

ROCK RIVER WATER RECLAMATION DISTRICT

FULLER CREEK PHASE F, PUMP STATION INSTALLATION CAPITAL IMPROVEMENT PROJECT 1566

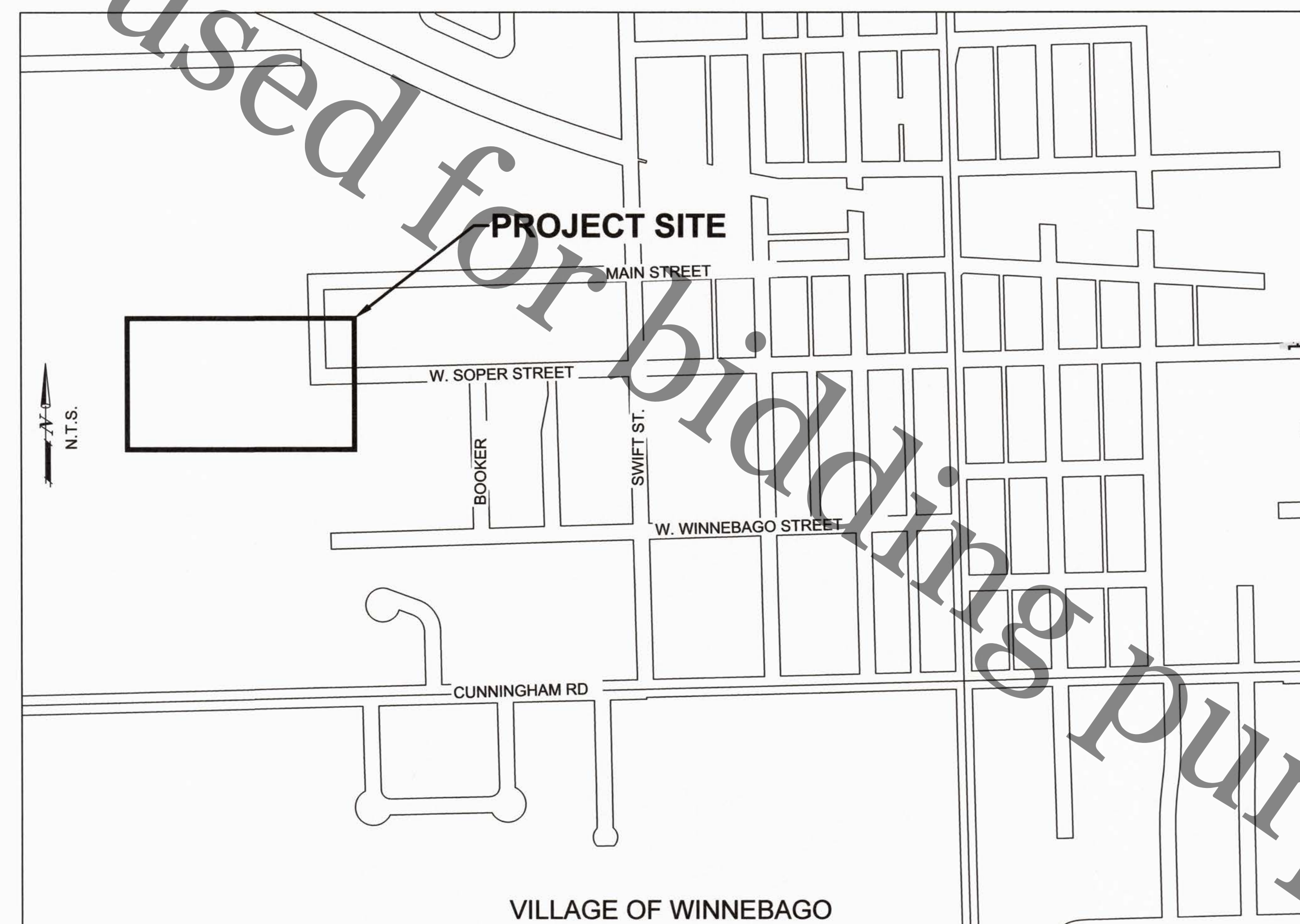
MARCH 6, 2018

BOARD OF TRUSTEES

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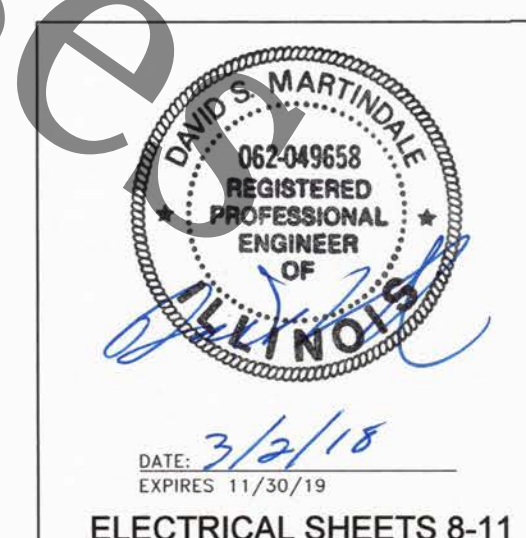
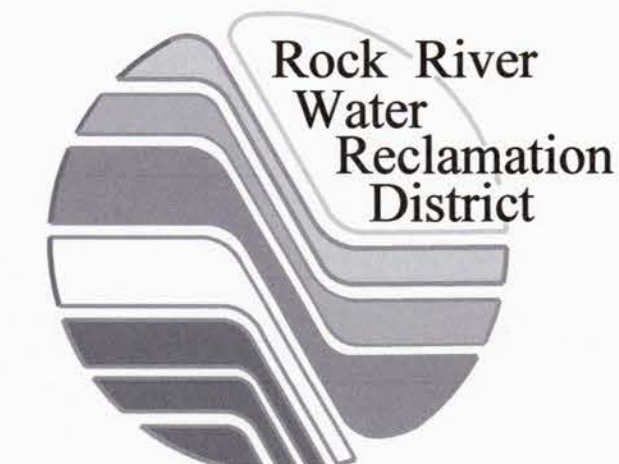
OFFICIALS

TIMOTHY S. HANSON	DISTRICT DIRECTOR
CHRISTOPHER T. BAER, PE	ENGINEERING MANAGER



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LEGEND		
EXISTING	PROPOSED	
		RIGHT OF WAY LINE
		PROPERTY LINE
		BUILDING
		WATER EDGE
		EASEMENT - SANITARY
		EASEMENT - TEMPORARY CONSTRUCTION
		BRUSH OR TREE LINE
		DITCH FLOWLINE
		FENCE
		FENCE - SILT
		FENCE - TEMPORARY CONSTRUCTION
		ROADWAY CENTERLINE
		EDGE OF PAVEMENT
		CURB & GUTTER
		CABLE - OVERHEAD
		CABLE - UNDERGROUND
		ELECTRIC - OVERHEAD
		ELECTRIC - UNDERGROUND
		FIBER OPTIC / CAT6 CABLE
		GAS LINE
		TELEPHONE - OVERHEAD
		TELEPHONE - UNDERGROUND
		PEDESTALS (CATV, ELEC, TELE), & HANDHOLE
		SANITARY MANHOLE & SANITARY SEWER
		SANITARY SERVICE & CLEANOUT
		SANITARY FORCEMAIN
		STORM SEWER
		STORM MANHOLE, CATCH BASIN, CURB INLET, INLET SPECIAL
		DRAINAGE CULVERT
		WATER MAIN & WATER MAIN VALVE
		WATER SERVICE & WATER SERVICE VALVE
		FIRE HYDRANT
		SOIL BORING
		BENCHMARK
		MAILBOX

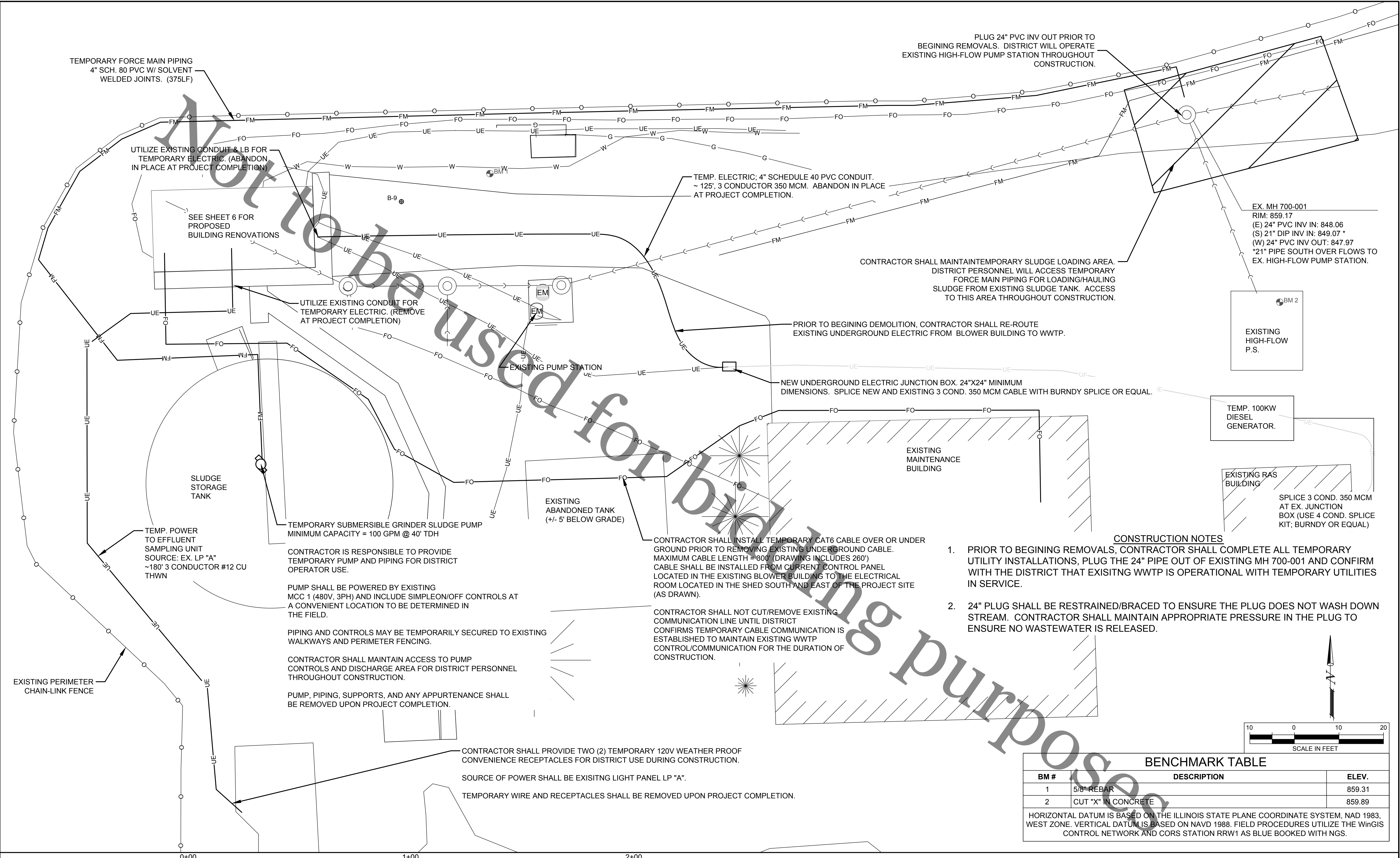
	DETAIL DESC. SCALE: AS NOTED	= DETAIL OR SECTION #, SHEET DETAIL OR SECTION IS ORIGINATED FROM, DESCRIPTION, AND SCALE.
		= SECTION #, SHEET SECTION IS SHOWN ON.
		= DETAIL #, SHEET DETAIL IS SHOWN ON, AND POINT OF VIEW.

ABBREVIATIONS	
SAN. = SANITARY	LF = LINEAR FEET
MH = MANHOLE	FT = FEET
CO = CLEANOUT	SY = SQUARE YARD(S)
VCP = VITRIFIED CLAY PIPE	EA = EACH
LINOIPP = LINED WITH CURED IN PLACE PIPE	CY = CUBIC YARD(S)
RCP = REINFORCED CONCRETE PIPE	LS = LUMP SUM
DI = DUCTILE IRON	PVMNT = PAVEMENT
CMP = CORRUGATED METAL PIPE	TY. = TYPE
ABD = ABANDON(ED)	UNK. = UNKNOWN
REM. = REMOVE(D)	EL. = ELEVATION
REPL. = REPLACE(D)	EX. = EXISTING
	PR. = PROPOSED

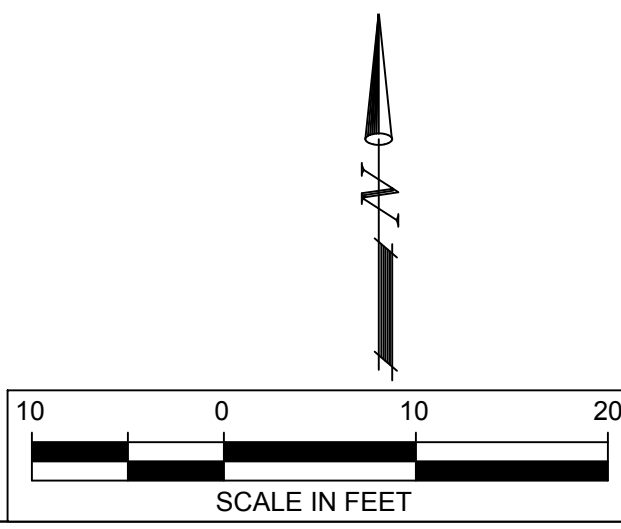
LEGEND	
	UTILITY POLE W/ GUY WIRE & MAST ARM LIGHT POLE
	TREE (DECIDUOUS & CONIFEROUS)
	BRUSH & SHRUB
	SPOT ELEVATION
	EXISTING SURFACE TYPE (HOT-MIX ASPHALT, AGGREGATE, CONCRETE, TURF)
	DITCH CHECK
	INLET OR PIPE PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL BLANKET
	PAVEMENT REPLACEMENT
	AGGREGATE REPLACEMENT
	RIP RAP

SUMMARY OF QUANTITIES			
No.	ITEM	UNIT	QTY.
1	TEMPORARY UTILITIES, COMPLETE	LS	1
2	SITE DEMOLITION, COMPLETE	LS	1
3	6" SANITARY SEWER SERVICE W/ 6" DIA. CLEANOUT	EA	1
4	5' DIA. SANITARY MANHOLE	EA	1
5	24" DIA. PVC SANITARY SEWER, AWWA C905, ASTM D3139	LF	47
6	12" DIA. PVC SANITARY FORCE MAIN, AWWA C905, ASTM D3139	LF	43
7	PCC SIDEWALK, 4"	SF	235
8	TEMPORARY PAVEMENT	SY	418
9	ROCK EXCAVATION	CY	88
10	DUPLEX SUBMERSIBLE PUMP STATION, COMPLETE	LS	1
11	VALVE VAULT, COMPLETE	LS	1
12	BUILDING RENOVATIONS, COMPLETE	LS	1
13	GENERAL ELECTRICAL, COMPLETE	LS	1
14	STANDBY POWER GENERATING SYSTEM, COMPLETE	LS	1
15	SITE RESTORATION AND SEEDING	LS	1

- GENERAL NOTES**
1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF WORK TO THE LINES AND GRADES SHOWN ON THESE PLANS. CONSTRUCTION SHALL NOT VARY FROM PLANS WITHOUT DISTRICT APPROVAL.
 2. THE ROCK RIVER WATER RECLAMATION DISTRICT, MUNICIPALITIES, PERTINENT ROADWAY AUTHORITIES, AND ALL AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED AT LEAST 48 HOURS MINIMUM BEFORE CONSTRUCTION CAN COMMENCE.
 - 3.
 4. ALL SERVICE LOCATIONS ARE APPROXIMATE AND MAY BE CHANGED IN THE FIELD WITH THE APPROVAL OF THE INSPECTOR. NO ADDITIONAL COMPENSATION WILL BE AWARDED DUE TO REVISED LOCATION.
 5. ALL CASTINGS SHALL BE SET TO FINAL GRADE PER ROCK RIVER WATER RECLAMATION DISTRICT REQUIREMENTS.
 6. SANITARY SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN THE STATE OF ILLINOIS, LATEST EDITION, AND THE REQUIREMENTS OF THE ROCK RIVER WATER RECLAMATION DISTRICT.
 7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. AT 8-1-1 OR 1-800-892-0123 AND ANY OTHER UTILITIES NOT ON THE J.U.L.I.E. SYSTEM 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
 8. ALL ROADWAY CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE ROADWAY AUTHORITY'S REQUIREMENTS, DISTRICT SPECIFICATIONS, AND THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, LATEST EDITION.
 9. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE I.E.P.A. STANDARDS AND SPECIFICATIONS, AND THE ILLINOIS URBAN MANUAL FOR SOIL EROSION AND SEDIMENT CONTROL.
 10. PROTECTION OF WATER SUPPLIES SHALL BE PER THE REQUIREMENTS OF TITLE 35, C. SECTION 370.350 OF THE ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS.

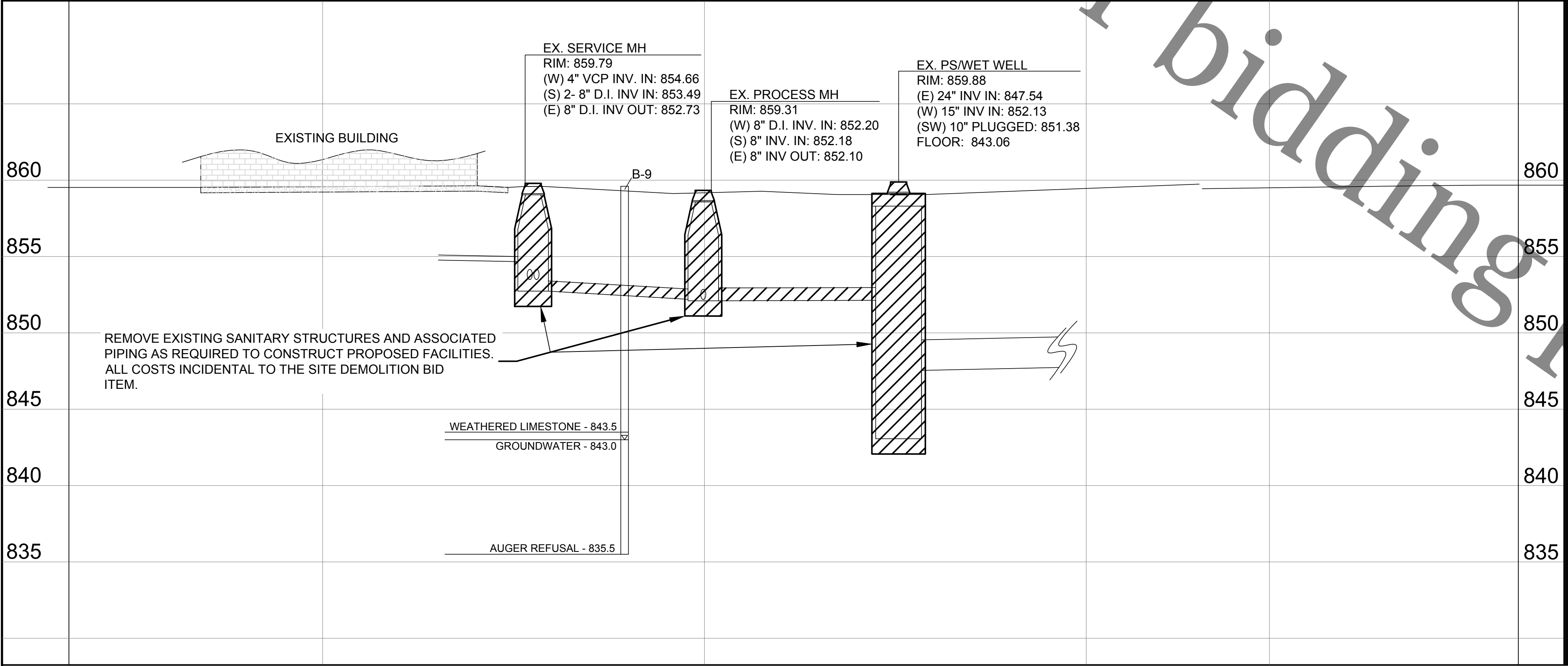
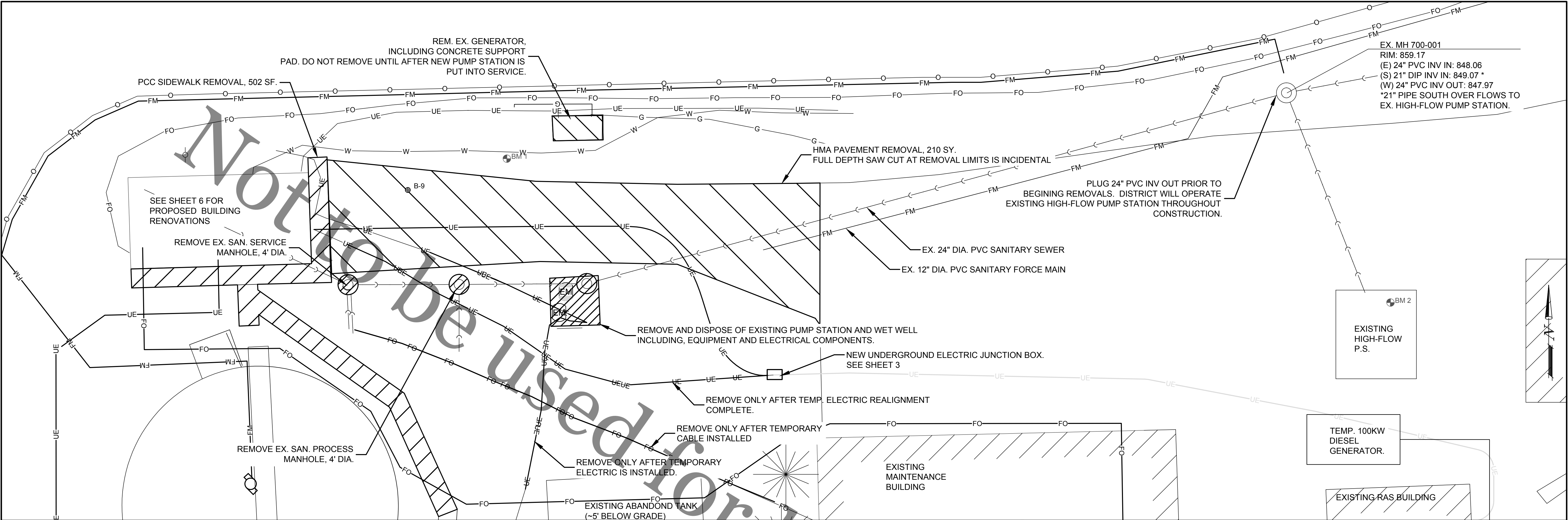


- CONSTRUCTION NOTES**
1. PRIOR TO BEGINING REMOVALS, CONTRACTOR SHALL COMPLETE ALL TEMPORARY UTILITY INSTALLATIONS, PLUG THE 24" PIPE OUT OF EXISTING MH 700-001 AND CONFIRM WITH THE DISTRICT THAT EXISITNG WWTP IS OPERATIONAL WITH TEMPORARY UTILITIES IN SERVICE.
 2. 24" PLUG SHALL BE RESTRAINED/BRACED TO ENSURE THE PLUG DOES NOT WASH DOWN STREAM. CONTRACTOR SHALL MAINTAIN APPROPRIATE PRESSURE IN THE PLUG TO ENSURE NO WASTEWATER IS RELEASED.



BENCHMARK TABLE		
BM #	DESCRIPTION	ELEV.
1	5/8" REBAR	859.31
2	CUT "X" IN CONCRETE	859.89

HORIZONTAL DATUM IS BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD 1983, WEST ZONE. VERTICAL DATUM IS BASED ON NAVD 1988. FIELD PROCEDURES UTILIZE THE WINGIS CONTROL NETWORK AND CORS STATION RRW1 AS BLUE BOOKED WITH NGS.



BENCHMARK TABLE		
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1	5/8" REBAR	859.31
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- CONSTRUCTION NOTES**
- PRIOR TO PERFORMING DEMOLITION WORK, CONTRACTOR SHALL COMPLETE ALL TEMPORARY UTILITY INSTALLATIONS, PLUG THE 24" PIPE OUT OF EXISTING MH 700-001 AND CONFIRM WITH THE DISTRICT THAT EXISITNG WWTP IS OPERATIONAL WITH ALL TEMPORARY UTILITIES IN SERVICE.
 - 24" PLUG SHALL BE RESTRAINED/BRACED TO ENSURE THE PLUG DOES NOT WASH DOWN STREAM. CONTRACTOR SHALL MAINTAIN APPROPRIATE PRESSURE IN THE PLUG TO ENSURE NO WASTEWATER IS RELEASED.
 - PROPER DISPOSAL OF REMOVED ITEMS IS THE CONTRACTOR'S RESPONSIBILITY AND IS INCIDENTAL TO THE CONTRACT.
 - REMOVAL AND DISPOSAL OF EXISTING PIPING AS REQUIRED TO FACILITATE INSTALLATION OF PROPOSED ITEMS IS INCIDENTAL. IF ANY PORTION OF UNDERGROUND PIPING OR CONDUITS ARE TO BE ABANDONED IN PLACE, CONTRACTOR SHALL PLUG PIPE ENDS AT THE LIMIT OF REMOVAL WITH NON-SHRINK GROUT OR OTHER DISTRICT APPROVED METHOD.



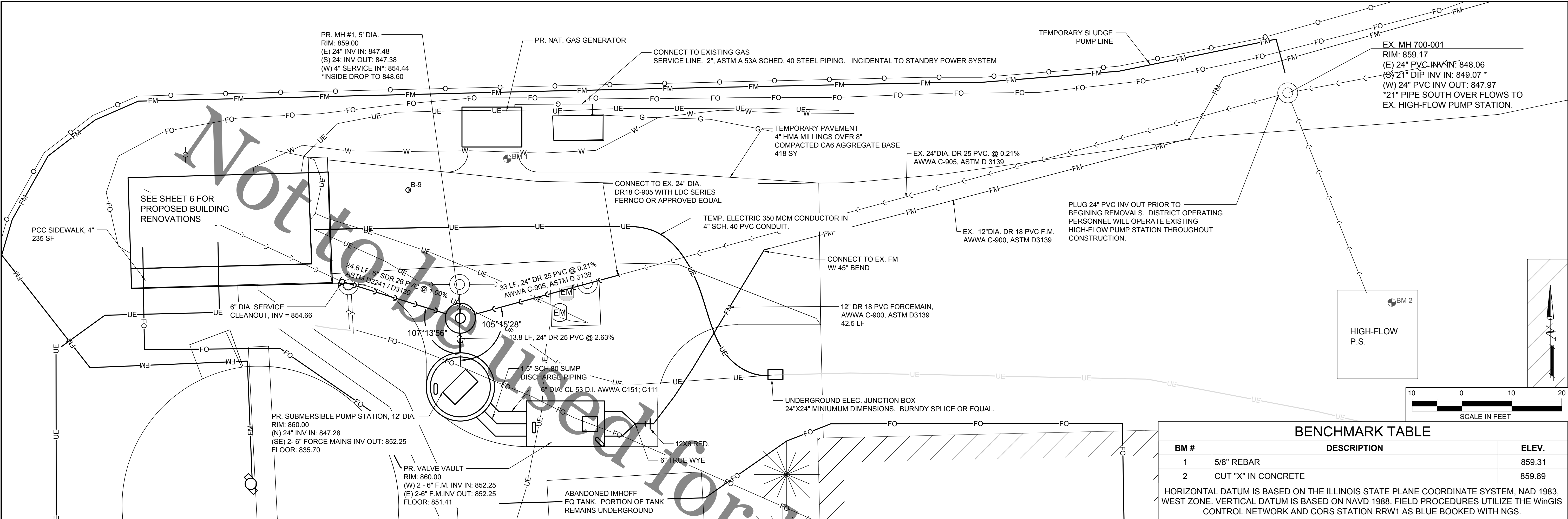
**ROCK RIVER WATER
RECLAMATION DISTRICT**
3501 KISHWAUKEE STREET
ROCKFORD, ILLINOIS 61109
(815) 387-7660

No.	DATE	REVISION	INT.

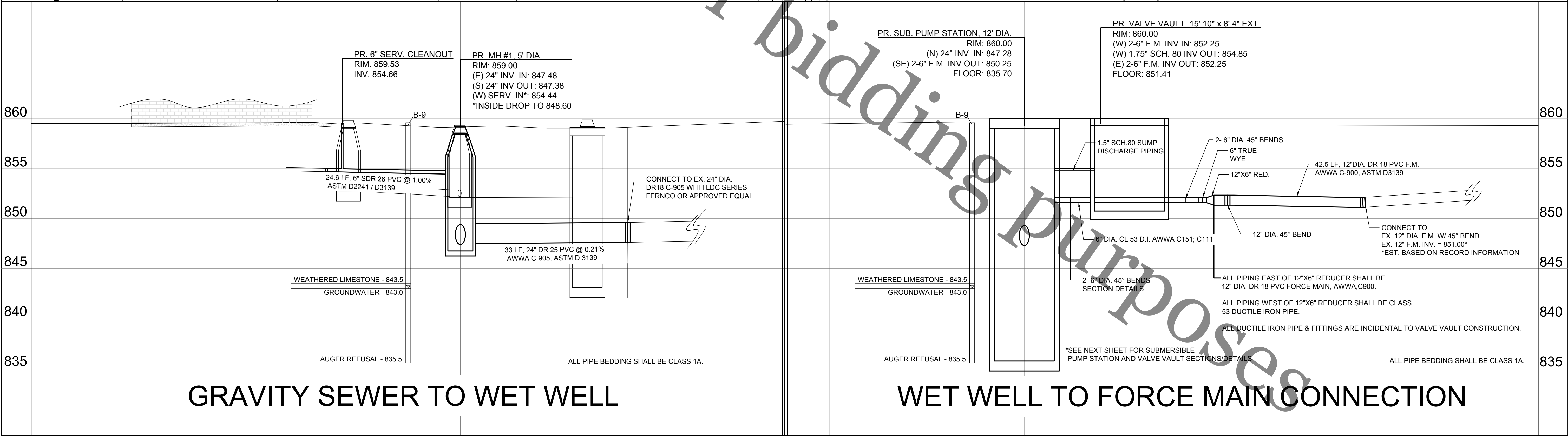
**FULLER CREEK PHASE F, PUMP STATION INSTALLATION
CAPITAL IMPROVEMENT PROJECT #1566**

**WEST SOPER STREET
SITE DEMOLITION PLAN**

Sheet No.
4 OF 12
Date
3/8/2018



BENCHMARK TABLE		
BM #	DESCRIPTION	ELEV.
1	5/8" REBAR	859.31
2	CUT "X" IN CONCRETE	859.89
HORIZONTAL DATUM IS BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD 1983, WEST ZONE. VERTICAL DATUM IS BASED ON NAVD 1988. FIELD PROCEDURES UTILIZE THE WINGIS CONTROL NETWORK AND CORS STATION RRW1 AS BLUE BOOKED WITH NGS.		



GRAVITY SEWER TO WET WELL

WET WELL TO FORCE MAIN CONNECTION

PUMP REQUIREMENTS

- CONTRACTOR SHALL SUPPLY THREE (3) PUMPS TOTAL, INCLUDING 35' OF POWER AND CONTROL CABLE. TWO(2) PUMPS WILL BE INSTALLED IN THIS PROJECT. THE THIRD PUMP WILL BE STORED ON SITE AS A BACK-UP.
- PUMPS SHALL BE 25HP, 480V, 60HZ GRINDER, CHOPPER OR NON-CLOG PUMPS CAPABLE OF PUMPING 809GPM @ 60.04' TDH.
- PUMPS SHALL BE IDENTICAL.
- PUMPS SHALL BE AS MANUFACTURED BY VAUGHAN, ABS/SULZER, FLYGT, GRUNDFOS, HOMA OR DISTRICT APPROVED EQUIVALENT.
- PUMP RAIL SYSTEM, LIFTING CHAINS OR CABLES, SUPPORTS, AND HARDWARE SHALL BE OF STAINLESS STEEL CONSTRUCTION AND COMPATIBLE WITH APPROVED PUMP.
- SEE SPECIFICATIONS FOR PUMPS AND COMPONENT SUBMITTAL REQUIREMENTS.
- CONTRACTOR SHALL SUPPLY LEVEL TRANSDUCER (GREYLINE DFM 5.1A), HIGH LEVEL FLOATS, STAINLESS STEEL CABLE, WEIGHT AND APPURTENANCES. THE CABLE AND WEIGHT TO WHICH LEVEL TRANSDUCER AND HIGH LEVEL FLOAT SWITCH SHALL BE ATTACHED TO THE SS EYE BOLT DETAILED ON THIS SHEET. SEE SPECIFICATIONS AND ELECTRICAL PLAN SHEETS 8-11 FOR ADDITIONAL DETAIL.

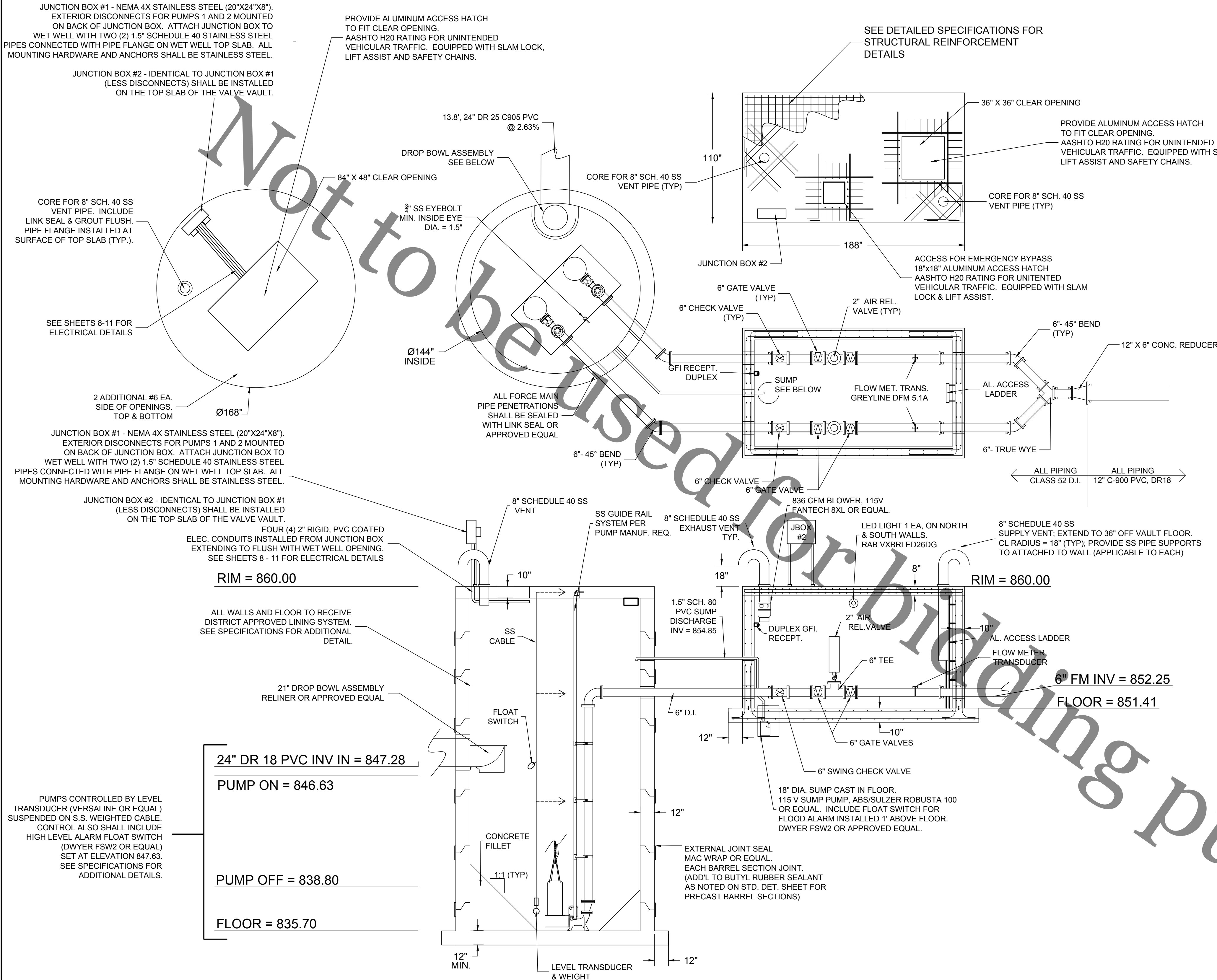
CONSTRUCTION NOTES

- SEE SPECIFICATIONS FOR ADDITIONAL DETAIL AND COMPONENT REQUIREMENTS.
- ALL PRESSURE PIPE PENETRATIONS SHALL BE SEALED WITH A DOUBLE LINK SEAL OR DISTRICT APPROVED EQUAL. REFER TO THE STANDARD DETAIL SHEET FOR GRAVITY PIPE PENETRATION SEALS.
- ALL PIPING THROUGH VALVE VAULT SHALL BE PROPERLY SUPPORTED BY CAST IN PLACE CONCRETE OR STAINLESS STEEL SUPPORTS. INCIDENTAL TO VALVE VAULT CONSTRUCTION
- FLOOR OF VALVE VAULT SHALL BE SLOPED TO DRAIN TO PROPOSED SUMP.
- REFER TO SPECIFICATIONS AND DETAILS FOR AIR RELEASE VALVE INSTALLATION REQUIREMENTS.
- CONTRACTOR SHALL ROTATE VENTILATION PIPING AS REQUIRED TO ENSURE GOOSENECK DOES NOT EXTEND BEYOND EXTERIOR PERIMETER OF VAULT OR WET WELL. FINAL ALIGNMENT WILL BE AS APPROVED BY THE DISTRICT.
- PROPOSED PUMP STATION PAY ITEM INCLUDES ALL ITEMS DETAILED ON THIS SHEET, INSTALLED INCLUDING DUCTILE IRON PIPE, EXCAVATION, BACKFILL AND FINISH GRADING AND RESTORATION.

ELECTRICAL EQUIPMENT

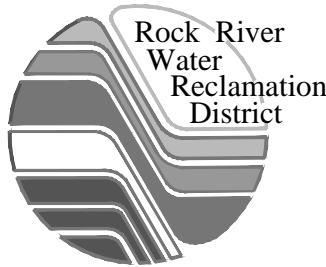
SEE SHEETS 8 - 11 FOR ADDITIONAL DETAIL

- WET WELL:
 - TWO (2) 25 HP SUBMERSIBLE PUMPS
 - ONE (1) PMC VERSALINE VL2000 SERIES OR EQUAL LEVEL TRANSDUCER
 - HIGH LEVEL ALARM FLOAT SWITCH DWYER FSW2 OR EQUAL.
- VALVE VAULT:
 - TWO (2) WALL MOUNTED LED LIGHTS; RAB VXBRLD26DG OR EQUAL.
 - ONE (1) ABS/ROBUSTA 100 SUMP PUMP OR EQUAL.
 - ONE (1) FANTECH FKDBXL EXHAUST FAN OR EQUAL.
 - TWO (2) DUPLEX GFI RECEPTACLES (VAPOR PROOF).
 - TWO (2) FLOW METER TRANSDUCERS, GREYLINE MODEL DFM 5.1.A OR EQUAL.
 - ONE (1) PLUNGER STYLE LIGHT SWITCH INSTALLED AT VAULT ACCESS HATCH TO CONTROL LIGHTING AND FAN. SWITCH SHALL BE VAPOR PROOF.



PRECAST CONCRETE WET WELL; CAST IN PLACE VALVE VAULT

ALL DETAILS 1/4"=1' UNLESS NOTED OTHERWISE
SOME DETAILS MAY BE SHOWN OUT OF SECTION FOR CLARITY



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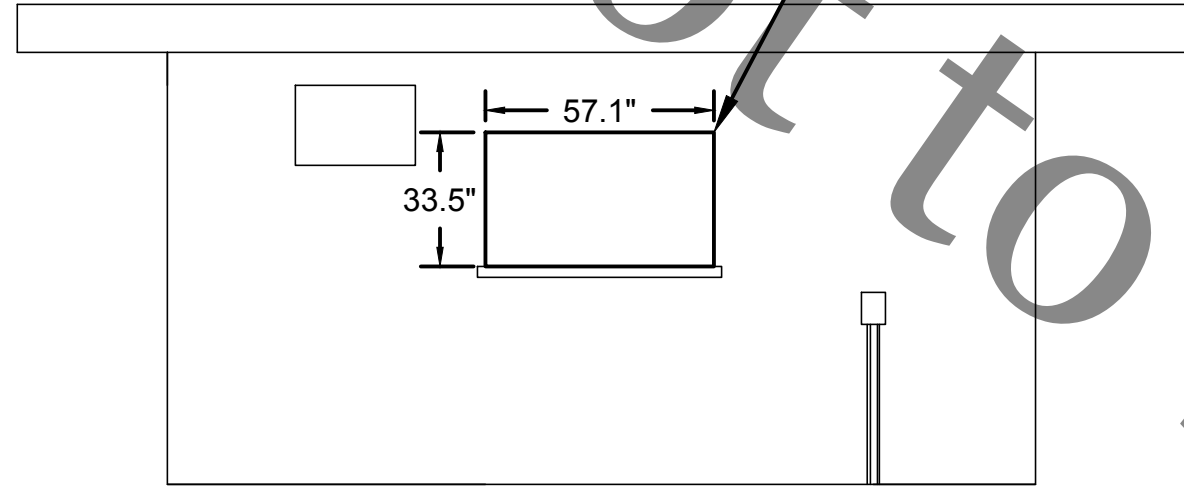
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CAPITAL IMPROVEMENT PROJECT #1566

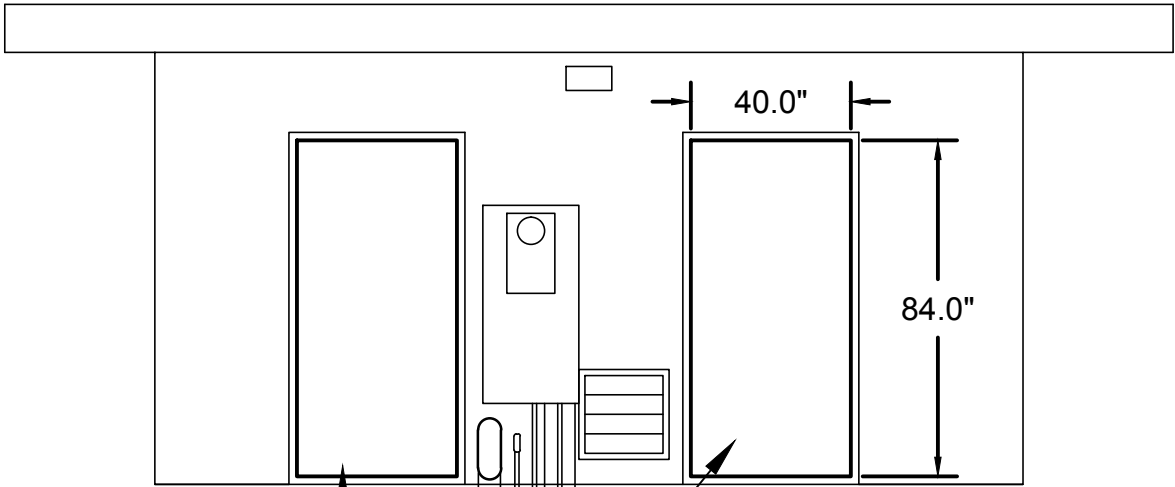
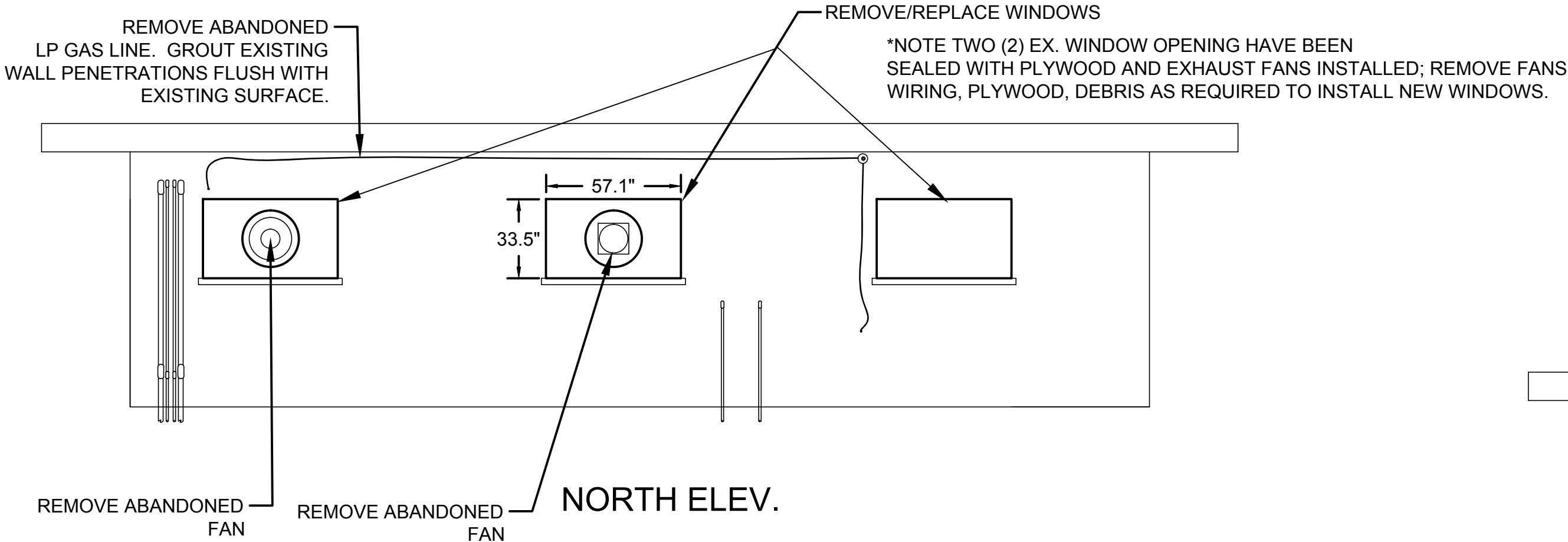
WEST SOPER STREET
PUMP STATION - WET WELL & VALVE VAULT SECTIONS & DETAILS

Sheet No.
6 OF 12
Date
3/8/2018

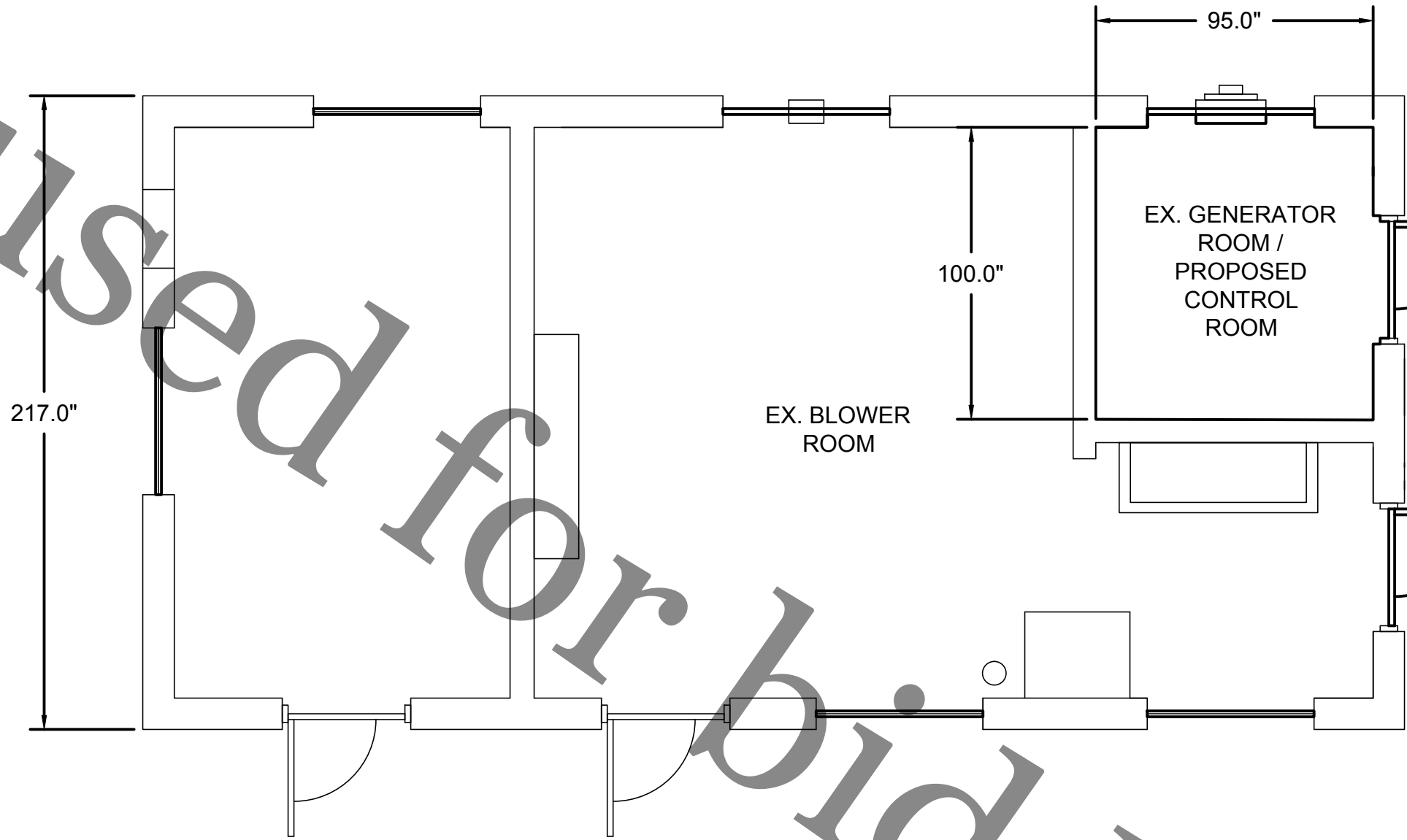
REMOVE AND REPLACE EXISTING WINDOWS (6 TOTAL) WITH NEW ALUMINUM CLAD, DOUBLE PANE PICTURE WINDOWS. MAXIMUM INSULATING U-FACTOR = 0.37. COLOR OF CLADDING SHALL BE SELECTED BY THE DISTRICT.



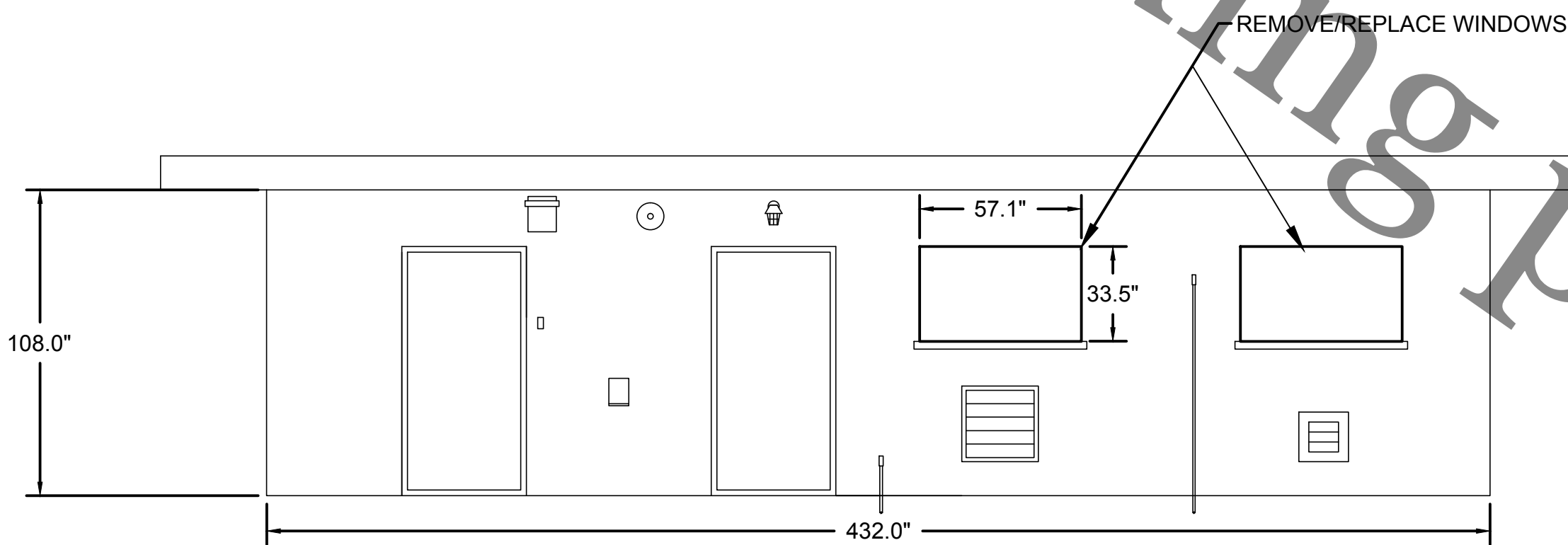
WEST ELEV.



EAST ELEV.



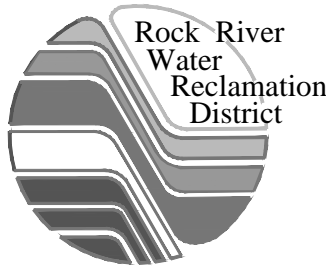
PLAN VIEW



SOUTH ELEV.

CONSTRUCTION NOTES

1. BUILDING IMPROVEMENTS FOR THIS PROJECT ARE LIMITED TO REPLACEMENT OF EXISTING WINDOWS (6), REPLACING EXT. DOOR PANELS (2), WORK WITHIN THE EXISTING GENERATOR ROOM, AND ELECTRICAL WORK REQUIRED FOR PROPOSED PUMPING EQUIPMENT AND APPURTENANCES.
2. DIMENSIONS PROVIDED ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING DIMENSIONS PRIOR TO PRODUCT SUBMITTAL AND PURCHASE.
3. ANY EQUIPMENT AND CONDUITS NOT BEING REUSED IN PROPOSED CONSTRUCTION LOCATED IN THE EXISTING GENERATOR ROOM SHALL BE REMOVED. CEILING, WALL, OR FLOOR PENETRATIONS THAT REMAIN SHALL BE GROUTED FLUSH WITH ADJACENT SURFACE.
4. PRIOR TO REMOVAL OF EXISTING GENERATOR AND AUTOMATIC TRANSFER SWITCH, CONTRACTOR SHALL HAVE A PORTABLE, DIESEL DRIVEN STAND BY GENERATOR ON SITE TO SERVE AS BACK-UP POWER FOR THE TREATMENT PLANT WHICH WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. GENERATOR SHALL BE SIZED APPROPRIATELY FOR THE LOADING PROVIDED IN SPECIFICATIONS.
5. AFTER REMOVALS, AND BEFORE ANY NEW EQUIPMENT OR CONDUIT IS INSTALLED IN THE EXISTING GENERATOR ROOM, CONTRACTOR SHALL CLEAN AND PAINT ALL INTERIOR WALLS AND CEILING OF THE BLOWER ROOM. COLOR SHALL BE AS SELECTED BY THE DISTRICT.



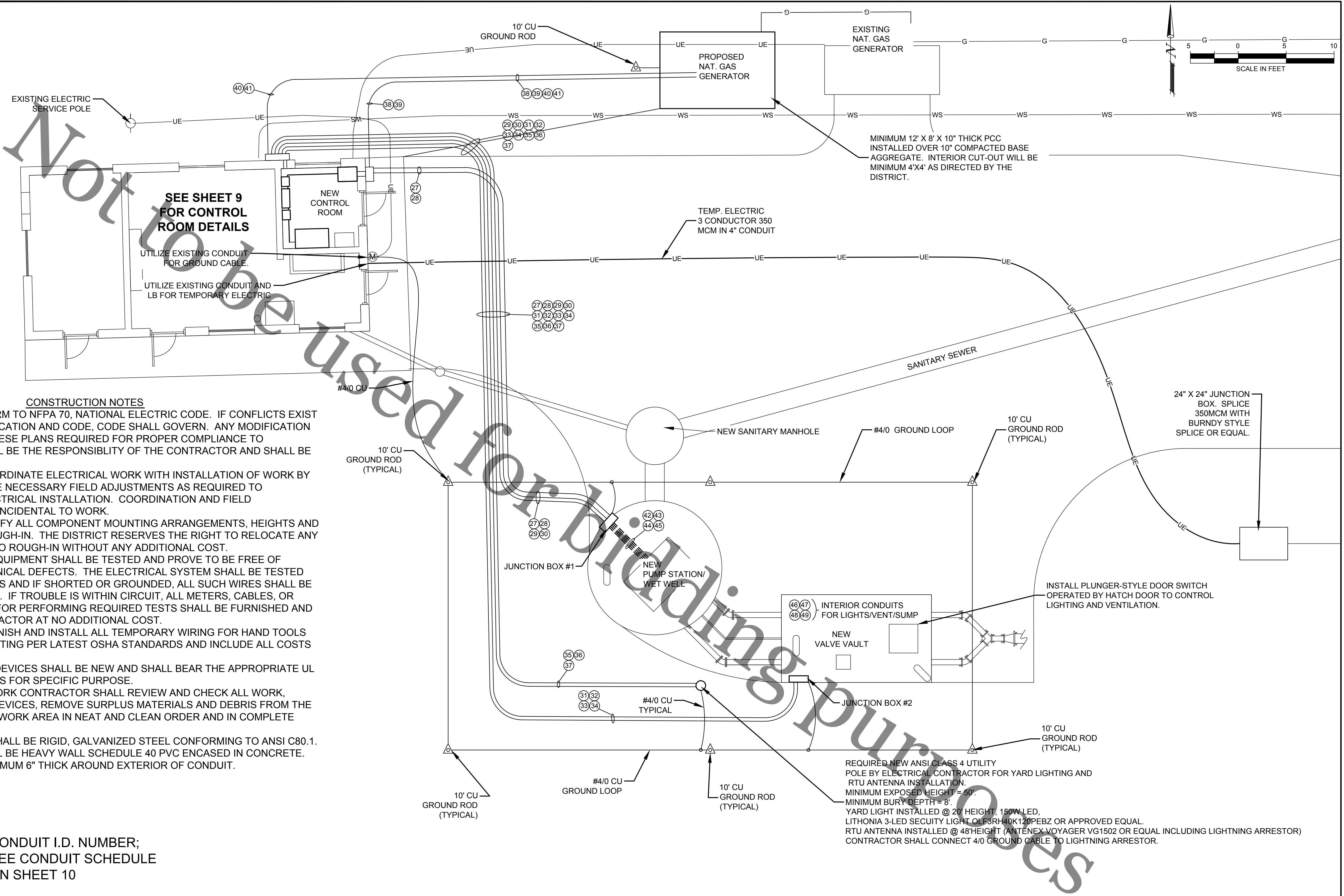
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FULLER CREEK PHASE F, PUMP STATION INSTALLATION
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WEST SOPER STREET
EXISTING BUILDING RENOVATIONS

Sheet No.
7 OF 12
Date
3/1/2018



- CONSTRUCTION NOTES**
1. ALL WORK SHALL CONFORM TO NFPA 70, NATIONAL ELECTRIC CODE. IF CONFLICTS EXIST BETWEEN PLANS, SPECIFICATION AND CODE, CODE SHALL GOVERN. ANY MODIFICATION AND/OR ADDITIONS TO THESE PLANS REQUIRED FOR PROPER COMPLIANCE TO APPLICABLE CODES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE BID.
 2. CONTRACTOR SHALL COORDINATE ELECTRICAL WORK WITH INSTALLATION OF WORK BY OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE ELECTRICAL INSTALLATION. COORDINATION AND FIELD ADJUSTMENTS SHALL BE INCIDENTAL TO WORK.
 3. CONTRACTOR SHALL VERIFY ALL COMPONENT MOUNTING ARRANGEMENTS, HEIGHTS AND LOCATIONS PRIOR TO ROUGH-IN. THE DISTRICT RESERVES THE RIGHT TO RELOCATE ANY DEVICE UP TO 10' PRIOR TO ROUGH-IN WITHOUT ANY ADDITIONAL COST.
 4. ALL INSTRUMENTS AND EQUIPMENT SHALL BE TESTED AND PROVE TO BE FREE OF ELECTRONIC AND MECHANICAL DEFECTS. THE ELECTRICAL SYSTEM SHALL BE TESTED FOR GROUNDS OR SHORTS AND IF SHORTED OR GROUNDED, ALL SUCH WIRES SHALL BE REMOVED AND REPLACED. IF TROUBLE IS WITHIN CIRCUIT, ALL METERS, CABLES, OR EQUIPMENT NECESSARY FOR PERFORMING REQUIRED TESTS SHALL BE FURNISHED AND PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.
 5. CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY WIRING FOR HAND TOOLS AND CONSTRUCTION LIGHTING PER LATEST OSHA STANDARDS AND INCLUDE ALL COSTS IN BID.
 6. ALL EQUIPMENT AND/OR DEVICES SHALL BE NEW AND SHALL BEAR THE APPROPRIATE UL OR CSA APPROVED LABELS FOR SPECIFIC PURPOSE.
 7. UPON COMPLETION OF WORK CONTRACTOR SHALL REVIEW AND CHECK ALL WORK, CLEAN EQUIPMENT AND DEVICES, REMOVE SURPLUS MATERIALS AND DEBRIS FROM THE PROPERTY, LEAVING THE WORK AREA IN NEAT AND CLEAN ORDER AND IN COMPLETE WORKING CONDITION.
 8. ALL INTERIOR CONDUIT SHALL BE RIGID, GALVANIZED STEEL CONFORMING TO ANSI C80.1. EXTERIOR CONDUIT SHALL BE HEAVY WALL SCHEDULE 40 PVC ENCASED IN CONCRETE. CONCRETE SHALL BE MINIMUM 6" THICK AROUND EXTERIOR OF CONDUIT.

= CONDUIT I.D. NUMBER;
SEE CONDUIT SCHEDULE
ON SHEET 10



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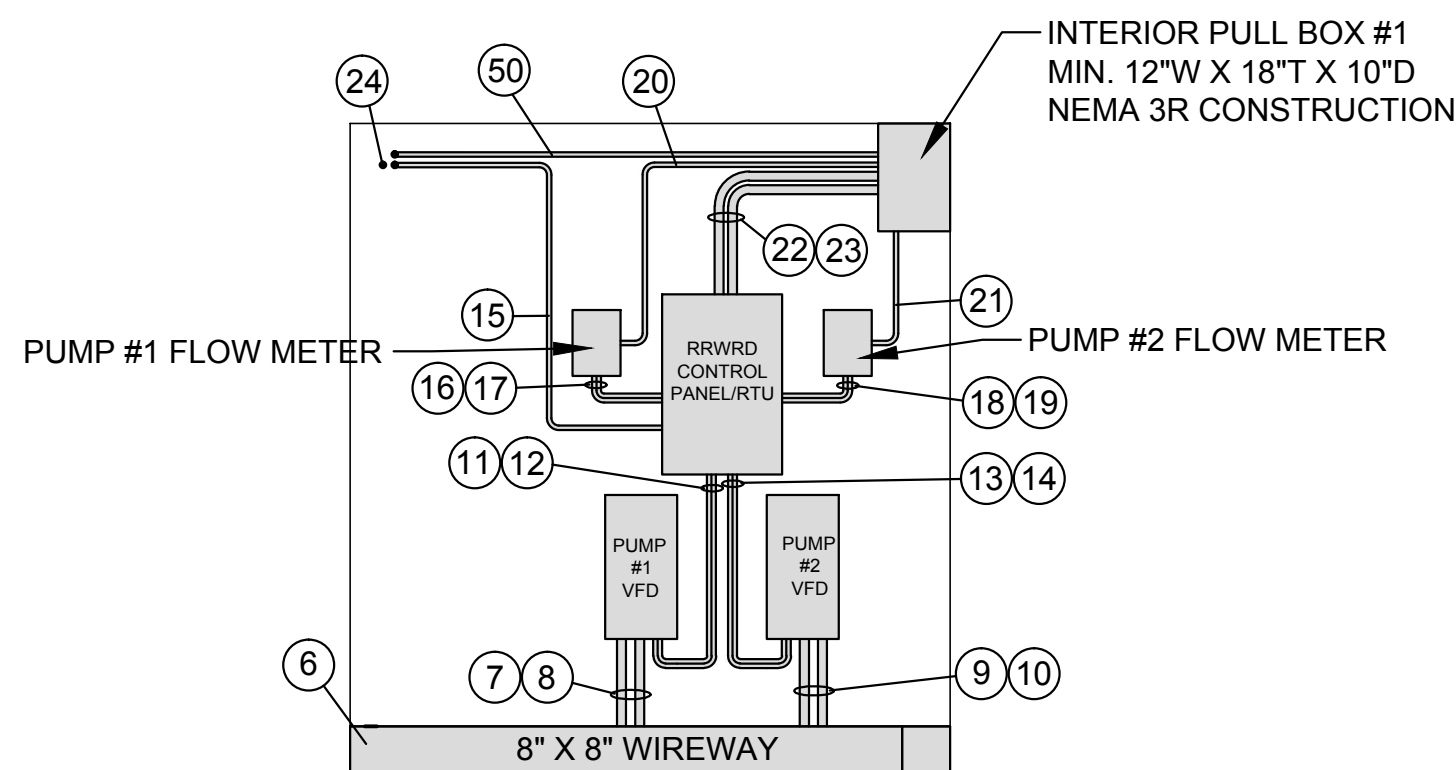
**WEST SOPER STREET
ELECTRICAL SITE PLAN**

Sheet No.
8 OF 12
Date
3/1/2018

REMOVE EXISTING JUNCTION BOX AND CONDUIT. GROUT CONDUIT PENETRATIONS FLUSH WITH EXISTING FLOOR SURFACE.

REMOVE EX. UNIT HEATER AND RECEPTACLE.

EXISTING WEST WALL ELEV.



PROPOSED WEST WALL ELEV.

1-2" CONDUIT TO HIGH FLOW P.S.
1-2" TO EX. GENERATOR
2-3/4" TO EX. GENERATOR

INTERIOR PULL BOX #1

EXISTING NORTH WALL ELEV.

CORE DRILL EX. WALL (2 - 6" DIA.) TO CONNECT NEW AUTO TRANSFER SWITCH AND PULL BOX #2.

EXTERIOR PULL BOX #2. MINIMUM DIMENSIONS:
18"W X 48"H X 10"D. NEMA 4X STAINLESS STEEL CONSTRUCTION REQUIRED.

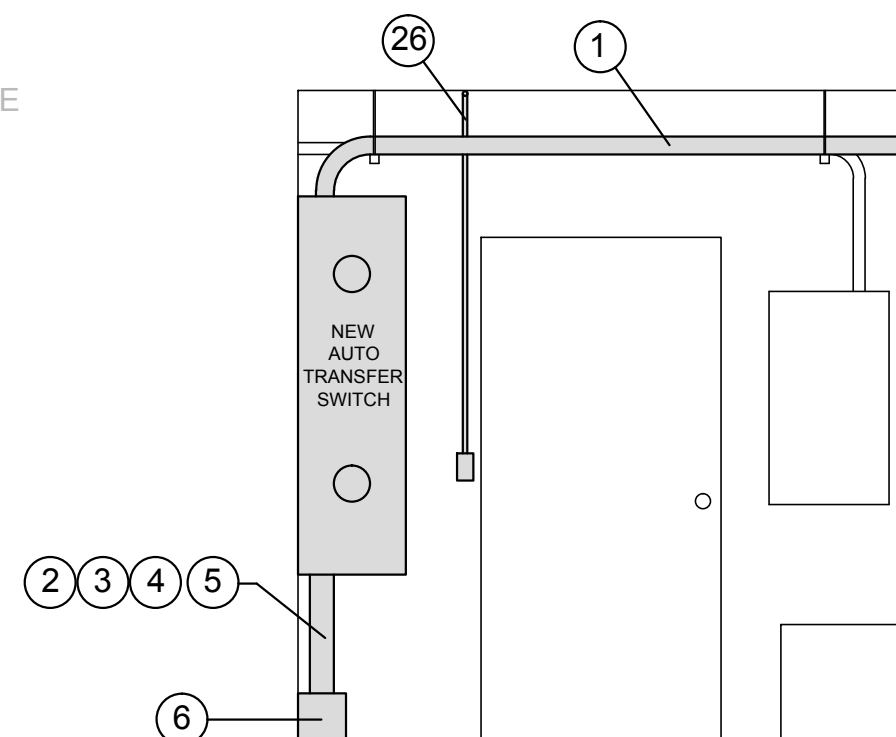
PROPOSED NORTH WALL ELEV.

1-2" CONDUIT TO HIGH FLOW P.S.
1-2" TO EX. GENERATOR
2-3/4" TO EX. GENERATOR

EX. AUTO TRANSFER SWITCH

EX. LOUVER

EXISTING EAST WALL ELEV.



PROPOSED EAST WALL ELEV.

EXTERIOR PULL BOX #1
MIN. 30"W X 18"H X 10"D
NEMA 4X STAINLESS STEEL CONSTRUCTION REQUIRED

SEE ELEVATION
VEIWS FOR
DETAIL

LED CEILING MOUNT
RAB CLED52BBW/BL
OR EQUAL

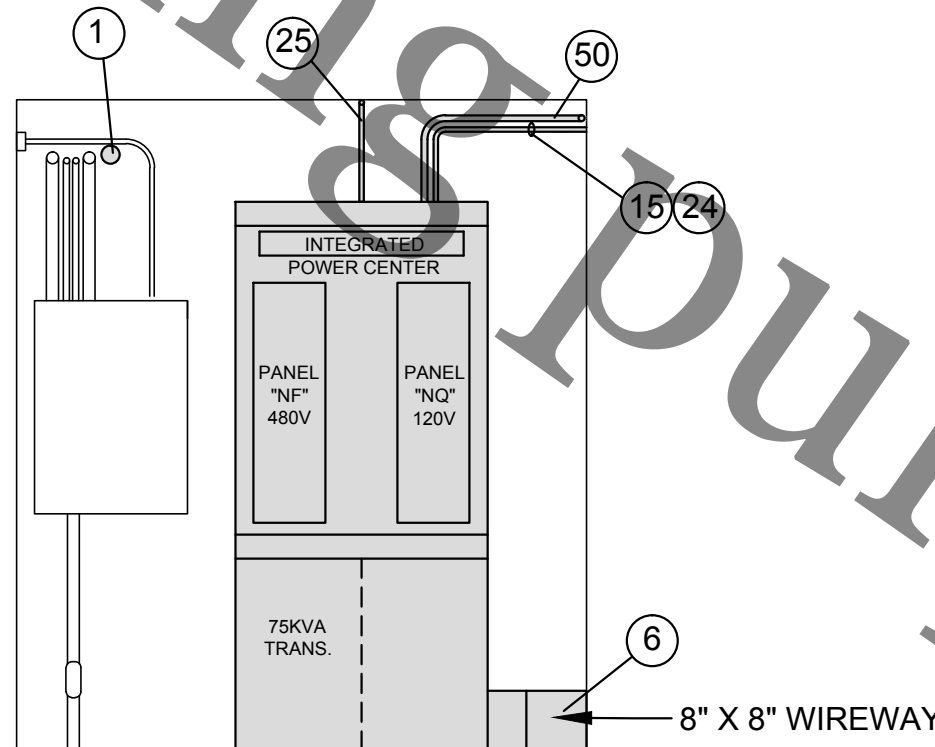
CONTROL ROOM PLAN VIEW

PLAN VIEW AND ALL DETAILS DRAWN AT 3/8" = 1'

REMOVE EX. RECEPTACLE & ASSOCIATED CONDUIT.

REMOVE EX. PUMP STATION DISCONNECT, JUNCTION BOX, ASSOCIATED CONDUIT & CONDUCTORS.

EXISTING SOUTH WALL ELEV.



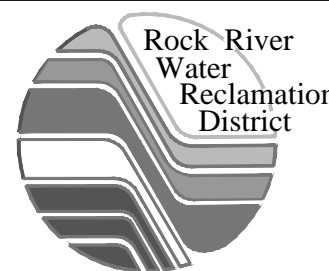
PROPOSED SOUTH WALL ELEV.

#

= CONDUIT I.D. NUMBER;
SEE CONDUIT SCHEDULE
ON SHEET 10

INTEGRATED POWER CENTER

1. POWER CENTER SHALL BE DELIVERED TO SITE WITH "NF" AND "NQ" PANELS AND TRANSFORMER ASSEMBLED AND MOUNTED IN A SINGLE ENCLOSURE.
2. POWER CENTER SHALL BE AS MANUFACTURED BY SQUARE D OR DISTRICT APPROVED EQUIVALENT.
3. MAXIMUM ENCLOSURE DIMENSIONS SHALL BE 42" WIDE X 24" DEEP X 92" HIGH.
4. ALL CIRCUIT BREAKERS SHALL INCLUDE A VISUAL INDICATOR FOR A TRIPPED BREAKER. QO, QOB OR APPROVED EQUAL.



ROCK RIVER WATER
RECLAMATION DISTRICT
3501 KISHWAUKEE STREET
ROCKFORD, ILLINOIS 61109
(815) 387-7660

No.	DATE	REVISION	INT.

FULLER CREEK PHASE F, PUMP STATION INSTALLATION
CAPITAL IMPROVEMENT PROJECT #1566

WEST SOPER STREET
ELECTRICAL CONTROL ROOM DETAILS

Sheet No.
9 OF 12
Date
3/1/2018

CONDUIT SCHEDULE

CONDUIT I.D. NUMBER	INTERIOR/EXTERIOR	SIZE	FROM	TO	APPROXIMATE LENGTH	CONDUCTORS (#) DESCRIPTION	ASSOCIATED EQUIPMENT
1	INTERIOR - CTRL. BLDG.	3" DIAMETER	SERVICE METER	AUTO TRANS. SWITCH	14.7	(1) 3 CONDUCTOR, 350 MCM	AUTO TRANSFER SWITCH (ATS)
2	INTERIOR - CTRL. BLDG.	3" DIAMETER	AUTO TRANS. SWITCH	CONDUIT 6	1.7	(1) 3 CONDUCTOR, 350MCM	ATS; INT. POWER CENTER
3	INTERIOR - CTRL. BLDG.	3" DIAMETER	AUTO TRANS. SWITCH	CONDUIT 6	1.7	(1) 3 CONDUCTOR, #8 SHIELDED VFD CABLE, 1000V RATED	VFD#1; PUMP #1
4	INTERIOR - CTRL. BLDG.	3" DIAMETER	AUTO TRANS. SWITCH	CONDUIT 6	1.7	(1) 3 CONDUCTOR, #8 SHIELDED VFD CABLE, 1000V RATED	VFD #2; PUMP #2
5	INTERIOR - CTRL. BLDG.	3" DIAMETER	AUTO TRANS. SWITCH	CONDUIT 6	1.7	SPARE - NO CONDUCTORS	-
6	INTERIOR - CTRL. BLDG.	8" X 8"	AUTO TRANS. SWITCH	INT. POWER CENT.	17.7	(2) 3 CONDUCTOR, #8 SHIELDED, 1000V RATED; (1) 3 CONDUCTOR, 350 MCM; (2) #8 CU THWN	ATS; INT. POWER CENTER; VFD #1; PUMP #1; VFD #2; PUMP #2
7	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONDUIT 6	VFD #1	1.4	(1) 3 CONDUCTOR #8 CU, THWN	INT. POWER CENTER; VFD #1
8	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONDUIT 6	VFD #1	1.4	(1) 3 CONDUCTOR #8 SHIELDED VFD CABLE 1000V RATED	VFD #1; PUMP #1
9	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONDUIT 6	VFD #2	1.4	(1) 3 CONDUCTOR #8 CU, THWN	INT. POWER CENTER; VFD #2
10	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONDUIT 6	VFD #2	1.4	(1) 3 CONDUCTOR #8 SHIELDED VFD CABLE, 1000V RATED	VFD #2; PUMP #2
11	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	VFD #1	3.7	(2) 2 CONDUCTOR #18 CU THWN	CTRL PANEL; VFD #1
12	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	VFD #1	3.7	(1) 2 CONDUCTOR #18 SHIELDED	CTRL PANEL; VFD #1
13	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	VFD #2	3.7	(2) 2 CONDUCTOR #18 CU THWN	CTRL PANEL; VFD #2
14	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	VFD #2	3.7	(1) 2 CONDUCTOR #18 SHIELDED	CTRL PANEL; VFD #2
15	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	INT. POWER CENTER	CONTROL PANEL	10.4	(1) 3 CONDUCTOR #10 CU THWN	INT. POWER CENTER; CTRL PANEL
16	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	FLOW METER #1	1.2	(1) 2 CONDUCTOR #18 SHIELDED	CONTROL PANEL; FLOW METER #1
17	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	FLOW METER #1	1.2	(1) 3 CONDUCTOR #12 CU THWN	CONTROL PANEL; FLOW METER #1
18	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	FLOW METER #2	1.2	(1) 2 CONDUCTOR #18 SHIELDED	CONTROL PANEL; FLOW METER #2
19	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	CONTROL PANEL	FLOW METER #2	1.2	(1) 3 CONDUCTOR #12 CU THWN	CONTROL PANEL; FLOW METER #2
20	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	FLOW METER #1	PULL BOX #1	5.6	(1) 2 CONDUCTOR #18 SHIELDED	FLOW METER #1; FLOW TRANSDUCER #1
21	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	FLOW METER #2	PULL BOX #1	1.9	(1) 2 CONDUCTOR #18 SHIELDED	FLOW METER #2; FLOW TRANSDUCER #2
22	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONTROL PANEL	PULL BOX #1	3.6	(3) 2 CONDUCTOR #18 SHIELDED	WW LEVEL; PUMP #1 AMPS; PUMP #2 AMPS
23	INTERIOR - CTRL. BLDG.	1 1/2" DIAMETER	CONTROL PANEL	PULL BOX #1	3.5	(7) 2 CONDUCTOR #18; (2) 3 CONDUCTOR #12 CU THWN	WW FLOAT; PUMP #1 TEMP; PUMP #2 TEMP; V.V. FLOAT; V.V. LIGHTING & VENT.
24	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	INT. POWER CENTER	EX. LP "A"	22.8	(1) 3 CONDUCTOR #6 CU THWN	INT. POWER CENTER; EX. LP"A"
25	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	INT. POWER CENTER	CTRL. ROOM LIGHT	5.8	(1) 3 CONDUCTOR #12 CU THWN	INT. POWER CENTER; NEW LIGHT/SWITCH
26	INTERIOR - CTRL. BLDG.	3/4" DIAMETER	WALL SWITCH	CTRL. ROOM LIGHT	9.9	(1) 3 CONDUCTOR #12 CU THWN	NEW LIGHT; NEW SWITCH
27	EXTERIOR - UNDERGROUND	3" DIAMETER	PULL BOX #2	JUNCTION BOX #1	67	(2) 3 CONDUCTOR #8 SHIELDED VFD CABLE, 1000V RATED	VFD #1; PUMP #1; VFD #2; PUMP #2
28	EXTERIOR - UNDERGROUND	3" DIAMETER	PULL BOX #2	JUNCTION BOX #1	67	SPARE - NO CONDUCTORS	
29	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #1	78	(1) 2 CONDUCTOR #18 SHIELDED	WET WELL LEVEL
30	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #1	78	(1) 2 CONDUCTOR #18 CU THWN	WET WELL FLOAT
31	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #2	128	(2) 2 CONDUCTOR #18 CU THWN; (3) 3 CONDUCTOR #12 CU THWN	VALVE VAULT LIGHTS; VENTILATION, SUMP PUMP RECEPTICLE
32	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #2	128	(2) 2 CONDUCTOR #18 SHIELDED	FLOW METER #1 TRANSDUCER; FLOW METER #2 TRANSDUCER
33	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #2	128	SPARE - NO CONDUCTORS	-
34	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	JUNCTION BOX #2	128	SPARE - NO CONDUCTORS	-
35	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	YARD LIGHT	130	(1) 3 CONDUCTOR #12 CU THWN	INT. POWER CENTER; YARD LIGHTING
36	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	RTU ANTENNA	112	(1) RG 58 COAX CABLE	CTRL PANEL; RTU ANTENNA
37	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	YARD LIGHT UTILITY POLE	112	SPARE - NO CONDUCTORS	-
38	EXTERIOR - UNDERGROUND	3" DIAMETER	PULL BOX #2	NEW GENERATOR	52	(1) 3 CONDUCTOR 350 MCM	ATS; NEW GENERATOR
39	EXTERIOR - UNDERGROUND	3" DIAMETER	PULL BOX #2	NEW GENERATOR	52	SPARE - NO CONDUCTORS	-
40	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	NEW GENERATOR	63	(2) 2 CONDUCTOR #18 CU THWN	CTRL PANEL; NEW GENERATOR
41	EXTERIOR - UNDERGROUND	2" DIAMETER	PULL BOX #1	NEW GENERATOR	63	SPARE - NO CONDUCTORS	-
42	INTERIOR - WET WELL	2" DIAMETER	PUMP #1 DISCONNECT	EDGE OF ACCESS OPENING	8	PUMP #1 CABLE (SUPPLIED W/ PUMP)	PUMP #1
43	INTERIOR - WET WELL	2" DIAMETER	JUNCTION BOX #1	EDGE OF ACCESS OPENING	8	(1) 2 CONDUCTOR #18 SHIELDED (SUPPLIED WITH TRANSDUCER)	WET WELL LEVEL TRANSDUCER
44	INTERIOR - WET WELL	2" DIAMETER	JUNCTION BOX #1	EDGE OF ACCESS OPENING	8	(1) 2 CONDUCTOR #18 CU THWN (SUPPLIED W/ FLOAT SWITCH)	WET WELL FLOAT SWITCH
45	INTERIOR - WET WELL	2" DIAMETER	PUMP #2 DISCONNECT	EDGE OF ACCESS OPENING	8	PUMP #2 CABLE (SUPPLIED W/ PUMP)	PUMP #2
46	INTERIOR - VALVE VAULT	3/4" DIAMETER	JUNCTION BOX #2	LIGHT AND VENTILATION CIRCUIT	30	(2) 3 CONDUCTOR #12 CU THWN	VALVE VAULT LIGHTING AND VENTILATION
47	INTERIOR - VALVE VAULT	3/4" DIAMETER	JUNCTION BOX #2	SUMP PUMP RECEPTICLE	15	(2) 3 CONDUCTOR #12 CU THWN	VALVE VAULT SUMP RECEPTICLE
48	INTERIOR - VALVE VAULT	3/4" DIAMETER	JUNCTION BOX #2	FLOAT SWITCH	15	(1) 2 CONDUCTOR #18 CU THWN	VALVE VAULT FLOAT SWITCH
49	INTERIOR - VALVE VAULT	3/4" DIAMETER	JUNCTION BOX #2	LIGHT/VENT SWITCH (PLUNGER STYLE ON HATCH)	26	(1) 2 CONDUCTOR #18 CU THWN	ACCESS STATUS (CTRL TO PLUNGER SWITCH ON ACCESS HATCH)
50	INTERIOR - CONTROL ROOM	3/4" DIAMETER	INT. POWER CENTER	INTERIOR PULL BOX #1	15	(2) 3 CONDUCTOR #12 CU THWN	INT. POWER CENTER; VALVE VAULT SUMP RECEPTICLE;YARD LIGHTING

NOTES REGARDING EQUIPMENT

- DISTRICT WILL SUPPLY A COMPLETELY ASSEMBLED CONTROL PANEL TO CONTRACTOR.
- CONTRACTOR SHALL PULL AND PREPARE WIRING TO CONTROL PANEL FOR DISTRICT PERSONNEL TO LAND. CONTRACTOR SHALL NOT LAND ANY WIRES IN THE CONTROL PANEL.
- ALL SPECIFIC MANUFACTURES AND MODELS LISTED SHALL BE CONSIDERED STANDARD. CONTRACTOR MAY SUBMIT "EQUAL" ITEMS AS SUBSTITUTE FOR DISTRICT REVIEW AND APPROVAL.

GROUNDING SYSTEM

SEE PROPOSED GROUND LOOP ON SITE ELECTRICAL SITE PLAN	
ITEM	QUANTITY
10' CU GROUND RODS	7 EACH
#4/0 CU GROUNDING CABLE	205FEET

EQUIPMENT SCHEDULE

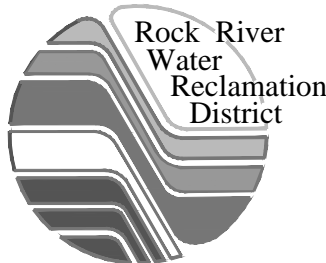
CONTROL ROOM	
ITEM	DESCRIPTION, MAKE & MODEL
INTEGRATED POWER CENTER	SQUARE D IPC2TC2TC-SEE
AUTOMATIC TRANSFER SWITCH	ASCO 300 SERIES 400AMP, CAT. NO. J-03ATS-A-3-400-480-GO-F
PUMP #1 VFD	480V, 3PH, 30HP CONSTANT TORQUE BY ABB OR DANFOSS
PUMP #2 VFD	480V, 3PH, 30HP CONSTANT TORQUE BY ABB OR DANFOSS
PUMP #1 FLOW METER	GREYLINE INSTRUMENTS #DFM5.1A-1-A-A-1-A-1-B-1-A
PUMP #2 FLOW METER	GREYLINE INSTRUMENTS #DFM5.1A-1-A-A-1-A-1-B-1-A
CONTOL ROOM LIGHT	LED CEILING MOUNT - RAB CLED52BBWBL
RRWRD CONTROL PANEL *	ASSEMBLED AND SUPPLIED BY THE DISTRICT*
WET WELL	
PUMP #1	25 HP SUBMERSIBLE CAPABLE OF 809GPM @ 60.4TDH AS MANUFACTURED BY VAUGHN, GRUNDFOS, ABS, FLYGT OR, HOMA
PUMP #2	25 HP SUBMERSIBLE CAPABLE OF 809GPM @ 60.4TDH AS MANUFACTURED BY VAUGHN, GRUNDFOS, ABS, FLYGT OR, HOMA
LEVEL TRANSDUCER	PMC VERSALINE VL2113-10PSIG-35"-IS
HIGH LEVEL FLOAT SWITCH	DWYER SERIES FSW2
VALVE VAULT	
LIGHTING	2- WALL MOUNTED RAB VXBRLD26DG
EXHAUST FAN	FANTECH MODEL FKD8XL, 115V
SUBMERSIBLE PUMP	ABS/ROBUSTA 100, 115V
PUMP #1 FLOW METER TRANSDUCER	SUPPLIED W/ FLOWMETER (GREYLINE) SEE CTRL ROOM EQUIP.
PUMP #2 FLOW METER TRANSDUCER	SUPPLIED W/ FLOWMETER (GREYLINE) SEE CTRL ROOM EQUIP.
FLOOD ALARM SWITCH	DWYER SERIES FSW2
NEW UTILITY POLE	
YARD LIGHTING	LITHONIA SECURITY FLOODLIGHT, OLF-3RH-40K-120-PE-BZ
RTU ANTENNA	ANTENEX VOYAGER, VG1502 WITH LIGHTNING ARRESTOR

CONDUCTOR TYPE/TOTAL PROJECT LENGTH

TEMPORARY UTILITY CONDUCTORS + TOTAL FROM CONDUIT SCHEDULE + 10% (ESTIMATE ONLY, CONTRACTOR TO FIELD VERIFY)	
CONDUCTOR	QUANTITY
3 CONDUCTOR 350 MCM (INCLUDING 125' TEMP)	219 FEET
3 CONDUCTOR #6 CU THWN	25 FEET
3 CONDUCTOR #8 SHIELDED VFD CABLE, 1000V RATED	194 FEET
3 CONDUCTOR #8 CU THWN	42 FEET
3 CONDUCTOR #10 CU THWN	12 FEET
3 CONDUCTOR #12 CU THWN (INCLUDING 180' TEMP)	905 FEET
2 CONDUCTOR #18 CU THWN	578 FEET
2 CONDUCTOR #18 SHIELDED	399 FEET
RG 58 COAXIAL CABLE	124 FEET
CAT 6 CABLE (TEMPORARY)	300 FEET

CONDUIT AND CONDUCTOR REQUIREMENTS

- ALL LENGTHS PROVIDED ARE ESTIMATED; CONTRACTOR SHALL VERIFY REQUIRED LENGTHS OF CONDUITS AND CONDUCTORS IN THE FIELD.
- ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN OR THWN.
- REQUIRED COLORS FOR INSULATION SHALL BE AS FOLLOWS:
 - 480V - BROWN, ORANGE, YELLOW
 - 120V - BLACK, RED, WHITE
 - 24VDC - BLUE
- ALL INTERIOR CONDUITS SHALL BE RIGID GALVANIZED STEEL CONFORMING TO ANSI C80.1 AND MANUFACUTURED IN ACCORDANCE WITH UL6.
- ALL EXPOSED EXTERIOR CONDUIT AND CONDUITS INSTALLED IN THE PROPOSED WET WELL AND VALVE VAULT SHALL BE PVC COATED METAL CONDUIT CONFORMING TO NEMA RN1, ANSI C80.1.
- UNLESS NOTED ELSEWHERE IN PLANS ALL INTERIOR ENCLOSURES SHALL CONFORM TO NEMA 12; ALL EXTERIOR SHALL CONFORM TO NEMA 3R.
- ALL BURIED CONDUIT SHALL BE SCHEDULE 40 PVC ENCASED IN CONCRETE.
- DIAMETERS INDICATED FOR CONDUITS SHALL BE CONSIDERED MINIMUM.
- CONTRACTOR SHALL COMPLY WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC). SHOULD PLANS AND SPECIFICATIONS CONTAIN CONFLICTS WITH NEC; NEC SHALL GOVERN. NO ADDITIONAL PAYMENT WILL BE MADE FOR MODIFICATIONS OR ADDITIONS TO COMPLY WITH THE CURRENT NEC.



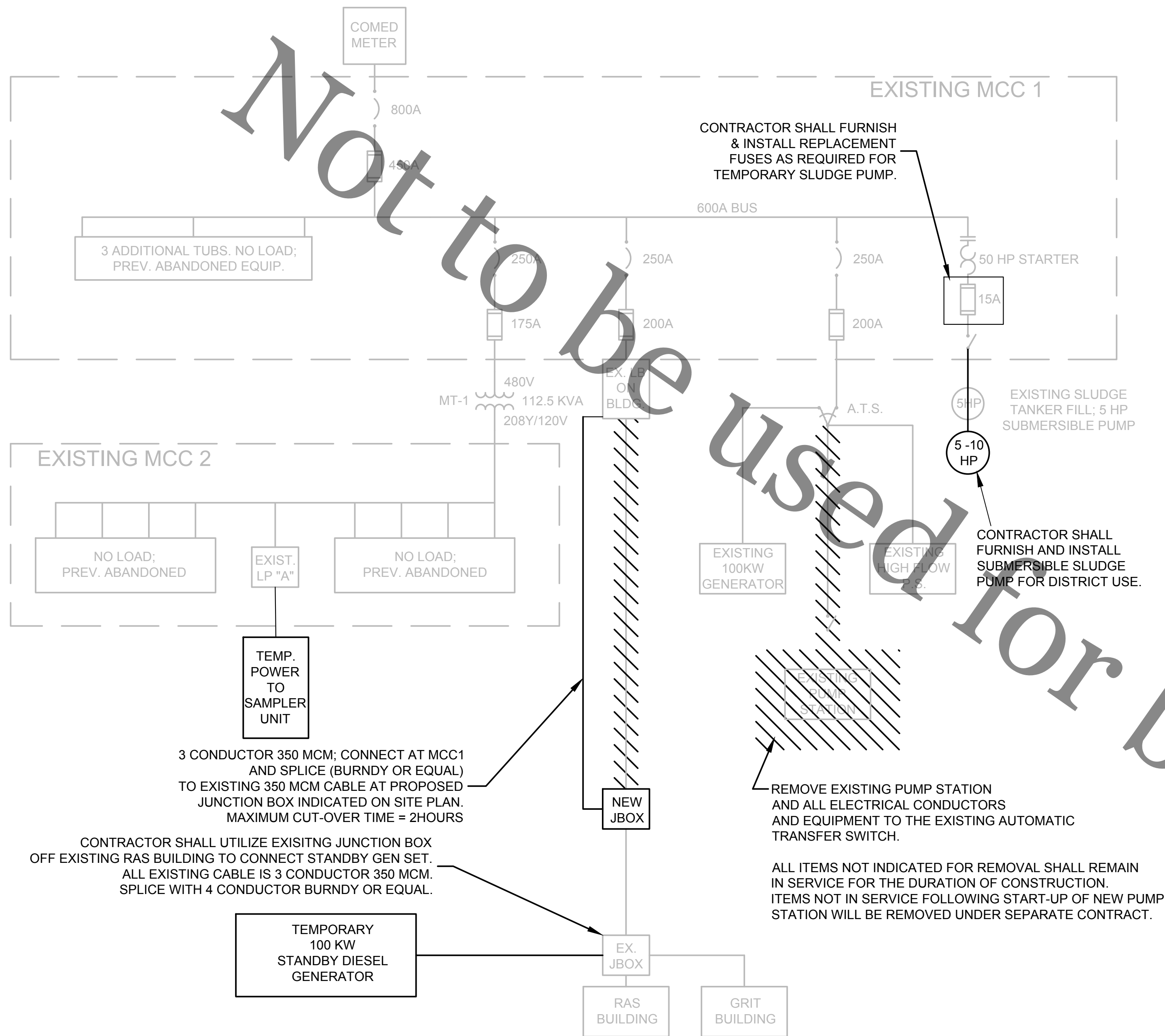
**ROCK RIVER WATER
RECLAMATION DISTRICT**
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CAPITAL IMPROVEMENT PROJECT #1566

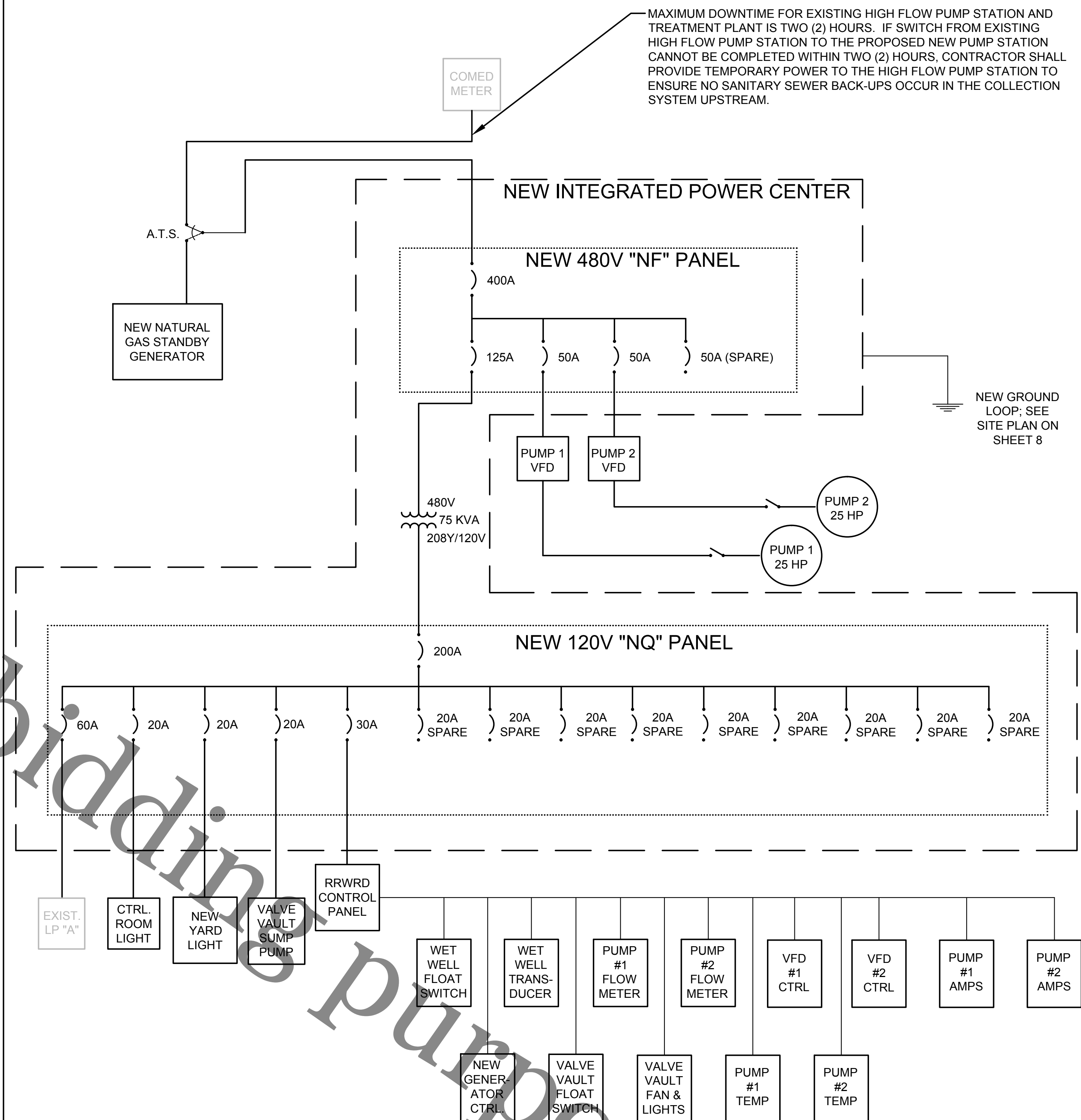
WEST SOPER STREET
ELECTRICAL WIRING SCHEDULE

Sheet No.
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3/1/2018



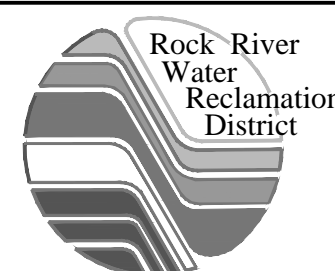
EXISTING BLOWER BUILDING ELECTRICAL SCHEMATIC; PROPOSED TEMPORARY ELECTRIC UTILITY PLAN

PROPOSED TEMPORARY ELECTRIC UTILITY INDICATED IN BOLD
THIS DRAWING IS INTENDED FOR CLARIFICATION AND SHALL BE
USED IN CONJUNCTION WITH SITE PLAN AND EQUIPMENT SCHEDULES.



PROPOSED FINAL ELECTRICAL SCHEMATIC

THIS DRAWING IS INTENDED FOR CLARIFICATION AND SHALL BE
USED IN CONJUNCTION WITH SITE PLAN AND EQUIPMENT SCHEDULES.



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FULLER CREEK PHASE F, PUMP STATION INSTALLATION
CAPITAL IMPROVEMENT PROJECT #1566

**WEST SOPER STREET
ELECTRICAL SCHEMATIC**

Sheet No.
11 OF 12
Date
3/1/2018

RIGID PIPE BEDDING DETAIL

FLEXIBLE PIPE BEDDING DETAIL

SERVICE CONNECTION DETAIL
FOR CONNECTION TO 18" DIA. OR LARGER PIPE

CASING AND SPACER DETAIL FOR PVC CARRIER PIPE

SANITARY MANHOLE ADJUSTMENT DETAIL

FOR NEW AND EXISTING

CUT-IN SERVICE CONNECTION DETAIL
(CLAY PIPE)
PROFILE VIEW

CUT-IN SERVICE CONNECTION DETAIL
(PVC PIPE)
PLAN VIEW

VERTICAL RISER DETAIL

INSIDE DROP MANHOLE DETAIL

DROP BOWL DETAIL

DROP BOWL STANDARDS	
LATERAL PIPE SIZE	MINIMUM DIAMETER DOWN PIPE SIZE
6" DIA.	4"
8" DIA.	6"
10" DIA.	8"
>10" DIA.	*

*PER MANUFACTURERS RECOMMENDATIONS OR AS DIRECTED BY RRWD

NOTES:

3. THE MAXIMUM DROP FROM THE INVERT OF ANY PIPE IN A MANHOLE TO THE POURED CHANNEL UNDER THAT PIPE SHALL BE 8".
4. MANHOLES LOCATED OUTSIDE PUBLIC RIGHT-OF-WAY MUST BE MARKED WITH A METAL FENCE POST.
5. ALL NEW MANHOLES SHALL BE VACUUM TESTED TO A.S.T.M. C-1244 PRIOR TO PLACING INTO SERVICE. EXISTING MANHOLES WILL NOT REQUIRE VACUUM TESTING.
6. ALL ADJUSTMENT RING JOINTS SHALL BE SEALED WITH (2) 1" BEADS OF APPROVED MATERIAL (E-Z STIK, ETC.)
7. INCLUDING CAST IRON FRAME TO CONCRETE MANHOLE STRUCTURE.
8. ALL BARREL JOINTS SHALL BE SEALED WITH 3 1/2" x 3/8" APPROVED MATERIAL (E-Z STIK, KENT SEAL) ON THE SHIP/LAP AND ANOTHER BEAD SEALED ON THE JOINT (MAR MAC MACWRAP OR EQUIVALENT).
9. MANHOLE STRUCTURE TO BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE MANHOLE RISER PIPE.
10. MANHOLE STRUCTURE SHALL CONFORM TO A.S.T.M. C478-90 OR THE LATEST DESIGNATION.
11. WHEN A CASTING REQUIRES PITCHING, A MINIMUM OF (3) THREE SHIMS (PLASTIC OR METAL) SHALL BE EQUALLY SPACED TO PREVENT MARKING ON THE CASTING.
12. BE INSTALLED BETWEEN THE CASTING AND THE MASONRY. HYDRAULIC CEMENT SHALL BE PLACED TO FILL THE ENTIRE SPACE BETWEEN THE CASTING & MASONRY.
13. PRE-CAST FLAT TOPS WILL NOT BE PERMITTED ON R.R.W.R.D. MANHOLES.

STANDARD MANHOLE DETAIL

PIPE CONNECTION TO PROPOSED
MANHOLE SHALL BE MADE WATER-
TIGHT BY MEANS OF RUBBER GASKET
SEAL (A-LOK OR APPROVED EQUAL),
CONFORMING TO A.S.T.M. F-477,
FAST INTEGRALLY IN THE WALL OR
CLAMP. THE GASKET SEAL SHALL BE
STAINLESS STEEL CLAMP CONFORMING
TO A.S.T.M. C-923.

PIPE CONNECTION TO EXISTING
MANHOLE SHALL BE MADE
WATER-TIGHT BY MEANS OF RUBBER
GASKET SEAL AND STAINLESS STEEL
CLAMP, CONFORMING TO A.S.T.M.
C-923. THE GASKET SEAL OR EQUAL
PIPE ACCESS SHALL BE MADE BY
CORE DRILLING MANHOLE WALL.

PSX SERIES GASKETS ARE NOT
PERMITTED ON MANHOLE OPENINGS
OVER 20" DEEP. MANHOLE OPENINGS
OVER 20" DEEP SHALL REQUIRE AN
A-LOK TO MANHOLE GASKET.

STANDARD SERVICE & ALTERNATE SERVICE RISER DETAIL
WITH SERVICE CLEANOUT RISER DETAIL