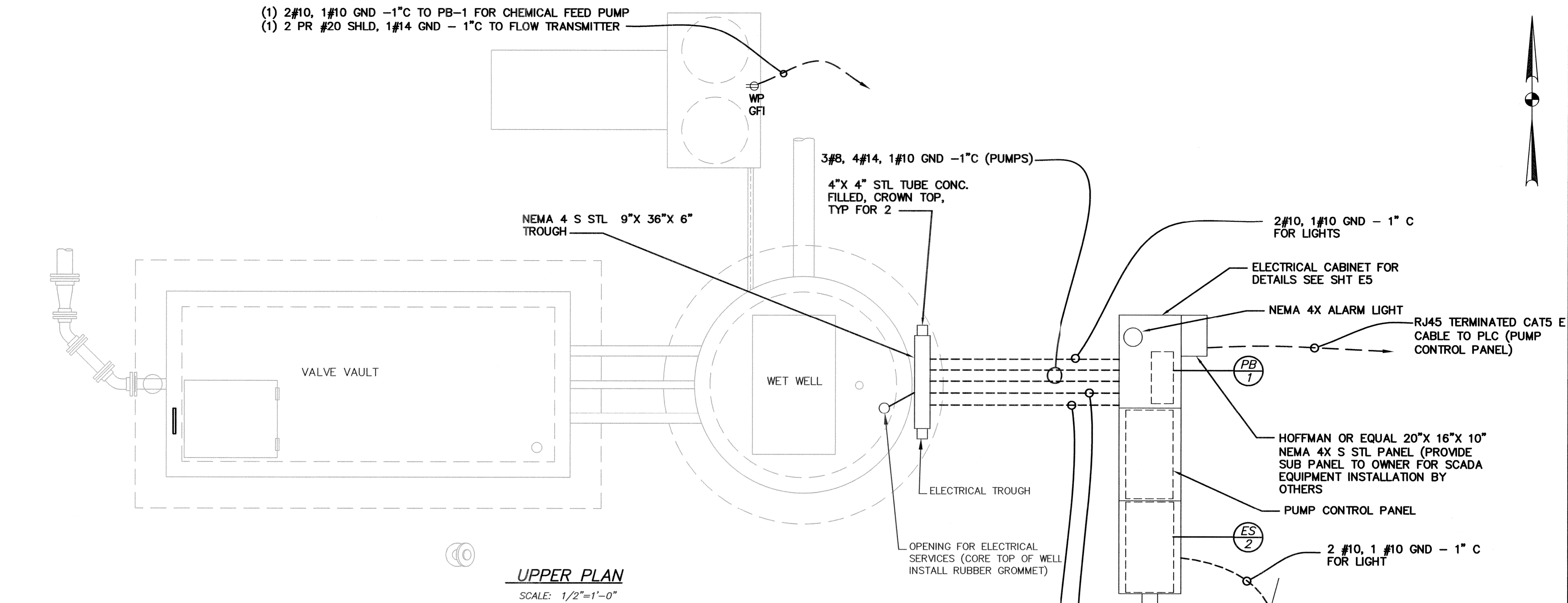
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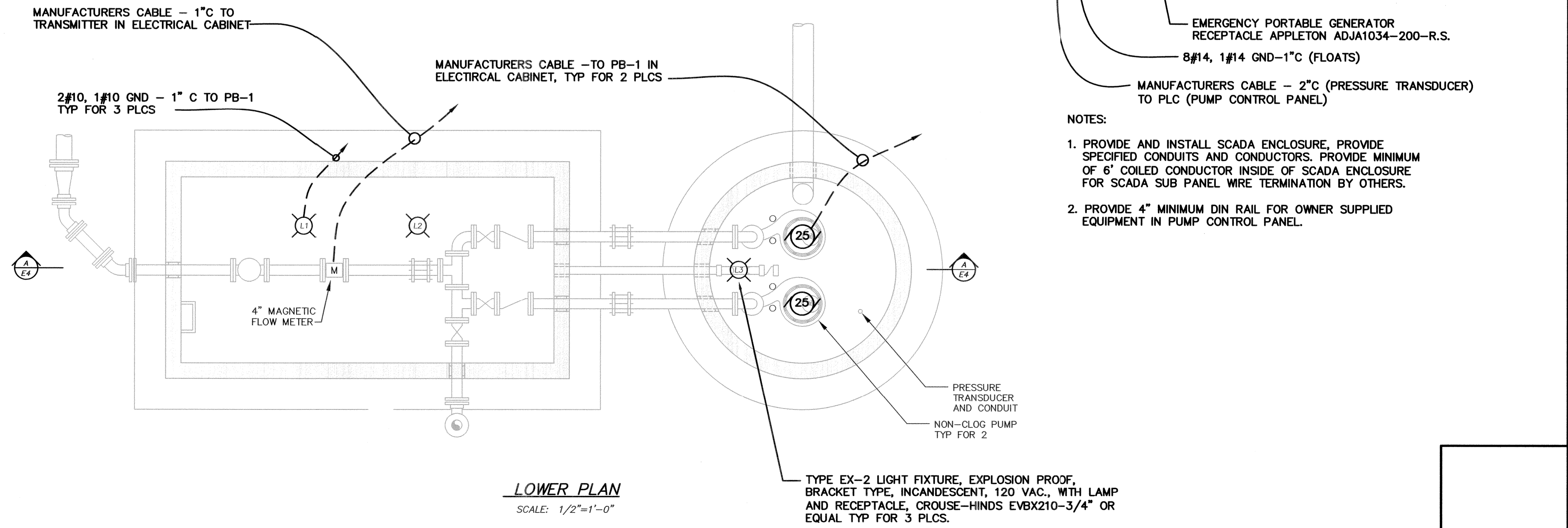
CANTON, OHIO
 FAIRCREST ST SW LIFT STATION
 AND SANITARY SEWER EXTENSION
 G.P. #1142
 ELECTRICAL SITE PLAN



JOB NO.	E 12022-2
DATE	2/2014
SCALE	1"=10'
SHEET NO.	E2



UPPER PLAN
SCALE: 1/2"=1'-0"



LOWER PLAN
SCALE: 1/2"=1'-0"

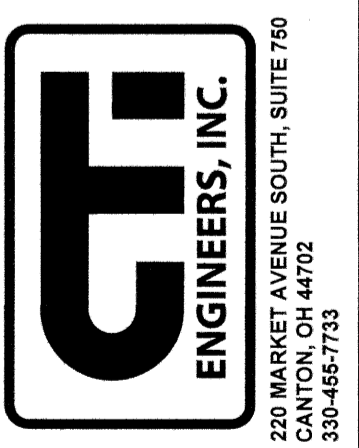
- NOTES:
1. PROVIDE AND INSTALL SCADA ENCLOSURE, PROVIDE SPECIFIED CONDUITS AND CONDUCTORS. PROVIDE MINIMUM OF 6' COILED CONDUCTOR INSIDE OF SCADA ENCLOSURE FOR SCADA SUB PANEL WIRE TERMINATION BY OTHERS.
 2. PROVIDE 4" MINIMUM DIN RAIL FOR OWNER SUPPLIED EQUIPMENT IN PUMP CONTROL PANEL.

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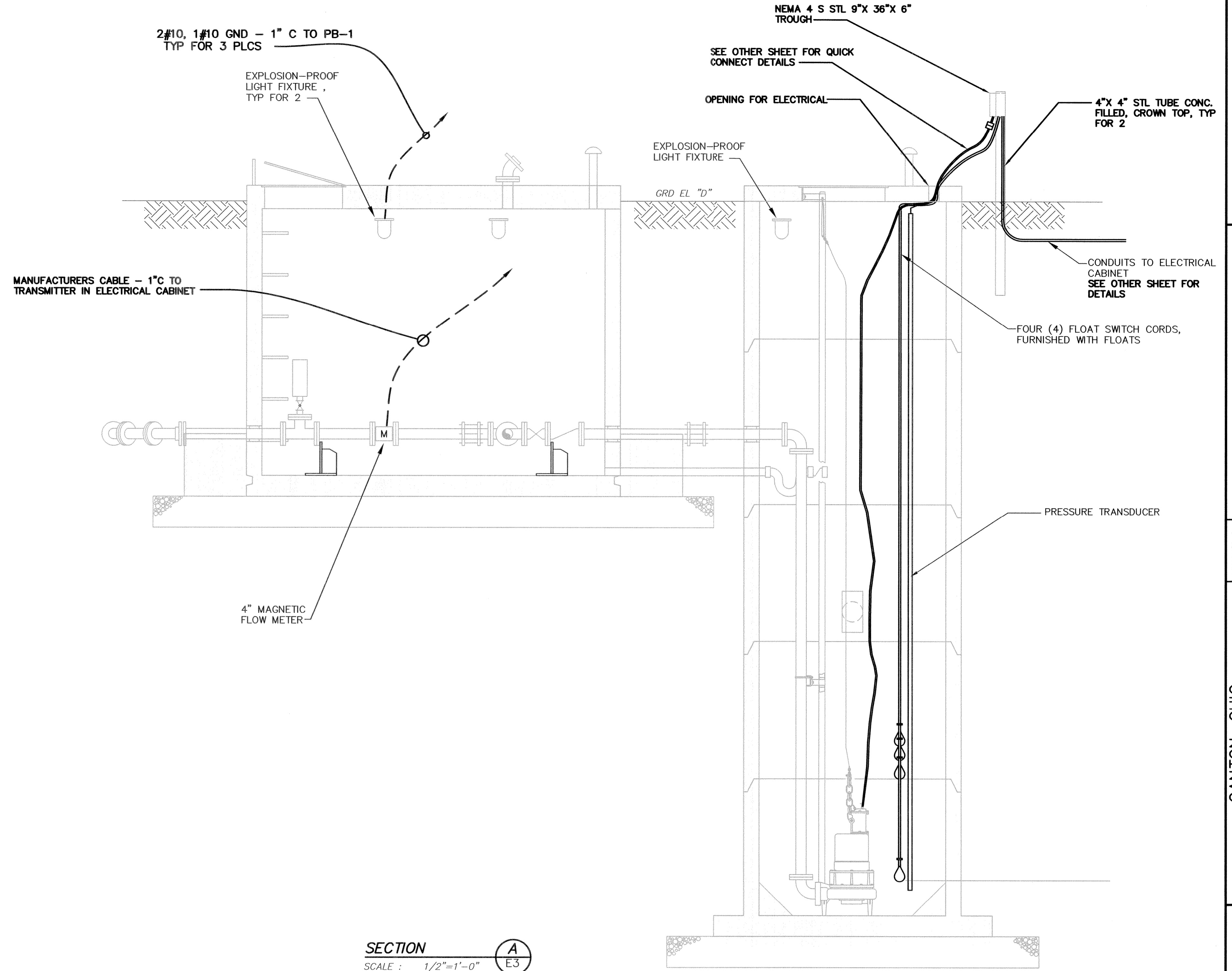
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APPROVED BY	WAD

CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
ELECTRICAL
LIFT STATION PLANS



JOB NO.	E 12022-2
DATE	5/2014
SCALE	AS SHOWN
SHEET NO	E3



SECTION
SCALE : 1/2"=1'-0" A
E3

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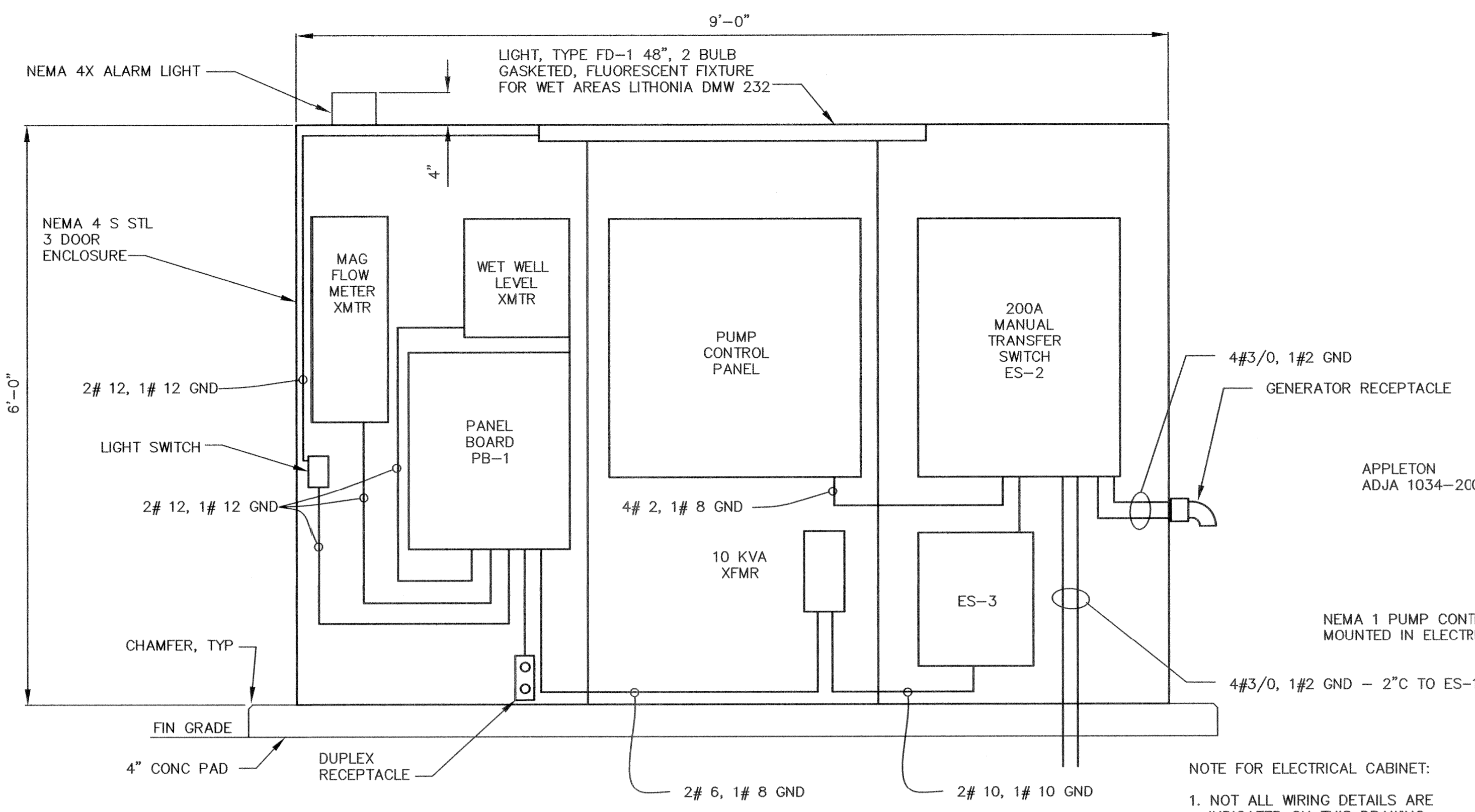
CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
ELECTRICAL LIFT STATION
SECTION AND DETAILS



JOB NO. E 12022-2
DATE 2/2014
SCALE AS SHOWN
SHEET NO. E4

E:\12022-2 FAIRCREST PS\E05 ELECTRICAL DETAILS 1.DWG, E5 ELECTRICAL DETAILS, 07/14/2014 03:00 PM

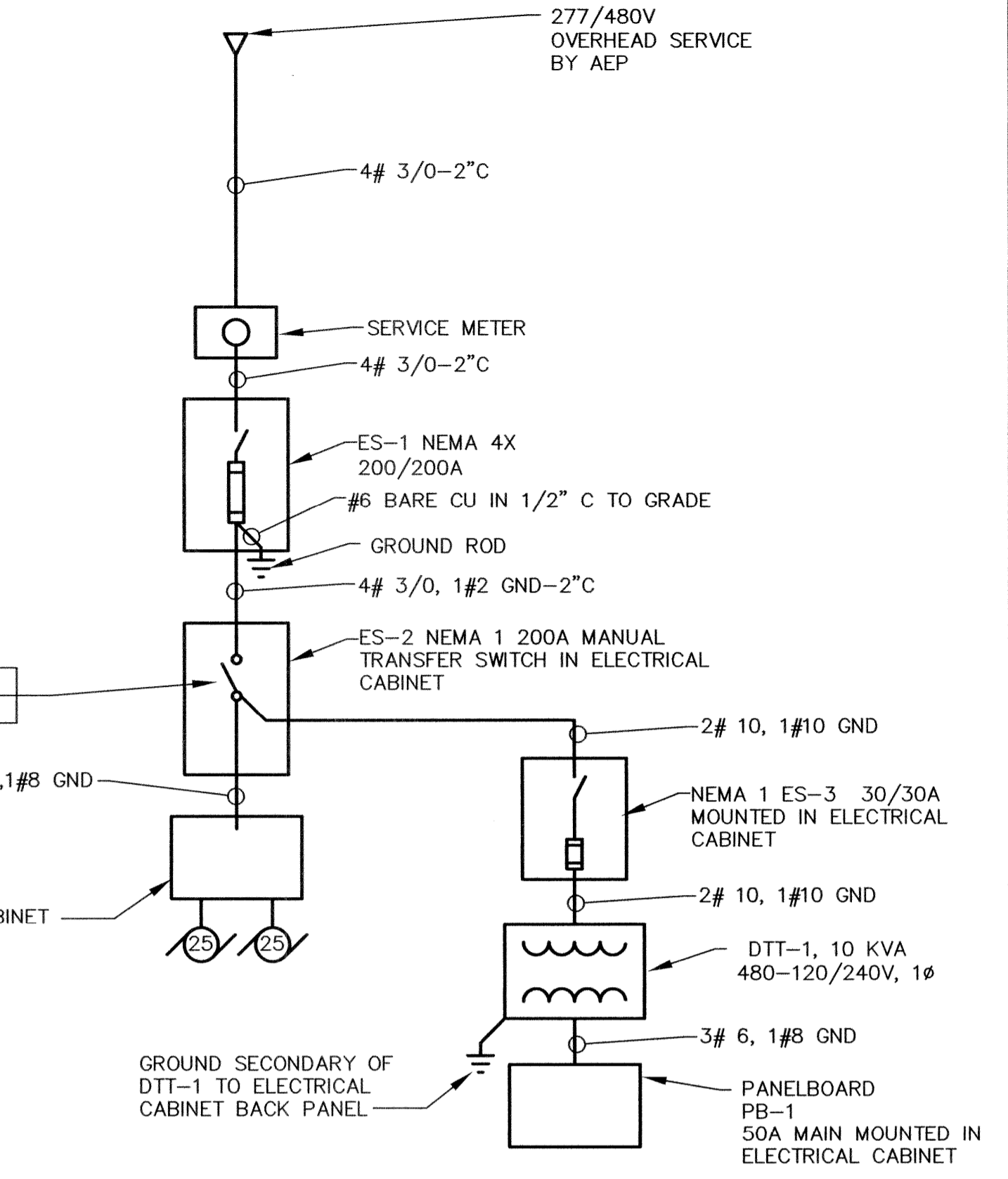
DATE OF PRINT



ELECTRICAL CABINET LAYOUT

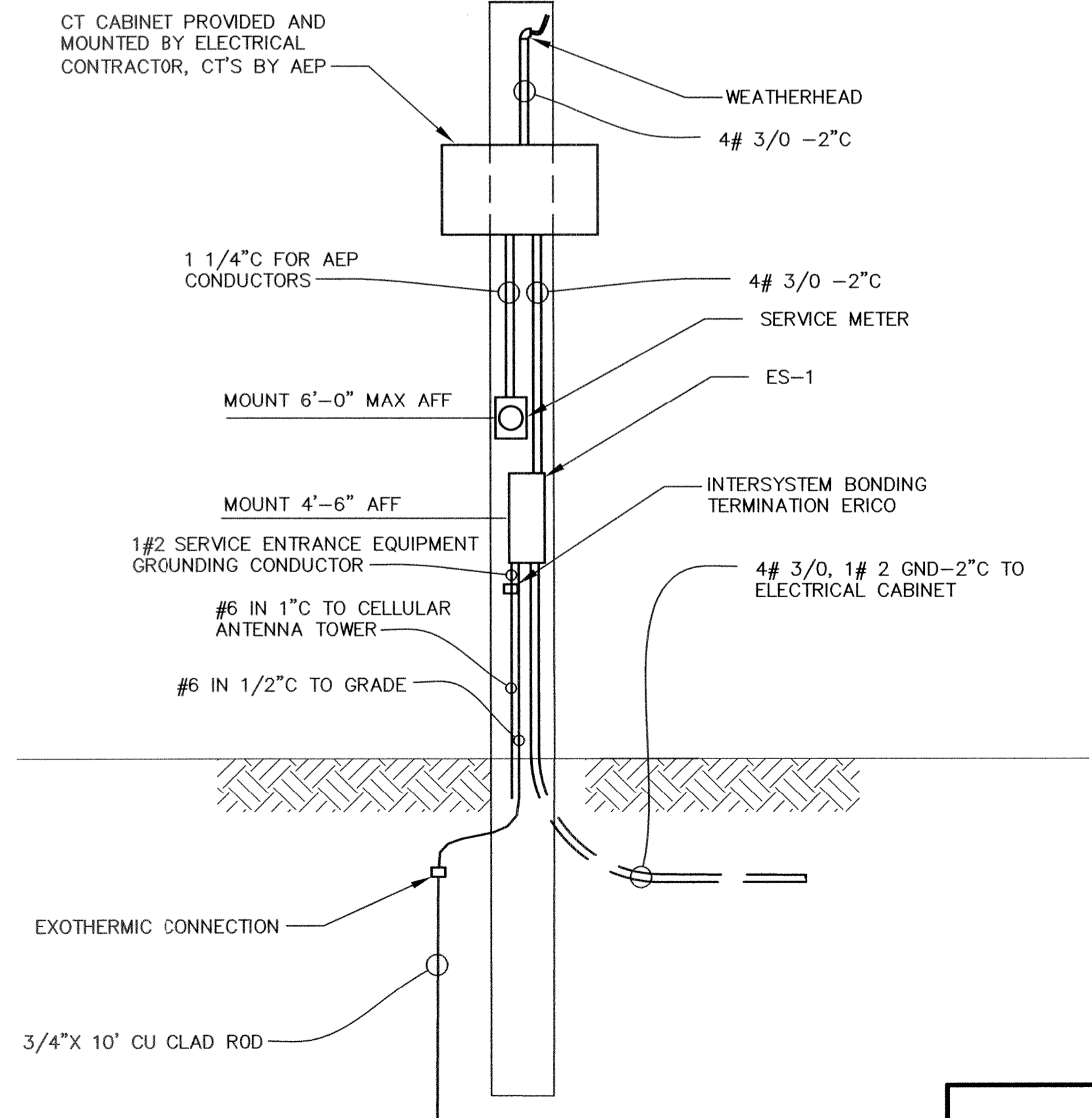
SCALE: NONE

MICROLOGIX 1400 PLC 1766-L32AWA W/ 1762-IF4 AI CARD SCADA I/O SCHEDULE	
SIGNAL	TYPE
WET WELL LEVEL	AI
STATION FLOW	AI
PUMP NO. 1 RUN	DI
PUMP NO. 1 AUTO	DI
PUMP NO. 1 O.L.	DI
PUMP NO. 1 SEAL FAIL	DI
PUMP NO. 1 TEMPERATURE	DI
PUMP NO. 2 RUN	DI
PUMP NO. 2 AUTO	DI
PUMP NO. 2 O.L.	DI
PUMP NO. 2 SEAL FAIL	DI
PUMP NO. 2 TEMPERATURE	DI
PHASE FAILURE	DI
PUMP OFF FLOAT	DI
PUMP LEAD FLOAT	DI
PUMP LAG FLOAT	DI
HIGH LEVEL FLOAT	DI
NORMAL POWER ON	DI
UPS FAILURE	DI
GENERATOR RUN (FUTURE)	DI
GENERATOR FAIL (FUTURE)	DI
TRANSFER SWITCH FAIL (FUTURE)	DI



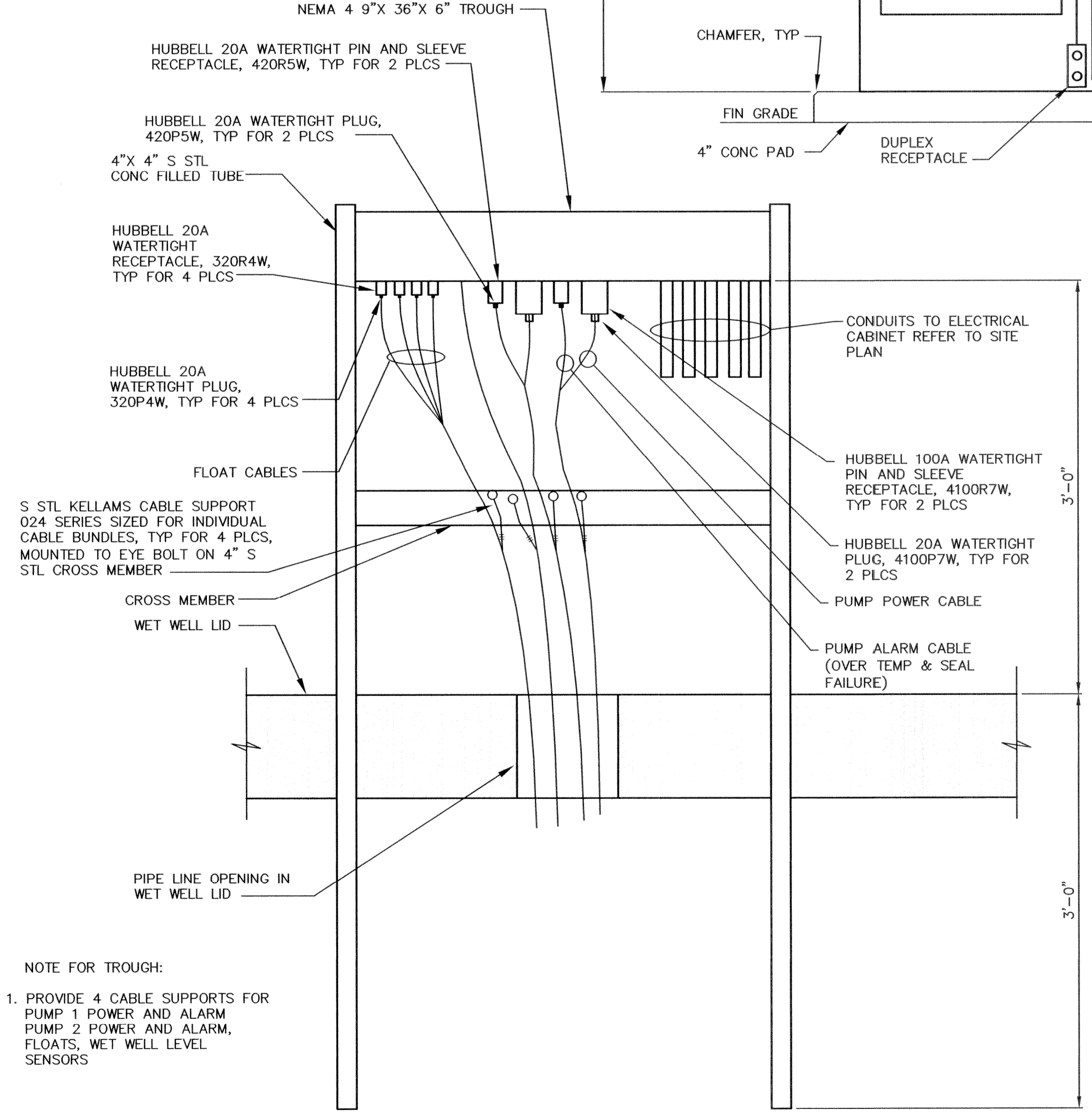
ONE-LINE DIAGRAM

NOT TO SCALE



POWER/METER POLE DETAIL

SCALE: NONE



9" x 36" x 6" TROUGH DETAIL

SCALE: NONE

NOTE FOR TROUGH:
1. PROVIDE 4 CABLE SUPPORTS FOR PUMP 1 POWER AND ALARM, PUMP 2 POWER AND ALARM, FLOATS, WET WELL LEVEL SENSORS

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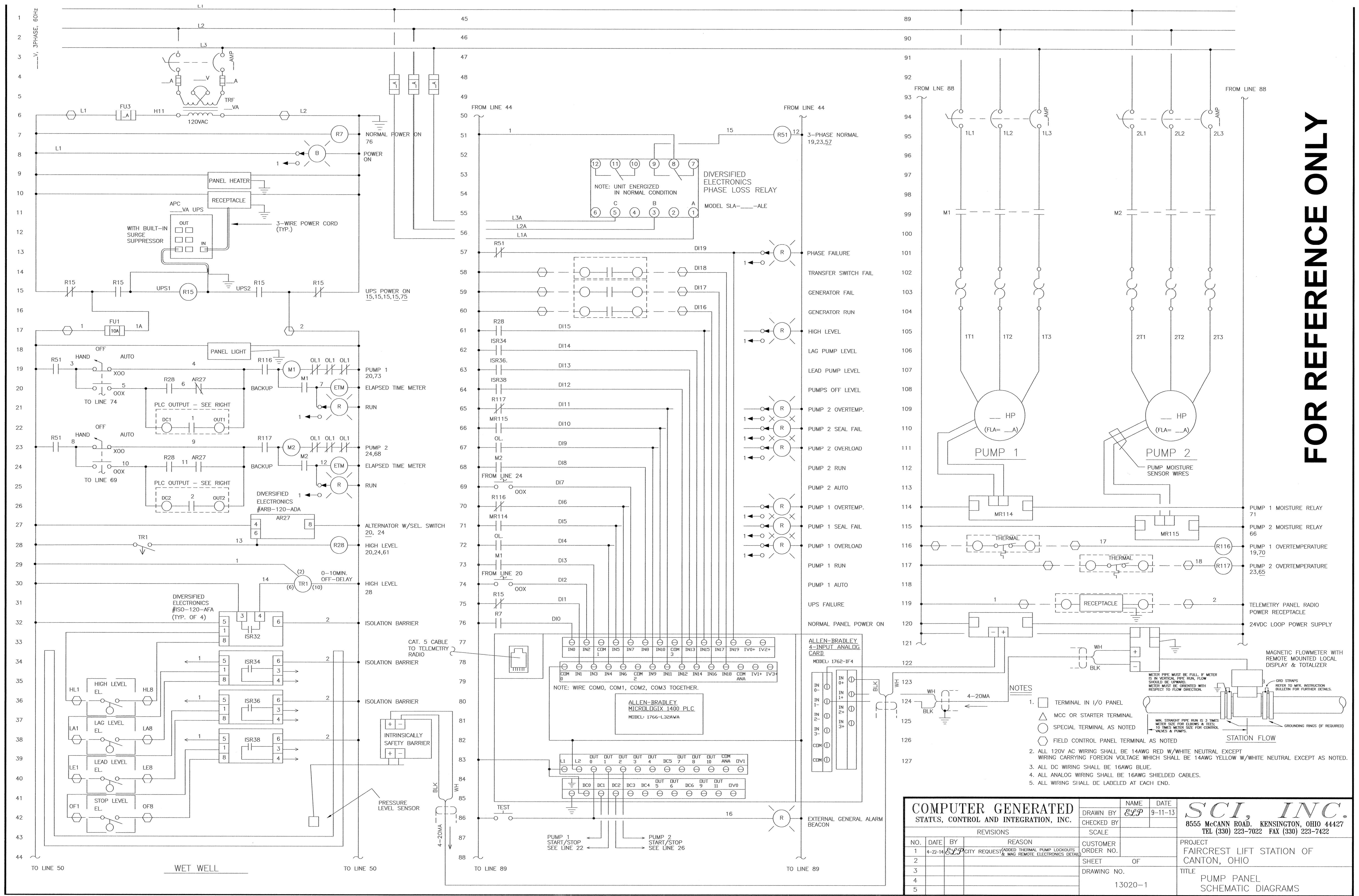
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CANTON, OHIO
FAIRCREST ST SW LIFT STATION
AND SANITARY SEWER EXTENSION
G.P. #1142
ELECTRICAL DETAILS



JOB NO.	E 12022-2
DATE	5/2014
SCALE	AS SHOWN
SHEET NO.	E5



FOR REFERENCE ONLY

COMPUTER GENERATED STATUS, CONTROL AND INTEGRATION, INC.		NAME <i>ELP</i>	DATE 9-11-13
DRAWN BY <i>ELP</i>		CHECKED BY	SCALE
NO. DATE BY REASON		CUSTOMER ORDER NO.	SHEET OF
1	4-22-14	<i>ELP</i>	CITY REQUEST (MODIFIED THERMAL PUMP LOCKOUTS & MAG REMOTE ELECTRONICS DETAIL)
2			
3			
4			
5			

PROJECT FAIRCREST LIFT STATION OF CANTON, OHIO	TITLE PUMP PANEL SCHEMATIC DIAGRAMS
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8555 McCANN ROAD, KENSINGTON, OHIO 44427	TEL (330) 223-7022 FAX (330) 223-7422
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- NOTES**
- TERMINAL IN I/O PANEL
 - △ MCC OR STARTER TERMINAL
 - SPECIAL TERMINAL AS NOTED
 - FIELD CONTROL PANEL TERMINAL AS NOTED
 - ALL 120V AC WIRING SHALL BE 14AWG RED W/WHITE NEUTRAL EXCEPT WIRING CARRYING FOREIGN VOLTAGE WHICH SHALL BE 14AWG YELLOW W/WHITE NEUTRAL EXCEPT AS NOTED.
 - ALL DC WIRING SHALL BE 16AWG BLUE.
 - ALL ANALOG WIRING SHALL BE 16AWG SHIELDED CABLES.
 - ALL WIRING SHALL BE LABELED AT EACH END.
- METER PIPE MUST BE FULL, IF METER IS IN VERTICAL PIPE, RUN FLOW SHOULD BE UPWARD. METER MUST BE ORIENTED WITH RESPECT TO FLOW DIRECTION.
- MIN. STRAIGHT PIPE RUN IS 3 TIMES METER SIZE FOR ELBOWS & TEES; 10 TIMES METER SIZE FOR CONTROL VALVES & TURNS.
- STATION FLOW
- GROUNDING RINGS (IF REQUIRED)
- 0-10 MIN. OFF-DELAY
- 0-20MA
- 4-20MA