CONSTRUCTION DRAWINGS

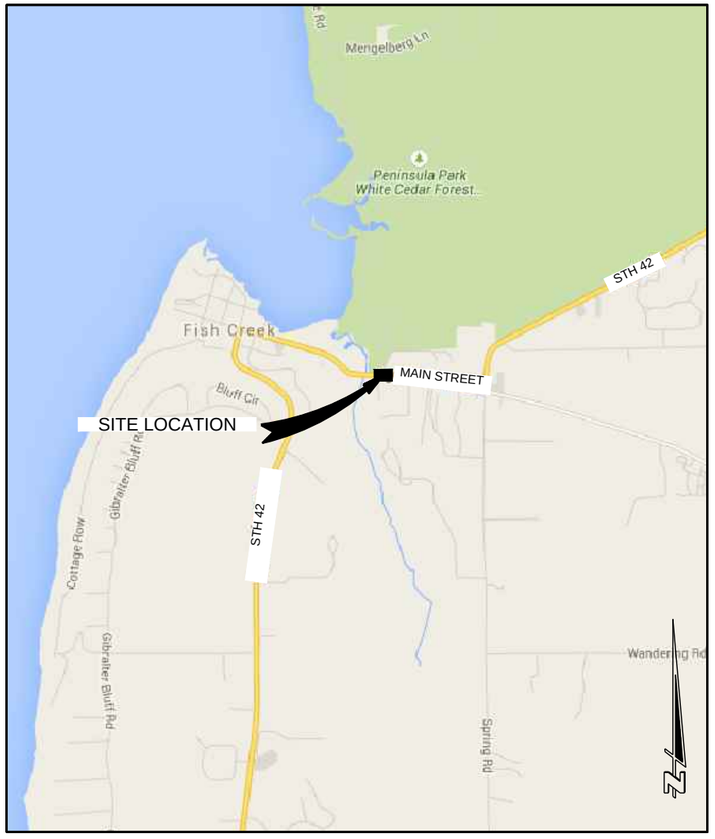
FOR

LIFT STATION #3 RELOCATION

CONTRACT A-16

FISH CREEK SANITARY DISTRICT NO. 1

TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN
OCTOBER 2016

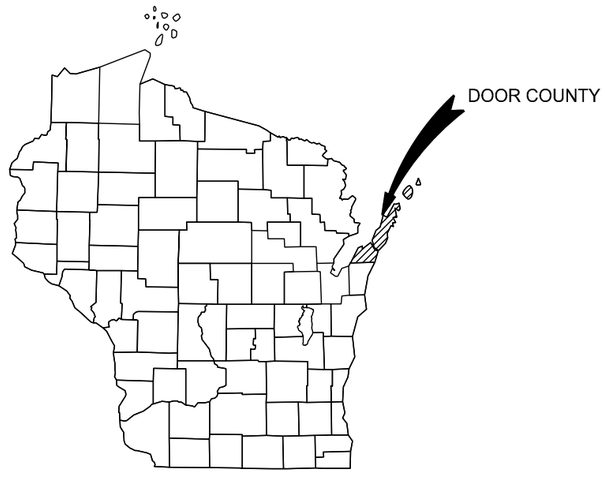


SITE LOCATION MAP

Prepared By

Cedar corporation

PROJECT I.D. F4953-0010



COUNTY LOCATION MAP

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MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL EXISTING	SYMBOL PROPOSED
SANITARY SEWER (PLAN) – LENGTH–DIA. MATERIAL @ GRADE	(SIZE & MAT'L) SAN	LENGTH – SIZE MATL SAN
SANITARY FORCEMAIN (PLAN) – DIA. MATERIAL	(SIZE & MAT'L) FM	LENGTH – SIZE MATL FM
STORM SEWER (PLAN) – LENGTH–DIA. MATERIAL @ GRADE	(SIZE & MAT'L.) STM	LENGTH – SIZE MATL STM
WATER MAIN (PLAN)– LENGTH–DIA. MATERIAL–(FITTING–FITTING)	(SIZE & MAT'L.) WM	LENGTH – SIZE MATL (FIT FIT) WM
SANITARY SEWER (PROFILE) – LENGTH–DIA. MATERIAL @ GRADE	(SIZE & MAT'L)	XXX'– XX" PVC SAN @ 0.00%
SANITARY FORCEMAIN (PROFILE) – DIA. MATERIAL	(SIZE & MAT'L)	XXX'– XX" FORCEMAIN @ 0.00%
STORM SEWER (PROFILE) – LENGTH–DIA. MATERIAL @ GRADE	(SIZE & MAT'L.)	XXX'– XX" RCP STM @ 0.00%
WATER MAIN (PROFILE)– DIA. MATERIAL	(SIZE & MAT'L.)	X" PVC WM.
GAS MAIN	GAS	GAS
ELECTRIC – BURIED	UGE	UGE
ELECTRIC – OVERHEAD	OE	OE
TELEPHONE – BURIED	TEL	TEL
TELEPHONE – BURIED (FIBER OPTIC)	FO	FO
TELEPHONE – OVERHEAD	OH	OH
CABLE TELEVISION – BURIED	TV	TV
CABLE TELEVISION – OVERHEAD	OH	OH
CENTERLINE		
RIGHT–OF–WAY LINE		
EDGE OF EASEMENT		
PAVEMENT (STREET, DRIVE, SIDEWALK, ETC.)		
GRAVEL		
CURB & GUTTER		
RAILROAD		
FENCE – AS LABELED		
GUARDRAIL		

LIST OF STANDARD ABBREVIATIONS

ASPH	ASPHALT
B/B	BACK TO BACK
BOC	BACK OF CURB
BLDG	BUILDING
BM	BENCH MARK
BSMT	BASEMENT
C	CUT
C&G	CURB AND GUTTER
C/C	CENTER TO CENTER
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CI	CAST IRON PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CP	CONTROL POINT
CTH	COUNTY TRUNK HIGHWAY
CTV	CABLE TV
CS	CURB STOP
DIA	DIAMETER
DI	DUCTILE IRON PIPE
EA	EACH
ELEC	ELECTRIC (E WHEN USED IN LINE STYLE)
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
FO	FIBER OPTIC
G	GAS
GV	GAS VALVE
GW	GUY WIRE
INV	INVERT
IP	IRON PIPE OR PIN
L	LENGTH (OF CURVE)
LC	LONG CHORD OF CURVE
LP	LIGHT POLE
MB	MAILBOX
MG	METER–GAS
MH	MANHOLE
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PED	PEDESTAL
PVMT	PAVEMENT
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PP	POWER POLE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC OR PVC	POLYVINYL CHLORIDE / POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RANGE OR RADIUS
RCP	REINFORCED CONCRETE PIPE
REBAR	REINFORCEMENT BAR
REQD	REQUIRED
RL	REFERENCE LINE
ROW	RIGHT–OF–WAY
SAN	SANITARY
SDWK	SIDEWALK
SF	SILT FENCE
SL	SANITARY LATERAL
SHLDR	SHOULDER
STA	STATION
STH	STATE TRUNK HIGHWAY
STM	STORM OR STORM SEWER
TEL	TELEPHONE
TEMP	TEMPORARY
TOC	TOP OF CURB
TYP	TYPICAL
VC	VERTICAL CURVE
WM	WATER MAIN
WS	WATER SERVICE
WV	WATER VALVE

MAPPING & TOPOGRAPHY SYMBOLOGY

DESCRIPTION	SYMBOL EXISTING	SYMBOL PROPOSED
BENCH MARK		
CATCH BASIN/INLET		
CONTROL POINT	CP	CP
CULVERT	(DIA. & TYPE)	(LENGTH–DIA. & TYPE)
CURB STOP G=GAS W=WATER	G OR W	G OR W
ELECTRIC PEDESTAL		
FIRE HYDRANT		
IRON PIPE = IP IRON ROD = IR	IP OR IR	IP OR IR
LIGHT – ORNAMENTAL		
LIGHT – STREET		
MAILBOX	MB	
MANHOLE ELECTRIC	E	
MANHOLE GAS	G	
MANHOLE MISCELANEOUS	MH	MH
MANHOLE SANITARY	SA	SAN MH
MANHOLE SIGNAL	SI	SIG MH
MANHOLE STORM	ST	STM MH
MANHOLE STORM INLET CATCH BASIN		
MANHOLE WATER	W	
MANHOLE TELEPHONE	T	
METER – GAS	G	
METER – WATER	W	
PEDESTAL CABLE TV		
PEDESTAL TELEPHONE		
SIGN		
BUSH CONIFER		
BUSH DECIDUOUS		
TREE DECIDUOUS/INCH DIA	12"	
TREE CONIFEROUS/INCH DIA	10"	
TREE LINE		
VALVE: W=WATER, G=GAS	W OR G	W OR G
UTILITY POLE		
SILT FENCE	SF	SF
MAJOR CONTOURS	890	890
MINOR CONTOURS		
SPOT ELEVATIONS	+891.2	+891.22
CONCRETE TO BE REMOVED AND REPLACED		
GRAVEL TO BE REMOVED AND REPLACED		
WATER SERVICE TO BE REPLACED, SIZE AS NOTED, LOCATION AS SHOWN		X" WS
SANITARY SEWER LATERAL TO BE REPLACED TO THE R/W, SIZE AS NOTED		X" SL

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WI
PROFESSIONAL ENGINEER
10/24/16

Cedar corporation

DRAWING OR SHEETS COVERED BY THIS SEAL:
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C–CIVIL

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PROFESSIONAL ENGINEER
10-24-2016

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Solid planning, superior solutions

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3, 18, 19, 20

E–ELECTRICAL/I–INSTRUMENTATION

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LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
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JOB NO. 4953-0010
DRAWN BY JMP
CHECKED BY DMS
DATE OCTOBER 2016
SET TYPE CONSTRUCTION

STANDARD SYMBOLS ABBREVIATIONS & STAMPS

SCALE 0 NA

SHEET NO. 2 of 20

I:\Clients-GrBay\F\4953 Fish Creek Sanitary District 1\010 Lift Station No 3 Relocation\100 Cad\COVER-DETAILS.dwg 10/24/16 2:29:27 PM

INSTRUMENT SOCIETY OF AMERICA
INSTRUMENT IDENTIFICATION

	FIRST LETTER(S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSOUT FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	
D	USER'S CHOICE	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO(FRACTION)			
G	USER'S CHOICE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE				
N	TORQUE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		
P	PRESSURE (OR VACUUM)		POINT, TEST CONNECTION		
Q	QUANTITY	INTEGRATE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION				
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE	Y AXIS		RELAY OR COMPUTE	
Z	POSITION, DIMENSION	Z AXIS		DRIVE ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

P&ID SYMBOLS (TYPICAL)

A: DESCRIPTION, TOP LINE

B: DESCRIPTION, BOTTOM LINE

TRS: FIRST LETTER(S) AND SUCCEEDING LETTERS OF INSTRUMENT IDENTIFICATION, REFER TO ISA TABLE

W: UNIT PROCESS NUMBER

X: LOOP NUMBER

Y: UNIT NUMBER, USED FOR MULTIPLE SETS WITH THE SAME X-Y DESIGNATION

Z: SET NUMBER, USED FOR MULTIPLE SETS OF UNITS WITH THE SAME W-X-Y DESIGNATION

N: NUMBER OF UNITS

C: INSTALLATION REQUIREMENT:
- x.p.: CLASS I, DIVISION 1 HAZARDOUS LOCATION
- i.s.: INTRINSICALLY SAFE, INSTALLED IN CLASS I, DIVISION 1 HAZARDOUS LOCATION

O: PROVISION REQUIREMENT:
- * EXISTING, RE-USED EQUIPMENT
- ** EQUIPMENT SPECIFIED UNDER DIVISION OTHER THAN 16
- *** FUTURE EQUIPMENT
- BLANK: EQUIPMENT SPECIFIED UNDER DIVISION 16

FIELD DEVICE

CONTROL PANEL DEVICE, FRONT-OF-PANEL, NORMALLY ACCESSIBLE

CONTROL PANEL DEVICE, BACK-OF-PANEL, NOT NORMALLY ACCESSIBLE

MCC DEVICE, FRONT-OF-PANEL, NORMALLY ACCESSIBLE

MCC DEVICE, BACK-OF-PANEL, NOT NORMALLY ACCESSIBLE

SOFTWARE DEVICE OR FUNCTION, NORMALLY ACCESSIBLE

SOFTWARE DEVICE OR FUNCTION, NOT NORMALLY ACCESSIBLE

SOFTWARE ALARM FUNCTION, NORMALLY ACCESSIBLE

INTERLOCK FUNCTION, REFER TO SPECIFICATIONS

NON-CONNECTING LINES

CONNECTING LINES

XX (Y) PROGRAMMABLE LOGIC CONTROLLER INPUT/OUTPUT POINT WHERE Y=QUANTITY AND XX
- DI: DIGITAL INPUT
- DO: DIGITAL OUTPUT
- AI: ANALOG INPUT
- AO: ANALOG OUTPUT

XX (Y) NETWORK (DEVICENET, ETC) CONTROL SYSTEM INPUT/OUTPUT POINT WHERE Y=QUANTITY AND XX
- DI: DIGITAL INPUT
- DO: DIGITAL OUTPUT
- AI: ANALOG INPUT
- AO: ANALOG OUTPUT

MS XX FULL VOLTAGE MOTOR CONTROLLER, XX INDICATES LOCATION

XX YY MOTOR CONTROLLER, XX INDICATES TYPE OF CONTROLLER AND YY INDICATES LOCATION

(2) PARALLEL LINES (PARENTHETICAL NUMBER INDICATES THE NUMBER OF SIGNALS REPRESENTED)

LINETYPE LEGEND

Ax = 2C#16 SHIELDED, TWISTED PAIR CABLE

Dx = #14 THHN WIRE (x = NUMBER OF WIRES)

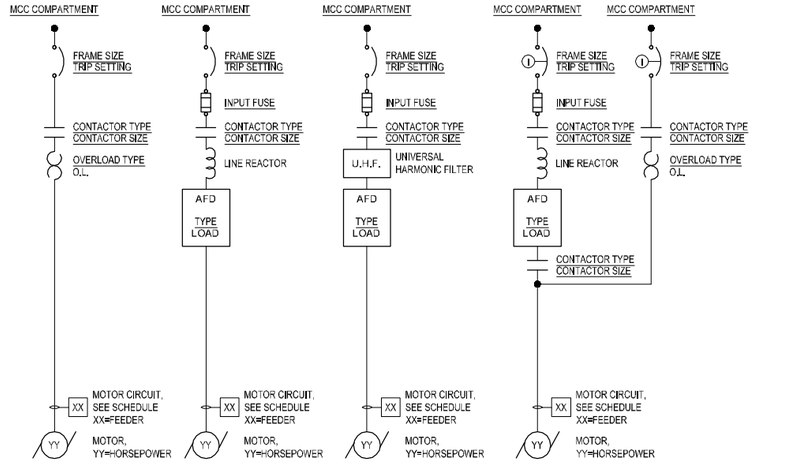
Mx = 1" CONDUIT FOR CABLE SUPPLIED BY MANUFACTURER BY MFG. (x=NUMBER OF CONDUITS)

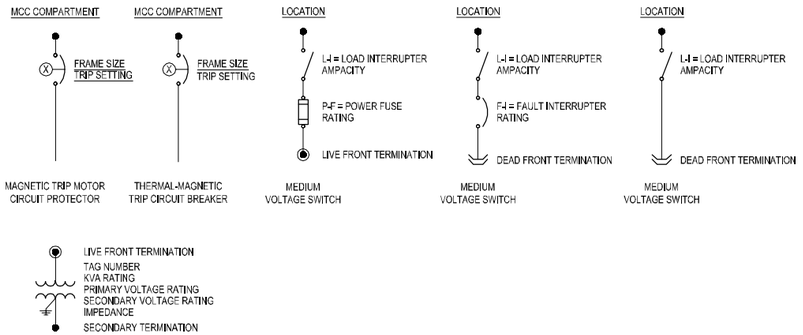
Ex = 3/4" CONDUIT AND CAT5e(x) CABLE(S) (x = NUMBER OF CABLES)

FO = CONDUIT AND FIBER OPTIC CABLE

- SOFTWARE SIGNAL/FUNCTION
- ANALOG SIGNAL, 4-20mADC OR PULSE FREQUENCY
- PULSE FREQUENCY
- DISCRETE SIGNAL, DRY CONTACT
- MANUFACTURER'S SIGNAL
- PNEUMATIC SIGNAL
- MAJOR PROCESS
- MINOR PROCESS

MOTOR CONTROL CENTER (MCC) SYMBOLS





PROCESS NOTES:

1. SIZE CONDUIT PER NEC. MINIMUM SIZE 3/4".
2. PROVIDE SEPARATE CONDUITS FOR THE FOLLOWING:
   a. 4-20mADC
   b. 120 VOLT CONTROL
   c. 120 VOLT POWER
   d. 480 VOLT POWER
   e. LOW VOLTAGE INSTRUMENTATION
   f. COMMUNICATION
3. REFER TO SPECIFICATION 16901 FOR DETAILS ON VARIOUS LOOP FUNCTIONS AS WELL AS DETAILS REGARDING OPERATOR INTERFACE FUNCTIONS.
4. REFER TO DIVISION SPECIFICATIONS FOR ADDITIONAL DETAILS REGARDING INSTRUMENTATION AND CONTROL EQUIPMENT FURNISHED UNDER THOSE SPECIFICATIONS.
5. (1) 1-1/2"C REFERS TO NUMBER OF WIRES AND SIZE OF WIRE REQUIRED, WHERE AS:
   (1) = ONE WIRE
   1-1/2"C = THE SIZE OF WIRE REQUIRED

WIRING & CONDUIT

1. (X) #12 & #12G

   REFERS TO NUMBER OF WIRE(S) AND SIZE OF WIRE(S) REQUIRED, WHERE AS:

   (1) = ONE WIRE
   #12 = THE SIZE OF WIRE REQUIRED
   G = GROUND WIRE

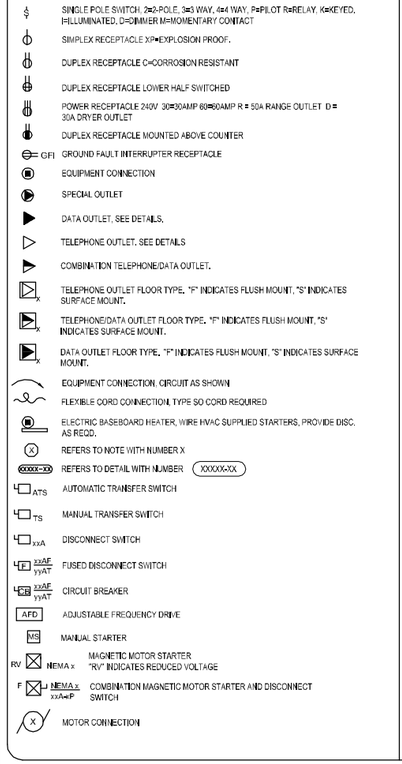
2. (X) 1-1/2"C

   REFERS TO NUMBER OF CONDUIT(S) AND SIZE OF CONDUIT(S) REQUIRED, WHERE AS:

   (1) = ONE CONDUIT
   1-1/2"C = THE SIZE OF CONDUIT REQUIRED

* REFER TO DRAWINGS FOR REQ'D WIRE AND CONDUIT SIZES AND AMOUNTS

ELECTRICAL PLAN SYMBOLS



GENERAL NOTES:

1. THIS DRAWING IS A STANDARD LEGEND. SYMBOLS SHOWN MAY NOT ALL APPEAR ON DRAWINGS FOR THIS PROJECT.
2. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED (SHELF) POSITION. BISTABLE RELAYS ARE SHOWN IN THE RESET POSITION.
3. ONE-LINE DIAGRAMS FOR POWER SWITCHGEAR, USE ANSI STANDARD SYMBOLS AND ABBREVIATIONS.
4. SEE INSTRUMENTATION DRAWINGS FOR INSTRUMENTATION SYMBOLS AND DETAILS.
5. OTHER ABBREVIATIONS PER ANSI Z32.13 AND ISA S5.1
6. ELEVATIONS ADJACENT TO SYMBOLS ARE BASED ON STATION DATUM. HEIGHTS ADJACENT TO SYMBOLS (+4.0) ARE REFERENCED TO FINISHED FLOOR GRADE.
7. THE LETTERS "GFI" ADJACENT TO A RECEPTACLE INDICATES A GROUND FAULT INTERRUPTER FEED-THROUGH RECEPTACLE ASSEMBLY. THE LETTERS ADJACENT TO A PANELBOARD CIRCUIT BREAKER INDICATES A GROUND FAULT CIRCUIT BREAKER. THE LETTERS "IG" INDICATE AN ISOLATED GROUND RECEPTACLE, PROVIDE SEPARATE GROUND WIRE.
8. SEE SPECIFICATIONS AND SCHEDULES FOR COMPONENT REQUIREMENTS FOR MOTOR CONTROLLERS AND FOR CONTACTORS.

ELECTRICAL ABBREVIATIONS

AFD	ADJUSTABLE FREQUENCY DRIVE	EM	EMERGENCY	KVA	KILOVOLT-AMPERES	PC	PHOTO CONTROL
AFG	ABOVE FINISH GRADE	EP	CLASS 1, DIV. 1 EQUIPMENT	KW	KILOWATTS	PFR	PHASE FAIL RELAY
AHU	AIR HANDLING UNIT	EUH	ELECTRIC UNIT HEATER	MAU	MAKE-UP AIR UNIT	PVC	POLYVINYL CHLORIDE
AUTO	AUTOMATIC	EWC	ELECTRIC WATER COOLER	M.C.	MECHANICAL CONTRACTOR	REQ'D	REQUIRED
AUX	AUXILIARY	EWH	ELECTRIC WALL HEATER	MCC	MOTOR CONTROL CENTER	SPEC	SPECIFICATION
AWG	AMERICAN WIRE GAUGE	FBO	FURNISHED BY OTHERS	MFR	MANUFACTURER	SPD	160KA/PHASE MINIMUM SURGE PROTECTIVE DEVICE
BKR	BREAKER	G	GROUND	MS-AUX	MOTOR STARTER AUXILLIARY	SS	STAINLESS STEEL
C	CONDUIT	G.C.	GENERAL CONTRACTOR	mA	MILLIAMPERE	TC	7 DAY TIMECLOCK PROVIDED BY ELECTRICAL CONTRACTOR
CB	CIRCUIT BREAKER	GFI	GROUND FAULT INTERRUPTER	mV	MILLIVOLT	TYP	TYPICAL
CKT	CIRCUIT	GND	GROUND	MOD	MOTOR OPERATED DAMPER	UH	UNIT HEATER
CU	COPPER	HVAC	HEATING, VENTILATING & AIR CONDITIONING	NL	NIGHTLIGHT	UPS	UNINTERRUPTIBLE POWER SUPPLY
DISC	DISCONNECT	HTR	HEATER	N.O.	NORMALLY OPEN	W	WITH
E.C.	ELECTRICAL CONTRACTOR	I.S.	INTRINSICALLY SAFE	N.C.	NORMALLY CLOSED	WH	WATER HEATER
ECB	ENCLOSED CIRCUIT BREAKER	I/O	INPUT/OUTPUT	NF	NON-FUSED	WP	WEATHER PROOF
EDH	ELECTRIC DUCT HEATER	IG	ISOLATED GROUND	NTS	NOT TO SCALE	XFMR	TRANSFORMER
EF	EXHAUST FAN	J-BOX	JUNCTION BOX	O.L.	OVERLOAD	XLP	CROSS LINKED POLYETHYLENE
ELEV	ELEVATION	KCMIL	THOUSAND CIRCULAR MILS	OHD	OVER HEAD DOOR		
		KV	KILOVOLTS				

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FISH CREEK SAN. DIST. NO. 1

LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4853-0010

DRAWN BY JMB

CHECKED BY RJJ

DATE OCTOBER 2016

SET TYPE CONSTRUCTION

ELECTRICAL SYMBOLS & ABBREVIATIONS

SHEET NO. 3 of 20

G:\01 ACTIVE PROJECTS\Fish Creek Lift Station 2016537\Muermann Drawings\Electrical\ES3 ELECTRICAL.dwg 10/24/16 12:28:18 PM

NOTES

1. PROVIDE FOR TRANSFER OF SEWAGE FROM LOCATIONS UPSTREAM OF THE CONSTRUCTION AREA TO AN ENGINEER-APPROVED POINT IN THE EXISTING SYSTEM LOCATED DOWNSTREAM OF THE WORK AREA UNTIL SUCH TIME AS THE NEW SANITARY SEWER COLLECTION SYSTEM INSTALLED AS PART OF THIS CONTRACT IS FULLY FUNCTIONAL.

2. PROVIDE PUMPS OF SUFFICIENT CAPACITY TO HANDLE PEAK FLOWS DURING PUMPING OPERATIONS.

3. PROTECT PIPING TO ENSURE CONTINUOUS DISCHARGE.

4. MAKE PROVISIONS FOR SUPPLYING A "BACKUP" PUMP IN A TIMELY MANNER IF THE PRIMARY PUMP SHOULD FAIL.

5. PROVIDE CLEANUP OF ANY SPILLS OR BACKUPS RESULTING FROM, OR OCCURRING DURING, CONSTRUCTION ACTIVITIES.

6. CONTRACTOR MAY CHOOSE TO TRUCK SEWAGE TO FISH CREEK SEWAGE TREATMENT PLANT. DISCHARGE OF SEWAGE AT TREATMENT PLANT SHALL NOT EXCEED 200 GPM.

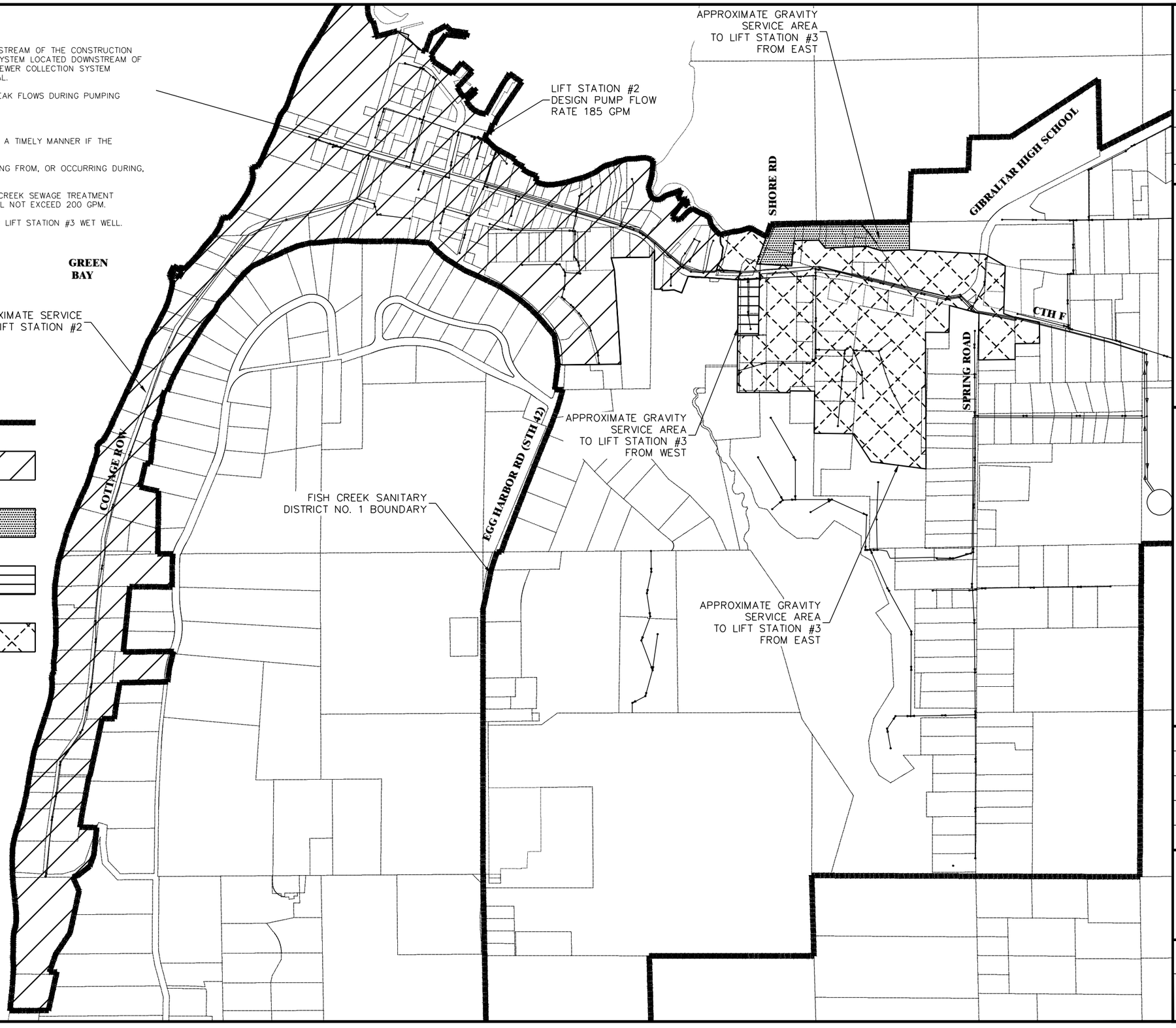
7. LIFT STATION #2 FORCEMAIN CURRENTLY DISCHARGES TO LIFT STATION #3 WET WELL.

LEGEND

- FISH CREEK SANITARY DISTRICT NO. 1 BOUNDARY
- APPROXIMATE DRAINAGE AREA TO LIFT STATION 2
- LIFT STATION #3 SUB-DRAINAGE AREA FROM NORTH
- LIFT STATION #3 SUB-DRAINAGE AREA FROM WEST
- LIFT STATION #3 SUB-DRAINAGE AREA FROM EAST

ESTIMATED DAILY FLOWS AT LIFT STATION #3

	MIN	MAX
DEC 2015	28,050 gpd	89,250 gpd
JAN 2016	35,700 gpd	73,950 gpd
FEB 2016	33,150 gpd	58,650 gpd
MAR 2016	40,800 gpd	79,050 gpd
APR 2016	48,450 gpd	89,250 gpd
MAY 2016	45,900 gpd	130,050 gpd



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FISH CREEK SAN. DIST. NO. 1

LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4853-0010
DRAWN BY JMP
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DATE OCTOBER 2016
SET TYPE CONSTRUCTION

SANITARY SERVICE AREA LIFT STATION #3

SCALE 0 800

SHEET NO. 4 of 20

SAWCUT, REMOVE & REPLACE ASPHALT PAVEMENT 3", CRUSHED AGGREGATE BASE 9"

EXIST LATERAL

EXIST OVERHEAD LINES WILL BE REMOVED AND BUIRIED ALONG ELM ST PAVEMENT PRIOR TO CONSTRUCTION BY UTILITY COMPANIES

SHORE RD

ELM STREET

PARCEL NO. 0140232312711D

MH 73

REMOVE TO CL OF SHORE RD

EXCAVATE AND PROVIDE ASPHALT PAVEMENT 3", CRUSHED AGGREGATE BASE 9"

INSTALL INLET PROTECTION

REMOVE & REPLACE CURB & GUTTER

REMOVE EXIST TREE

"PENNINSULA STATE PARK" SIGN

EXCAVATE, LOCATE AND EXPOSE FORCEMAIN PRIOR TO CONSTRUCTION OF LIFT STATION AND PROTECT

MH 72B

LIGHT POLE

INSTALL 280 LF SILT FENCE

INSTALL INLET PROTECTION ON FIRST INLET EAST NORTH SIDE STH 42

REMOVE & REPLACE CURB & GUTTER

STH 42 (66' R/W)

ABANDON EXISTING SANITARY (FLOWABLE FILL REQUIRED)

REMOVE & REPLACE CONCRETE SIDEWALK

SAW CUT, REMOVE & REPLACE ASPHALT PAVEMENT 5", CRUSHED AGGREGATE BASE 12"

20.0'

REMOVE & REPLACE CONCRETE SIDEWALK

REMOVE & REPLACE CURB & GUTTER

INSTALL INLET PROTECTION

REMOVE & REPLACE CONCRETE DRIVEWAY APRON/SIDEWALK

MH 72

REMOVE & REPLACE CONCRETE DRIVEWAY APRON/SIDEWALK

PARTIALLY REMOVE EXIST LIFT STATION #3 WET WELL

LIFT STATION NO. 3

SAW CUT, REMOVE & REPLACE ASPHALT PAVEMENT 3", CRUSHED AGGREGATE BASE 9"

MH 72A

PROTECT EXIST SIGN AND SIGN LIGHTING

REMOVE CONCRETE

PARTIALLY REMOVE EMERGENCY PUMP MH

REMOVE CONCRETE INSTALL ASPH PAVEMENT SAW CUT REQUIRED

PROTECT EXIST FENCE

DISTURBED SOIL LIMITS SEED AND MULCH

PARTIALLY REMOVE EXIST LIFT STATION #3 DRY WELL

SALVAGE & REPLACE TRASH RECEPTICLE REMOVE & REPLACE CONCRETE PAD

REMOVE CONTROL PANEL, POWER POLE AND WIRE TO POLE AT STREET

REMOVE, SALVAGE & DELIVER ENTIRE TIMBER RETAINING WALL TO PROPERTY OWNER

REMOVE 36" DIAM TREE

SAW CUT, REMOVE & REPLACE ASPHALT PAVEMENT 3", CRUSHED AGGREGATE BASE 9"

REMOVE WET WELL VENT

ABANDON EXISTING FORCEMAIN

NOTES

1. THE EXACT NUMBER, LOCATION AND SPACING OF ALL EROSION CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED.

2. PROTECT AND SAVE EXISTING SIDEWALK AND CURB & GUTTER EXCEPT WHERE SHOWN FOR REMOVAL.

3. LOCATE AND VERIFY THE ACTIVE STATUS OF SANITARY LATERALS ON THE REPLACEMENT SECTION OF SANITARY SEWER.

4. TRENCH BACKFILL BETWEEN MH 73 AND LIFT STATION #3 AND AROUND ALL SHEETING, 3/4" CLEAR STONE.

5. MATERIALS CAN NOT BE PLACED IN MANNER THAT WOULD BLOCK VIEWING OF PARK SIGN FROM STH 42.

6. SEE SPECIFICATION SECTION 02411 FOR DEMOLITION AND ABANDONMENT DETAILS.

7. GRANULAR BACKFILL, 3/4" CLEAR STONE BETWEEN MH 72 AND 72A. BETWEEN MH 72A AND 72B SHALL BE TO WITHIN 6' OF FINISH GRADE AND NATIVE MATERIAL THERE AFTER.

8. RELACE SIDEWALK WITH 4" THICK AND 6" THICK IN DRIVEWAY WITH 6" CRUSHED AGGREGATE BASE.

9. REPLACE CURB AND GUTTER WITH 30" WIDE CURB AND GUTTER, MATCH EXISTING PROFILE. CRUSHED AGGREGATE BASE TO MATCH PAVEMENT REPLACEMENT SECTION.

NOTES

1. TEMPORARY PATCH ALL ROAD AND DRIVEWAY CUTS WITH COLD MIX ASPHALT UNTIL HMA IS AVAILABLE 2017.

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FISH CREEK SAN. DIST. NO. 1

LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4853-0010
DRAWN BY JMP
CHECKED BY DMS
DATE OCTOBER 2016
SET TYPE CONSTRUCTION

SITE DEMOLITION AND EROSION CONTROL PLAN

SCALE 0 20

SHEET NO. 5 of 20

I:\Clients-GrBay\F\F4953 Fish Creek Sanitary District 1\010 Lift Station No 3 Relocation\100 Cad\00base4953-0010.dwg 10/25/16 11:22:34 AM

SHORE RD

ELM STREET

GRASS

CURB

EXIST PRIVATE WELL

WELL

DECK

PARCEL NO. 0140232312

12'

40.5'

16.0'

75.0'

VALVE VAULT

ASPH

CONTROL PANEL
WITH 12" THICK CONC. BASE

MH 73

RELOCATED LIFT STATION 3

3'

10'

6'

VENT

"PENNINSULA STATE PARK" SIGN

LANDSCAPING

LIFT STATION #3 WET WELL

31.5'

5'

31'

8" DIP VENT PIPE
SLOPE TO HIGH
POINT AT VENT

LIGHT POLE

MH 72B

CONC. SIDEWALK

SAN

OH

FM

UGE

STM

TEL

NO.	DATE	APVD	REVISION
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LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO.	4853-0010
DRAWN BY	JMP
CHECKED BY	DMS
DATE	OCTOBER 2016
SET TYPE	CONSTRUCTION

LIFT STATION SITE PLAN

SCALE
0 10

SHEET NO.
6 of 20

I:\Clients-GrBay\F\F4953 Fish Creek Sanitary District 1\010 Lift Station No. 3 Relocation\100 Cad\00base4953-0010.dwg 10/25/16 10:09:50 AM

SHORE RD

ELM STREET

GRASS

CURB

WELL

DECK

PARCEL NO. 0140232312

EXIST 590.93

EXIST 590.82

ASPH

591.50

591.5

591.50

EXIST 590.83

591.50

EXIST 591.16

"PENNINSULA STATE PARK" SIGN

LANDSCAPING

591.50

SLOPE INTERCEPT

EXIST 591.10

EXIST 590.95

LIGHT POLE

CONC. SIDEWALK

CURB

SAN

OH

FM

STM

UGE

TEL

I:\Clients-GrBay\F\F4953 Fish Creek Sanitary District 1\010 Lift Station No. 3 Relocation\100 Cad\00base4953-0010.dwg 10/25/16 10:40:15 AM

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CONTRACT A-16
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DOOR COUNTY, WISCONSIN

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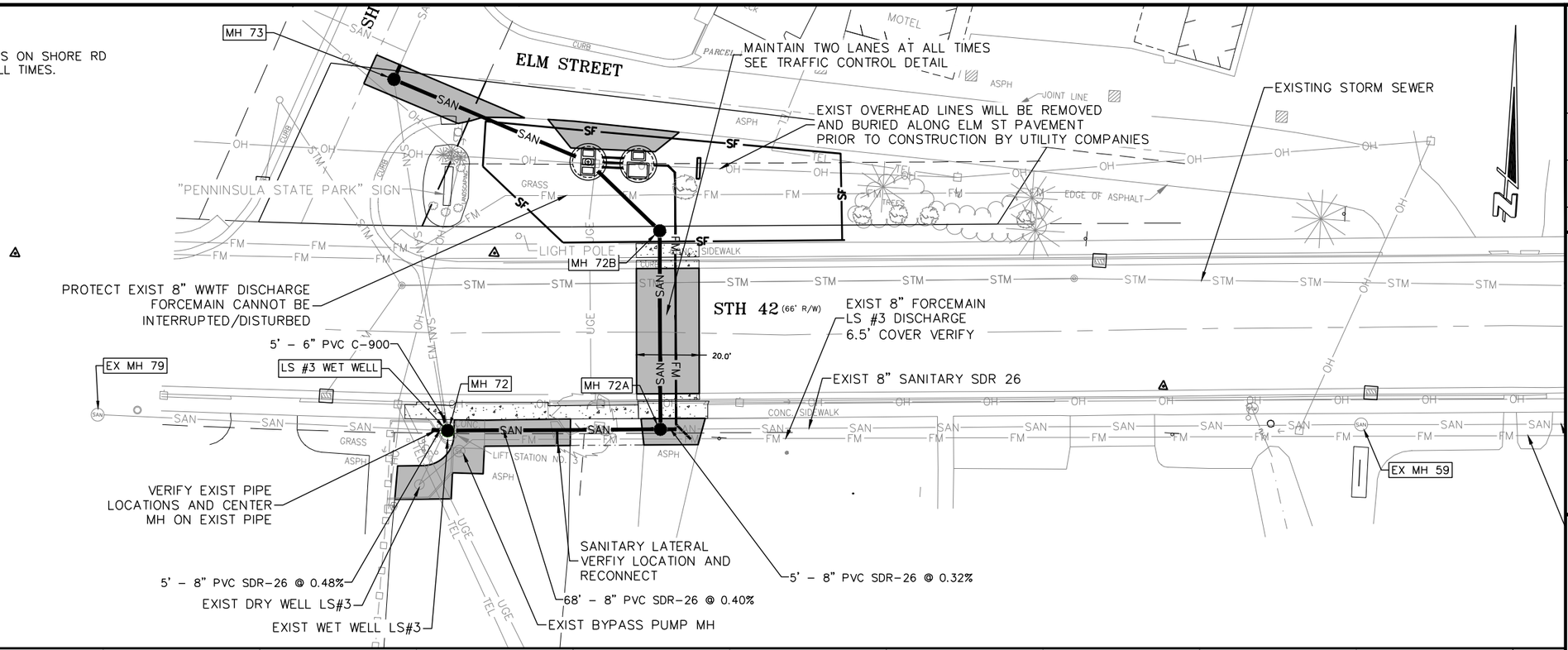
DATE	OCTOBER 2016
SET TYPE	CONSTRUCTION

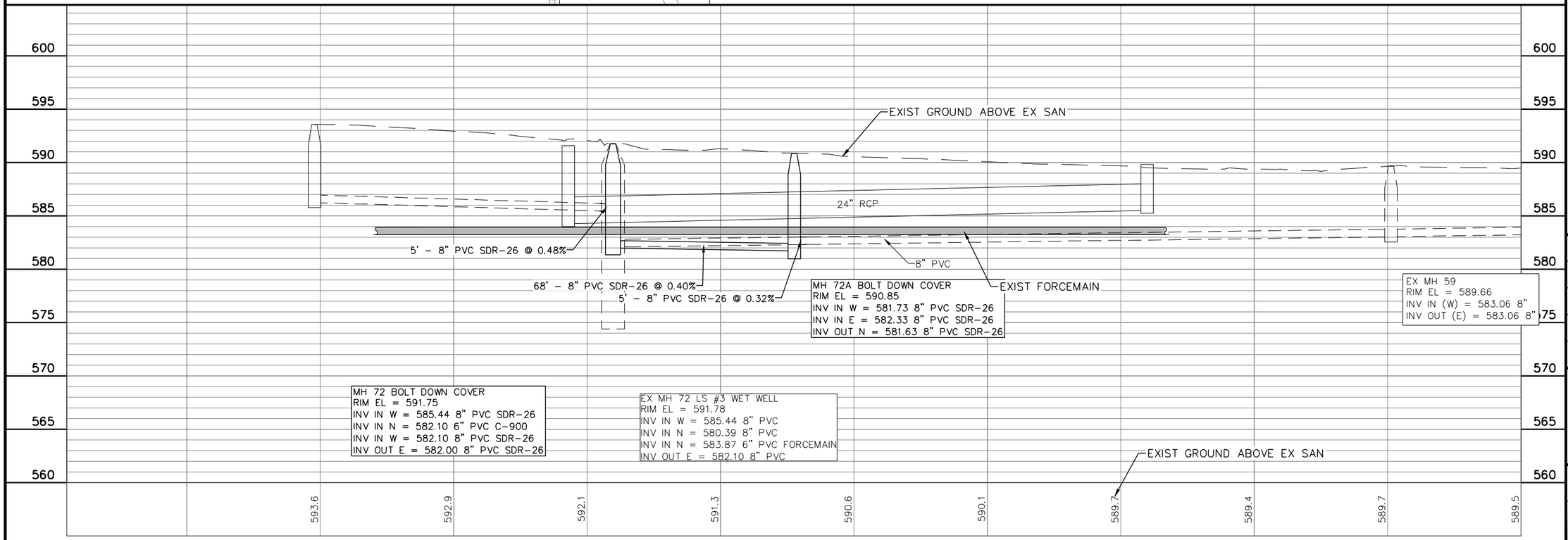
LIFT STATION GRADING PLAN

SCALE
0 10

SHEET NO.
7 of 20

NOTE:
1. MAINTAIN ACCESS ON SHORE RD AND ELM ST AT ALL TIMES.





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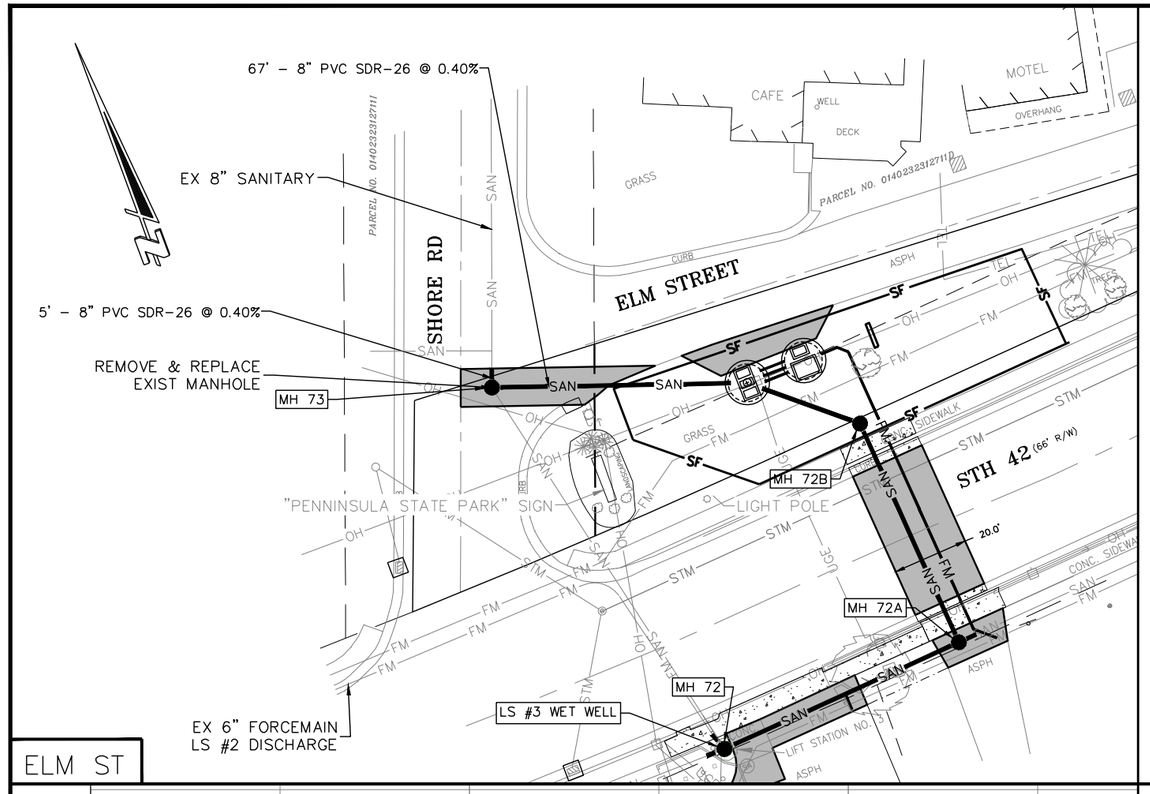
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO.	4953-0010
DRAWN BY	JMP
CHECKED BY	DMS
DATE	OCTOBER 2016
SET TYPE	CONSTRUCTION

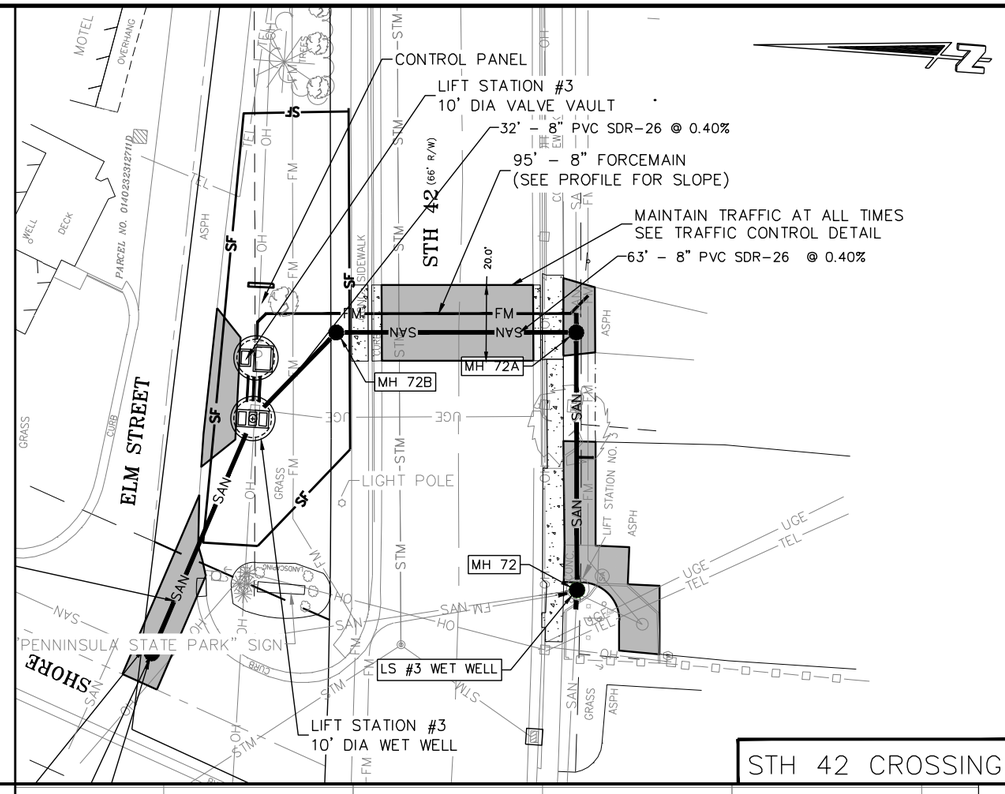
PLAN & PROFILE
STH 42

SCALE
0 40

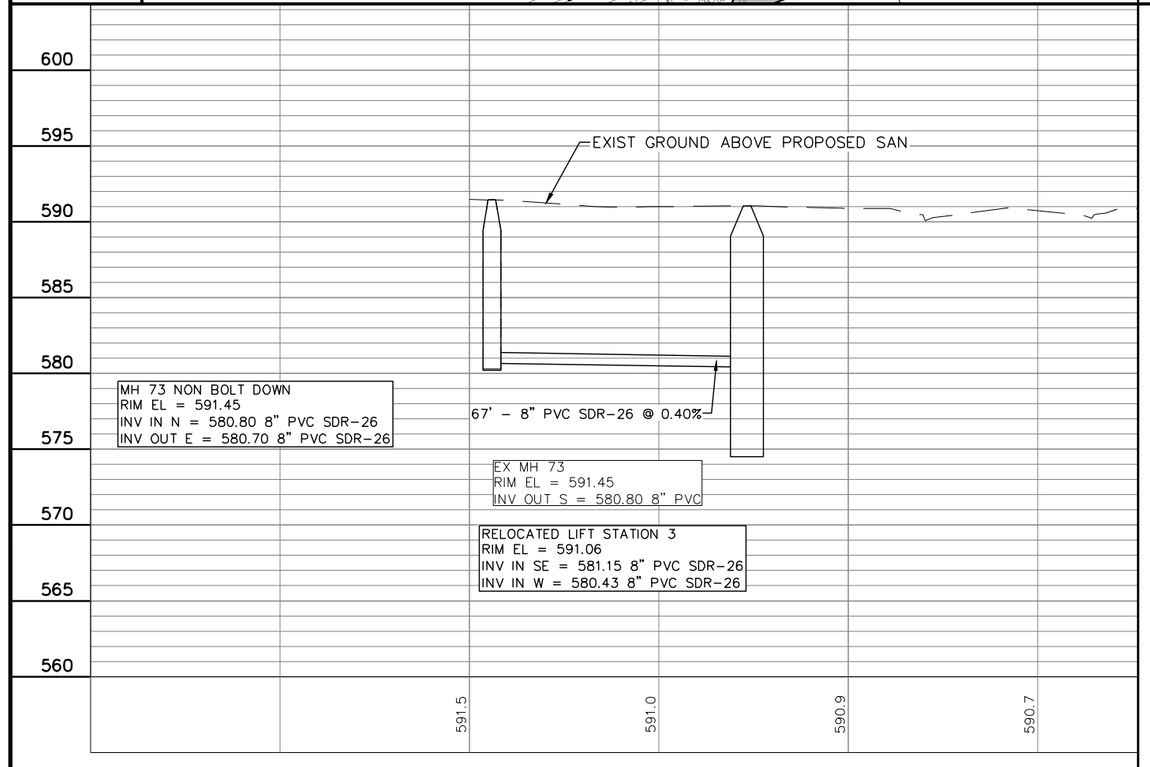
SHEET NO.
8 of 20

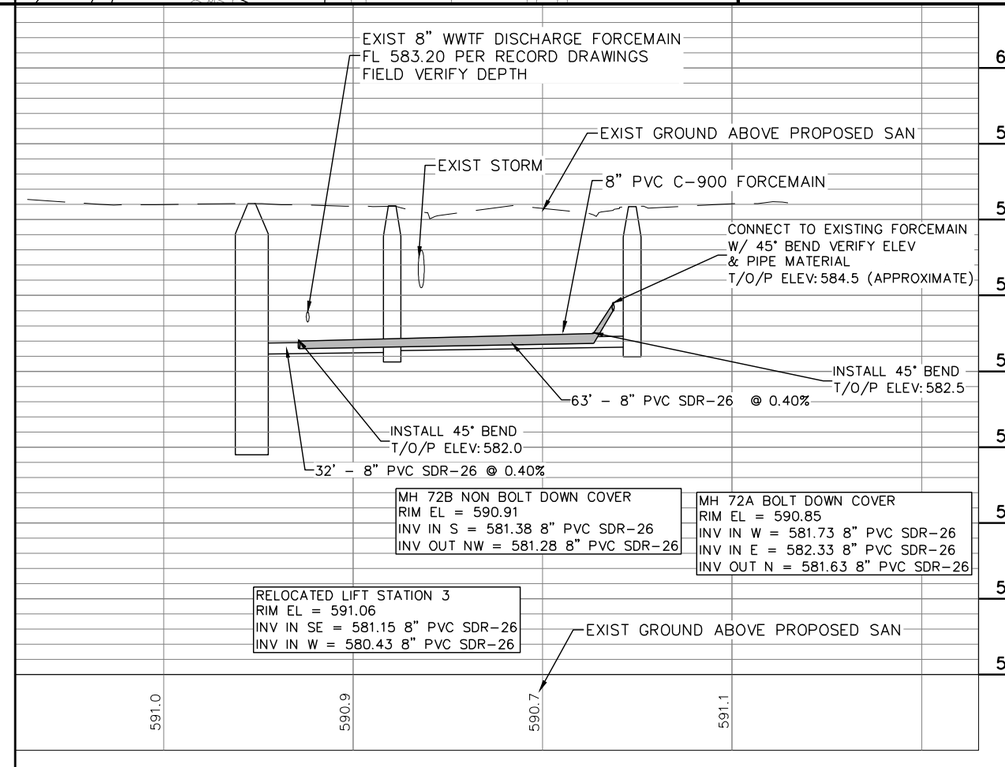


ELM ST



STH 42 CROSSING





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PLAN & PROFILE STH 42 CROSSING & ELM ST

SCALE 0 40

SHEET NO.

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NOTE: TRAFFIC CONTROL DETAIL TO BE IMPLEMENTED DURING CONSTRUCTION OF MH 073 AND SANITARY SEWER FROM MH 073 TO LIFT STATION 3.

PLACE ROAD WORK AHEAD SIGN 500' NORTH ON SHORE RD

TRAFFIC CONTROL DRUMS 10' SPACING, TYP.

TYPE III BARRICADES WITH ROAD CLOSED SIGNS AFFIXED

MH 73

LIFT STATION #3

LIFT STATION NO. 3

SHORE RD

ELM STREET

STH 42 (66' R/W)

20.0'

11'

PARCEL NO. 0140232312711

PARCEL NO. 0140232312711D

CAFE

WELL

DECK

MOTEL

OVERHANG

GRASS

ASPH

CONC. SIDEWALK

CURB

LIGHT POLE

"PENNINSULA STATE PARK" SIGN

LANDSCAPING

TREES

JOIN

GRA

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TRAFFIC CONTROL DETAIL SHORE RD & ELM ST

SCALE 0 20

SHEET NO.

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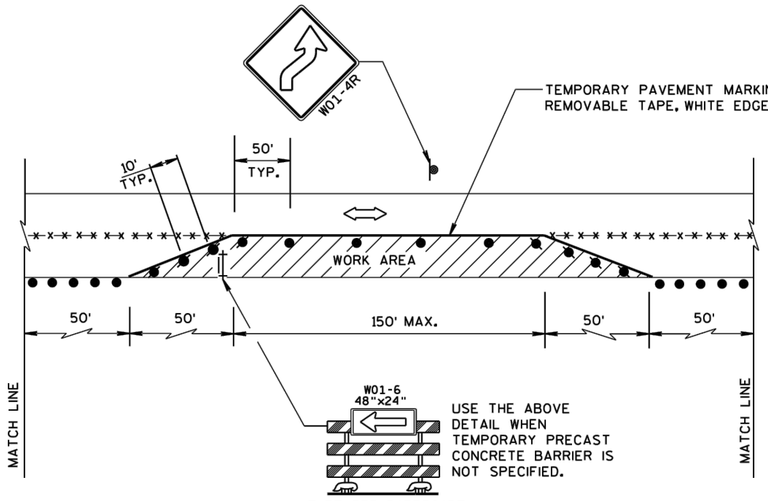
LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" × 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC



TYPE III BARRICADE

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED.

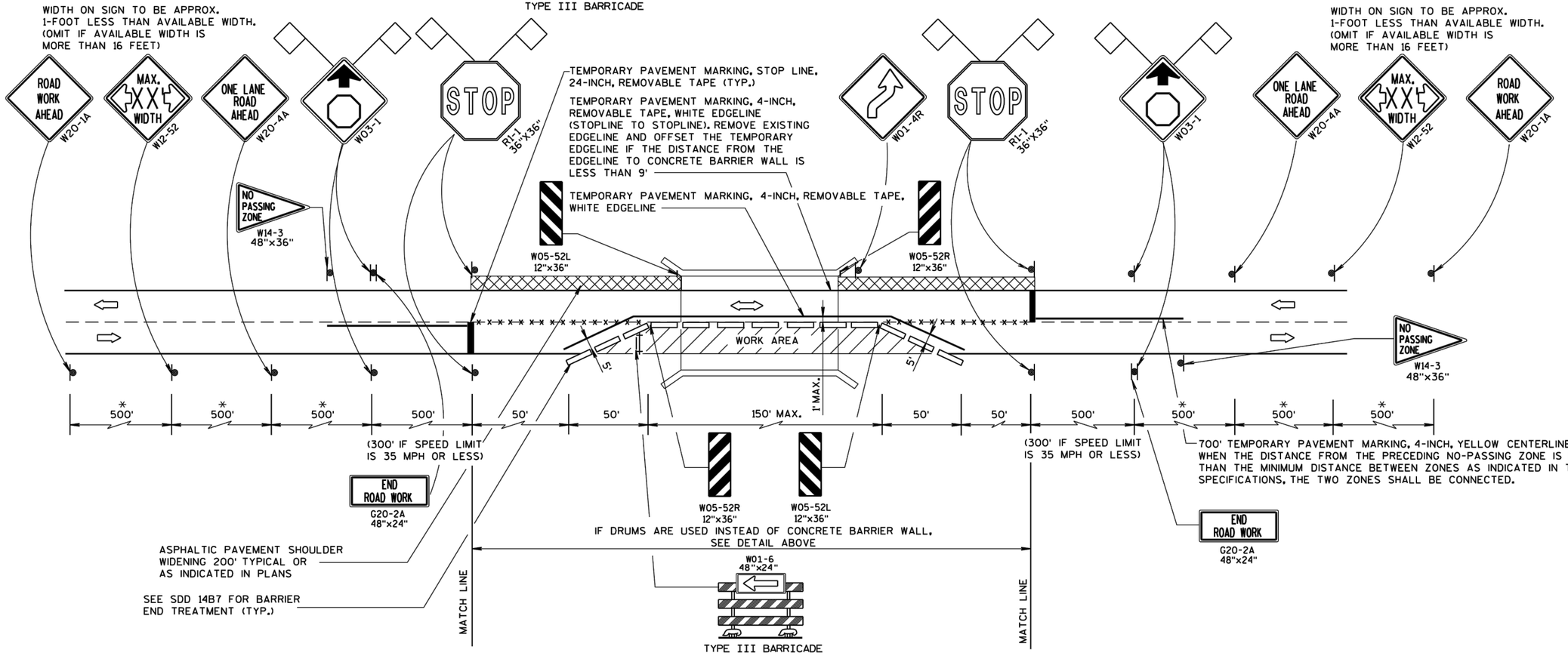
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.



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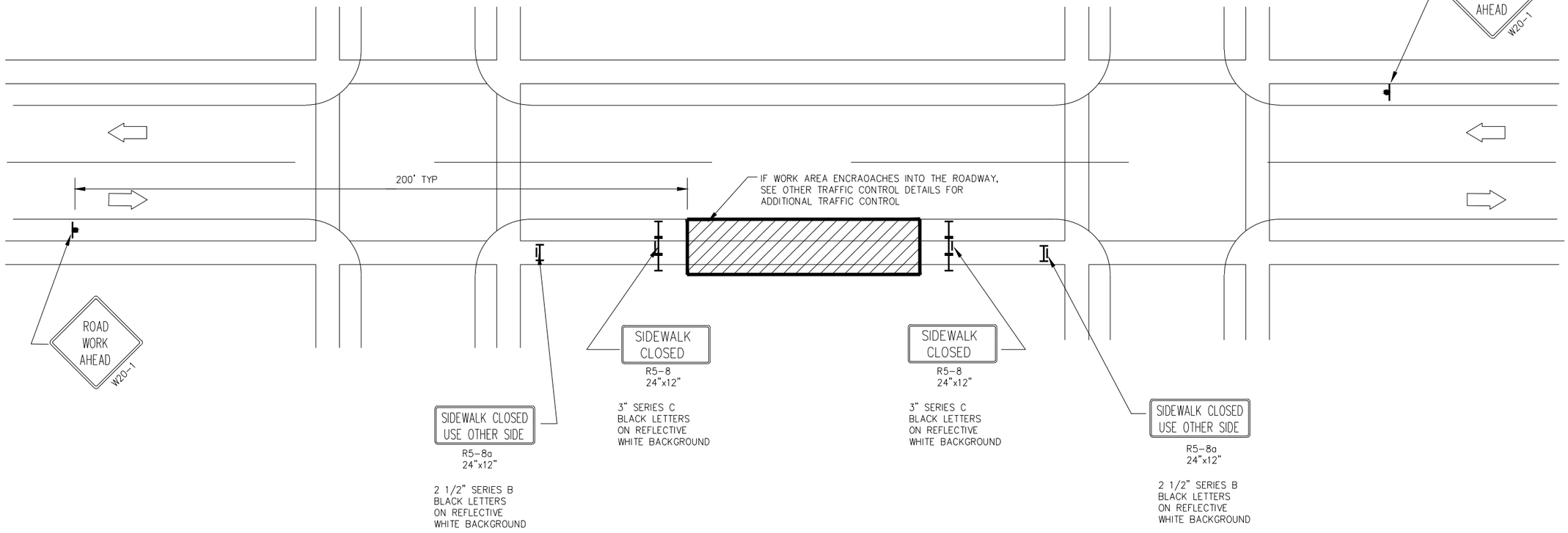
TRAFFIC CONTROL DETAIL STH 42

SCALE 0 NA

SHEET NO. 11 of 20



LEGEND

- POST MOUNTED SIGN
- I/I TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES:

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, SIDEWALK CLOSURE

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JOB NO. 4953-0010
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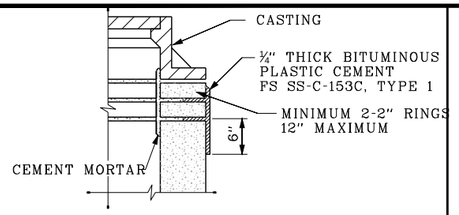
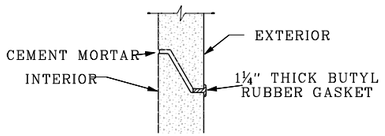
SIDEWALK CLOSURE DETAIL

SCALE 0 NA

SHEET NO. 12 of 20



ADJUSTING RING JOINT DETAIL

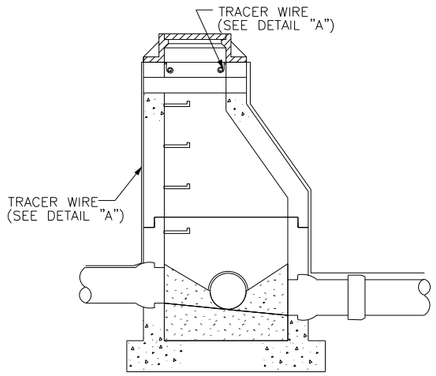


BARREL SECTION JOINT DETAIL

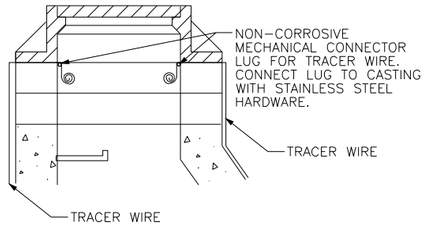
NOTES:

1. THE FINAL ADJUSTMENT RING TO BE A 2" RECYCLED RUBBER RING PER THE SPECIFICATIONS FOR MANHOLES WITHIN THE ROAD SECTION
2. SEAL SPACE BETWEEN RECYCLED RUBBER ADJUSTMENT RINGS WITH POLYURETHANE SEALANT SUPPLIED BY CONTRACTOR

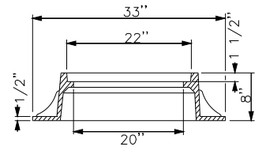
STRUCTURE: JOINT DETAILS



DETAIL "A" TRACER WIRE

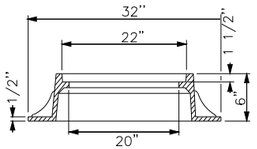


MANHOLE TRACER WIRE DETAIL



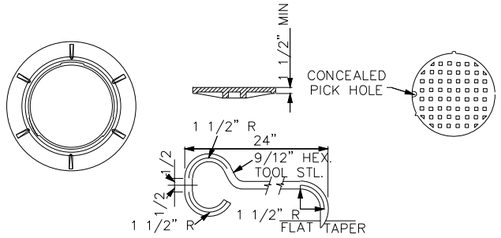
TYPE 1 FRAME & COVER

MINIMUM WT. 285 LBS.
NEENAH R-1500 OR EQUAL



TYPE 2 FRAME & COVER

MINIMUM WT. 280 LBS
NEENAH R-1510-A OR EQUAL



COVER REMOVING TOOL
FOR CONCEALED PICKHOLE

NOTES:

ALL COVERS SHALL BE SELF-SEALING WITH GASKET.

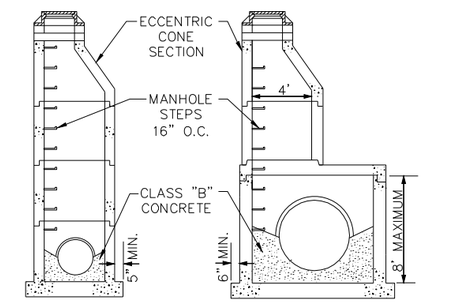
FRAME AND COVER SHALL BE MACHINED AND FITTED SO THAT ROCKING AND CHATTERING WILL BE ELIMINATED.

WHEN MANHOLE ADJUSTMENT IS LIMITED, PROVIDE TYPE 2 FRAME

FRAME WEIGHT INCLUDES COVER

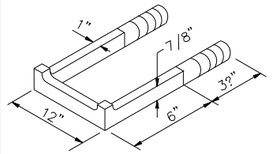
FURNISH ONE COVER REMOVING TOOL FOR CONCEALED PICKHOLE COVERS WITH EACH ORDER OF 20 COVERS OR FRACTION THERE OF.

FRAME & COVER DETAIL



4' DIAMETER PRECAST CONCRETE MANHOLE

LARGE DIAMETER PRECAST CONCRETE MANHOLE



TYPICAL MANHOLE STEP

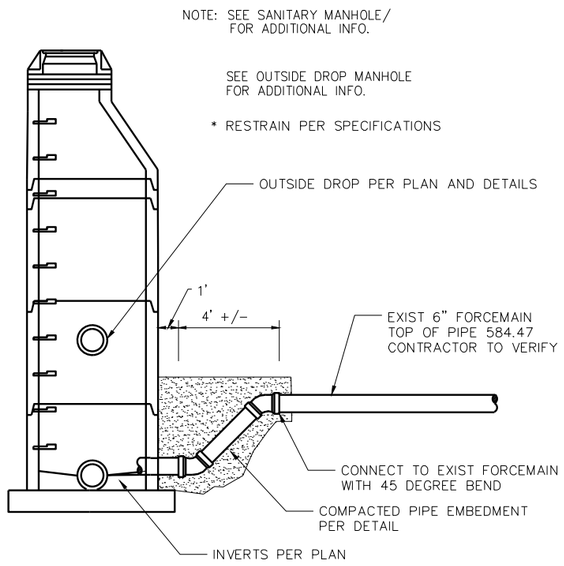
NOTES:

BASE SLAB OVERHANG DESIGNED FOR 25' MAXIMUM DEPTH

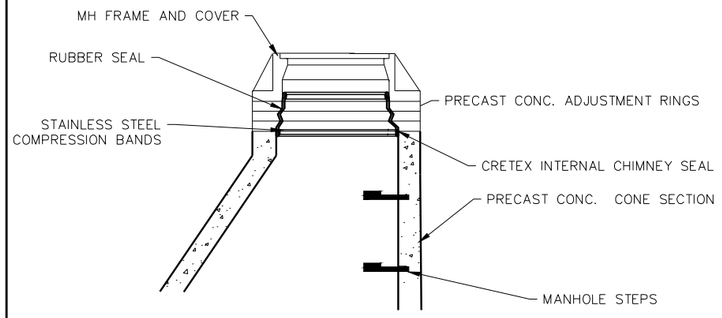
PRECAST CONCRETE BASE SHALL BE CAST MONOLITHIC WITH BARREL SECTION

		MAX. PIPE I.D. STRAIGHT THRU TO 45° DEFLECTION	MAX. PIPE I.D. 90° DEFLECTION
4'	MANHOLE	18"	18"
5'	MANHOLE	30"	27"
6'	MANHOLE	42"	30"
8'	MANHOLE	54"	42"

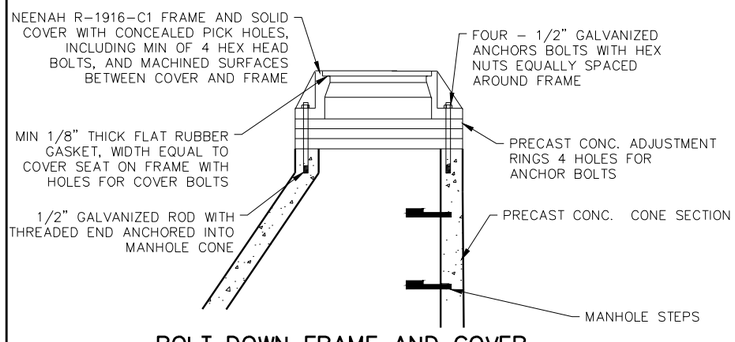
STRUCTURE: PRECAST MANHOLE DETAIL



MH 72 SPECIAL DETAIL
NO SCALE



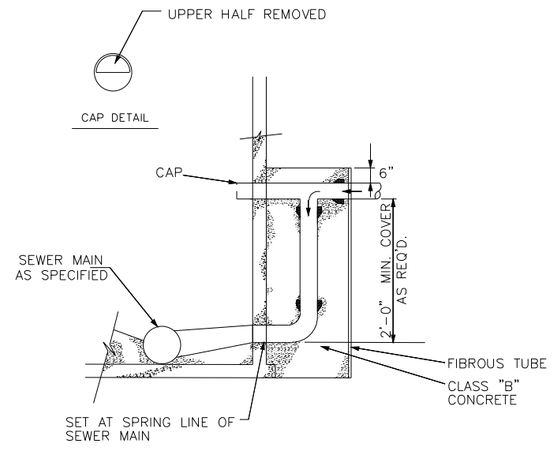
INTERNAL CHIMNEY SEAL (ALL MANHOLES)
NO SCALE



BOLT DOWN FRAME AND COVER
NO SCALE

GENERAL NOTES

1. PROVIDE FLEXIBLE WATER TIGHT GASKET OR CONNECTOR MANUFACTURED IN ACCORDANCE TO ASTM C443 OR C923 AT PIPE AND BARREL.
2. PROVIDE 8" DIA. DROP FOR SEWERS 8" TO 18" DIA. 12" DIA. DROP FOR SEWERS 21" TO 30" DIA.
3. SOLVENT WELD CAP IN PLACE
4. COUPLER TO BE HELD IN PLACE WITH STAINLESS STEEL CLAMP.



STRUCTURE: MANHOLE DROP DETAIL

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SANITARY SEWER DETAILS

SCALE 0 NA

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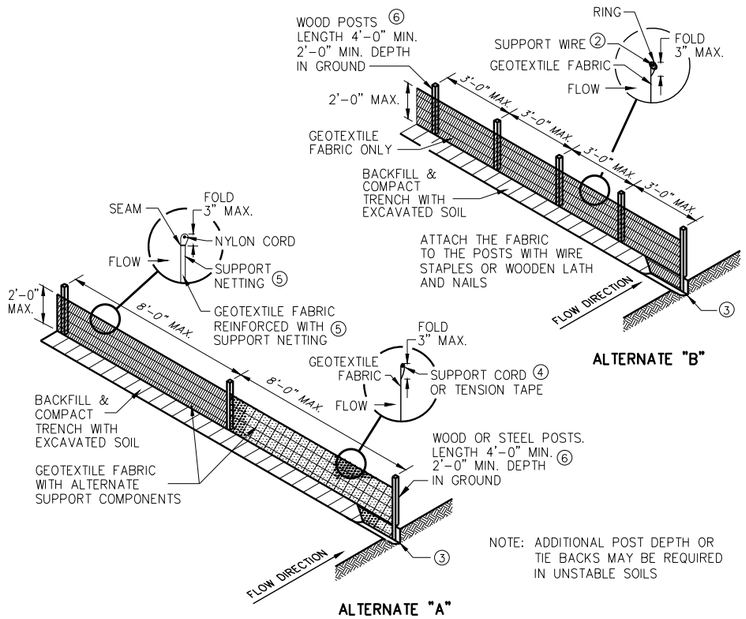


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

TRENCH DETAIL

GENERAL NOTES

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

① CROSS BRACE WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.

② MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C-C.

③ EXCAVATE A TRENCH A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

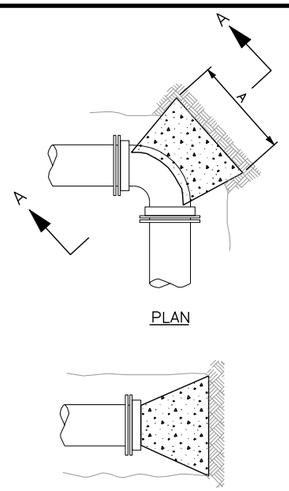
④ WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C-C.

⑤ GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 3/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.

⑥ STEEL POSTS SHALL BE STUDDED "TEE" OF "U" TYPE WITH A MINIMUM WEIGHT OF 1.28 LBS/LINEAL FOOT (WITHOUT ANCHOR). FIN ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1-1/8"x1-1/8" OAK OR HICKORY.

ALTERNATES A & B ARE EQUAL AND EITHER MAY BE USED.

SILT FENCE
NO SCALE



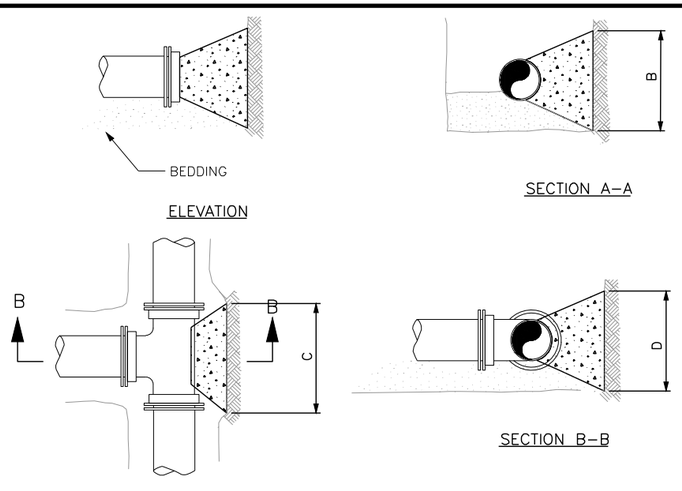
NOTES:

REACTION BLOCKING WILL CONTACT FITTING FROM BELL TO BELL AND THE FULL DIAMETER OF FITTING AS SHOWN

CAST BLOCKING AGAINST UNDISTURBED EARTH

USE CLASS "B" CONCRETE BLOCKING

DIMENSIONS IN TABLES ARE BASED ON WATER PRESSURE OF 150 psi AND EARTH RESISTANCE OF 4000 POUNDS

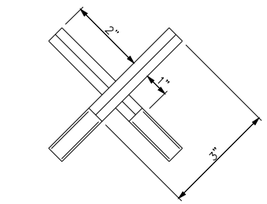


DIA	BENDS					
	22 12		45		90	
	A	B	A	B	A	B
6" & 8"	1'-0"	1'-0"	1'-2"	1'-2"	1'-10"	1'-6"
10" & 12"	1'-4"	1'-4"	1'-10"	1'-10"	2'-8"	2'-3"
14" & 16"	1'-10"	1'-8"	2'-6"	2'-4"	3'-10"	2'-10"
18" & 20"	2'-4"	2'-0"	3'-3"	2'-10"	5'-0"	3'-4"
24"	2'-10"	2'-4"	4'-0"	3'-5"	5'-4"	3'-10"
30"	3'-6"	3'-0"	5'-4"	3'-10"	8'-0"	4'-8"

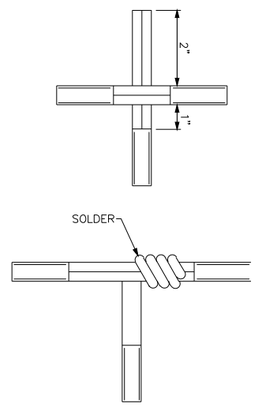
TEES		
DIA	C	D
6" & 8"	1'-6"	1'-4"
10" & 12"	2'-3"	2'-0"
14" & 16"	3'-2"	2'-6"
18" & 20"	4'-0"	3'-0"
24"	5'-3"	3'-4"
30"	6'-3"	4'-3"

REACTION BLOCKING DETAIL

IN-LINE CONNECTION



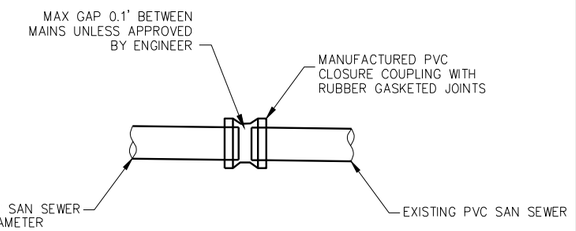
BRANCH CONNECTION



NOTES:

1. CUT OFF INSULATION FROM WIRE AS SHOWN IN THE DRAWING, BUT DO NOT CUT THE COPPER WIRE.
2. LOOP THE WIRE ENDS AT LEAST 4 TIMES ON BOTH SIDES OF THE CONNECTION
3. USING A PROPANE TORCH, APPLY FLAME DIRECTLY TO JOINT (LOOPS) TO BE SOLDERED.
4. APPLY 62SN OR EQUIVALENT ROSIN CORE SOLDER TO THE SPLICE. SOLDER SHOULD FLOW INTO JOINT.
5. SOLDERING PASTE MUST BE APPLIED TO THE LOOPS BEFORE HEAT IS APPLIED IF ROSIN CORE SOLDER IS NOT USED.
6. WHEN COOLED, COVER SPLICE WITH TWO PROTECTIVE LAYERS OF TAPE TO 6" BEYOND EACH END OF THE STRIPPED WIRE. TAPE SHALL BE POLYETHYLENE ADHESIVE TAPE 1-1/2" WIDE AND 8MM THICK.

TRACER WIRE SPLICE CONNECTION DETAIL



DETAIL OF CONNECTION TO EXISTING SAME DIAMETER PVC SANITARY SEWER

CLASS "B"

PIPE EMBEDMENT DETAIL

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CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4953-0010
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DATE OCTOBER 2016
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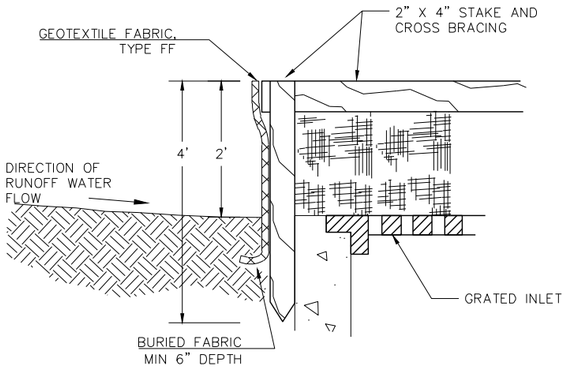
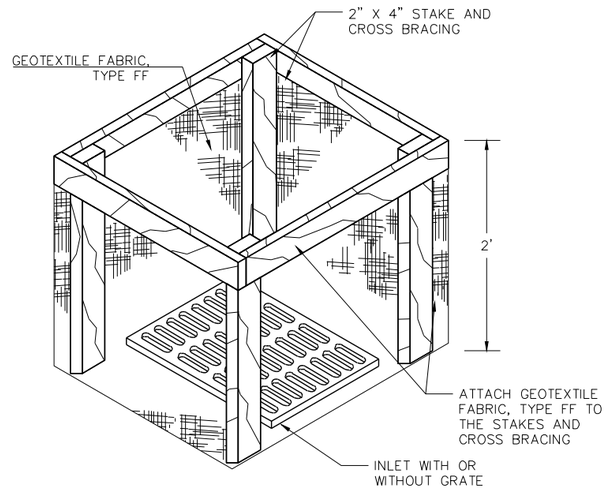
SANITARY SEWER FORCEMAIN EROSION CONTROL DETAIL

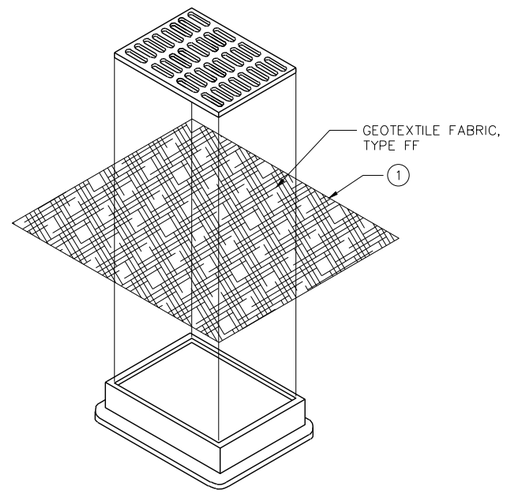
SCALE 0 NA

SHEET NO. 14 of 20



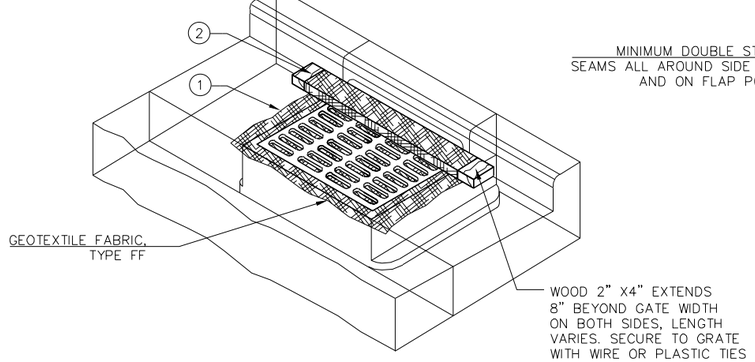


INLET PROTECTION, TYPE A

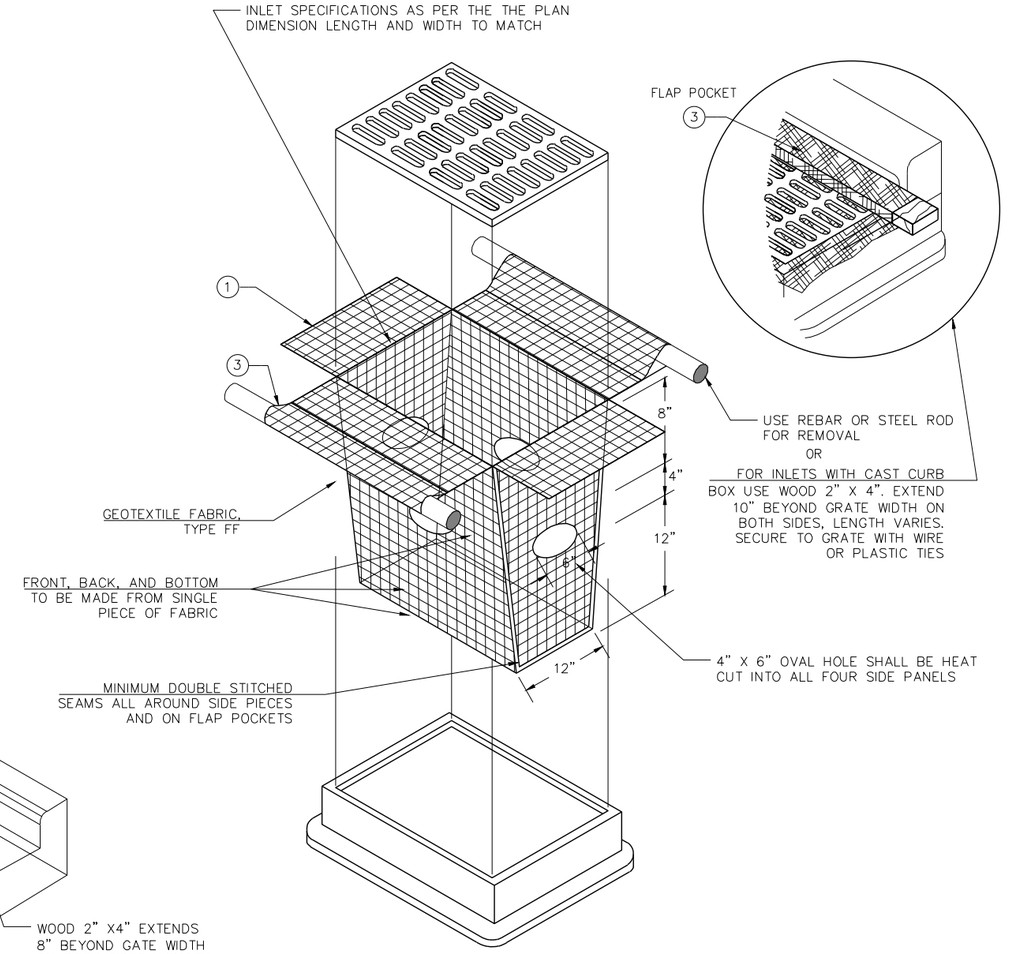


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE (2))

GENERAL NOTES

MANUFACTURED ALTERNATIVE APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

(1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

(2) FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

(3) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE , BETWEEN THE INLET WALL AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 10-2

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EROSION CONTROL DETAIL

SCALE: 0 — NA

SHEET NO.

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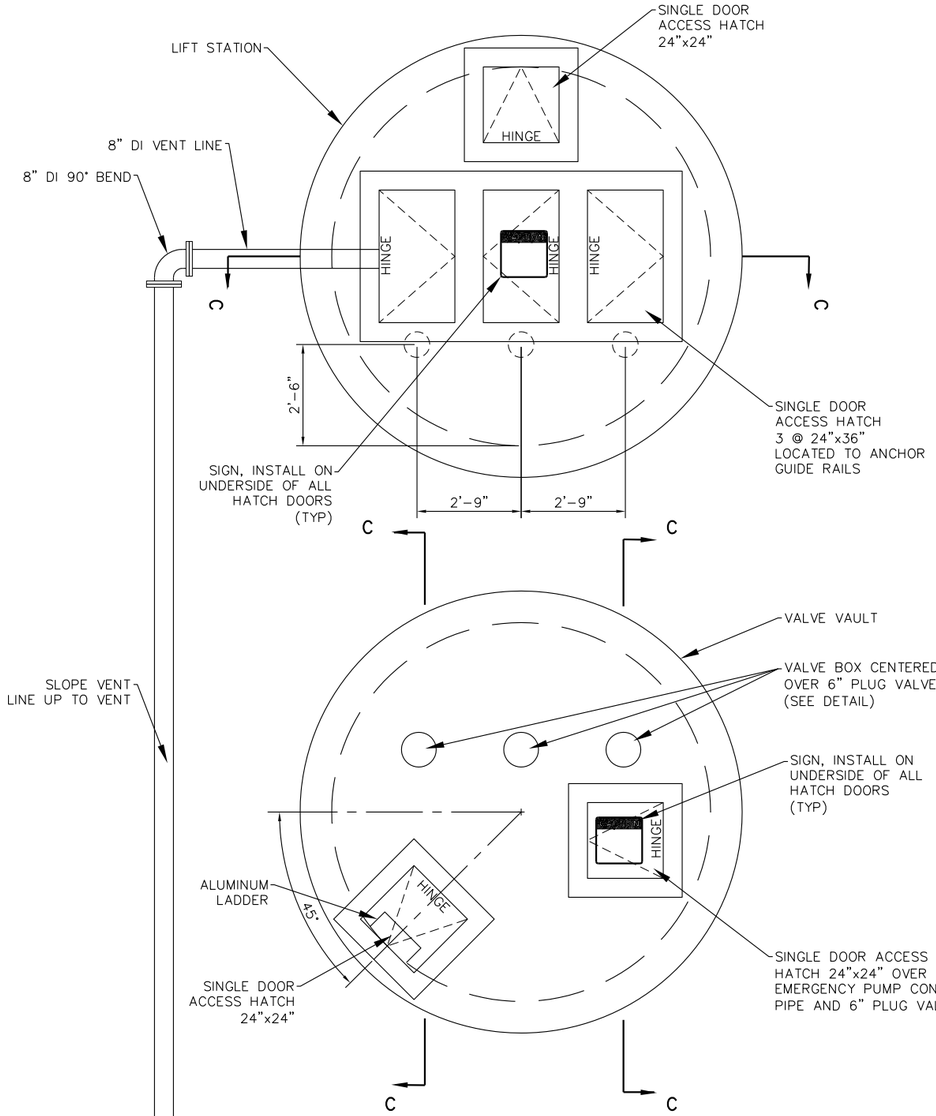
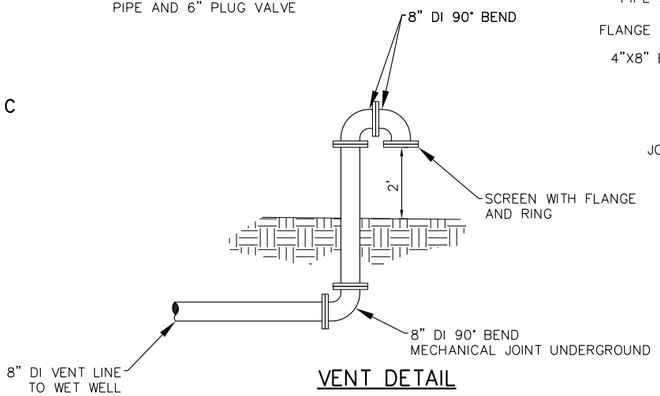
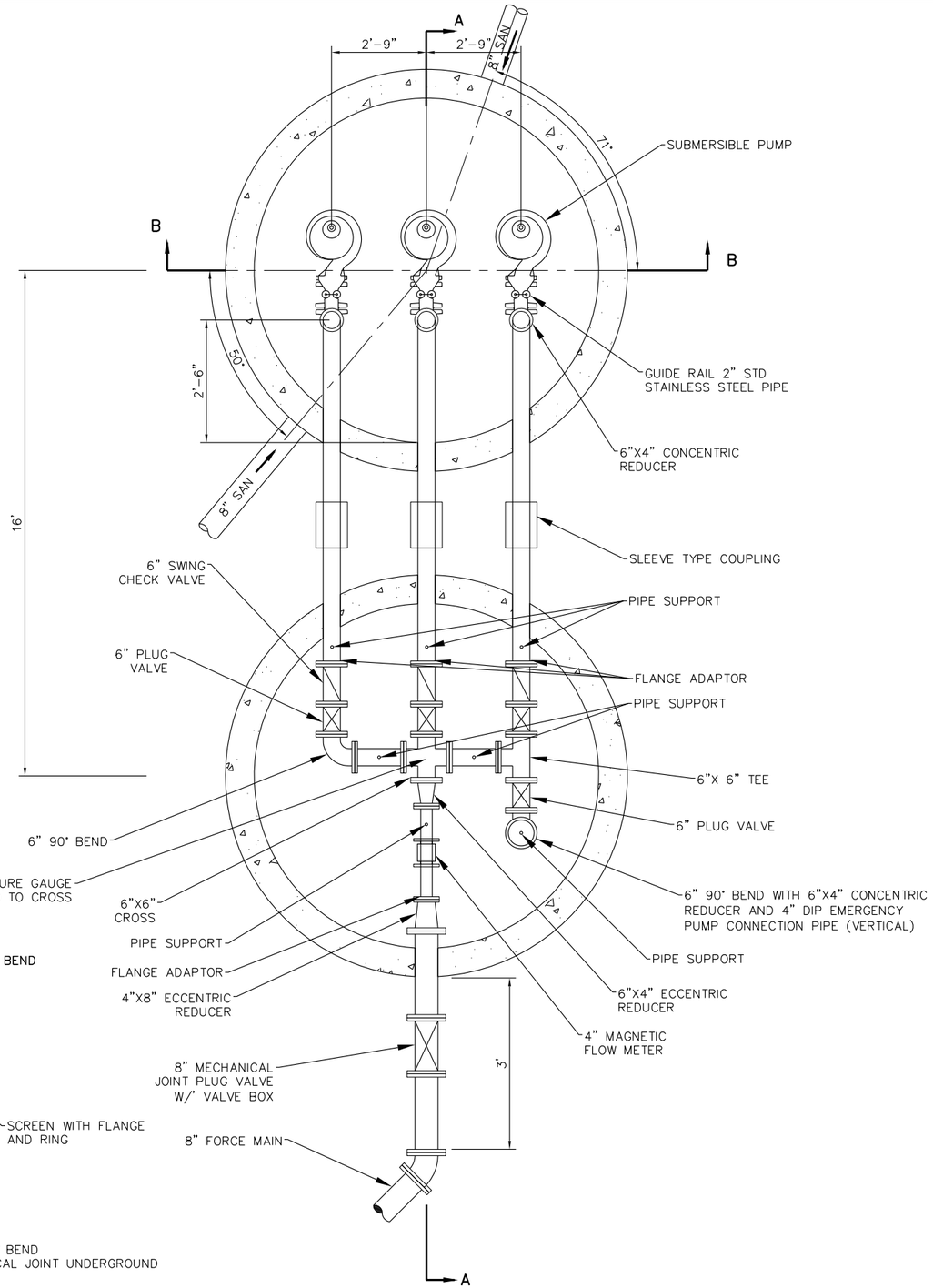


COVER DETAIL



VENT DETAIL



PLAN DETAIL

SUBMERSIBLE PUMP LIFT STATION AND VALVE VAULT

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TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4953-0010
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DATE OCTOBER 2016
SET TYPE CONSTRUCTION

LIFT STATION DETAIL

SCALE 0 NA

SHEET NO. 16R of 20

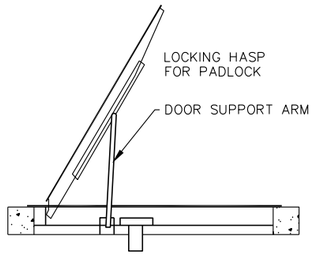
10"x14" MINIMUM

CAUTION

DANGEROUS/HAZARDOUS GASES.
LEVEL 2 CONFINED SPACE
DO NOT ENTER WITHOUT PROPER
EQUIPMENT AND SUPERVISION

1" MIN. BLACK LETTERS ON YELLOW BKGRD (TYP.)

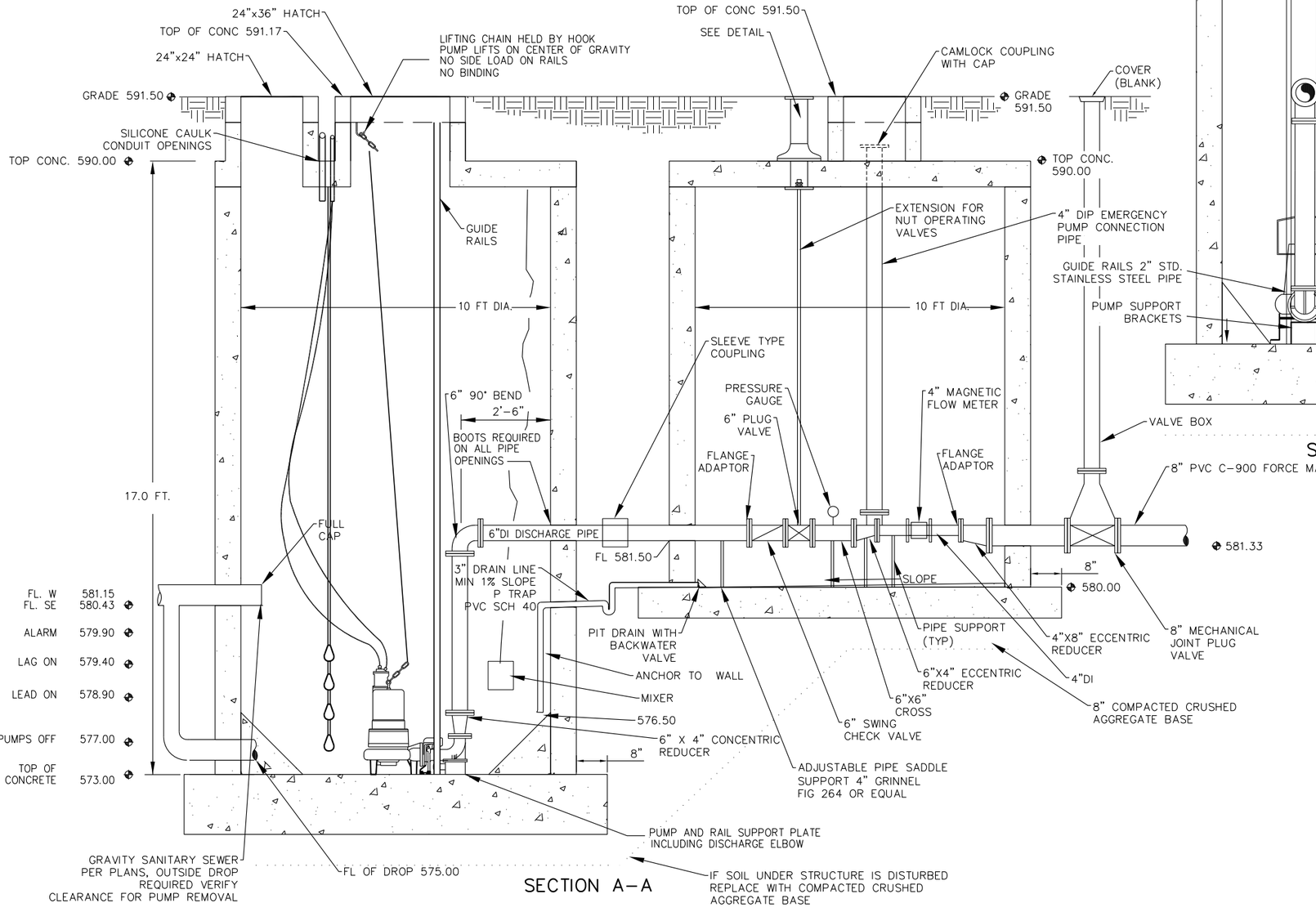
SIGN PROVIDED BY LAB SAFETY
REFERENCE # 6113761 OR EQUAL



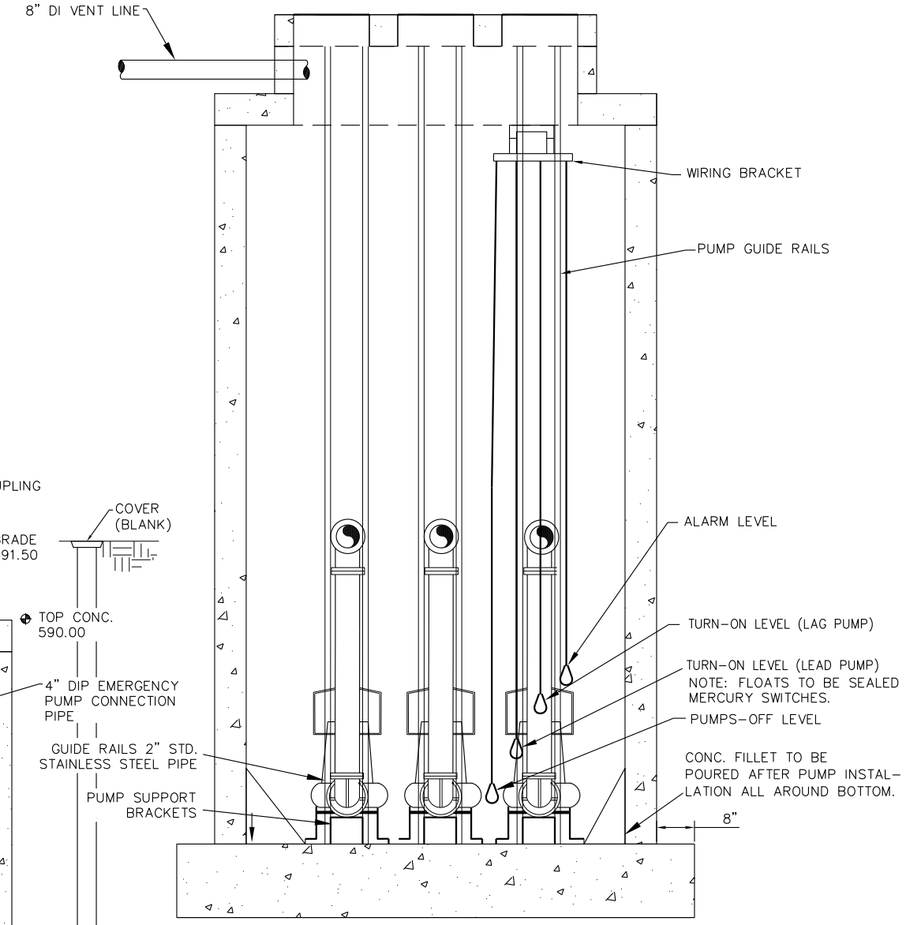
ACCESS DOOR DETAIL

VIEW OF FRAME WITH
DOOR IN OPEN POSITION

SECTION C–C



SECTION A–A



SECTION B–B

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LIFT STATION DETAIL

SCALE 0 NA

SHEET NO. 17R of 20

WET WELL STRUCTURE, CLASS I, DIVISION 1 SPACE. PROVIDE WATERTIGHT SEAL FOR ALL CONDUIT PENETRATIONS. PROVIDE NEW LEVEL TRANSMITTER AND BACKUP FLOAT SWITCHES ACCESSIBLE FROM WETWELL HATCH.

APPROXIMATE ROUTE FOR DIRECT BURIED PUMP & MIXER CABLE CONDUITS.

VALVE VAULT STRUCTURE, CLASS I, DIVISION 2 SPACE.

NEW SUBMERSIBLE PUMP (TYP. OF 3)

NEW SUBMERSIBLE MIXER

LIFT STATION CONTROL PANEL ON CONCRETE PAD, SEE DETAILS 2690-820 FOR INSTALLATION.

APPROXIMATE LOCATION OF UNDERGROUND ELECTRIC SERVICE

SELF-CONTAINED METER SOCKET MOUNTED ON BACK OF CONTROL PANEL.

PROVIDE J-BOXES AND SEAL-OFFS MOUNTED TO BACK OF CONTROL PANEL AS REQUIRED, SEE DETAIL 2605-607.

EXTERIOR RECEPTACLE

EXISTING POLE-MOUNTED UTILITY TRANSFORMERS. ELECTRIC UTILITY TO PROVIDE NEW ELECTRIC SERVICE TO RELOCATED LIFT STATION NO.3 AS GENERALLY SHOWN.

EXISTING LIFT STATION NO.3 SCADA ANTENNA REINSTALLED ON NEW CONDUIT MAST, REFER TO DETAILS 2690-701 & 2690-702 FOR INSTALLATION. MOUNT AT SAME HEIGHT AS THE EXISTING INSTALLATION AND ADJUST HEIGHT AS NECESSARY TO REESTABLISH COMMUNICATION WITH THE EXISTING RADIO NETWORK.

EXISTING OVERHEAD ELECTRIC LINES TO BE RELOCATED BY ELECTRIC UTILITY PRIOR TO START OF CONSTRUCTION

PROVIDE WET WELL LEVEL SENSOR, INSTALL PER DETAIL 2690-000

APPROXIMATE ROUTE FOR DIRECT BURIED INTRISICALLY SAFE CIRCUIT CONDUITS.

PROVIDE FLOWMETER, INSTALL PER DETAIL 2690-100. REMOTE MOUNT TRANSMITTER IN CONTROL PANEL AND PROVIDE CONDUIT SIZED FOR MANUFACTURER'S CABLE. PROVIDE INSULATED THROAT BUSHING AND DUXSEAL, OR EQUAL AT CONDUIT ENTRY. PROVIDE STRAIN RELIEF FOR CABLE USING SST KELLEMS GRIPS SUSPENDED FROM TOP OF VAULT USING SST HOOK WITH SPRING-LOADED CLASP. ALL ANCHORS SHALL BE SST.

PROVIDE LIFT STATION WET WELL BACKUP FLOAT SWITCHES (THREE TOTAL), INSTALL PER DETAIL 2690-051

EXISTING LIFT STAITON NO.3 OVERHEAD ELECTRIC SERVICE

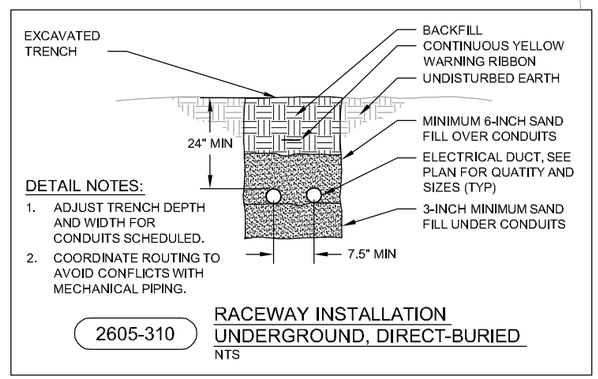
EXISTING LIFT STATION NO.3 TO BE DEMOLISHED. DISCONNECT EXISTING PUMPS AND FIELD DEVICES FOR REMOVAL BY CONTRATOR. REMOVE AND DISPOSE OF ALL ASSOCIATED CONDUIT, ELECTRICAL BOXES/WIREWAYS AND SUPPORT STRUCTURES. REMOVE AND SALVAGE EXISTING CONTROL PANEL-MOUNTED SCADA RADIO FOR REINSTALLATION IN NEW RELOCATED LIFT STATION CONTROL PANEL.

COORDINATE WITH ELECTRIC UTILITY TO DE-ENERGIZE EXISTING ELECTRIC SERVICE AND REMOVE EXISTING METER. REMOVE AND SALVAGE EXISTING GENERATOR RECEPTACLE FOR REUSE AT NEW LIFT STATION. REMOVE AND SALVAGE TO OWNER THE EXISTING METER SOCKET AND MANUAL TRANSFER SWITCH. REMOVE AND DISPOSE OF ALL REMAINING CONDUIT, WIRE AND ASSOCIATED ELECTRICAL BOXES/WIREWAYS AND SUPPORT STRUCTURES.

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. INSTALL UNDERGROUND CONDUITS PER DETAIL 2605-310 THIS SHEET. REFER TO ONE-LINE DIAGRAM.
3. MINIMUM CONDUIT SIZE 3/4", UNLESS OTHERWISE NOTED.
4. ROOM/AREA ATMOSPHERE REQUIREMENTS, REFER TO SECTION 16010:
   - 4.1. EXTERIOR, BELOW GRADE: UNDERGROUND, WET, NEW CONSTRUCTION.
   - 4.2. WET WELL, VALVE VAULT: HAZARDOUS, WET, NEW CONSTRUCTION
   - 4.3. EXTERIOR, ABOVE GRADE: GENERAL, WET, NEW CONSTRUCTION.

LIFT STATION ELECTRICAL SITE PLAN



DETAIL NOTES:

1. ADJUST TRENCH DEPTH AND WIDTH FOR CONDUITS SCHEDULED.
2. COORDINATE ROUTING TO AVOID CONFLICTS WITH MECHANICAL PIPING.

2605-310 RACEWAY INSTALLATION UNDERGROUND, DIRECT-BURIED
NTS

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ELECTRICAL SITE PLAN

SCALE 0 10 20

SHEET NO. 18 of 20

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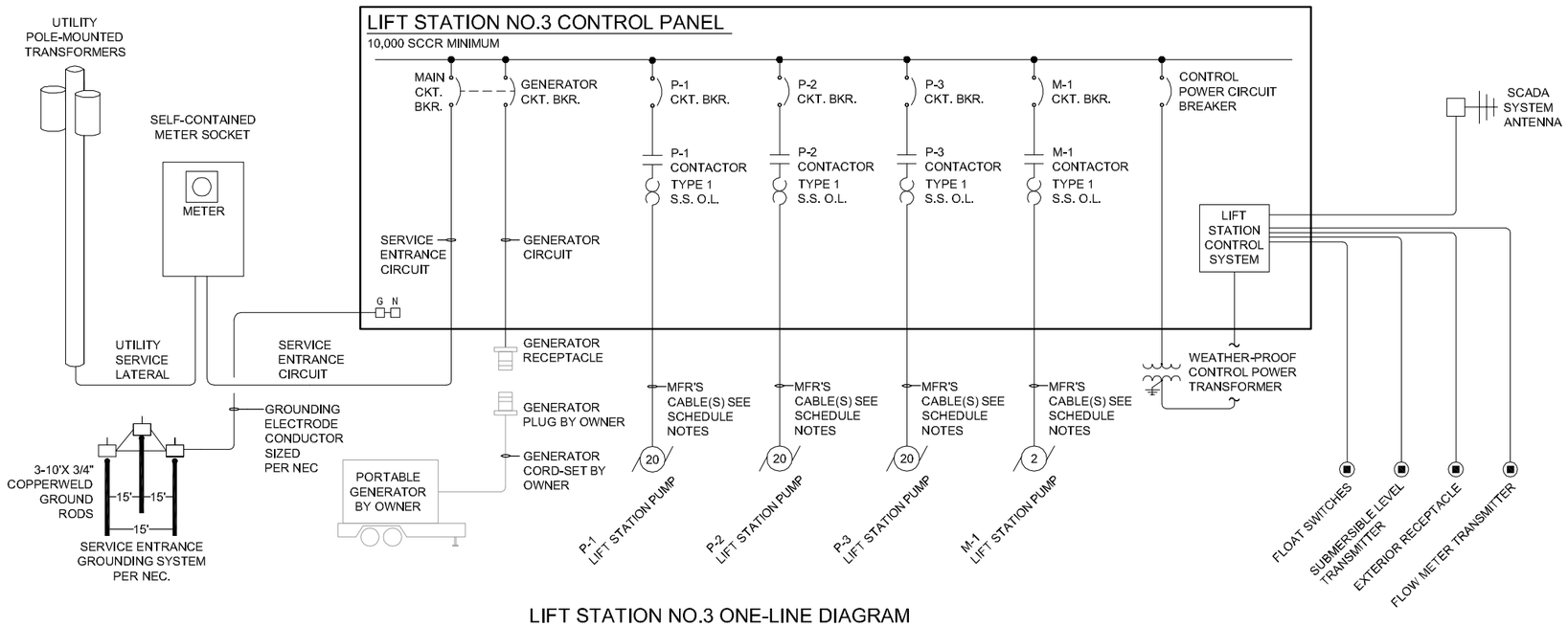

LIFT STATION NO.3 ONE-LINE DIAGRAM

N.T.S.

LIFT STATION ELECTRICAL DATA

STATION	ELECTRIC SERVICE ENTRANCE					LIFT STATION CONTROL PANEL EQUIPMENT		PUMP/MIXER DATA				STAND-BY POWER EQUIPMENT	
	VOLTAGE	AMPACITY	SERVICE LATERAL	SERVICE ENTRANCE CIRCUIT	SERVICE DISCONNECT SWITCH	MAIN CIRCUIT BREAKER	GENERATOR CIRCUIT BREAKER	HORSEPOWER	CIRCUIT BREAKER	CONTACTOR	CABLE(S)	PORTABLE GENERATOR CB SIZE	GENERATOR CIRCUIT
L.S. #3 - PUMPS	480/277V 3Ø,4W	200A	1-5"	4#3/0 & #6G IN 1-2"C	N/A	250AF/200AT	250AF/200AT	20	150AF/60AT - CB	FVNR - SIZE 2	1	80A	4#8 & #10G IN 3/4"C
L.S. #3 - MIXER								2	150AF15AT - CB	FVNR - SIZE 1	1		

NOTES:
1. STANDARD MOTOR DATA IS USED IN THE ABOVE CALCULATIONS. VERIFY ACTUAL NAMEPLATE FULL-LOAD AMP RATING WITH MANUFACTURER.
2. GENERATOR RECEPTACLES WHEN REQUIRED SHALL BE PROVIDED UNDER THE SCOPE OF SECTION 26 32 10.
3. COORDINATE WITH PUMP MANUFACTURER AND DETERMINE NUMBER AND SIZE OF PUMP CABLES. SIGNAL CABLE FOR HIGH TEMPERATURE AND SEAL FAIL SENSOR WIRING MAY BE PROVIDED AS A SEPARATE CABLE OR INTEGRAL TO THE PUMP POWER CABLE BASED ON PUMP MANUFACTURER DESIGN. SIZE PUMP CABLE CONDUITS AS NEEDED TO SATISFY NEC REQUIREMENTS FOR CONDUIT FILL. PUMP SENSOR CABLES MAY BE ROUTED IN SAME CONDUIT AS PUMP POWER CABLES.

LIFT STATION ELECTRICAL REQUIREMENTS:

1. UTILITY POLE-MOUNTED TRANSFORMER: EXISTING POLE OR NEW POLE BY UTILITY FOR UTILITY INSTALLATION OF POLE-MOUNTED TRANSFORMERS. UTILITY TRANSFORMERS SHALL PROVIDE THE SCHEDULED ELECTRIC SERVICE TO THE FACILITY.
2. SELF-CONTAINED METER SOCKET: PROVIDE UTILITY APPROVED SELF-CONTAINED METER SOCKET SUITABLE FOR THE ELECTRIC SERVICE SCHEDULED AND PER UTILITY REQUIREMENTS FOR UTILITY INSTALLATION OF METER. PROVIDED CONDUIT STUBOUTS FROM METER SOCKET PER UTILITY REQUIREMENTS FOR UTILITY INSTALLATION OF LATERAL CONDUCTORS.
3. SERVICE ENTRANCE CIRCUIT: PROVIDE SERVICE ENTRANCE CIRCUIT AS SCHEDULED.
4. SERVICE ENTRANCE GROUNDING SYSTEM: PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH NEC REQUIREMENTS AND AS SHOWN.
5. GROUNDING ELECTRODE CONDUCTOR: PROVIDE BARE COPPER GROUNDING ELECTRODE CONDUCTOR SIZED IN ACCORDANCE WITH NEC REQUIREMENTS AND AS SHOWN.
6. LIFT STATION CONTROL PANEL MAIN/GENERATOR CIRCUIT BREAKERS: PROVIDE LIFT STATION CONTROL PANEL INTERNAL MAIN AND GENERATOR CIRCUIT BREAKERS AS SCHEDULED. PROVIDE MECHANICAL CIRCUIT BREAKER INTERLOCK TO PREVENT SIMULTANEOUS CLOSING OF MAIN AND GENERATOR CIRCUIT BREAKERS.
7. GENERATOR CIRCUIT: PROVIDE GENERATOR CIRCUIT AS SCHEDULED.
8. THREE-PHASE GENERATOR RECEPTACLE: REMOVE AND SALVAGE EXISTING 200A, 600V, STYLE 1, REVERSE SERVICE RECEPTACLE FROM LIFT STATION NO.3 AND REINSTALL ON NEW LIFT STATION CONTROL PANEL. THIS RECEPTACLE WILL MATE WITH PLUG END ON OWNER'S EXISTING PORTABLE GENERATOR CORD SET THAT IS TO BE MODIFIED WITH THIS PROJECT. INSTALL RECEPTACLE ON SIDE OF LIFT STATION CONTROL PANEL ENCLOSURE FACING ELM STREET.
9. PORTABLE GENERATOR MODIFICATIONS: OWNER'S EXISTING 42KW, 53KVA DIESEL-FUELED PORTABLE GENERATOR BY KOHLER POWER SYSTEMS HAS THREE CORD SETS FOR PROVIDING VARIOUS THREE-PHASE AND SINGLE-PHASE POWER. WORK REQUIRED WITH THIS PROJECT SHALL INCLUDE RE-WIRING THE EXISTING 240/120V, 3Ø, 4W CORD SET FOR 480/277V, 3Ø, 4W POWER AND PROVIDING A NEW SET-MOUNTED 150AT/80AF CIRCUIT BREAKER TO BE USED WITH THAT CORD SET. SALVAGE EXISTING BREAKER TO OWNER. THE EXISTING CORD SET HAS A CROUSE-HINDS 200A, 600V, STYLE 1, 4W, 4-POLE REVERSE SERVICE PLUG THAT MATES WITH THE RECEPTACLE AT EXISTING LIFT STATION NO.3, WHICH SHALL BE RELOCATED TO THE NEW LIFT STATION.
10. CONTROL POWER SYSTEM: CONTROL PANEL SUPPLIER SHALL BE RESPONSIBLE FOR SIZING CONTROL POWER COMPONENTS BASED ON THE CONNECTED LOAD OF THE BRANCH CIRCUITS FED BY THE CONTROL POWER SYSTEM.
11. LIFT STATION CONTROL PANEL: FREESTANDING PANEL SHALL BE SERVICE-ENTRANCE RATED AND DESIGNED TO BE POWERED FROM 480/277V, THREE-PHASE, 4-WIRE ELECTRIC SERVICE. PANEL SHALL HAVE SCCR RATING THAT EXCEEDS THE AVAILABLE FAULT CURRENT AT THE METER AND SHALL HAVE MINIMUM RATING AS INDICATED ON DRAWINGS AND AS REQUIRED BY THE UTILITY. PROVIDE LIFT STATION CONTROL PANEL INTERNAL COMPONENTS AS SCHEDULED. EXISTING LIFT STATION NO.3 SCADA RADIO SHALL BE REINSTALLED IN THIS PANEL AND SETUP TO COMMUNICATE WITH THE EXISTING SCADA SYSTEM IN SAME MANNER AS CURRENT CONDITIONS. THE PANEL LAYOUT AND ENCLOSURE SIZE SHALL BE DESIGNED SO THAT THE TOP OF THE CONTROL PANEL INSTALLED ON CONCRETE PAD IS A MAXIMUM OF 4.4 FEET ABOVE FINISHED GRADE.
12. PUMP MOTOR CONTROLLERS: PROVIDE MOTOR CONTROL COMPONENTS AS SCHEDULED AND SPECIFIED.
13. PUMP & MIXER CABLES: INSTALL PUMP & MIXER CABLES AS DETAILED. PUMP & MIXER CABLES SHALL BE PROVIDED BY PUMP/MIXER MANUFACTURER AND SIZED FOR THE FULL LOAD OF THE MOTOR. PUMP & MIXER CABLES MAY INCLUDE SENSOR (HIGH TEMPERATURE AND SEAL FAIL) WIRING OR SECOND CABLE MAY BE PROVIDED FOR THIS PURPOSE. PROVIDE CONDUITS (QUANTITY AND SIZE) AS APPROPRIATE FOR THE PUMP& MIXER CABLE(S) PROVIDED UNDER THIS CONTRACT. MANUFACTURER SUPPLIED CABLES SHALL BE ROUTED TO CONTROL PANEL AND SHALL NOT BE SPLICED. PUMP & MIXER CABLE CONDUITS SHALL BE SIZED FOR THE PUMPS INSTALLED WITH THIS PROJECT AND ALSO BE OF SUFFICIENT SIZE FOR FUTURE 20 HP, 480V, THREE-PHASE PUMPS WHILE MEETING NEC REQUIREMENTS FOR CONDUIT FILL.
14. FLOAT SWITCHES: PROVIDE AND INSTALL THREE FLOAT SWITCHES AS DETAILED. FLOAT SWITCH CABLES SHALL BE INSTALLED IN ACCORDANCE WITH NEC REQUIREMENTS FOR INTRINSICALLY SAFE SYSTEMS. MANUFACTURER SUPPLIED CABLES SHALL BE ROUTED TO CONTROL PANEL AND SHALL NOT BE SPLICED.
15. SUBMERSIBLE LEVEL SENSOR: FURNISH AND INSTALL ONE SUBMERSIBLE LEVEL SENSOR AS DETAILED. LEVEL SENSOR CABLE SHALL BE INSTALLED IN ACCORDANCE WITH NEC REQUIREMENTS FOR INTRINSICALLY SAFE SYSTEMS. MANUFACTURER SUPPLIED CABLES SHALL BE ROUTED TO CONTROL PANEL AND SHALL NOT BE SPLICED.
16. FLOW METER: PROVIDE AND INSTALL ONE IP68 RATED FLOW METER WITH FACTORY-POTTED CABLE IN LIFT STATION VALVE VAULT AS DETAILED. FLOW METER TRANSMITTER SHALL BE INSTALLED INSIDE LIFT STATION CONTROL PANEL. MANUFACTURER SUPPLIED CABLES SHALL BE ROUTED TO TRANSMITTER IN CONTROL PANEL AND SHALL NOT BE SPLICED. POWER FLOW METER TRANSMITTER FROM 20A/1P CIRCUIT BREAKER IN CONTROL PANEL.
17. EXTERIOR RECEPTACLE: PROVIDE AND INSTALL ONE EXTERIOR WEATHERPROOF, EXTRA-HEAVY DUTY/HOSPITAL GRADE GFCI DUPLEX RECEPTACLE ON BACK OF CONTROL PANEL ENCLOSURE. PROVIDE WITH ALUMINUM "WHILE-IN-USE" COVER AS SPECIFIED. ROUTE 2#10 & #10G IN 3/4"C TO 20A/1P CIRCUIT BREAKER IN CONTROL PANEL.
18. SCADA SYSTEM ANTENNA: FURNISH AND INSTALL SCADA SYSTEM ANTENNA AS DETAILED. MOUNT ANTENNA MAST TO SIDE OF CONTROL PANEL OPPOSITE THE GENERATOR RECEPTACLE. INSTALL ANTENNA CABLE PER MANUFACTURER'S WRITTEN REQUIREMENTS.
19. SCADA SYSTEM MODIFICATONS: INCORPORATE LIFT STATION CONTROL AND MONITORING FUNCTIONS INTO THE EXISTING SCADA SYSTEM, REFER TO SECTION 16901 REQUIREMENTS.

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. COORDINATE WITH ELECTRIC UTILITY TO PROVIDE NEW THREE PHASE, FOUR-WIRE SERVICE AS SCHEDULED AND VERIFY AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT. ALL ELECTRIC UTILITY COSTS SHALL BE PAID DIRECTLY BY OWNER.
3. COORDINATE WITH GENERAL CONTRACTOR AND PROVIDE TEMPORARY ELECTRIC SERVICE FOR ANY BYPASS PUMPING AND SITE DEWATERING THAT MAY BE REQUIRED, REFER TO DIVISION 1 REQUIREMENTS.
4. INSTALL UNDERGROUND CONDUITS PER DETAIL 2605-310.
5. ROOM/AREA ATMOSPHERE REQUIREMENTS, REFER TO SECTION 16010 HARDWARE USAGE TABLE:
   - 5.1. EXTERIOR, ABOVE GRADE: GENERAL, WET, NEW CONSTRUCTION.
   - 5.2. EXTERIOR, BELOW GRADE: UNDERGROUND, WET, NEW CONSTRUCTION.
   - 5.3. WET WELL, VALVE VAULT: HAZARDOUS, WET, EXISTING CONSTRUCTION.

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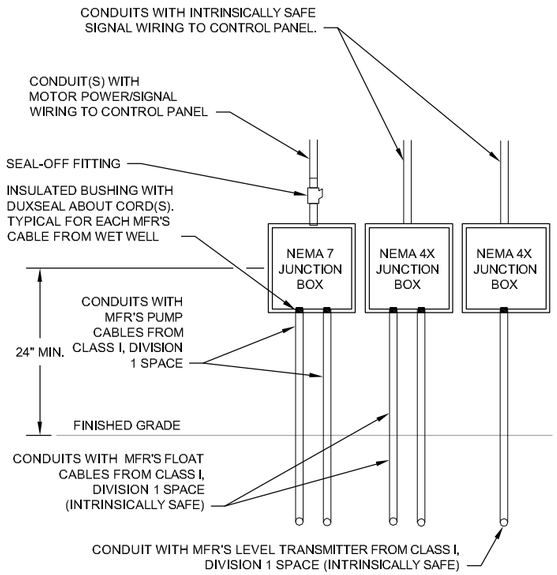
LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4853-0010
DRAWN BY JMB
CHECKED BY RJJ
DATE OCTOBER 2016
SET TYPE CONSTRUCTION

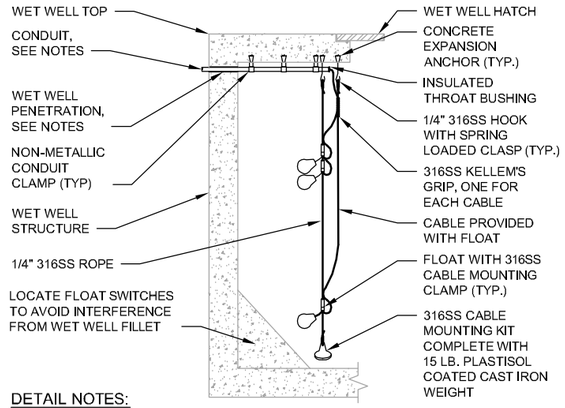
ONE-LINE DIAGRAM



DETAIL NOTES:

1. PROVIDE NUMBER OF J-BOXES AS REQUIRED, MOUNTED TO BACK OF CONTROL PANEL WITH SST STRUT SYSTEM AND SST ANCHORS/FASTENERS.

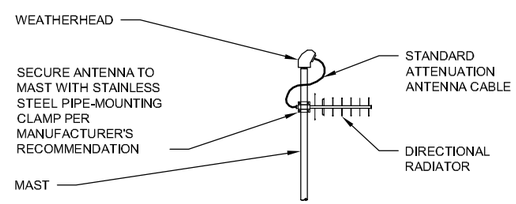
2605-607 LIFT STATION JUNCTION BOX DETAIL
NTS



DETAIL NOTES:

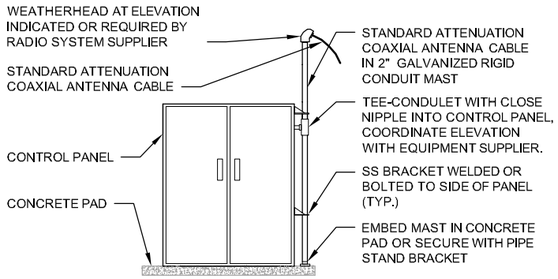
1. INSTALL FLOAT SWITCHES IN LOCATION WHERE SUSPENSION HOOKS, CABLES, AND CONDUIT(S) ARE ALL ACCESSIBLE FROM THE WET WELL HATCH WITHOUT ENTERING THE WET WELL. ADJUST FLOAT SWITCH MOUNTING TO ACHIEVE ACTIVATION ELEVATIONS AS SPECIFIED, SHOWN ON PLANS, OR DIRECTED IN THE FIELD BY THE ENGINEER.
2. INSTALL NO MORE THAN THREE FLOAT SWITCH CABLES IN EACH CONDUIT. PROVIDE MULTIPLE CONDUITS IF MORE THAN THREE FLOATS ARE SPECIFIED. CONDUIT SHALL BE 2-1/2". MATERIALS SHALL BE AS SPECIFIED.
3. FLOAT SWITCH GROUND CONDUCTOR SHALL BE SOLIDLY GROUNDED
4. PROVIDE SUFFICIENT SLACK CABLE, COILED AND SUSPENDED FROM HOOK, TO ALLOW ADJUSTMENT +/- 3 FT. FROM SPECIFIED ELEVATION.
5. WET WELL PENETRATION SHALL CONSIST OF NON-METALLIC SLEEVE FOR CAST IN-PLACE STRUCTURE OR CORED HOLE FOR PRE-CAST OR EXISTING STRUCTURE. PROVIDE MODULAR RUBBER SEAL AT EACH PENETRATION.

2690-051 INSTRUMENT INSTALLATION FLOAT SWITCH
NTS

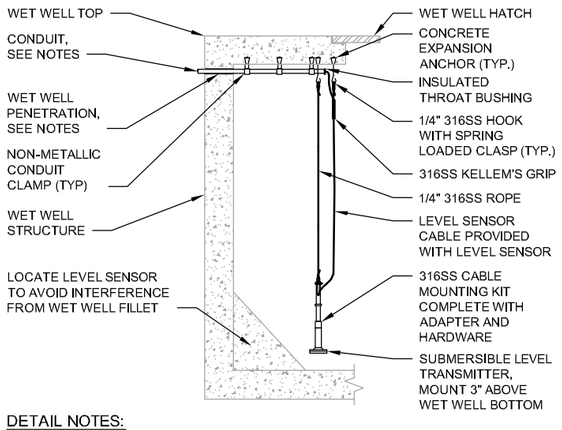


DIRECTIONAL RADIATOR

2690-701 RF RADIATOR INSTALLATION, MAST MOUNTED
NTS



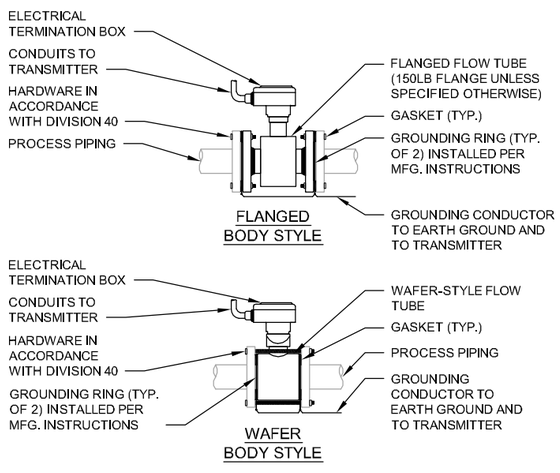
2690-702 RF ANTENNA MOUNTING, CONTROL PANEL SUPPORTED
NTS



DETAIL NOTES:

1. INSTALL LEVEL SENSOR IN LOCATION WHERE SUSPENSION HOOKS, CABLES, AND CONDUIT(S) ARE ALL ACCESSIBLE FROM THE WET WELL HATCH WITHOUT ENTERING THE WET WELL.
2. INSTALL AND CONNECT LEVEL SENSOR BREATHER TUBE (IF PROVIDED) PER MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE SUFFICIENT SLACK CABLE, COILED AND SUSPENDED FROM HOOK, TO ALLOW ADJUSTMENT +/- 3 FT. FROM SPECIFIED ELEVATION.
4. WET WELL PENETRATION SHALL CONSIST OF NON-METALLIC SLEEVE FOR CAST IN-PLACE STRUCTURE OR CORED HOLE FOR PRE-CAST OR EXISTING STRUCTURE. PROVIDE MODULAR RUBBER SEAL AT EACH PENETRATION.
5. CONDUIT SHALL BE SIZED TO ACCOMMODATE LEVEL SENSOR CABLE. MATERIALS SHALL BE AS SPECIFIED.

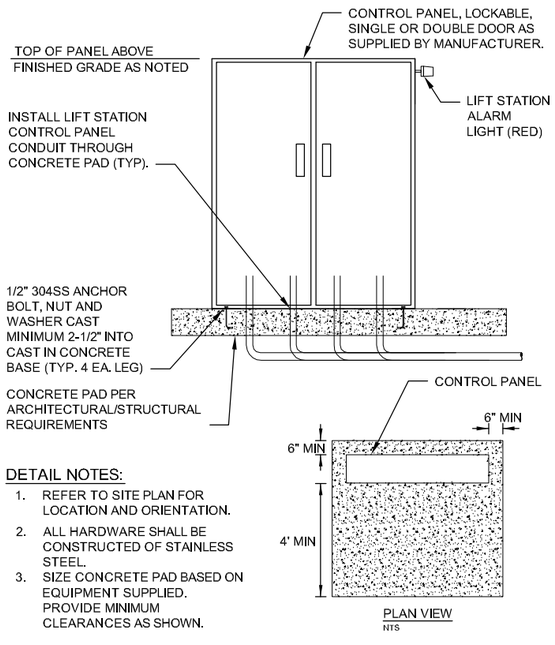
2690-000 INSTRUMENT INSTALLATION SUBMERSIBLE LEVEL TRANSMITTER
NTS



DETAIL NOTES:

1. INSTALL FLOW METER TO MAINTAIN STRAIGHT RUN OF 5 UPSTREAM PIPE DIAMETERS AND 2 DOWNSTREAM PIPE DIAMETERS, MINIMUM.
2. INSTALL CONDUIT(S) BETWEEN FLOW TUBE AND TRANSMITTER IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ALL CABLES SHALL BE INSTALLED IN CONDUIT.
4. INSULATED GROUND CONDUCTOR NEED NOT BE INSTALLED IN CONDUIT.
5. GROUNDING SYSTEM SHALL PROVIDE LESS THAN 0.5 OHM, 100MV WHEN TESTED WITH STANDARD METHODS.

2690-100 INSTRUMENT INSTALLATION, ELECTROMAGNETIC FLOW SENSOR
NTS



DETAIL NOTES:

1. REFER TO SITE PLAN FOR LOCATION AND ORIENTATION.
2. ALL HARDWARE SHALL BE CONSTRUCTED OF STAINLESS STEEL.
3. SIZE CONCRETE PAD BASED ON EQUIPMENT SUPPLIED. PROVIDE MINIMUM CLEARANCES AS SHOWN.

2690-820 CONTROL PANEL INSTALLATION EXTERIOR PAD-MOUNTED
NTS

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LIFT STATION #3 RELOCATION
CONTRACT A-16
TOWN OF GIBRALTAR
DOOR COUNTY, WISCONSIN

JOB NO. 4853-0010
DRAWN BY JMB
CHECKED BY RJJ
DATE OCTOBER 2016
SET TYPE CONSTRUCTION

ELECTRICAL DETAILS

SHEET NO.
20 of 20

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