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 RACINE COUNTY

CONSTRUCTION DRAWINGS FOR YORKVILLE WELL #2 RACINE COUNTY, WISCONSIN

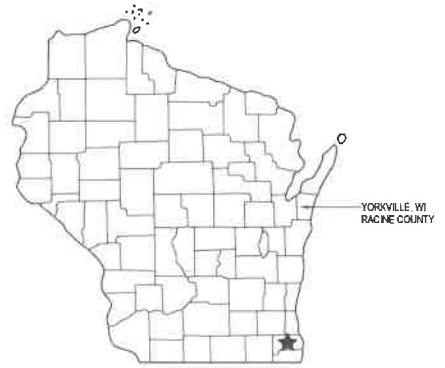


Printed Date:



PROJECT LOCATION MAP

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WISCONSIN

VILLAGE OF YORKVILLE
 YORKVILLE WELL #2
 RACINE COUNTY, WISCONSIN

The drawings are prepared in accordance with the rules and regulations of the State of Wisconsin, Department of Transportation, Division of Highway Engineering, and the rules and regulations of the State of Wisconsin, Department of Natural Resources, Division of Water. The drawings are prepared in accordance with the rules and regulations of the State of Wisconsin, Department of Transportation, Division of Highway Engineering, and the rules and regulations of the State of Wisconsin, Department of Natural Resources, Division of Water.

Project No. YORKVILLE-2022-001
 Drawn By: KAK

Project Status: Incomplete
 Issue Date: 08/29/24

REVISION SCHEDULE

REV. #	DESCRIPTION	DATE

TITLE SHEET

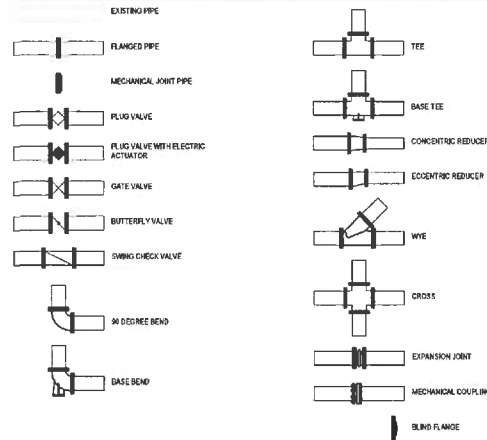
G001

THIS SHEET IS INTENDED TO BE PRINTED AT FULL SCALE

ABBREVIATION LIST

AF	ADAPTER FLANGE	MECH	MECHANICAL
ALUM	ALUMINUM	MFRS	MANUFACTURERS
APPROX	APPROXIMATELY	MIN	MINIMUM
BF	BLIND FLANGE	MV	MUG VALVE
BFV	BUTTERFLY VALVE	N	NORTH
BLOG	BUILDING	NA	NOT APPLICABLE
BLV	BALL VALVE	NOM	NOMINAL
BF	BLIND FLANGE	NO	NUMBER
BLK	BLOCK	NPW	NON-POTABLE WATER
BOT	BOTTOM	NFS	NOT TO SCALE
CHL	CHLORINE	OC	ON CENTER
CI	CAST IRON	OPNG	OPENING
CKD	CHECKERED	P	PLUG
CL	CENTERLINE	PC	PIPE COUPLING
CMU	CONCRETE MASONRY UNIT	PPC	PRESTRESSED PRECAST CONCRETE
CO	CLEAR-OUT	PR	PRESSURE REDUCER
CONC	CONCRETE	PRV	PRESSURE RELIEF VALVE
CONHT	CONDUITS	PRT	PORT
CTE	CONNECT TO EXISTING	PV	PLUG VALVE
COJ	CONTROL JOINT	PV & B	PLUG VALVE & BOX
CPE	CORROGATED POLYETHYLENE	PVC	POLYVINYL CHLORIDE
CV	CHECK VALVE	PW	PLANT WATER
DIP	DUCTILE IRON PIPE	R. RAD	RADIUS
E	EAST	RD	ROOF DRAIN
EL	ELEVATION	RAS	RETURN ACTIVATED SLUDGE
EQUIP	EQUIPMENT	RCP	REINFORCED CONCRETE PIPE
EX	EXISTING	RECIRC	RECIRCULATION
FD	FLOOR DRAIN	REMP	REINFORCED
FFE	FRESH-FIELD FLOOR ELEVATION	SEC	SECTION
FM	FORCEMAIN	SHT	SHEET
FRP	FIBERGLASS REINFORCED	SF	SQUARE FOOT / SQUARE FEET
FTD	FITTING/FOOTING	SP	SLIDE PLATE
GV	GATE VALVE	SO	SEWER OUTLET
GV & B	GATE VALVE & BOX	SS	STAINLESS STEEL
H	HIGH	SO	SQUARE
HWL	HIGH WATER LEVEL	TH	THICK
ID	INSIDE DIAMETER	TK	TANK
INS	INSIDE	TOW	TOP OF WEIR
INV	INVERT	TYP	TYPICAL
JI	JOINT	UNL	UNLESS OTHERWISE NOTED
L	LONG	W	WIDE
LL	LIQUID LEVEL	WAS	WASTE ACTIVATED SLUDGE
LT	LEFT	WA	WATER ()
M	METER	WSE	WATER SURFACE LEVEL
MASS	MASSBANK		

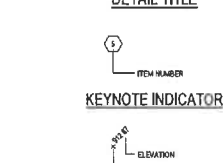
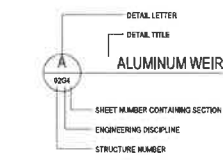
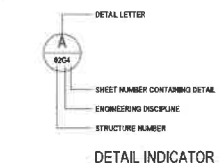
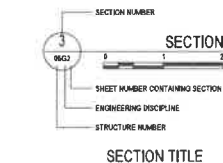
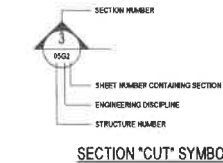
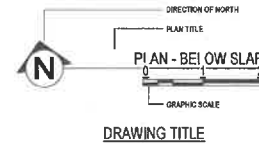
PROCESS PIPE LEGEND



GENERAL CONSTRUCTION LEGEND



DRAWING SYMBOLS



GENERAL NOTES

- SEE STRUCTURAL PLANS FOR ROOF, SLAB, WALL, FOUNDATION, BEAM AND REINFORCING STEEL INFORMATION AND CONCRETE DIMENSIONS.
- ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE A 12 MIL DRY FILM THICKNESS OF BITUMASTIC.
- ALL ANCHOR BOLTS, NUTS, FASTENERS, ETC. SHALL BE 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- ALTHOUGH NOT SPECIFICALLY NOTED ON THE PLANS, CONTRACTOR SHALL INSTALL PIPING USING SUPPORTS, PIPE COUPLINGS AND ANY OTHER PIPING APPURTENANCES REQUIRED FOR COMPLETE AND PROPER INSTALLATION. IN ADDITION, PROVIDE PIPE SUPPORTS IN LOCATIONS SPECIFICALLY DEFINED ON PLANS.
- TYPICAL DETAILS ARE INTENDED TO SHOW GENERAL DESIGN CONCEPT. SPECIAL INFORMATION CONCERNING ELEVATIONS AND DIMENSIONS SHOWN ON THESE DETAILS PERTAIN TO A PARTICULAR BUILDING OR STRUCTURE.
- INFORMATION REGARDING EXISTING CONSTRUCTION HAS COME FROM THE ORIGINAL CONSTRUCTION DOCUMENTS AND PRELIMINARY FIELD INVESTIGATIONS. ALL CONDITIONS, DIMENSIONS AND SIZES ARE TO BE FIELD VERIFIED BY THE CONTRACTOR TO ENSURE FIT BETWEEN THE NEW AND EXISTING. NOTIFY THE ENGINEER OF DISCREPANCIES NOTED BEFORE AND DURING CONSTRUCTION.
- DRAWINGS SHALL NOT TAKE PRECEDENCE OVER FIELD MEASUREMENTS.
- DUE TO PIPING CONSTRUCTION, DRAWINGS MAY NOT BE ACCURATE TO SCALE. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN AND IN NO CASE SHALL WORKING DIMENSIONS BE SOLELY FROM PLANS, SECTIONS OR DETAILS.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. THE CONTRACTOR SHALL COORDINATE ALL DRAWINGS AND VARIOUS CONSTRUCTION TRADES TO ACCOUNT WITH THE PROJECT. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES NOTED BEFORE AND DURING CONSTRUCTION. THE ENGINEER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS IN LAYOUT TO AVOID CONFLICT WITH THE WORK OF OTHER TRADES AND FOR THE PROPER EXECUTION OF THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK SHALL BE CONDUCTED WITHIN THE LINES OF CONSTRUCTION. CONTRACTOR SHALL REPAIR AND RESTORE ANY PAVEMENT, UTILITIES, OR OTHER FEATURES OUTSIDE THE LIMITS OF CONSTRUCTION THAT ARE DAMAGED DUE TO THE CONTRACTOR'S ACTS OR NEGLIGENCE AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY, AND STATE ROAD RESTRICTIONS FOR TRAILING AND EQUIPMENT MOBILIZATION.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY ADDITIONAL COSTS WHICH MAY RESULT FROM UNAUTHORIZED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PROTECT ALL EXISTING AND INSTALLED PIPING, EQUIPMENT, AND STRUCTURES DURING CONSTRUCTION. NOT TO BE REMOVED. ALL DAMAGED ITEMS SHALL BE REPAIRED OR REPLACED WITH NO ADDITIONAL COST TO THE OWNER.
- ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES SHALL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PROJECT.
- SIZE OF FITTINGS AND VALVES SHALL CORRESPOND TO THE SIZE OF ADJACENT PIPING, JOINTS AND FITTING MATERIAL SHALL BE AS SHOWN FOR ADJACENT PIPING.
- PROVIDE PROPER FLUE, GAPS, AND RESTRAINTS WHEN ANY PIPING IS TERMINATED.
- THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS NATURAL GAS, TELEPHONE, FIBEROPTIC, ELECTRIC, CABLE TV, AND PIPE LINES ARE UNKNOWN. CONTRACTOR SHALL CONTACT WISCONSIN DIGGERS NOT TO BE CALLED BY BEFORE COMMENCING ANY CONSTRUCTION.
- SOME ITEMS HAVE BEEN NOTATED INTO THE PLANS OF PROJECTION ON TYPICAL SECTIONS FOR CLARITY.
- IF FIRST COVER MINIMUM UNLESS OTHERWISE NOTED, PIPE BORED WITH LESS THAN 2.5 FOOT OF COVER SHALL BE INSULATED IN ACCORDANCE WITH SECTION 44.42.11-PROCESS PIPING INSULATION.



DRINK ONLINE

VILLAGE OF YORKVILLE
YORKVILLE WELL #2
RACINE COUNTY, WISCONSIN

This drawing is an indication of work and shall not be used for construction. The drawing is not to be used for construction. The drawing is not to be used for construction. The drawing is not to be used for construction.

Subsequent to completion of the drawing by the engineer, the engineer shall be responsible for the drawing. The drawing is not to be used for construction. The drawing is not to be used for construction.

SEH Project: YORKVILLE WELL #2
Checked By: JLN
Drawn By: EAM

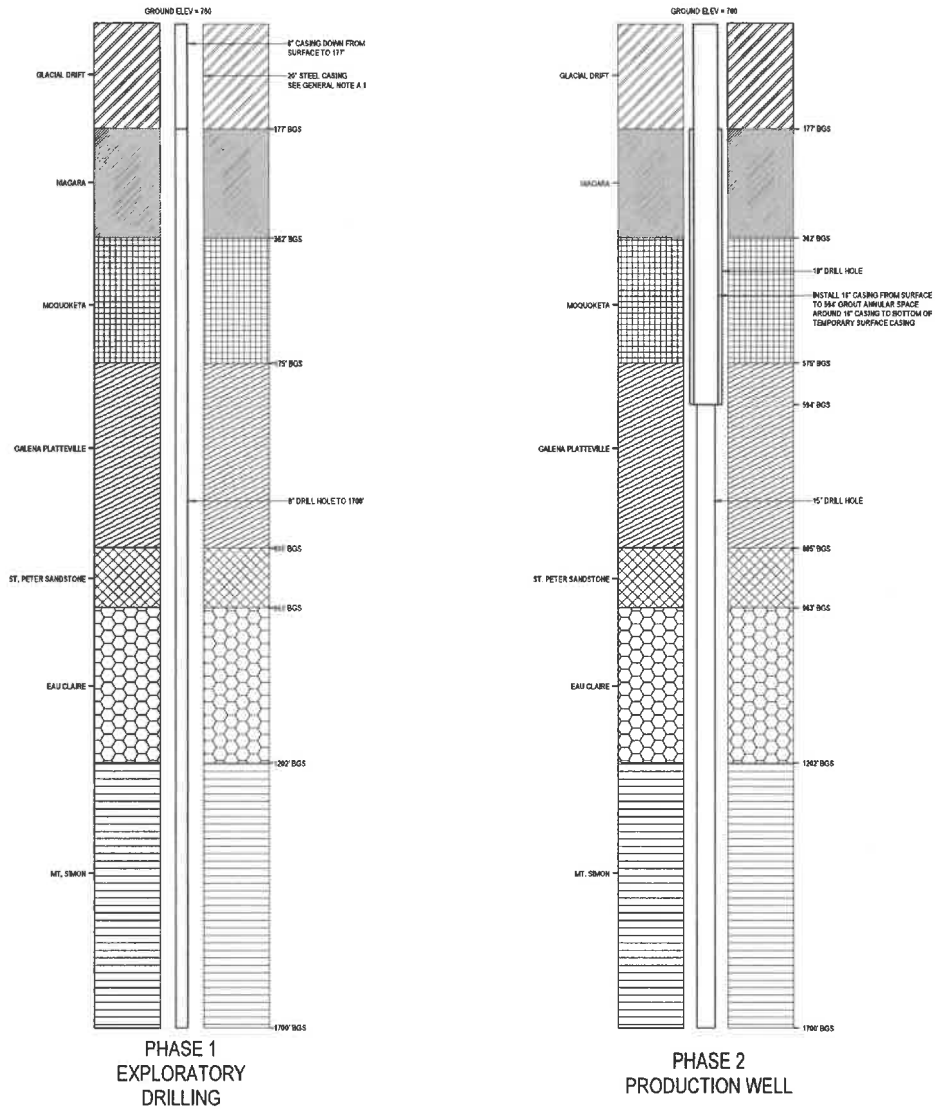
Project Status: Issues Item
15100 FOR BID: 6/29/2021

REV. #	DESCRIPTION	DATE

GENERAL PROCESS INFORMATION

P001

THIS DRAWING IS INTENDED TO BE PRINTED AT FULL SCALE 1"=20' (14"=20' MAX)



PHASE 1
EXPLORATORY
DRILLING

PHASE 2
PRODUCTION WELL

GENERAL NOTES

WELL NO. 2 IS TO BE CONSTRUCTED INTO TWO PHASES FOR THE PURPOSES OF FIRST ASSESSING THE FORMATION DEPTHS, GROUNDWATER QUALITY, AND CONFIRMING PRODUCTION WELL DESIGN.

- A. PHASE 1 - EXPLORATORY DRILLING IS ANTICIPATED TO BE CONSTRUCTED AS FOLLOWS
 1. DRILL DOWN 20' HIGH TEMPORARY STEEL CASING TO AN APPROXIMATE DEPTH OF 177 FEET (THROUGH GLACIAL DRIFT AND AT LEAST 10 FEET INTO THE NIAGARA MEMBER).
 2. CHECK TO ENSURE PLUMBNESS AND ALIGNMENT.
 3. INSTALL AN 8" HIGH STEEL CASING (WITH CENTRALIZER) INSIDE THE SURFACE CASING (8 FEET - 177 FEET) FOR A WORKING CASING DRUG PILOT BORING.
 4. DRILL A 8" NOMINAL OPEN PILOT HOLE, IDENTIFYING AND LOGGING LAYERS UNTIL REACHING A DEPTH OF 170 FEET.
 5. PROVIDE VIDEO AND GEOPHYSICAL LOGGING OF THE ENTIRE BOREHOLE.
 6. SURBERG AND INSTALL TEST PUMPING EQUIPMENT.
 7. COORDINATE WITH ENGINEER TO SET TEST PUMPING EQUIPMENT WITH PACKERS.
 - a. PUMP INTAKE APPROXIMATELY 700 FEET BGS.
 - b. PACKERS AT 650 FEET AND 885 FEET.
 8. CONDUCT 24 HOUR CONSTANT RATE PUMP TEST.
 9. FULL SUITE OF WATER QUALITY ANALYSIS.
- B. PHASE 2 - PRODUCTION WELL CONSTRUCTION IS ANTICIPATED AS FOLLOWS
 1. REMOVE 8" WORKING CASING FROM INSIDE SURFACE CASING.
 2. ENLARGE 8" PILOT HOLE TO 18 INCHES FROM 177 FEET TO 594 FEET.
 3. INSTALL A 18" CASING FROM SURFACE (0 FEET) TO 594 FEET.
 4. GROUT ANNULAR SPACE AROUND 18" CASING TO BOTTOM OF TEMPORARY SURFACE CASING.
 5. CONTINUE GROUTING ANNULAR SPACE REMOVING 20" SURFACE CASING.
 6. ALLOW GROUT TO SET AND PROCEED TO DRILL 15" DIAMETER OPEN HOLE FROM THE BOTTOM OF THE INNER CASING TO A DEPTH OF 1190 FEET.
 7. DEVELOP WELL.
 8. STEP - DOWNDOWN PUMP TEST.
 9. 72 HOUR CONSTANT RATE PUMP TEST.
 10. FULL SUITE OF WATER QUALITY ANALYSIS.
 11. TELETEST.

THE TARGET YIELD FOR WELL NO. 2 PRODUCTION IS 850 GPM. HOWEVER, THE WELL WILL BE INITIALLY EQUIPPED WITH A PUMP OF LOWER CAPACITY, (200-400 GPM).



Project Owner

VILLAGE OF YORKVILLE
YORKVILLE WELL #2
RACINE COUNTY, WISCONSIN

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DATE: 02/20/22
DRAWN BY: RJK

WELL Project: YORKVILLE WELL #2
Checked By: RJK
Drawn By: RJK

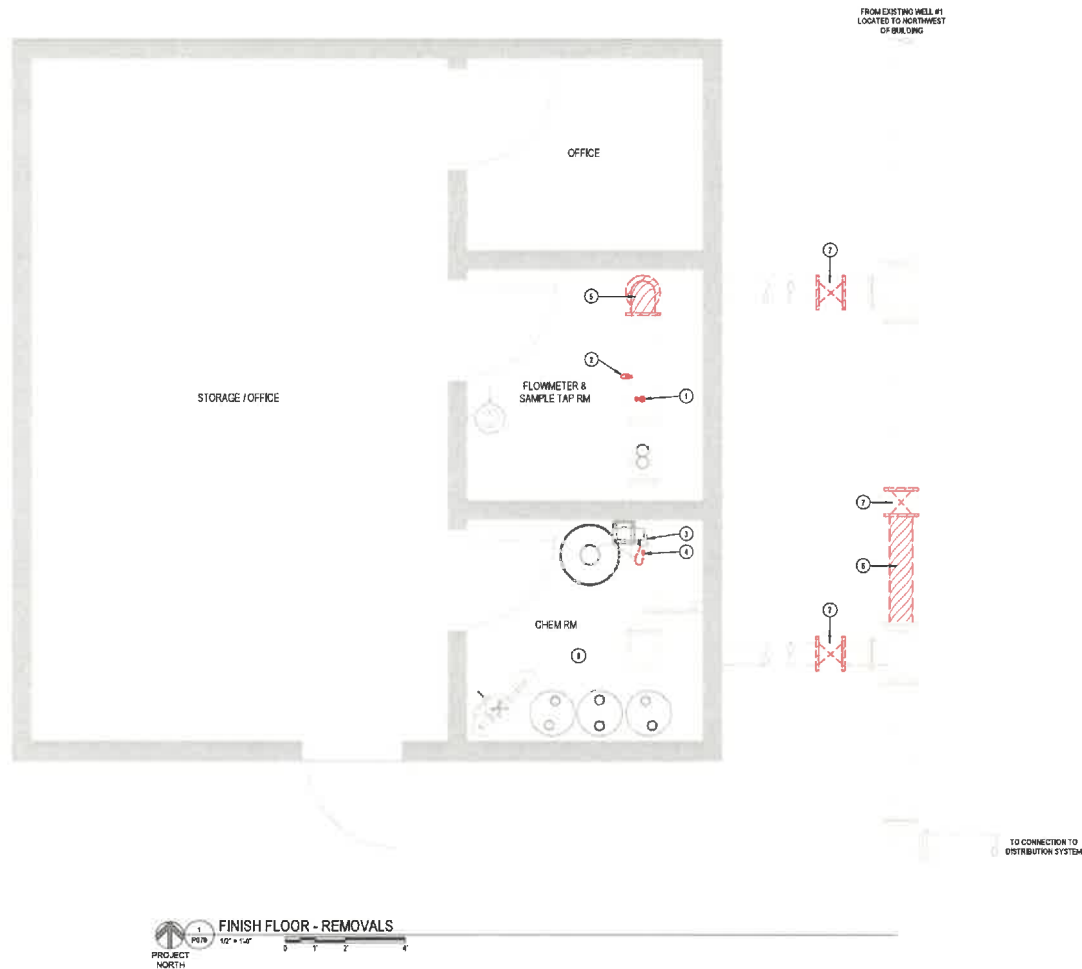
Project Number: 629024
Issue Date: 02/20/22

REV.	DESCRIPTION	DATE

WELL 2 - WELL CONSTRUCTION WELL DRILLING

P002

THIS DRAWING IS INTENDED TO BE PRINTED AT FULL SCALE UNLESS NOTED OTHERWISE



KEYNOTES

- 1 REMOVE EXISTING CHEMICAL INJECTION ASSEMBLY. PLUG WITH THREADED CAP
- 2 REMOVE EXISTING SAMPLE TAP
- 3 EXISTING FLOW SWITCH
- 4 REMOVE AND RELOCATE EXISTING HYPO INJECTION ASSEMBLY. PLUG WITH THREADED CAP
- 5 REMOVE ELBOW
- 6 REMOVE FLANGE AND SPOOL. PRICE
- 7 REMOVE GATE VALVE
- 8 REMOVE AND RESPICE ANY REMAINING SODIUM HYDROXIDE CHEMICAL FEED COMPONENTS INCLUDING CHEMICAL FEED PUMP, TANKS, AND TUBING. COORDINATE WITH OWNER



Drawn: C. O'Brien

VILLAGE OF YORKVILLE
 YORKVILLE WELL #2
 RACINE COUNTY, WISCONSIN

This drawing is an indication of what is intended. It is not a contract. The contractor shall verify all conditions before construction. The contractor shall be responsible for all costs associated with the removal of any existing equipment or materials not shown on this drawing. The contractor shall be responsible for all costs associated with the removal of any existing equipment or materials not shown on this drawing.

REV. #	DATE	BY	CHKD. BY
001	10/20/2020	JRL	KAK

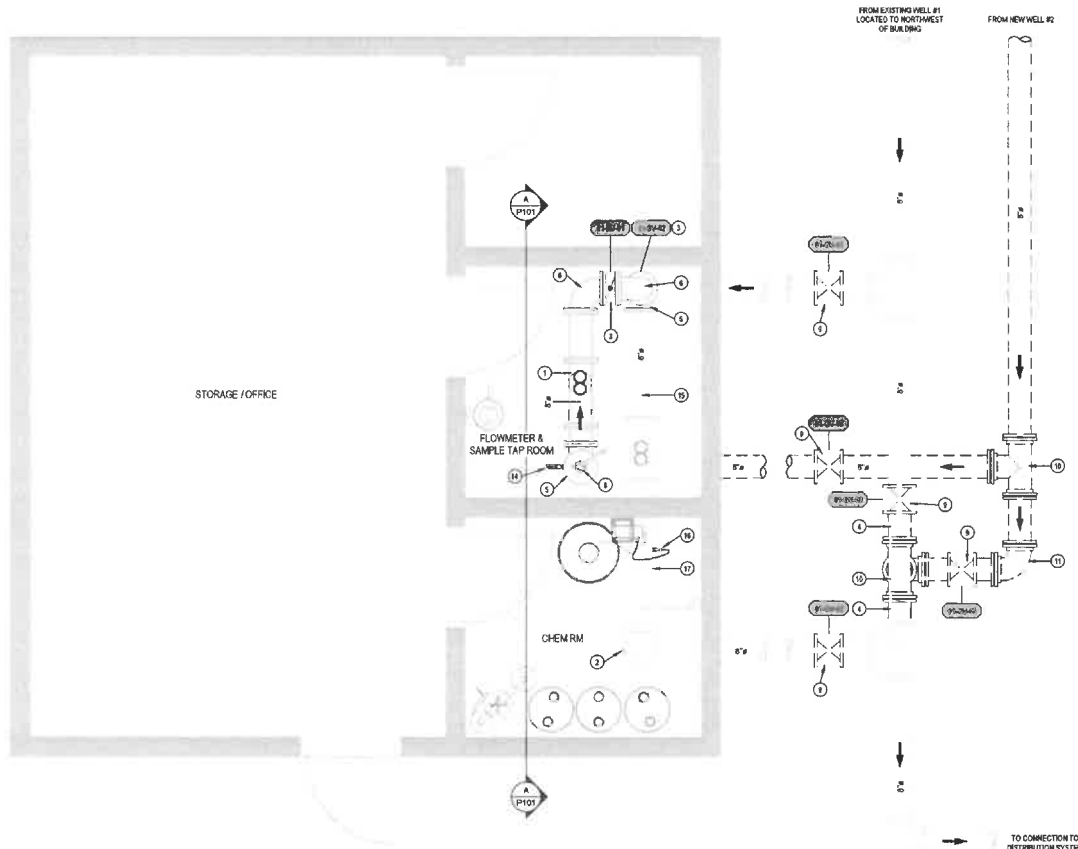
REVISION SCHEDULE

REV. #	DESCRIPTION	DATE
001	ISSUE FOR BIDDING	10/20/2020

REMOVALS PLAN

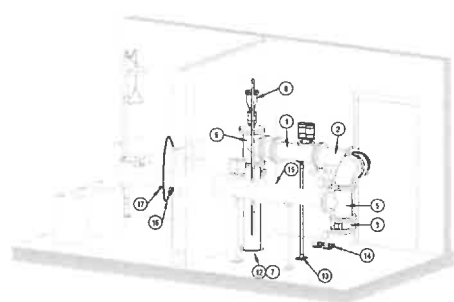
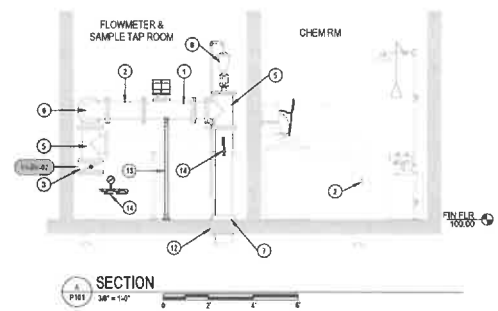
P070

THIS DRAWING IS UNLESS OTHERWISE NOTED TO BE PRINTED AT FULL SCALE. PROJECT 12061610



KEYNOTES

- ① 1" FLOWMETER WITH STRAIGHTENING VANE.
- ② SAMPLE TAP. SEE 8P561
- ③ 1" BUTTERFLY VALVE.
- ④ 1" SPOOL PIPE
- ⑤ 1" FLANGED TEE
- ⑥ 1" FLANGED ELBOW
- ⑦ FLOOR SLEEVE. SEE 8P901
- ⑧ AIR RELEASE VALVE. SEE 8P541
- ⑨ 1" GATE VALVE.
- ⑩ 1" 90° TEE
- ⑪ 1" 45° ELBOW
- ⑫ REMOVE FLOOR SLAB AS NEEDED FOR INSTALLATION OF NEW PIPE. REPAIR AS NEEDED.
- ⑬ PIPE SUPPORT AS NEEDED. SEE 7P501
- ⑭ PRESSURE GAUGE W/ SAMPLING TAP FITTING. SEE 8P511
- ⑮ THREAD PLUG CAP
- ⑯ CHEMICAL INJECTION PER STANDARD DETAIL 10P511
- ⑰ 3/4" TAP. PLUG WITH THREADED CAP FOR FUTURE USE.



ISO VIEW (FOR REFERENCE ONLY)



Project Owner:

VILLAGE OF YORKVILLE
YORKVILLE WELL #2
 RACINE COUNTY, WISCONSIN

The drawings are prepared to the extent indicated herein. It is the responsibility of the client to provide all necessary information and to verify the accuracy of the information provided. The drawings are not to be used for any other purpose without the written consent of the engineer.

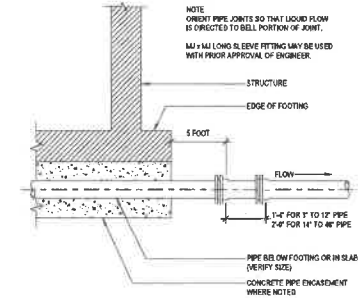
DATE Project YORKVILLE 10/2016
 Checked By MJC
 Drawn By JAV

Project Number Issue Date
 12106 FOR 802 06/2014

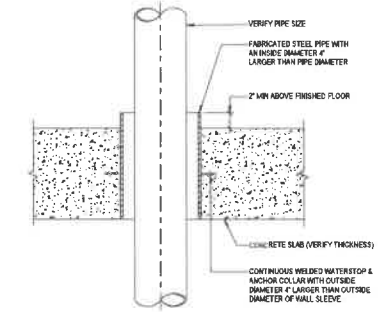
REV.	DESCRIPTION	DATE

FLOOR PLAN

P101



A PIPE CONNECTION - TYPE 1 DETAIL
NOT TO SCALE



B UNSEALED FLOOR SLEEVE DETAIL
NOT TO SCALE



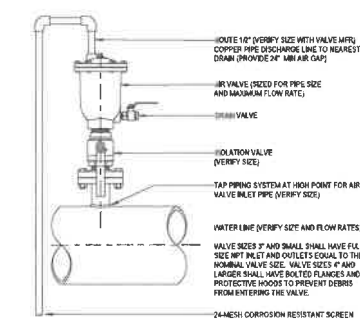
NOTES

- PLACE BETWEEN FITTING AND UNDISTURBED TRENCH WALL
- MINIMUM THICKNESS 12 INCHES
- MINIMUM AREA IN SQUARE FEET SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

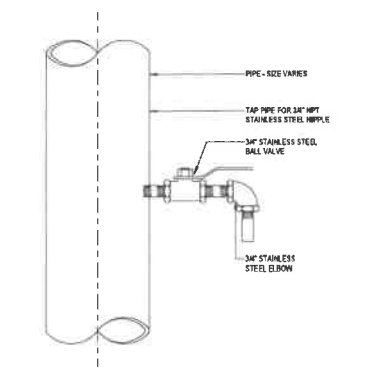
PIPE SIZE	THRUST BLOCKINGS			
	TEE OF PLUG	1/4 BEND	1/2 BEND	3/4 BEND
6"	2.9	3.1	1.8	0.8
8"	3.7	5.3	2.8	1.4
10"	5.7	8.1	4.4	2.2
12"	9.1	13.4	6.4	3.2
18"	15.1	21.4	11.6	5.9
24"	23.2	36.2	18.1	9.3
30"	31.8	48.5	25.1	13.3

- SIZE IN ORDER BASED ON LARGEST PIPE
- VERIFY THAT BOLTS ARE ACCESSIBLE AFTER CONCRETE IS POURED

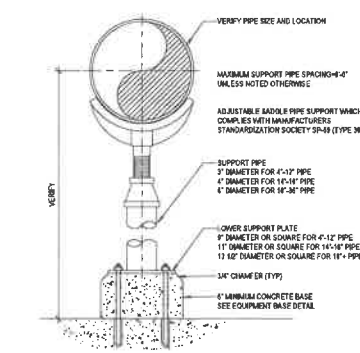
C CONCRETE THRUST BLOCKING DETAIL
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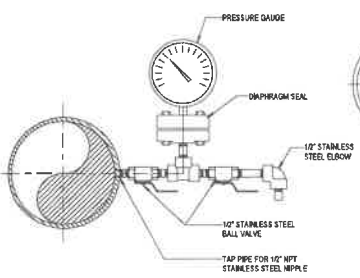
D AIR RELEASE VALVE DETAIL
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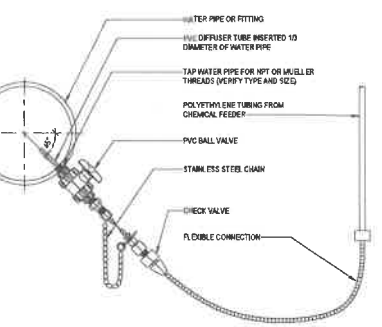
E SAMPLE TAP DETAIL
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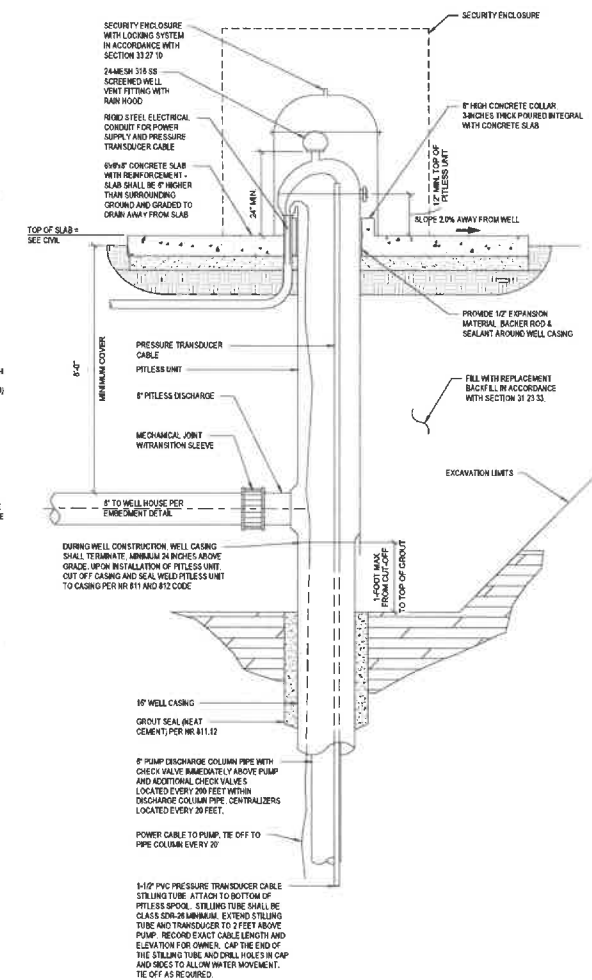
F PIPE SUPPORT FROM FLOOR
NOT TO SCALE



G PRESSURE GAUGE DETAIL
NOT TO SCALE



H CHEMICAL DIFFUSER DETAIL
NOT TO SCALE



J PITLESS UNIT DETAIL
NOT TO SCALE

VILLAGE OF YORKVILLE
YORKVILLE WELL #2
RACINE COUNTY WISCONSIN

This drawing is an extension of contract and shall remain the property of the Village of Yorkville, Wisconsin. It is to be used only for the project and location specified herein. It is not to be used for any other project or location without the written consent of the Village of Yorkville, Wisconsin. The Village of Yorkville, Wisconsin, is not responsible for any errors or omissions in this drawing. The user of this drawing shall be responsible for verifying all dimensions and specifications. The user of this drawing shall be responsible for obtaining all necessary permits and approvals. The user of this drawing shall be responsible for all costs associated with the use of this drawing. The user of this drawing shall be responsible for all damages and liabilities associated with the use of this drawing. The user of this drawing shall be responsible for all legal fees and costs associated with the use of this drawing. The user of this drawing shall be responsible for all other costs associated with the use of this drawing.

2022 Project: YORKVILLE
Checked By: JAL
Drawn By: JAL

Project No: 2022-0000000000
Issue No: 000001

REVISIONS

REV. # DESCRIPTION DATE

PROCESS PIPING DETAILS

