

CITY OF MASSILLON
CITY ENGINEER DEPARTMENT
STARK COUNTY, OHIO
BIT OF EDEN SANITARY SEWER PUMP STATION

PROJECT DESCRIPTION

REPLACEMENT OF EXISTING PACKAGING PLANT WITH A NEW DUPLEX GRINDER PUMP STATION INCLUDING 260 LF OF 2" FORCE MAIN AND A SANITARY MANHOLE TYPE: MASS 1040AGS.

CONVENTIONAL SIGNS

RIGHT OF WAY . . . EXISTING: _____, PROPOSED: _____
COUNTY LINE . . . _____
TOWNSHIP LINE . . . _____
CORPORATION LINE . . . _____
FENCE LINE . . . EXISTING: _____, PROPOSED: _____
GUARDRAIL . . . EXISTING: _____, PROPOSED: _____
MANHOLES . . . EXISTING: ☉, PROPOSED: ☉, REHABILITATED: ●
CATCH BASINS . . . EXISTING: ☒, PROPOSED: ☒, REHABILITATED: ☒
SIGNS . . . 1-POST: †, 2-POST: ‡, 3-POST: ≡, STREET: ‡
EXISTING POLES . . . POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ○
PROPOSED POLES . . . POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ●
EXIST. UTILITIES . . . VALVE: ⚙, HYDRANT: ⚡, METERS: ⚙, GUY: C

PERMIT TO INSTALL

SANITARY SEWER PERMIT TO INSTALL (P.T.I.) HAS BEEN RECEIVED FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY PROTECTION AGENCY THIS _____ DAY OF _____, 20____.
PTI No. _____

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

TWO WORKING DAYS
BEFORE YOU DIG

1-800-925-0988 (TOLL FREE)

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE

PLAN PREPARED BY:
CITY OF MASSILLON
Engineering Department

OWNER:
CITY OF MASSILLON
151 Lincoln Way East
Massillon, Ohio 44646



LOCATION MAP

PORTION TO BE IMPROVED . . . _____
STREETS . . . _____



Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

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CITY ENGINEER

KEITH A. DYLEWSKI, P.E., P.S. 7/9/12
DATE

CITY OF MASSILLON ELECTED OFFICIALS

KATHY CATAZARO-PERRY MAYOR
PERICLES G. STERGIOS LAW DIRECTOR/PROSECUTOR
JAYNE FERRERO AUDITOR
PAUL LAMBERT TREASURER
COUNCIL
GLEN E. GAMBER PRESIDENT
SARITA CUNNINGHAM-HEDDERLY 1st WARD
NANCY HALTER 2nd WARD
ANDREA SCASSA 3rd WARD
TONY M. TOWNSEND 4th WARD
DONNIE PETERS JR. 5th WARD
ED LEWIS 6th WARD
PAUL MANSON AT LARGE
LARRY SLAGLE AT LARGE
MILAN CHOVAN AT LARGE

NW NE
SW SE

200 100 0

HORIZONTAL
SCALE IN FEET

CHECKED BY:
KAD

DATE:
MAY, 2012

DRAWN BY:
FPW

DATE:
MAY, 2012

REVISIONS:
DATE DESCRIPTION

BIT OF EDEN SANITARY SEWER PUMP STATION

Title Sheet
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

DRAWING NAME:
bitofedenTitle.DWG

CITY NUMBER:
10ss03

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UTILITIES

LISTED BELOW ARE ALL KNOWN UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T 50 W.BOWERY, 6TH FLOOR AKRON, OH 44308 800-384-8057	AQUA WATER P.O. BOX 584 MASSILLON, OH 44648 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S. ERIE ST. MASSILLON, OH 44545 (330) 830-7085	MASSILLON CABLE TV P.O. BOX 814 MASSILLON, OH 44648 (330) 833-4134	GREAT LAKES 104 6TH ST. S.W. CANTON, OH 44702 (330) 456-2454
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3142	NORTHEAST OHIO NATURAL GAS CORP. 9081 S.R. 250 STRASSBURG, OH 44680-9766 (330) 878-5589	

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO WORK.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE

OUPS - 1-800-362-2764
OGUPUPS - 1-800-925-0988

DATUM ELEVATION

ALL BENCHMARKS ARE BASED ON REFERENCE BENCHMARKS PROVIDED BY THE CITY OF MASSILLON

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE BASELINE AS SHOWN.

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING A BID. PROSPECTIVE BIDDERS ARE TO COORDINATE WITH THE OWNER FOR ACCESS TO THE SITE FOR INSPECTIONS AND EXPLORATORY EXCAVATION IF NEEDED. THE BIDDER SHALL CONTACT THE OWNER AT LEAST 72 HOURS IN ADVANCE OF THE DESIRED INSPECTION OR EXCAVATION. THE BIDDER SHALL CONTACT O.U.P.S. AND OBTAIN LOCATIONS OF OTHER UTILITIES.

QUANTITIES

QUANTITIES ARE INDICATED FOR COMPARISON OF BIDS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY QUANTITIES BEFORE ORDERING MATERIALS. VARIATIONS FROM THE PLAN QUANTITIES SHALL BE APPROVED BY THE CITY OF MASSILLON ENGINEER BEFORE MATERIAL ORDERS ARE PLACED. MATERIALS REJECTED DUE TO INCOMPATIBILITY BETWEEN ORDERED QUANTITIES AND FIELD CONDITIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION IS TO BE COMPLETED ACCORDING TO THE CURRENT CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHEN A CONFLICT ARISES BETWEEN THE CITY OF MASSILLON AND ODOT'S STANDARDS, THE MORE STRINGENT STANDARD WILL BE USED AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER. THE CONTRACTOR SHALL FOLLOW ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

PRESERVATION OF EXISTING UTILITY SERVICES

ANY EXISTING WATER LINE, SANITARY SEWER, STORM SEWER, GAS LINE OR OTHE UTILITY IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

CONDITIONS OF WORK

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, STATE, COUNTY, AND CITY OF MASSILLON LAWS AND REGULATIONS. ALL WORK, AT ALL TIMES SHALL BE SUBJECT TO OBSERVATION BY THE CITY OF MASSILLON ENGINEER AND/OR HIS REPRESENTATIVE. ALL WORK SHALL COMPLY WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS AND OHIO EPA, AND STANDARDS OF THE CITY OF MASSILLON. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, AND APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL FOLLOW THE MORE STRINGENT GUIDELINES OF THE CITY OF MASSILLON OR ODOT AT THE DESCREATION OF THE CITY OF MASSILLON ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN FACILITIES FOR A CONSTRUCTION OFFICE, EMPLOYEE PARKING, AND EMPLOYEE SANITARY FACILITIES. ON STREET PARKING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE FOR THE LAWFUL OFF-SITE DISPOSAL OF DEMOLITION DEBRIS AND CONSTRUCTION WASTE.

EXISTING DATA

EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND BECOME THOROUGHLY FAMILARIZED WITH THE SITE PRIOR TO BID SUBMISSION.

EXISTING STRUCTURES, GRADES, PIPING, ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTEED TO BE CORRECT AND COMPLETE. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK.

EXISTING UNDERGROUND UTILITIES SHOWN ARE RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. SERVICE LATERALS ARE NOT SHOWN.

IT IS THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY THE CITY, PRIOR TO BID OPENING NON-CONFORMING OR CONFLICTING INFORMATION.

REMOVAL AND RELOCATION OF EXISTING UTILITIES

THE CONTRACTOR IS REQUIRED TO COOPERATE WITH EACH RESPECTIVE UTILITY OWNER FOR THE REMOVAL AND/OR RELOCATION OF ANY AND ALL UTILITIES THAT CREATE A CONFLICT WITH CONSTRUCTION OF THE PROJECT.

ITEM 623. CONSTRUCTION STAKING

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT. THIS WORK IS TO BE UNDER ITEM 623 CONSTRUCTION STAKING.

CROSSING OR CONNECTING TO EXISTING PIPES AND UTILITIES

WHERE THE 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 LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE CITY OF MASSILLON ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

PAYMENT FOR THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

ITEM 659. TOPSOIL, SEEDING AND MULCHING

ITEM 659 SHALL BE APPLIED TO ALL EXPOSED SOIL AREAS DISTURBED DURING CONSTRUCTION. SUCH AS SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING.

THE CITY SHALL APPROVE SEED MIX PRIOR TO APPLICATION TO BE USED THROUGHOUT CONSTRUCTION LIMITS.

SANITARY SEWER SPECIFICATIONS

SANITARY SEWER CONSTRUCTION PROPOSED FOR THIS PROJECT SHALL CONFORM TO THE LATEST CITY OF MASSILLON STANDARDS AND CONSTRUCTION AND MATERIALS SPECIFICATIONS, TEN STATE STANDARDS, AND THE LATEST EDITION OF THE ODOT CMS, OR MODIFIED BY THE CONTRACT DRAWINGS. IF A CONFLICT ARISES BETWEEN SAID STANDARDS IT SHALL BE AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER AS TO WHICH STANDARD SHALL GOVERN. THE PROJECT CONTRACT DRAWINGS SHALL GOVERN UNLESS NOTED OTHERWISE.

SANITARY GRAVITY SEWER PIPE AND FITTINGS SHALL BE PVC SDR 35 CONFORMING TO ASTM D-3034 UNLESS OTHERWISE NOTED. PVC COMPOUNDS SHALL CONFORM TO ASTM D-1784 PVC PIPE AND FITTINGS SHALL HAVE BELL AND SPIGOT TYPE JOINTS CONFORMING TO ASTM D-3212 AND GASKETS CONFORMING TO ASTM F-477

BACKFILL IN SEWER TRENCHES SHALL CONFORM TO ODOT ITEM 603.10 AND BE PLACED IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT OF 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D-698 AND THOROUGHLY COMPACTED WITH MACHINE MOUNDED COMPACTION EQUIPMENT. THE PLACING OF BACKFILL MATERIAL SHALL BE CONTINUED UNTIL THE TRENCH IS ENTIRELY FILLED AND COMPACTED WITH THE APPROVED GRANULAR MATERIAL TO THE GRADE CALLED FOR ON THE CONTRACT DRAWINGS. EXCAVATED MATERIAL CONFORMING TO ODOT ITEM 203 SHALL BE USED FOR BACKFILLING EXISTING STRUCTURES (AFTER REMOVAL) ONLY. CRUSHED GRAVEL CONFORMING TO GRADATION REQUIREMENTS OF ODOT ITEM 304 OR APPROVED EQUAL AS SHOWN IN ODOT TABLE 703-1 SHALL BE USED FOR BACKFILLING ALL SEWER TRENCH AREAS SHOWN ON THE PLANS AND AS DIRECTED BY THE CITY OF MASSILLON ENGINEER. FLOODING, JETTING, OR PUDDLING OF BACKFILL MATERIAL WILL NOT BE PERMITTED UNLESS APPROVED BY THE CITY OF MASSILLON ENGINEER. COMPACTION TESTING OF THE BACKFILL BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

SANITARY SEWERS SHALL BE AIR TESTED FOR LEAKAGE AND MANDREL TESTED FOR DEFLECTION. THE MAXIMUM ALLOWABLE PIPE DEFLECTION SHALL BE 5%.

PRIOR TO FINAL PAYMENT FOR AND ACCEPTANCE OF SANITARY SEWER INSTALLATION THE RESULTS OF THE AIR PRESSURE TESTS, TELEVISION TESTS AND MADREL TESTS SHALL BE FORWARDED TO THE CITY OF MASSILLON ENGINEER.

DEFLECTION TESTING

MAXIMUM ALLOWABLE PIPE DEFLECTION (REDUCTION IN VERTICAL INSIDE DIAMETER) SHALL BE 5%. DEFLECTION TESTS OF PIPE SHALL BE PERFORMED NOT SOONER THAN 30 DAYS AFTER THE BACKFILL HAS BEEN PROPERLY PLACED AND BEFORE FINAL ACCEPTANCE. LOCATIONS WITH EXCESS DEFLECTION SHALL BE EXCAVATED AND REPAIRED BY RE-BEDDING OR REPLACEMENT OF THE PIPE AT THE CONTRACTOR'S EXPENSE. DEVICES FOR TESTING INCLUDE A DEFLECTOMETER METER, OR PROPERLY SIZED (60, NO-GO) MANDREL OR SEWER BALL. THE DEFLECTION TESTING MUST BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES. FOR THE PURPOSE OF DEFLECTION MEASUREMENTS, THE BASE INSIDE PIPE DIAMETERS WITHOUT DEFLECTION ARE PROVIDED IN TABLE A. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE APPLIED TO THE BASE INSIDE DIAMETER IN DETERMINING THE MINIMUM PERMISSIBLE DIAMETER. IT MUST BE EMPHASIZED THAT TO INSURE ACCURATE TESTING, THE LINES MUST BE THOROUGHLY CLEANED.

TABLE A
INSIDE DIAMETERS FOR DEFLECTION MEASUREMENTS
OF ASTM D 3034 SDR 35 / SDR 21 PVC SEWER PIPE

SIZE	SDR	AVG. O.D.	BASE I.D.	DEFLECTION MANDREL
6"	35	6.275	5.742	5.54
8"	35	8.400	7.665	7.28
10"	35	10.500	9.563	9.08
12"	35	12.500	11.361	10.79

TELEVISION TESTING

ALL SANITARY SEWERS, 8-INCH DIAMETER AND LARGER, MUST PASS AN INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE A COMPLETE INTERNAL INSPECTION DVD TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE RECORDING PROCEDURE SHALL BE IN ACCORDANCE WITH CITY OF MASSILLON ENGINEERING DEPARTMENT STANDARDS.

LEAKAGE TESTS

LEAKAGE TESTS SHALL BE PERFORMED WHICH MAY INCLUDE APPROPRIATE WATER OR LOW PRESSURE AIR TESTING. THE TESTING METHODS SELECTED SHOULD TAKE INTO CONSIDERATION THE RANGE IN GROUNDWATER ELEVATIONS DURING THE TEST AND ANTICIPATED DURING THE DESIGN LIFE OF THE SEWER COMPLETED AND ACCEPTED.

WATER (HYDROSTATIC) TEST

THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY [9L/(MM OF PIPE DIAMETER KM D)] FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (0.6 M).

AIR TESTING AS PER ASTM F1417

AIR TESTING WILL BE CONDUCTED AS THE PROJECT IS BEING CONSTRUCTED. AT NO TIME WILL MORE THAN 900 FEET OF PIPE BE INSTALLED BEFORE AIR TESTING IS PERFORMED. SEWAGE WILL NOT BE DIVERTED TO ANY SECTION OF PIPE, REGARDLESS OF LENGTH, UNTIL ALL TESTING IS COMPLETED AND ACCEPTED.

AFTER BACKFILLING A MANHOLE TO MANHOLE REACH OF SANITARY SEWER LINE, THE CONTRACTOR SHALL, AT HIS EXPENSE, CONDUCT THE LINE ACCEPTANCE TESTS. THE TESTS SHALL BE PERFORMED ACCORDING TO THE STATED PROCEDURES AND UNDER THE SUPERVISION OF THE CITY OF MASSILLON ENGINEER OR HIS REPRESENTATIVE.

EQUIPMENT USED SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS AND BE APPROVED BY THE CITY OF MASSILLON ENGINEER:

1. PNEUMATIC PLUGS SHALL HAVE A SEALING LENGTH EQUAL TO OR A GREATER THAN THE DIAMETER OF THE PIPE BEING INSPECTED.
2. PNEUMATIC PLUGS SHALL RESIST INTERNAL TEST PRESSURES WITHOUT REQUIRED EXTERNAL BRACING OR BLOCKING.
3. ALL AIR USED SHALL PASS THROUGH A SINGLE CONTROL PANEL.
4. THREE INDIVIDUAL HOSES SHALL BE USED FOR THE FOLLOWING CONNECTIONS:
 - a. FROM CONTROL PANEL TO PNEUMATIC PLUGS FOR INFLATION.
 - b. FROM CONTROL PANEL TO SEALED LINE FOR INTRODUCING THE LOW PRESSURE AIR.

TEST EQUIPMENT TESTING PROCEDURES SHALL BE AS FOLLOWS:

- c. FROM SEALED LINE TO CONTROL PANEL FOR CONTINUALLY MONITORING AIR PRESSURE RISE IN THE SEALED LINE.

NW

NE

N

SW

SE

1

0

0.5

0

1

0

0.5

0

HORIZONTAL
SCALE IN FEET

CHECKED BY:
KAD

DATE:
MAY, 2012

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DATE	DESCRIPTION

BIT OF EDEN SANITARY SEWER PUMP STATION

General Notes
City of Massillon
Stark County, Ohio

Kathy Cazaro-Perry, Mayor

Massillon

City of Champions

DRAWING NAME:
bitofedennote1.DWG

CITY NUMBER:
10ss03

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CONTINUED: AIR TESTING AS PER ASTM F1417

ALL PNEUMATIC PLUGS SHALL BE SEAL TESTED BEFORE BEING USED IN THE ACTUAL TEST INSTALLATION. ONE LENGTH OF PIPE SHALL BE LAID ON THE GROUND AN SEALED AT BOTH ENDS WITH THE PNEUMATIC PLUGS TO BE CHECKED. THE SEALED PIPE SHALL BE PRESSURED TO 5 PSIG. THE PLUGS MUST HOLD AGAINST THIS PRESSURE WITHOUT HAVING TO BE BRACED.

AFTER A MANHOLE TO MANHOLE REACH OF PIPE HAS BEEN BACKFILLED AND CLEANED, AND THE PNEUMATIC PLUGS ARE CHECKED BY THE ABOVE PROCEDURE, THE PLUGS SHALL BE PLACED IN THE LINE AT EACH MANHOLE. LOW PRESSURE AIR SHALL BE SLOWLY INTRODUCED INTO THIS SEALED LINE UNTIL THE INTERNAL AIR PRESSURE REACHES APPROXIMATELY 4 PSIG.

AT LEAST TWO MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSIG, THE AIR HOSE FROM THE CONTROL PANEL TO THE AIR SUPPLY SHALL BE DISCONNECTED. THE PORTION OF THE LINE BEING TESTED SHALL BE TERMED "ACCEPTABLE" IF THE TIME REQUIRED IN MINUTES FOR THE PRESSURE TO DECREASE FROM 3.5 TO 2.5 PSIG (GREATER THEN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE) SHALL NOT BE LESS THAN THE TIME SHOWN FOR THE GIVEN DIAMETERS IN THE FOLLOWING TABLE:

PIPE DIAMETER IN.	MINIMUM TIME MINUTES	LENGTH FOR MINUTES TIME, FT.	TIME FOR LONGER LENGTH, S	SPECIFICATION TIME LENGTH (L) SHOWN, MINUTES							
				100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.	450 FT.
4	3:46	597	0.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	0.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:36	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	198	3.416 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	6.342 L	14:10	14:10	17:46	22:15	26:42	31:09	35:36	40:04
18	17:0	133	7.692 L	17:00	19:13	25:38	32:09	38:27	44:52	51:16	57:41

IN AREAS WHERE GROUND WATER IS KNOWN TO EXIST, THE CONTRACTOR SHALL INSTALL A 1/2 INCH DIAMETER CAPPED PIPE NIPPLE APPROXIMATELY 10 INCHES LONG, THROUGH THE MANHOLE WALL ON TOP OF ONE OF THE SANITARY SEWER LINES ENTERING THE MANHOLE. THIS SHALL BE DONE AT THE TIME THE SANITARY SEWER LINE IS INSTALLED. IMMEDIATELY PRIOR TO THE PERFORMANCE OF THE LINE ACCEPTABILITY TEST, THE GROUND WATER SHALL BE DETERMINED BY REMOVING THE PIPE CAP, BLOWING AIR THROUGH THE PIPE NIPPLE IN THE GROUND SO AS TO CLEAR IT, AND THEN CONNECTING A CLEAR PLASTIC TUBE TO THE NIPPLE. THE PLASTIC TUBE SHALL BE VERTICAL AND A MEASUREMENT OF THE HEIGHT, IN FEET OF WATER OVER THE INVERT OF THE PIPE, SHALL BE TAKEN AFTER THE WATER HAS STOPPED RISING IN THIS PLASTIC TUBE. THE HEIGHT, IN FEET OF WATER OVER THE INVERT OF THE PIPE, SHALL BE TAKEN AFTER THE WATER HAS STOPPED RISING IN THIS PLASTIC TUBE. AIR TEST PRESSURE IS TO BE INCREASED BY 0.433 PSI FOR EACH FOOT THE GROUND WATER IS ABOVE THE INVERT OF THE SEWER LINE BEING TESTED. THE ALLOWABLE DROP OF ONE POUND AND THE TIMING OF THE TEST REMAIN THE SAME.

IF A LINE ACCEPTABILITY TEST IS BEING CONDUCTED ON MORE THAN ONE MANHOLE REACH OF PIPE, THE ENTIRE SECTION BEING TESTED SHALL MEET THE LINE ACCEPTABILITY REQUIREMENTS AS IF ONLY ONE (1) OF THE MANHOLE REACHES IN THE SECTION WERE BEING TESTED.

NEGATIVE AIR PRESSURE (VACUUM) TESTING OF MANHOLES AS PER ASTM C-1244

PREPARATION OF THE MANHOLE:

- A. ALL LIFT HOLES SHALL BE PLUGGED.
- B. ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED, TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.

PROCEDURE:

- A. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. A VACUUM OF 10 IN. OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 IN OF MERCURY.
- C. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 IN. OF MERCURY TO 9 IN. OF MERCURY MEETS OR EXCEEDS THE VALUES INDICATED IN TABLE BELOW.

DEPTH (FT)	MINIMUM TEST TIMES FOR MANHOLES								
	DIAMETER, IN.								
	30	33	36	42	48	54	60	66	72
TIME, IN SECONDS									
8	11	12	14	17	20	23	26	29	33
10	14	15	18	21	25	29	33	36	41
12	17	18	21	25	30	35	39	43	49
14	20	21	25	30	35	41	46	51	57
16	22	24	39	34	40	46	52	58	67
18	25	27	32	38	45	52	59	65	73
20	28	30	35	42	50	53	65	72	81

CLEAN WATER STATEMENT

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

RELATION TO WATER MAINS

SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.

SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.

WORKING AREA

NO EXCAVATION WITH SIDE SLOPES STEEPER THAN 2:1 AND/OR DEEPER THAN 2', OPEN CASTINGS AND PIPES SHALL BE LEFT EXPOSED WHEN THE SITE IS UNATTENDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SECURE ALL SUCH EXCAVATIONS, OPEN CASTINGS AND PIPES AGAINST UNAUTHORIZED ENTRY COVERING WITH STEEL PLATES, TEMPORARY BACKFILLING, FENCING AND SECURITY SERVICES SHALL BE INCLUDED IN THE PRICE BID FOR THE WORK.

FINAL APPROVAL

A VIDEO IN THE FORM OF DVD WILL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS SUBMITTED THE SITE SHALL BE VIDEOED AGAIN BY THE CONTRACTOR. ANY DISCREPANCIES WILL BE RESOLVED PRIOR TO FINAL PAYMENT. AS BUILT DRAWINGS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER IN A CLEAR AND LEGENDABLE MANNER PRIOR TO FINAL INVOICE.

COST OF THIS WORK SHALL BE INCLUDED IN ITEM 623 CONSTRUCTION STAKING

KEEN PUMP STATION COMPLETE OR APPROVED EQUAL

GENERAL

FURNISH AND INSTALL A FULLY ASSEMBLED GRINDER PUMP PACKAGE CONSISTING OF GRINDER PUMP, BASIN ASSEMBLY, INTERNAL DISCHARGE PIPING, CHECK VALVE, SHUT-OFF VALVE, QUICK-DISCONNECT GUIDE RAIL SYSTEM, LIFTING CABLE, THREE LEVEL CONTROLS, LEVEL CONTROL BRACKET, JUNCTION BOX, INLET FITTING AND CONTROL PANEL.

ALL EQUIPMENT SHALL BE FACTORY INSTALLED EXCEPT FOR THE GRINDER PUMP, INLET FITTING AND EXTERNALLY MOUNTED CONTROL PANEL.

BASIN

THE BASIN SHALL BE 48" IN DIAMETER AND 9.5'(114") IN DEPTH. THE BASIN SHALL BE FIBERGLASS WITH THE REINFORCING MATERIAL AND RESINS PER THE MANUFACTURERS SPECIFICATION. THE BASIN WALL SHALL BE DESIGNED TO WITHSTAND A WALL COLLAPSE BASED ON THE ASSUMPTION OF HYDROSTATIC TYPE LOADING BY BACKFILL WITH MINIMUM DENSITY OF 120 POUNDS PER CUBIC FOOT. AN ANTI FLOAT COLLAR SHALL BE MANUFACTURED AS PART OF EACH BASIN

BASIN COVER

A ONE-PICE, SOLID FIBERGLASS BASIN COVER SHALL BE PROVIDED WITH EACH BASIN ASSEMBLY. THE COVERS SHALL CONTAIN A CAPTIVE, NOT SEPARATE GASKET. COVES SHALL BE BOLTED TO THE BASIN WITH STAINLESS STEEL CAP SCREWS. NONCORRODDING STAINLESS STEEL THREADED INSERTS SHALL BE FULLY ENCAPSULATED IN THE UPPER FLANGE OF THE FIBERGLASS BASIN.

RAIL ASSEMBLY

THE LIFT-OUT RAIL SYSTEM SHALL PERMIT EASY REMOVAL AND INSTALLATION OF THE PUMP WITHOUT THE NECESSITY OF PERSONNEL ENTERING THE BASIN. THE RAIL ASSEMBLY SHALL OF A DUCTILE IRON LIFT-OUT BASE / ELBOW ASSEMBLY. STAINLESS STEEL GUIDE RAILS AND STAINLESS STEEL GUIDE RAIL BRACKETS. THE LIFT-OUT ELBOW FOR THE BASE ASSEMBLY SHALL CONTAIN A DOVE-TAILED GROOVE AND SEALING O-RING ON THE FACE TO PROVIDE A LEAK-PROOF SEAL AT ALL OPERATING PRESSURES. THE GUIDE RAILS ARE TO BE OF SUFFICIENT STRENGTH TO PREVENT BINDING AND EASE OF PUMP REMOVAL AND INSTALLATION. THE LIFT-OUT BASE ELBOW INCORPORATES A NON-BINDING STAINLESS STEEL GUIDE BRACKET. THE GUIDE RAIL LIFT-OUT BASE ELBOW INCORPORATES A NON-BINDING STAINLESS STEEL GUIDE BRACKET. THE GUIDE RAIL DESIGN MUST BE STRESS-FREE ONCE THE PUMP IS LOCATED WITHIN THE BASE ASSEMBLY.

CHECK VALVE

A LIFT-OUT BALL CHECK VALVE ASSEMBLY SHALL BE AN INTEGRAL PART OF THE LIFT-OUT BASE ELBOW. THE CHECK VALVE ASSEMBLY SHALL BE ATTACHED TO THE DISCHARGE OF THE PUMP AND REMOVE SIMULTANEOUSLY WITH THE PUMP. NO ENTRY IN THE WET WELL IS REQUIRED FOR SERVICING THE CHECK VALVE. THE CHECK VALVE SHALL CONTAIN A FREE FLOWING BALL, UNOBTRUSIVE TO THE FLOW OF LIQUIDS AND SOLIDS WITHIN THE DISCHARGE PIPING. THE VALVE DESIGN SHALL BE SUCH TO ALLOW FOR OPERATION WHEN NEGATIVE HEADS, UP TO 5 FEET ARE ENCOUNTERED. THE VALVE SHALL CONTAIN A MAINTENANCE ACCESS PORT CAPABLE OF SERVICING THE VALVE WITHOUT DISRUPTING THE EXISTING PIPING. THE VALVE SHALL BE DESIGNED TO OPERATE AT ALL PRESSURES WITHIN THE SEWER SYSTEM CREATED BY THE GRINDER PUMPS.

SHUT-OFF VALVE

A PVC, 1/4 TURN BALL TYPE SHUT-OFF VALVE WITH TEFLON SEATS SHALL BE FURNISHED AS AN INTEGRAL PART OF THE INTERNAL PIPING ASSEMBLY. AN EXTENSION HANDLE SHALL BE SUPPLIED IF THE DISCHARGE DEPTH IS GREATER THAN 18" FROM THE SURFACE.

DISCHARGE PIPING

SCHEDULE 80 PVC DISCHARGE PIPING SHALL CONNECT TO THE STATIONARY DISCHARGE BASE LIFT ASSEMBLY AND TERMINATE AT A 1 1/4" DISCHARGE FLANGE MOUNTED ON THE BASIN AT THE HEIGHT SHOWN IN THE PLANS. THE DISCHARGE FLANGE SHALL HAVE 1-1/4" NPT THREADS AND ATTACH TO THE EXTERNAL DISCHARGE PIPING.

INLET FITTING

A ONE-PIECE INLET FITTING FOR 6" SCH 40 OR SDR 35 PLASTIC PIPE SHALL BE SHIPPED LOOSE FOR FIELD INSTALLATION AS REQUIRED BY THE INSTALLATION. THE FITTING MUST BE A WATER AND VAPOR TIGHT SEAL WITH NO CAULKING.

LEVELING CONTROLS

PUMP ON, OFF AND ALARM LEVELS SHALL BE CONTROLLED BY THE THREE (3) MERCURY TUBE FLOAT SWITCHES. SWITCHES SHALL CONSIST OF A MERCURY TUBE SWITCH SEALED IN A CORROSION-RESISTANT POLYPROPYLENE HOUSING WITH A MINIMUM OF 18 GAUGE, 2-WIRE, SJOW/A JACKETED CABLE. THE LEVEL CONTROLS SHALL BE SUSPENDED FROM A STAINLESS STEEL BRACKET SO THAT ADJUSTMENT OR REPLACEMENT MAY BE DONE WITHOUT THE USE OF ANY TOOLS. LEVEL CONTROLS SHALL BE UL / CSA LISTED. THE CABLE LENGTH SHALL BE OF SUFFICIENT LENGTH TO REACH THE JUNCTION BOX WITHOUT SPLICES.

JUNCTION BOX

THE JUNCTION BOX SHALL BE CONSTRUCTED OF STRUCTURAL PLASTIC FOR CORROSION RESISTANCE AND OF ADEQUATE THICKNESS TO PROVIDE STABILITY AND MECHANICAL STRENGTH. THE JUNCTION BOX SHALL HAVE A FULLY GASKETED COVER THAT IS HELD IN PLACE BY FOUR (4) CAPTIVE STAINLESS STEEL SCREWS WITH HEADS OF ADEQUATE SIZE SO THAT THEY MAY EASILY BE INSTALLED AND REMOVED WITHOUT THE USE OF SPECIAL TOOLS.

AN ADEQUATE NUMBER OF SEALING-TYPE CORD GRIPS SHALL BE SUPPLIED FOR INCOMING PUMP AND LEVEL CONTROL CORDS. THE CORD GRIPS SHALL BE MADE OF A NON-CORRISIVE MATERIAL, SUCH AS PVC OR NYLON, CONTROL CORDS. MATERIAL, SUCH AS PVC OR NYLON, AND SHALL MAKE AN EFFECTIVE SEAL AROUND THE WIRE JACKET. THE CORD GRIPS SHALL SEAL TO THE JUNCTION BOX WITH AN O-RING OR GASKET.

THE JUNCTION BOX SHALL HAVE A PVC SOLVENT WELD SOCKET TYPE CONDUIT HUB OF ADEQUATE SIZE TO ACCOMMODATE THE NUMBER OF WIRES REQUIRED FOR THE PUMP AND LEVEL CONTROL OPERATION. THE INCOMING WIRES SHALL BE SEALED BY AN EXTERNAL TYPE SEAL-OFF (SUPPLIED BY OTHERS) SO CONDENSATION FROM THE CONDUIT OR GROUNDWATER WILL NOT ENTER THE ENCLOSURE. THE INTERIOR OF THE ENCLOSURE SHALL BE OF ADEQUATE SIZE TO ACCOMMODATE THE WIRES AND CONNECTIONS FOR PUMP AND LEVEL CONTROL OPERATION.

THE WIRES RUNNING BETWEEN THE CONTROL PANEL AND THE JUNCTION BOX SHALL BE COLOR-CODED AND FASTENED TO THE PUMP AND LEVEL CONTROLS BY MEANS OF ADEQUATELY SIZED AND INSULATED TWIST LOCK OR CRIMP CONNECTORS.

CONTROL BOX

(SEPARATE FROM BASIN ASSEMBLY) A NEMA 4X FIBERGLASS CONTROL PANEL SHALL BE FURNISHED WITH EACH BASIN PACKAGE. THE CONTROL PANEL SHALL MOLDED OF GLASS REINFORCED POLYESTER RESINS WHICH ARE CHEMICALLY RESISTANT TO CORROSIVE ATMOSPHERES. THE RESIN SYSTEM SHALL BE PIGMENTED TO IMPART A GRAY COLOR TO THE ENCLOSURE AND BE RESISTANT TO ULTRAVIOLET LIGHT.

THE RESIN SYSTEM SHALL INCLUDE A FLAME RETARDANT TO OBTAIN FLAMMABILITY RATING WHICH MEETS U.L. 94V-O. HEAT DISTORTION TEMPERATURE SHALL BE 350 DEGREES FAHRENHEIT.

THE ENCLOSURE SHALL BE HINGED WITH A HEAVY DUTY CORROSION RESISTANT STAINLESS STEEL PIANO HINGE. TWO STAINLESS STEEL LOCKABLE CLASPS SHALL BE INCORPORATED IN THE ENCLOSURE.

THE COMPLETE CONTROL BOX ASSEMBLY SHALL CONFORM TO U.L. 508 STANDARDS.

REFER TO CONTROL PANEL SPECIFICATIONS FOR DETAILS OF PANEL CONSTRUCTION.

GRINDER PUMP

THE PUMP SHALL BE OF CENTRIFUGAL DESIGN. POSITIVE DISPLACEMENT PUMPS SHALL NOT BE CONSIDERED EQUAL. THE PUMP SHALL BE RATED 3 HP, 3450 RPM. THE PUMP SHALL BE MANUFACTURED BY KEEN PUMP COMPANY OR APPROVED EQUAL. MODEL: KG-31 GRINDER PUMP, 3HP, 230/1/60, 3450 RPM, 40' CORDS

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SCALE IN FEET

CHECKED BY:
KAD

DATE:
MAY, 2012

DRAWN BY:
FPW

DATE:
MAY, 2012

REVISIONS:

DATE	DESCRIPTION

BIT OF EDEN SANITARY SEWER PUMP STATION

General Notes
City of Massillon
Stark County, Ohio

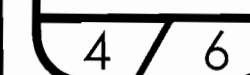
Kathy Cazazaro-Perry, Mayor

Massillon
City of Champions

DRAWING NAME:
bitofedennote2.DWG

CITY NUMBER:
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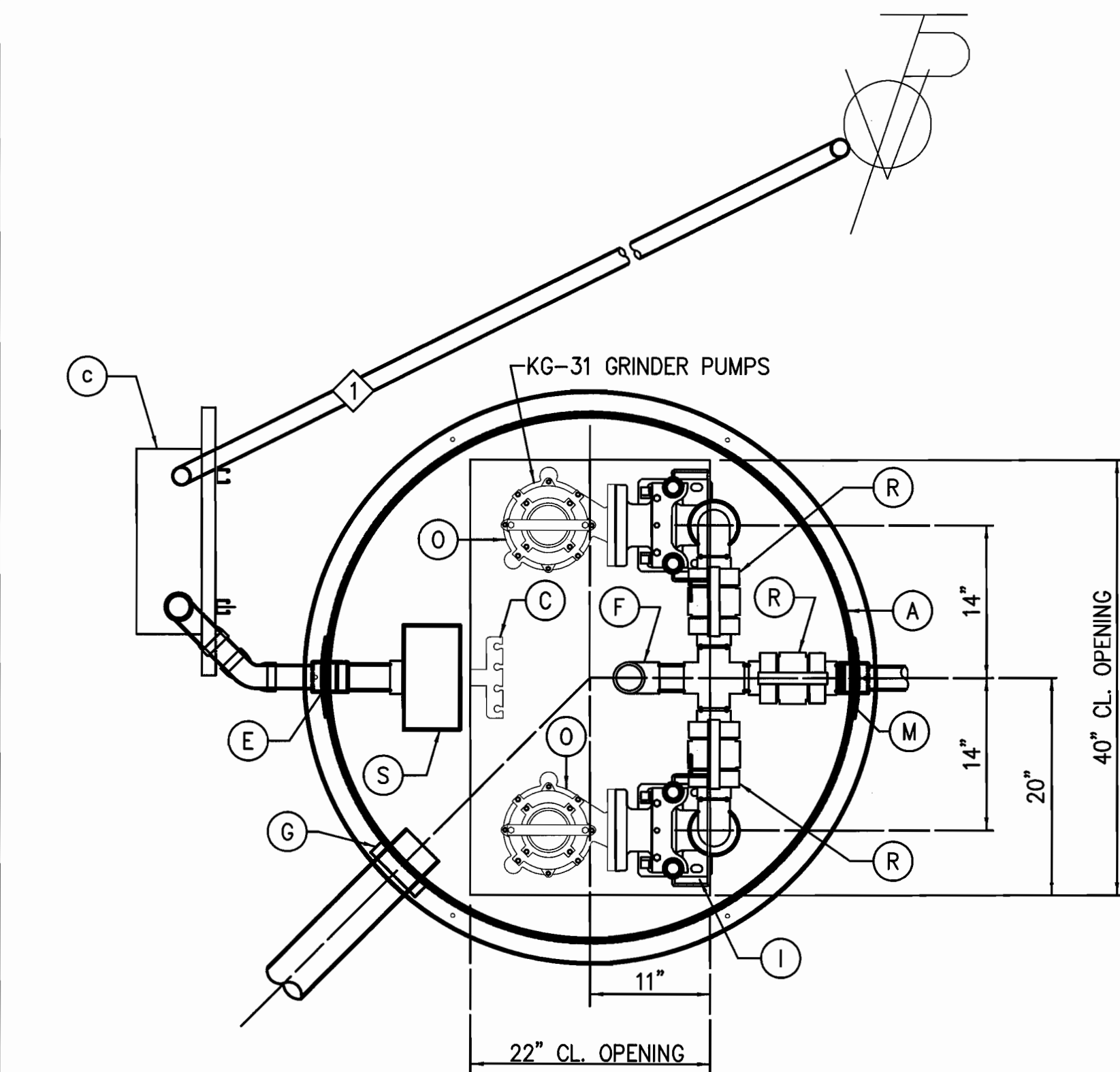
OHIO EDISON
240/120V, 1-PHASE, 3W 60 HERTZ.

KEY	QUANTITY	DESCRIPTION
(a)	- 1	- FUSIBLE DISCONNECT, DOUBLE THROW CENTER OFF SWITCH 240V., 100AMP, 2 POLE W/ NEUT. BAR; NEMA 4SS
(b)	- 1	- ELECTRIC METER
(c)	- 1	- NEMA 4X CONTROL PANEL WITH VISUAL/AUDIBLE ALARMS
(d)	- 1	- COPPERWELD GROUND ROD 3/4" X 10'
(e)	- 1	- 1 5/8" x 1 5/8" UNISTRUT CHANNEL PIERCED (MOUNTING SYSTEM)

KEY	DESCRIPTION
1	- 2-NO. 4 & NO. 4 NEUTRAL & NO. 8 GROUND IN 1 1/2" CONDUIT
2	- AS PER MANUFACTURER'S SPECIFICATIONS 2" CONDUIT
3	- NO. 8 GROUND IN 1" CONDUIT

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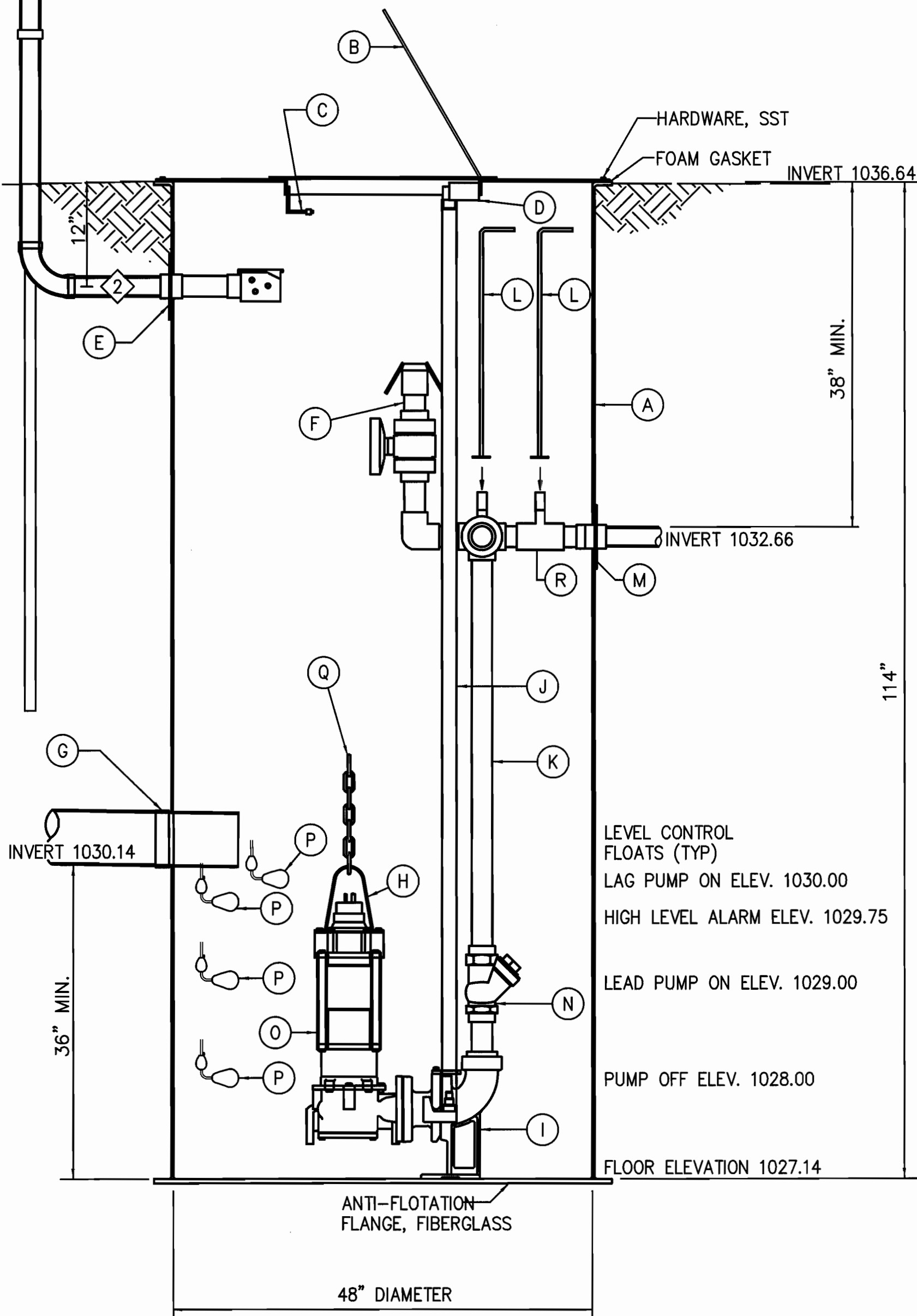
POWER SUPPLY, WIRING AND CONTROL

KEY	QUANTITY	DESCRIPTION
(A)	- 1	- 48" x 112" FIBERGLASS BASIN WITH ALUMINUM HATCH COVER
(B)	- 1	- BASIN ACCESS COVER ALUMINUM
(C)	- 1	- FLOAT BRACKET STAINLESS STEEL
(D)	- 1	- UPPER GUIDE BRACKET STAINLESS STEEL
(E)	- 1	- 2" NPT CONDUIT FLANGE, PLASTIC
(F)	- 1	- BYPASS ASSEMBLY WITH 2" BALL VALVE AND CAM-LOCK FITTING (PLASTIC)
(G)	- 1	- 6" INLET FITTING SCH40 GROMMET (FIELD INSTALLED)
(H)	- 2	- STAINLESS STEEL LIFT BALE
(I)	- 2	- KL3H LIFTOUT BASE ELBOW STAINLESS STEEL GUIDE PLATE (TYP 2)
(J)	- 4	- GUIDE RAILS, 1-1/4" STAINLESS STEEL
(K)	- LUMP	- 2" DISCHARGE PIPE, PVC80
(L)	- 3	- VALVE EXTENSION, STAINLESS STEEL
(M)	- 1	- 2" NPT DISCHARGE FLANGE, STAINLESS STEEL
(N)	- 2	- 2" BALL CHECK VALVE, CAST IRON
(O)	- 2	- PUMP - KG-31 GRINDER PUMP (TYP) 3HP,230V, 1PH, 60HZ KEEN PUMP
(P)	- 4	- FLOATS
(Q)	- LUMP	- STAINLESS STEEL LIFT CHAIN
(R)	- 3	- VALVE, 2" BALL, PVC TRUE UNION
(S)	- 1	- JUNCTION BOX

PACKAGED PUMP STATION

(2) KG-31 GRINDER PUMPS, 3HP, 230/1/60, 3450 RPM, 40' CORD
(2) KL-3H LIFT OUT SYSTEMS WITH STAINLESS STEEL UPPER BRACKET, GUIDE RAILS, AND LIFT CABLES, CHAINS
SCHEDULE 80 PVC DISCHARGING PIPING. TRUE UNION BALL VALVE, AND CHECK VALVES
JUNCTION BOX, FLOAT BRACKET, AND FOUR FLOAT SWITCHES
6" INLET
NEMA 4X CONTROL PANEL WITH VISUAL/AUDIBLE ALARMS
48"x114" FIBERGLASS BASIN WITH ALUMINUM HATCH COVER
BY-PASS PIPING SYSTEM FOR SECONDARY GENERATOR PUMP SYSTEM

PUMP SCHEDULE		
PUMP	1	2
TDH (FT)	24.31	24.31
FLOW (GPM)	39	39
HORSEPOWER	3	3
VOLTAGE	230/1/60	230/1/60
EXPLOSION PROOF	YES	YES
DESIGN BASIS: KEEN PUMP MODEL KG-31 GRINDER		



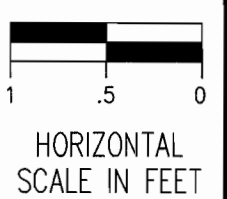
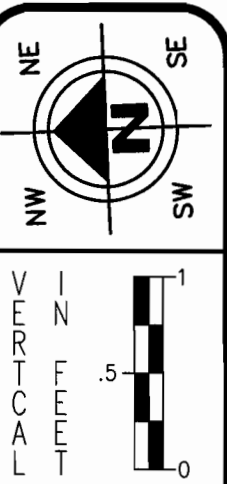
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CHECKED BY:
KAD
DATE:
MAY, 2012
DRAWN BY:
FPW
DATE:
MAY, 2012

REVISIONS:	DATE	DESCRIPTION

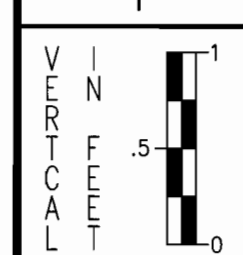
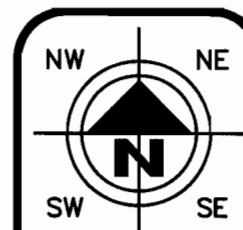
Bit of Eden Sanitary Sewer Pump Station
Pump Station and Electrical Plan and Profile
City of Massillon
Stark County, Ohio

Kathy Catanzo-Perry, Mayor
Massillon
City of Champions

DRAWING NAME:
BitofEdenPumpStation.DWG

CITY NUMBER:
10ss03

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HORIZONTAL
SCALE IN FEET

CHECKED BY:
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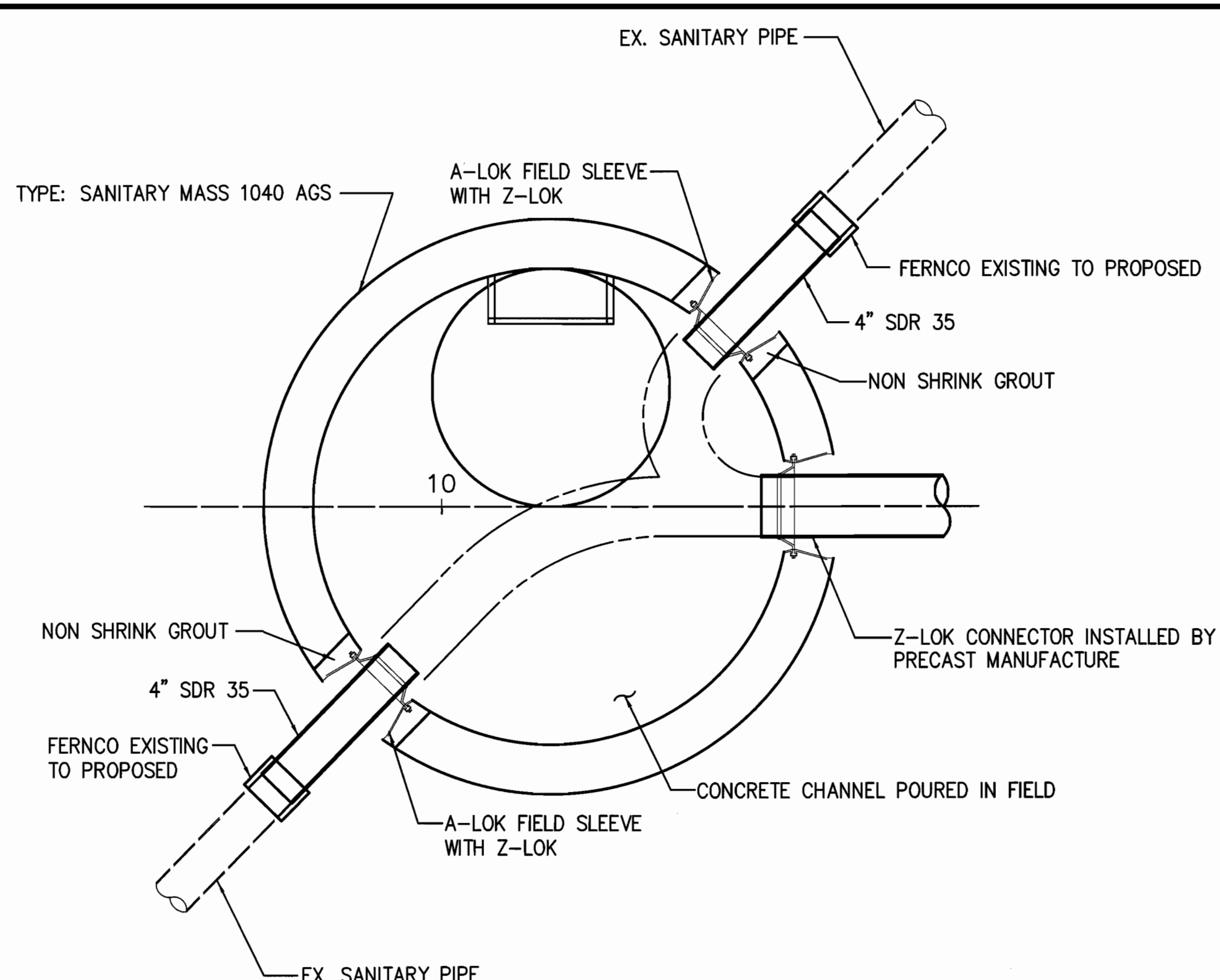
Bit of Eden Sanitary Sewer Pump Station
Details
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

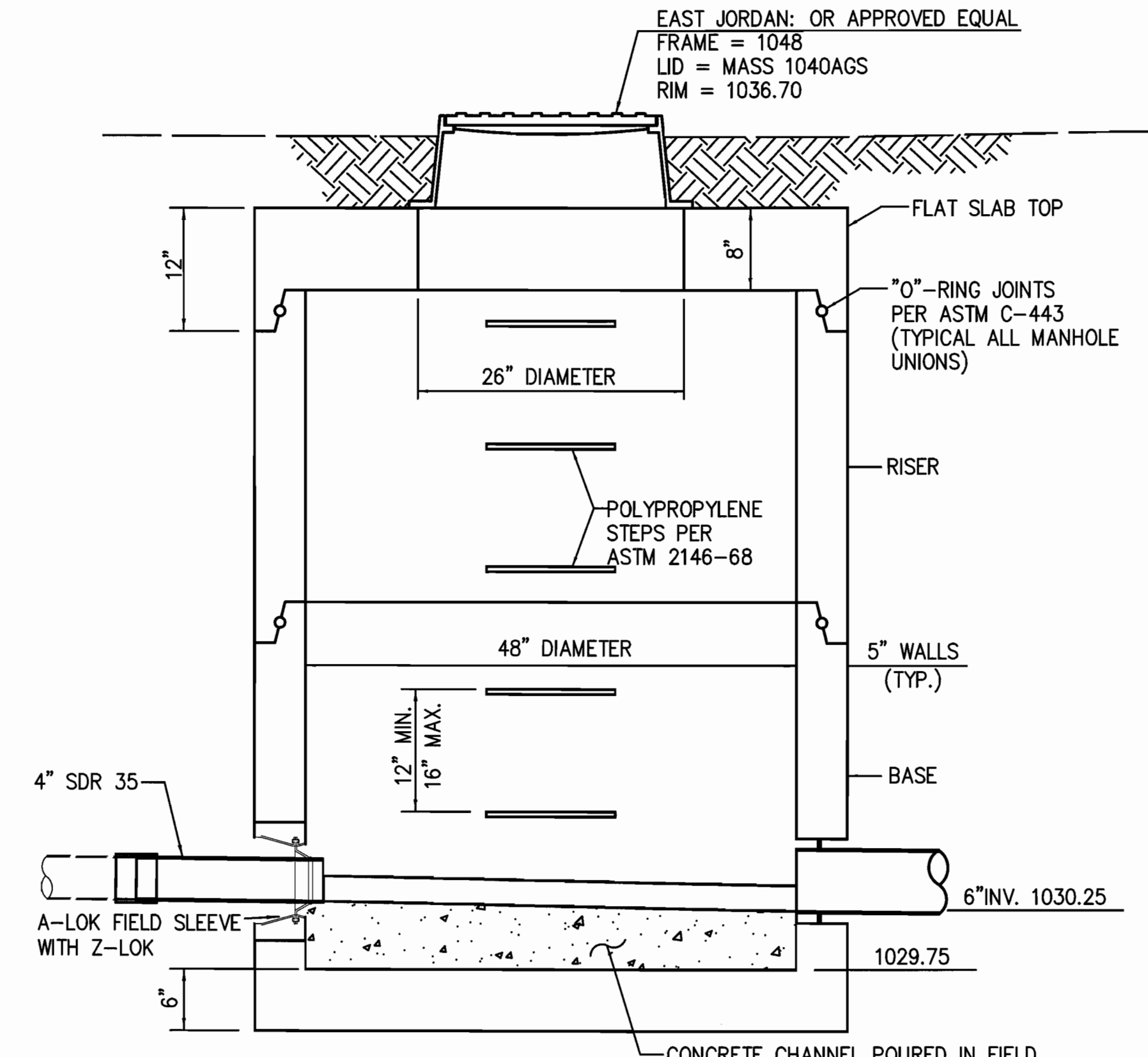
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PLAN



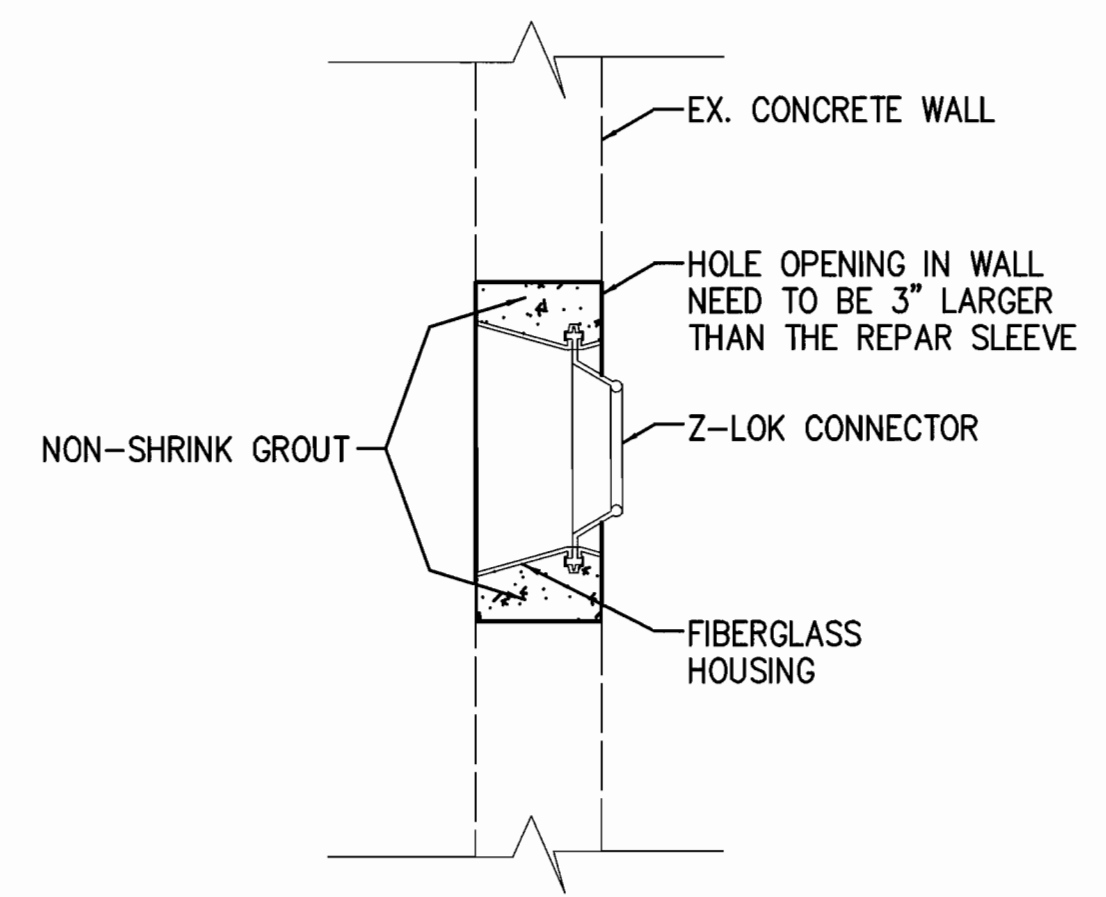
PROFILE

NOTE

- EXISTING PIPE SHALL BE FIELD VERIFIED FOR SIZE AND LOCATION
- THE INTERIOR/EXTERIOR OF THE MANHOLE WALL SHALL BE COATED WITH 21 MILS OF COAL TAR EPOXY, KOPPERS 300M OR EQUAL, WHERE SHOWN ON THE PLANS. THE COATING SHALL BE SPRAYED APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE JOINTS BETWEEN PRECAST SECTIONS SHALL NOT BE COATED. USE BUTYL RUBBER ROPE AS SPECIFIED ABOVE THE SEAL THE INTERIOR HORIZONTAL JOINT SURFACE.
- MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C-1244
- FLEXIBLE GASKETS ON SEWER LINES WILL BE IN ACCORDANCE WITH ASTM C-923

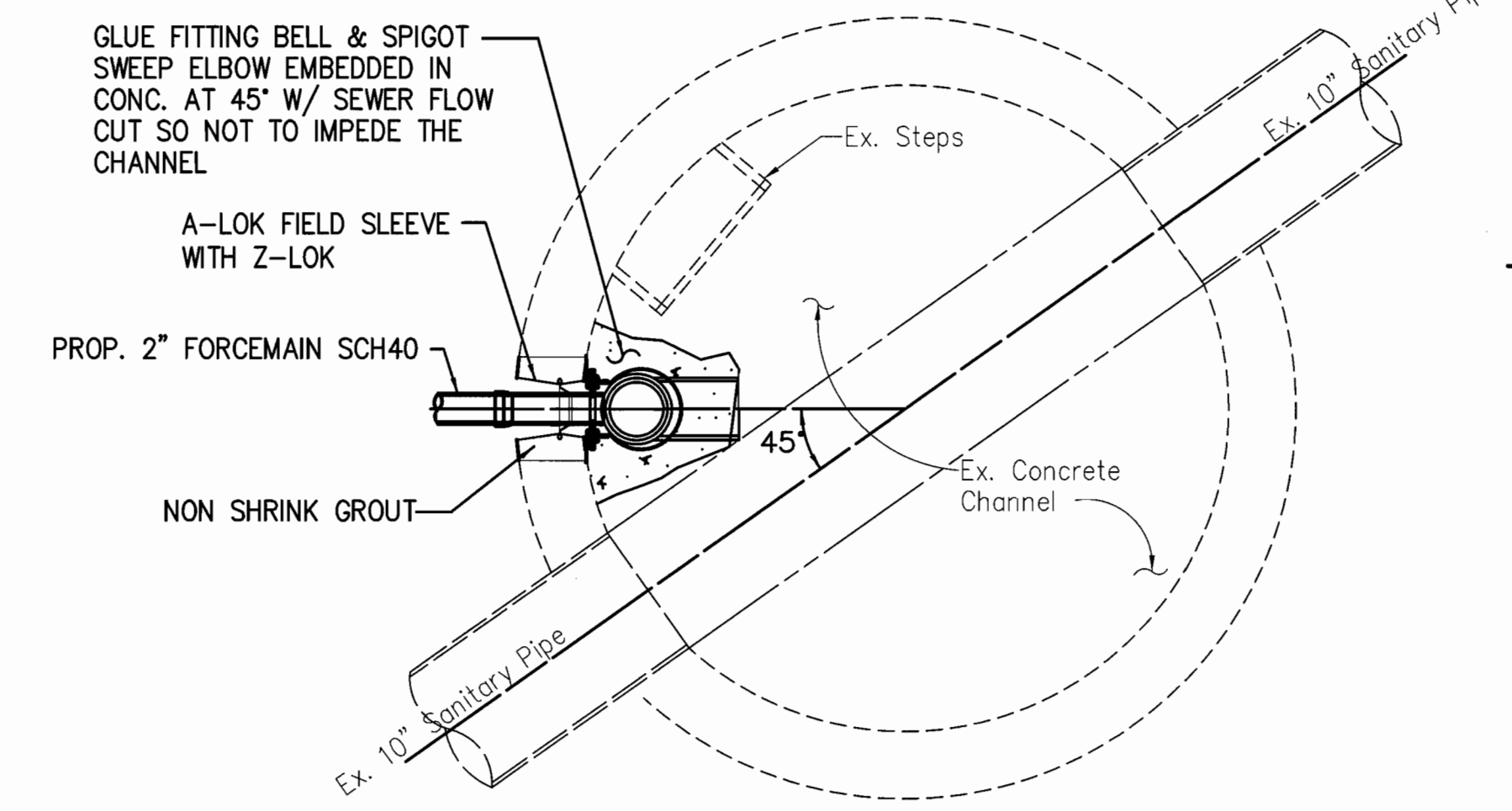
SM-1

MASS1040AGS - 48" DIA. PRECAST



A-LOK FIELD SLEEVE WITH Z-LOK DETAIL

- STEP 1.**
CHECK Z-LOK CONNECTOR IN A-LOK FIELD SLEEVE AND PIPE O.D. TO BE SURE THEY ARE CORRECT
- STEP 2**
MARK A PERIMETER, ON THE STRUCTURE, THREE (3) INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE A-LOK FIELD SLEEVE
- STEP 3**
ON THIS PERIMETER EITHER A) CORE THE ENTIRE OPENING TO CREATE A HOLE; OR B) DRILL A SERIES OF ONE (1) INCH OR LARGER CREATE A HOLE; OR B) DRILL A SERIES OF ONE (1) INCH OR LARGER HOLES NO MORE THAN 5 INCHES APART TO CREATE AN OPENING FOR THE FIELD SLEEVE
- STEP 4**
SET A-LOK FIELD SLEEVE IN OPENING ON CORRECT GRADE. PACK ANNULAR SPACE BETWEEN OPENING AND OUTSIDE DIAMETER OF FIELD SLEEVE FIRMLY WITH NON-SHRINK GROUT. CAREFULLY FOLLOW GROUT MANUFACTURER'S INSTRUCTIONS FOR MIXING, PLACING AND CURING.



PLAN

SR-1

EXISTING PRECAST SANITARY MANHOLE WITH PROPOSED INSIDE DROP

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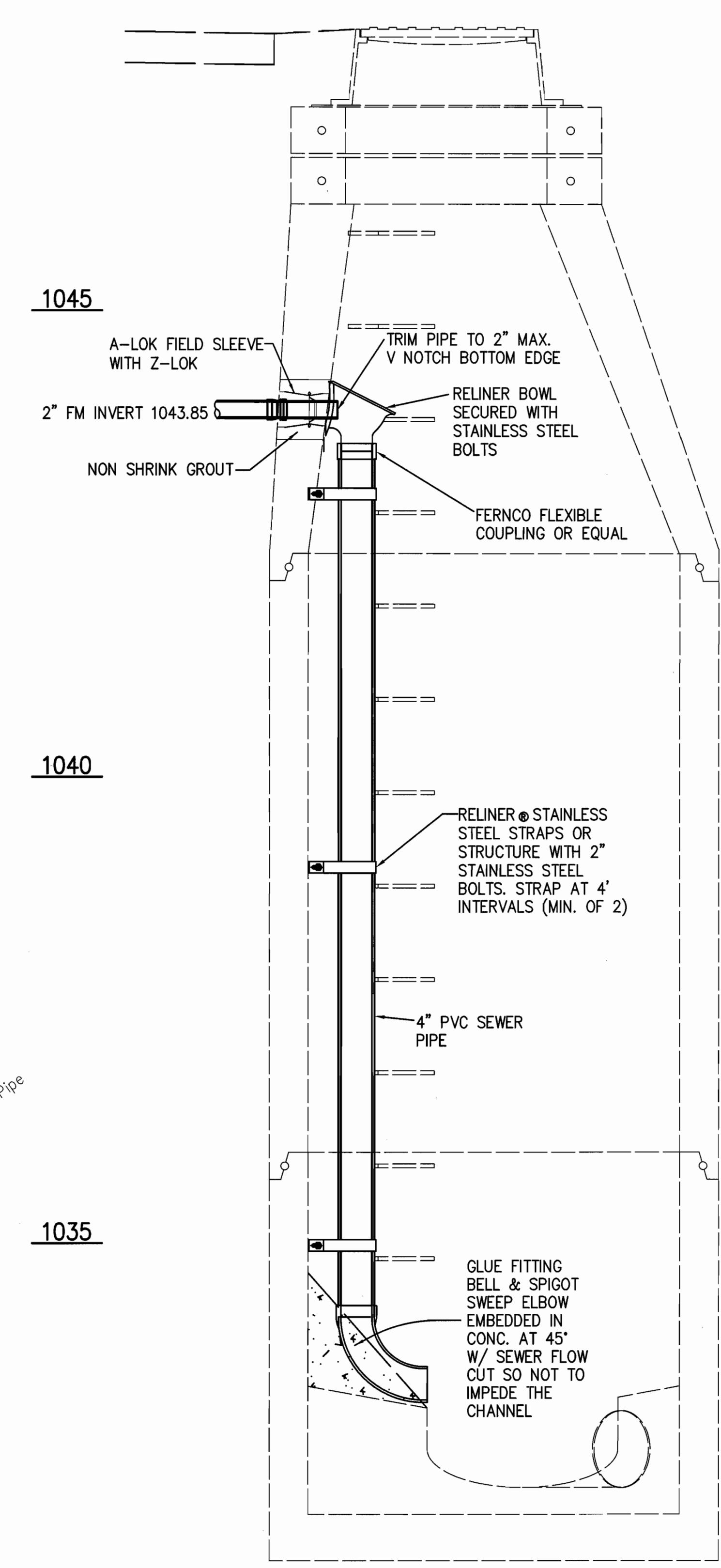
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PROFILE