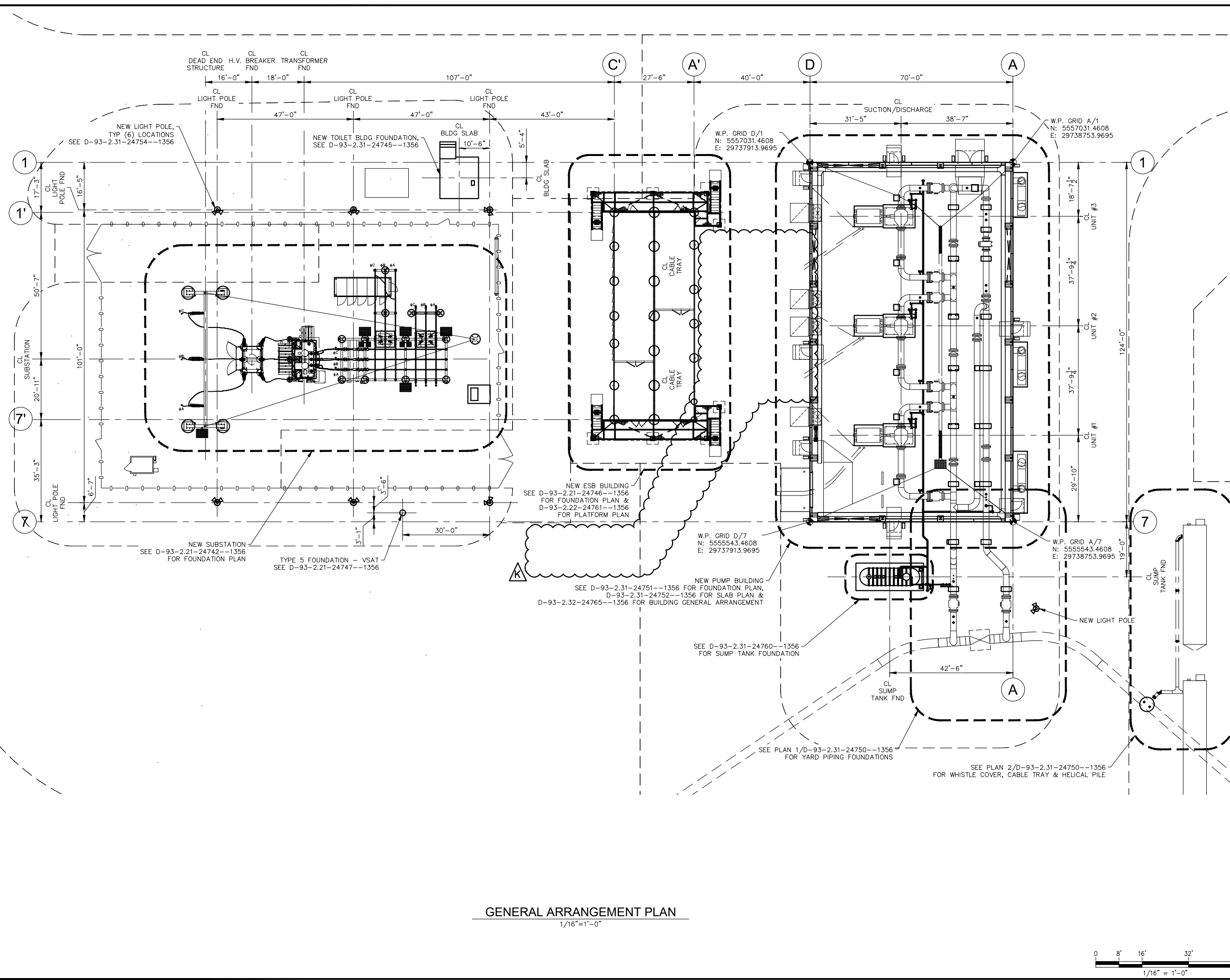


NOTES:
 1. SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.



RE-ISSUED FOR CONSTRUCTION
04/30/2020

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SIGNATURE: *John W. Makirinne*

TYPED OR PRINTED NAME: John W. Makirinne

DATE: 04/30/20 REG. NO.: 22540

K	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/AMA 04/30/20	JWM	-
J	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/26/19	JWM	-
H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-
NO	REVISION	BY DATE	APPR	APPR

ENBRIDGE®

SWATARA (MN) STATION
STATION 93

GENERAL ARRANGEMENT PLAN

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)

SCALE: 1/16"=1'-0" DATE: 12/18/2014 DRAWN: LHB/CLG

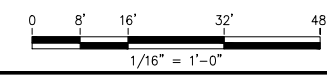
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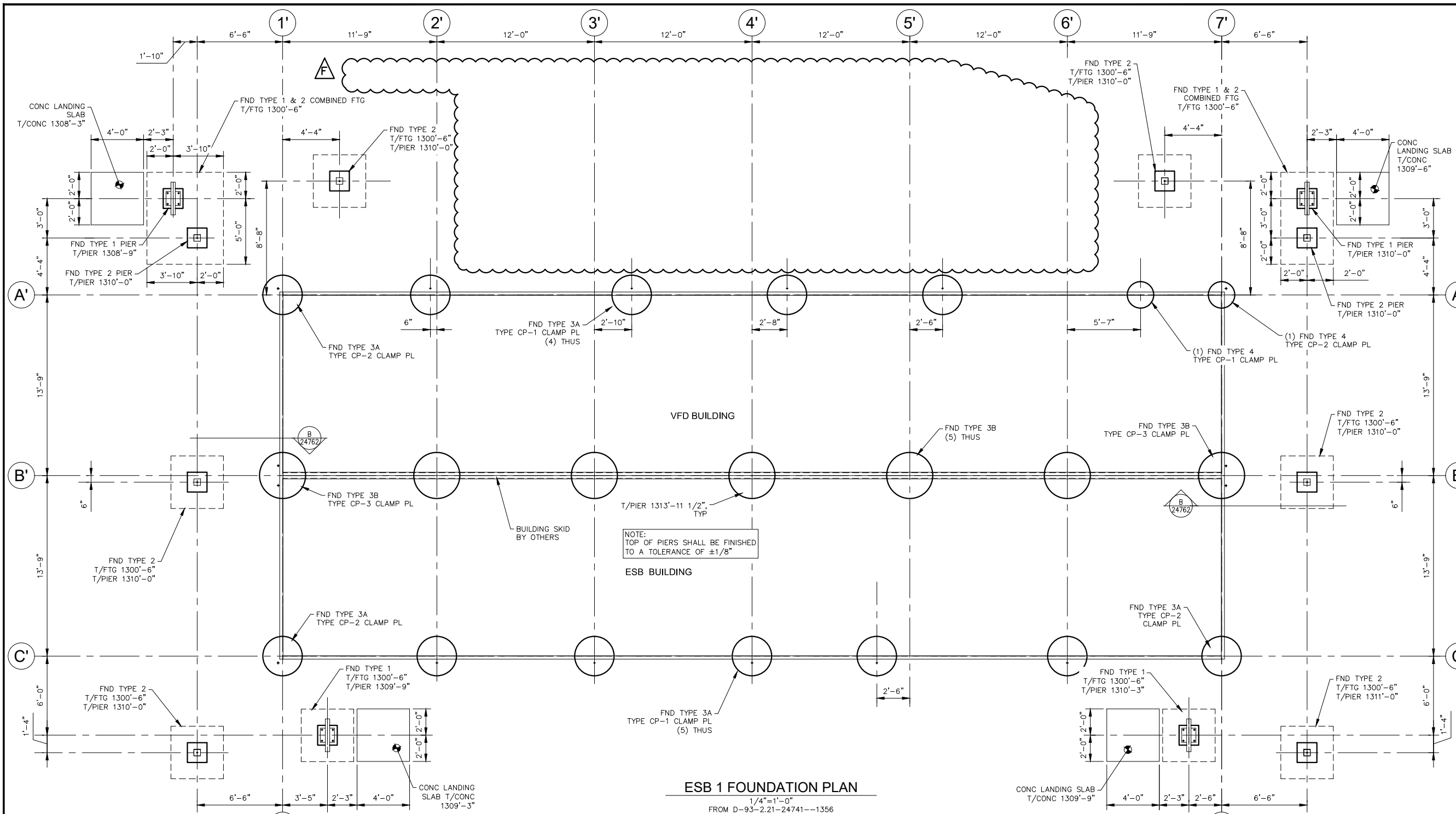
APPR: TM

APPR: -

D-93-2.21-24741-K-1356

GENERAL ARRANGEMENT PLAN
1/16"=1'-0"



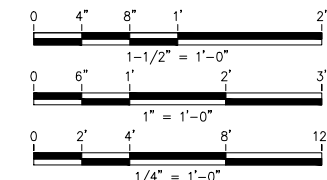
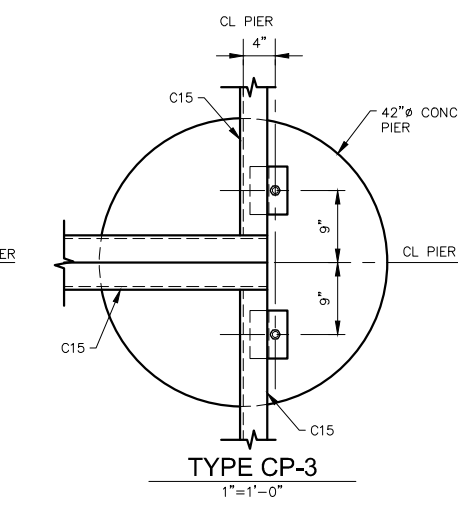
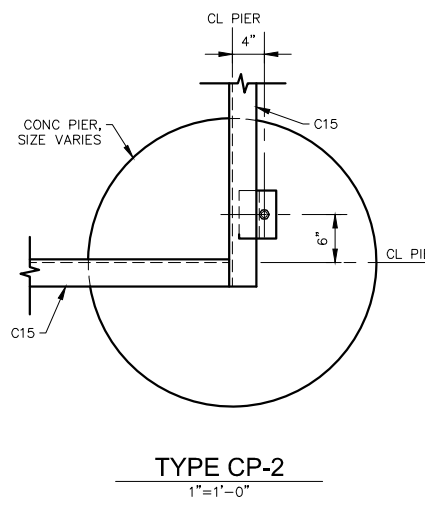
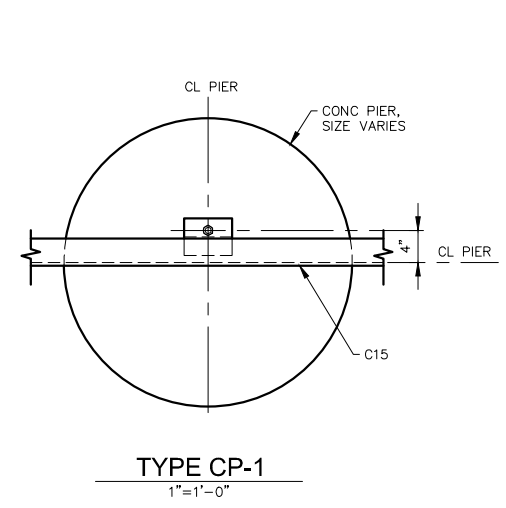
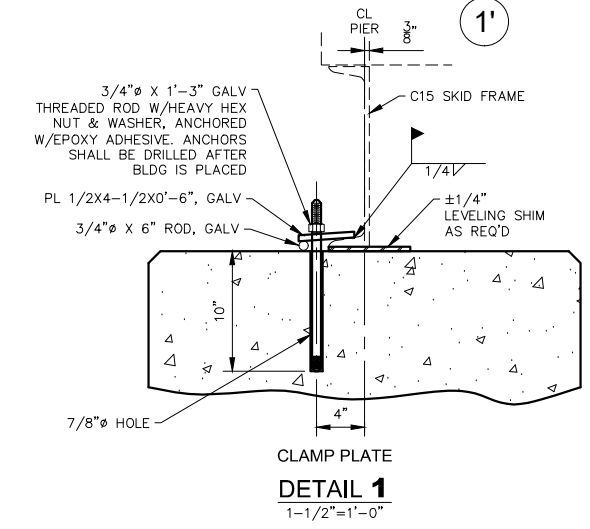


- NOTES:
- SEE D-93-2.31-24754--1356 FOR TYPICAL CONCRETE LANDING.
 - SEE D-93-2.21-24747--1356 FOR FOUNDATION DETAILS.
 - SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.

- DRILLED PIER NOTES
- DRILLED PIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 301, ACI 336.1 AND THE GEOTECHNICAL REPORT.
 - ALL PIERS SHALL BE INSPECTED BY THE OWNER'S FIELD REPRESENTATIVE BEFORE CONCRETE IS PLACED.
 - CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 5000 P.S.I. IN 28 DAYS.
 - REINFORCING BARS SHALL CONFORM TO ASTM DESIGNATION A615 GRADE 60.
 - CURING - TOP OF PIERS SHALL BE PROTECTED FROM PREMATURE DRYING, HEAVY RAINS, FLOWING WATER AND MECHANICAL INJURY. CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR 7 DAYS AFTER PLACEMENT, BY SPRINKLING OR MOISTENED BURLAP COVERING.
 - 2'-0"Ø, 3'-0"Ø & 3'-6"Ø DRILLED PIERS W/ 20'-0" EMBEDMENT BELOW FINISHED GRADE ARE DESIGNED FOR THE FOLLOWING ALLOWABLE AXIAL LOADS:
 24"Ø - 78.6k
 36"Ø - 166.4k
 42"Ø - 190.0k
 - TOLERANCES - THE AXIS OF EACH DRILLED PIER AT ANY HORIZONTAL SECTION SHALL NOT DEVIATE FROM THE VERTICAL BY MORE THAN ONE PERCENT OF THE DEPTH OF THE PIER. THE CENTER OF THE PIER AT THE TOP SHALL NOT BE MORE THAN ONE INCH FROM IT'S DESIGNATED LOCATION.
 - ALL CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO MINIMIZE SEGREGATION OF AGGREGATES.
 - TOP ELEVATION OF PIERS SHALL BE FINISHED TO A TOLERANCE OF ± 1/8".

RE-ISSUED FOR CONSTRUCTION
 04/30/2020

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 SIGNATURE: *John W. Makirinne*
 TYPED OR PRINTED NAME: John W. Makirinne
 DATE: 04/30/20 REG. NO.: 22540



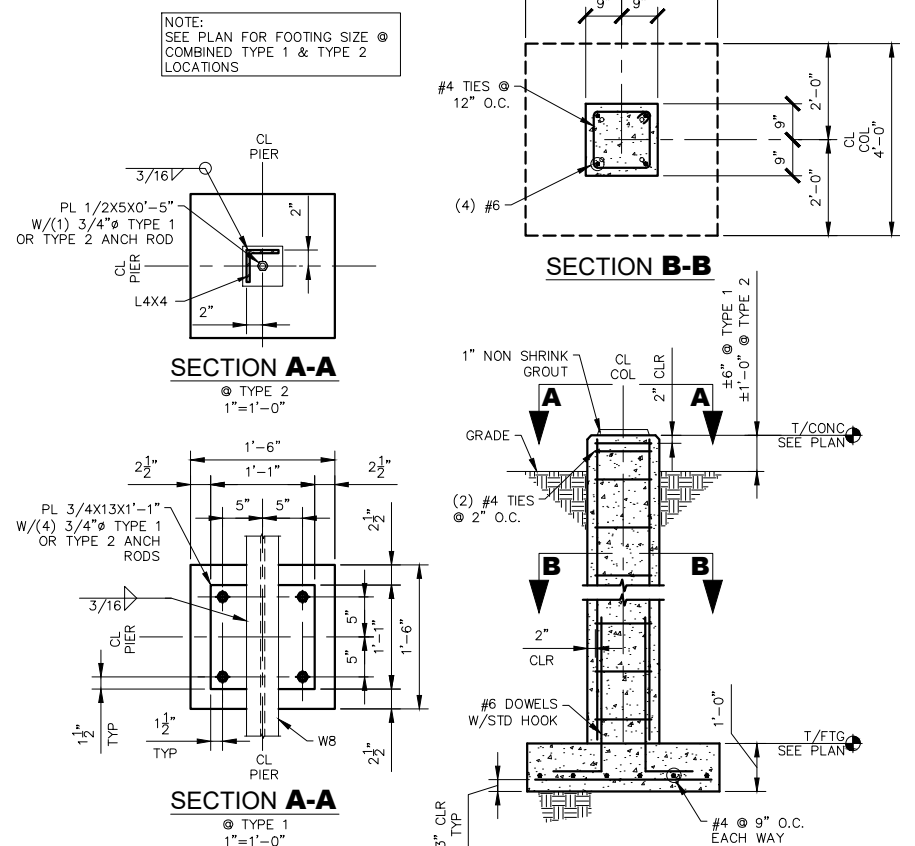
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E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-
NO	REVISION	BY DATE	APPR	APPR

ENBRIDGE
SWATARA (MN) STATION
 STATION 93
 ESB 1 BUILDING
 FOUNDATION PLAN & DETAILS

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)
 SCALE: AS NOTED DATE: 07/09/2015 DRAWN: LHB/CLG
 CHECK: LHB/JWM APPR: LHB/JWM DATE: 07/09/2015
 APPR: TM
 APPR: -

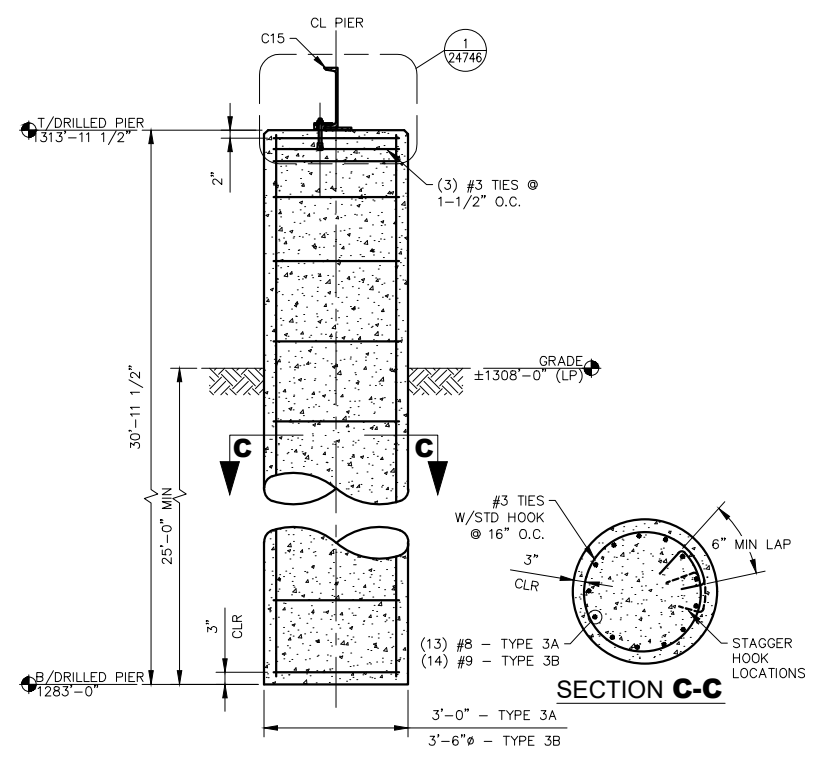
D-93-2.21-24746-F-1356

- NOTES:
- SEE D-93-2.21-24740-1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.31-24753-1356 FOR ANCHOR ROD DETAILS.



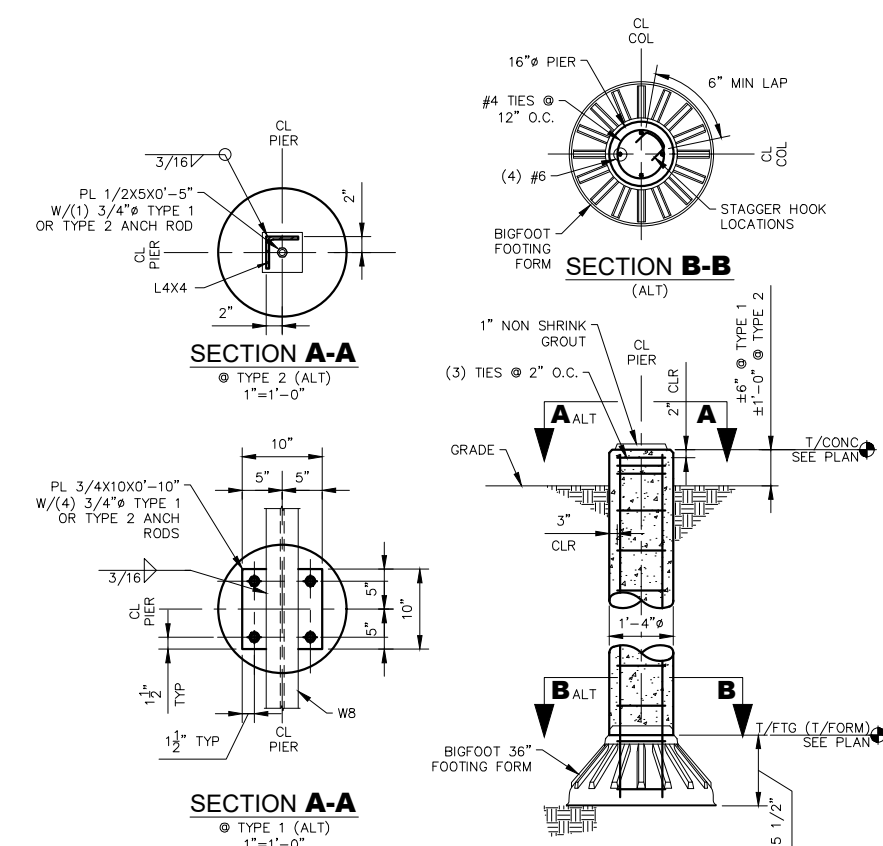
FOUNDATION TYPE 1 (STAIR) & TYPE 2 (PLATFORM)

1/2"=1'-0"
(4) REQ'D TYPE 1, (8) REQ'D TYPE 2
FROM DWG D-93-2.21-24746-1356



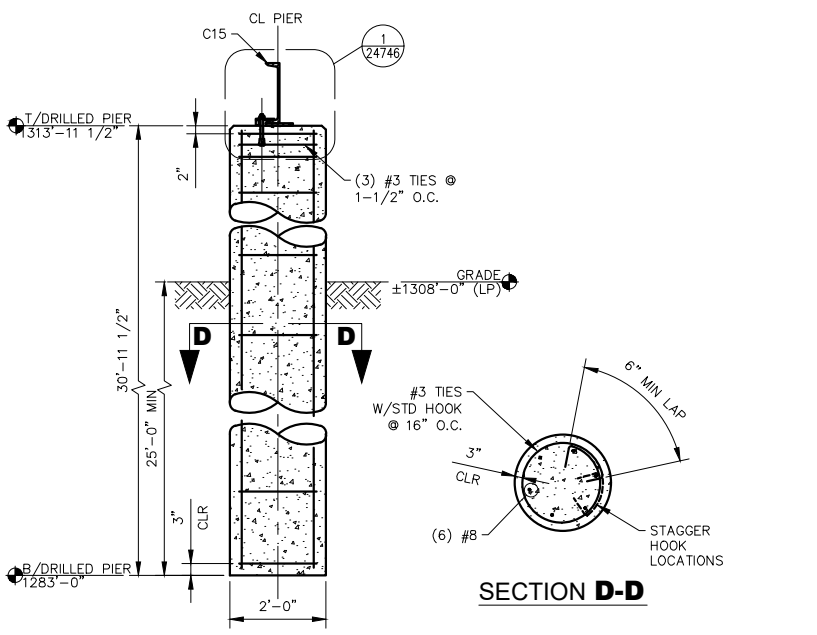
FOUNDATION TYPE 3A & 3B (BUILDING)

1/2"=1'-0"
(12) REQ'D TYPE 3A, (7) REQ'D TYPE 3B
FROM DWG D-93-2.21-24746-1356



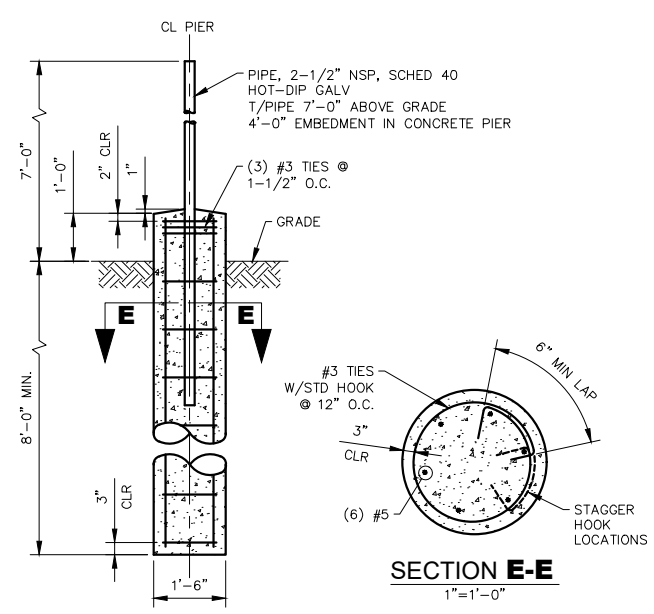
ALTERNATE FOUNDATION TYPE 1 (STAIR) & TYPE 2 (PLATFORM)

1/2"=1'-0"
(4) REQ'D TYPE 1, (8) REQ'D TYPE 2
FROM DWG D-93-2.21-24746-1356



FOUNDATION TYPE 4 (BUILDING)

1/2"=1'-0"
(2) REQUIRED
FROM DWG D-93-2.21-24746-1356



FOUNDATION TYPE 5 - VSAT

1/2"=1'-0"
(1) REQUIRED
FROM DWG D-93-2.21-24741-1356

ISSUED FOR CONSTRUCTION
02/28/2019

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SIGNATURE: *[Signature]*

TYPED OR PRINTED NAME: John W. Makirinne

DATE: 2/28/19 REG. NO.: 22540

NO	REVISION	BY DATE	APPR	APPR
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
C	ISSUED FOR BID AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/15/17	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-

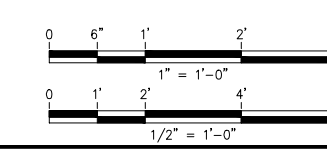
ENBRIDGE

SWATARA (MN) STATION
STATION 93
ESB 1 BUILDING
FOUNDATION DETAILS

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)

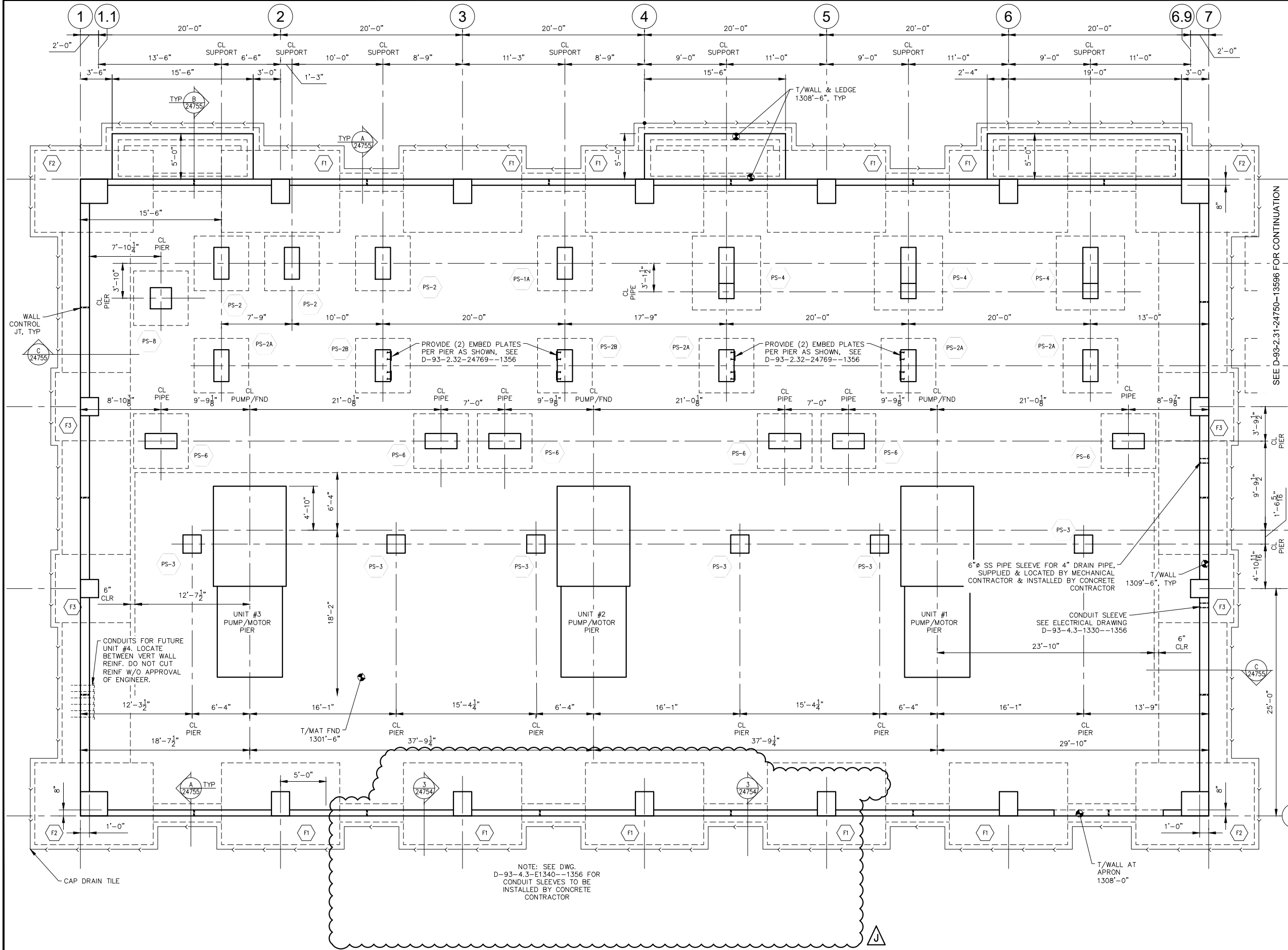
SCALE: AS NOTED DATE: 07/09/2015 DRAWN: LHB/CLG
CHECK: LHB/JWM APPR: LHB/JWM DATE: 07/09/2015
APPR: TM
APPR: -

D-93-2.21-24747-E-1356





- NOTES:
1. TOP OF FOOTING ELEVATION 1300'-6" UNLESS NOTED OTHERWISE.
 2. SEE D-93-2.31-24755--1356 FOR BUILDING FOUNDATIONS.
 3. SEE D-93-2.31-24758--1356 & D-93-2.31-24759--1356 FOR PIPE SUPPORT FOUNDATIONS.
 4. SEE D-93-2.31-24757--1356 FOR PUMP/MOTOR FOUNDATION.
 5. SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.



SEE D-93-2.31-24750-13596 FOR CONTINUATION

RE-ISSUED FOR CONSTRUCTION
04/30/2020

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SIGNATURE: *John W. Makirinne*
TYPED OR PRINTED NAME: John W. Makirinne
DATE: 04/30/20 REG. NO.: 22540

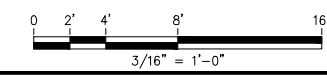
J	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/AMA 04/30/20	JWM	-
H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
G	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-
NO	REVISION	BY DATE	APPR	APPR

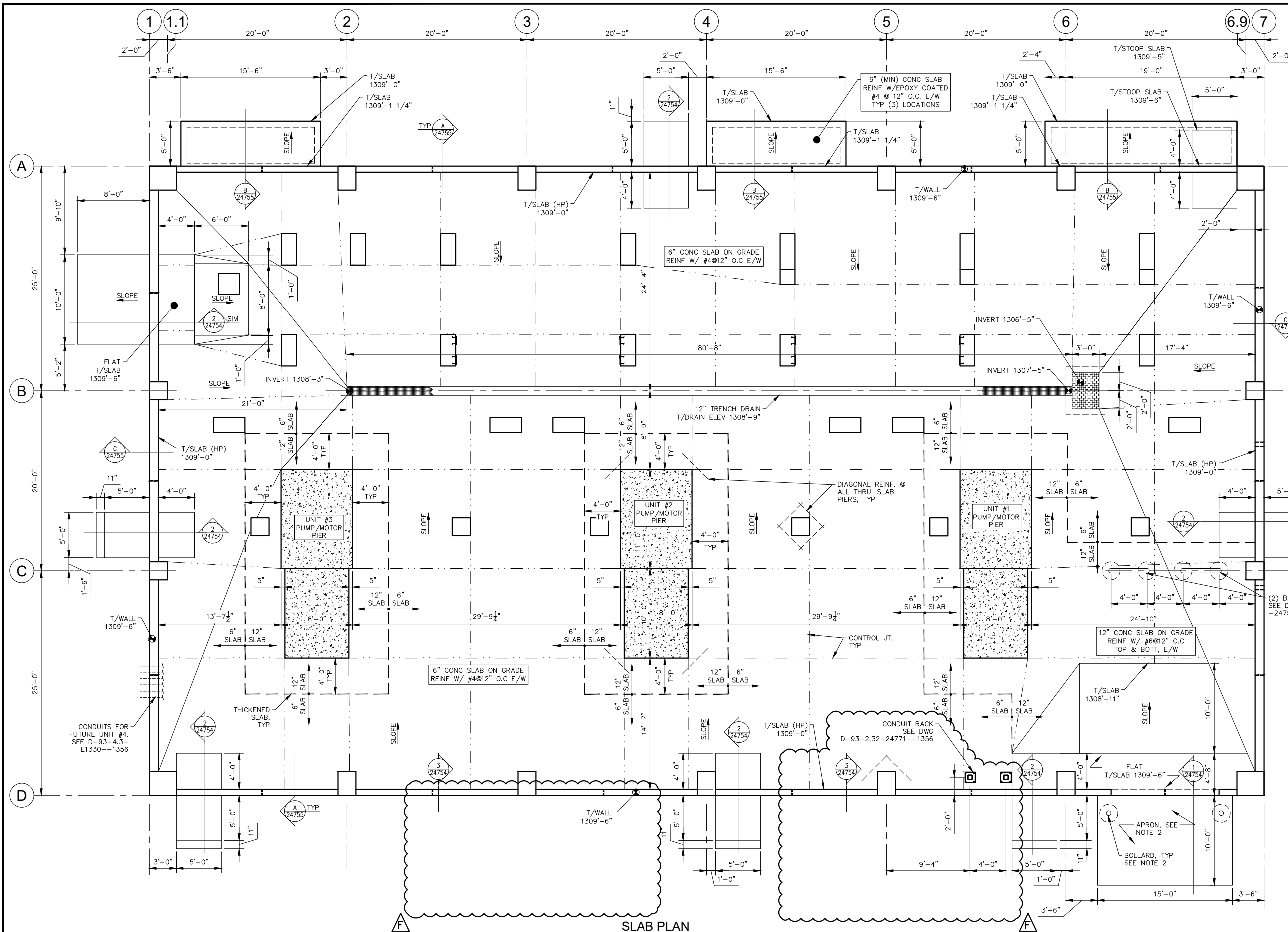
ENBRIDGE
SWATARA (MN) STATION
STATION 93
PUMP BUILDING
FOUNDATION PLAN

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)		
SCALE: 3/16"=1'-0"	DATE: 12/18/2014	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 12/18/2014
APPR: TM	D-93-2.31-24751-J-1356	
APPR: -		

FOUNDATION PLAN

3/16"=1'-0"
FROM D-93-2.21-24741--1356





- NOTES:
1. TOP OF SLAB ELEVATION 1309'-0" (HP) UNLESS NOTED OTHERWISE.
 2. SEE D-93-2.31-24753--1356 & D-93-2.31-24754--1356 FOR TYPICAL CONCRETE DETAILS.
 3. COORDINATE UNDER-SLAB CONDUIT WITH ELECTRICAL CONTRACTOR. SEE DWG D-93-4.3-E1330--100 FOR PLAN & D-93-4.3-E1340--100 FOR DETAILS.
 4. COORDINATE UNDER-SLAB PIPING WITH MECHANICAL CONTRACTOR. SEE DWG D-93-3.31-M0060--1356 & D-93-3.31-M0065--1356.
 5. SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.

RE-ISSUED FOR CONSTRUCTION
04/30/2020

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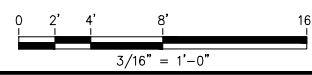
SIGNATURE: *John W. Makirinne*
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DATE: 04/30/20 REG. NO.: 22540

NO	REVISION	BY DATE	APPR	APPR
F	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/AMA 04/30/20	JWM	-
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 60% REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-



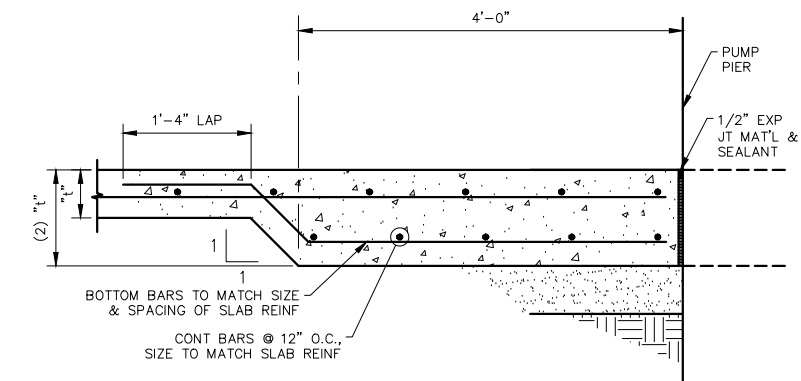
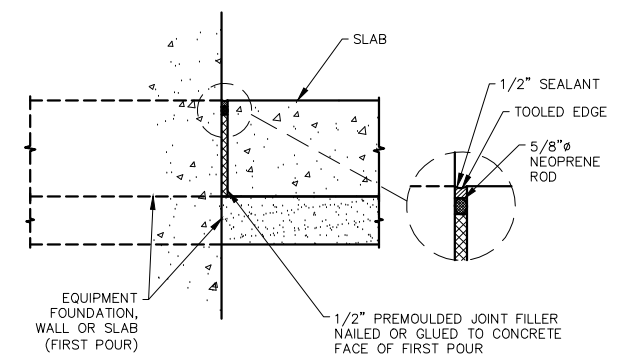
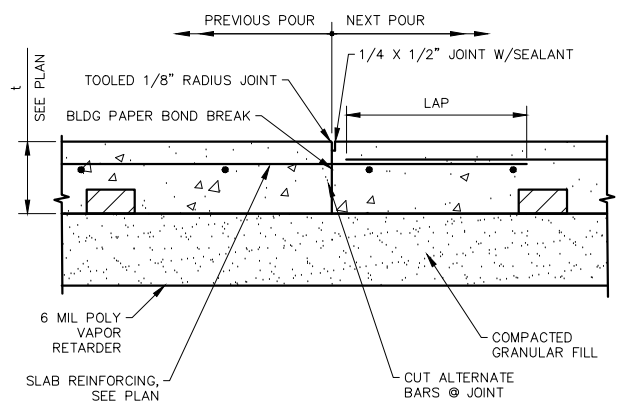
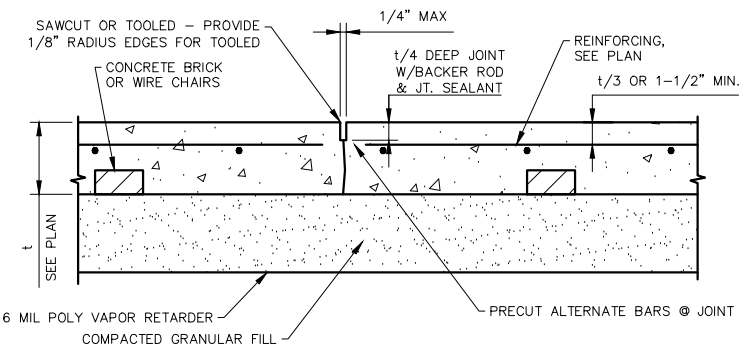
SWATARA (MN) STATION
STATION 93
PUMP BUILDING
SLAB PLAN

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)	SCALE: 3/16"=1'-0"	DATE: 07/09/2015	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 07/09/2015	APPR: TM
APPR: -			D-93-2.31-24752-F-1356



SLAB PLAN
3/16"=1'-0"
FROM D-93-2.21-24741--1356

NOTES:
1. SEE D-93-2.21-24740-1356 FOR GENERAL STRUCTURAL NOTES.



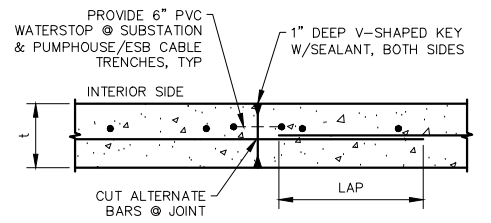
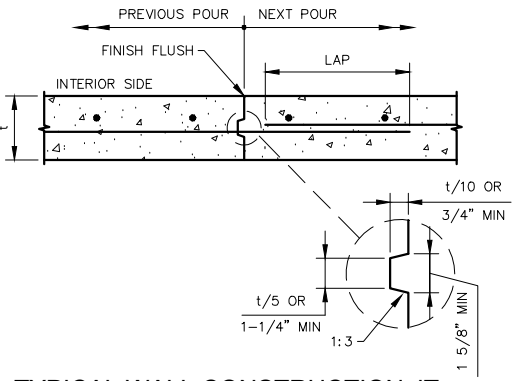
- NOTES:
1. SLAB POURS SHALL BE SUBDIVIDED BY CONTROL JOINTS AT A SPACING (IN FEET) NOT TO EXCEED 3 TIMES THE SLAB THICKNESS (IN INCHES) OR 20 FEET IN ANY DIRECTION UNLESS NOTED ON THE PLANS.
 2. CONSTRUCTION JOINTS AND CONTROL JOINTS MAY BE INTERCHANGED TO SUIT CONCRETE POUR SEQUENCE.
 3. EXACT LOCATION OF CONTROL JOINTS SHALL BE ESTABLISHED PRIOR TO CUTTING OR REINFORCEMENT AND PLACING OF CONCRETE.
 4. SAWING OF CONTROL JOINTS SHALL BEGIN AS SOON AS CONCRETE SURFACE HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING AND BEFORE RANDOM SHRINKAGE CRACKS CAN FORM IN THE CONCRETE SLAB. AT WALLS OR OTHER PLACES WHERE THE SAW CANNOT ACCESS, TOOLED OR FORMED JOINTS SHALL BE PROVIDED TO JOIN THE SAW CUT JOINT AND COMPLETE THE CONTROL JOINT. CONTROL JOINTS SHALL EXTEND THROUGH CURBS CAST MONOLITHICALLY WITH THE SLAB.
 5. SEE GENERAL NOTES FOR JOINT SEALANT DESCRIPTION.

TYPICAL SLAB CONTROL JT
NO SCALE

TYPICAL SLAB CONSTRUCTION JT
NO SCALE

TYPICAL SLAB ISOLATION JOINT & SEALANT
NO SCALE

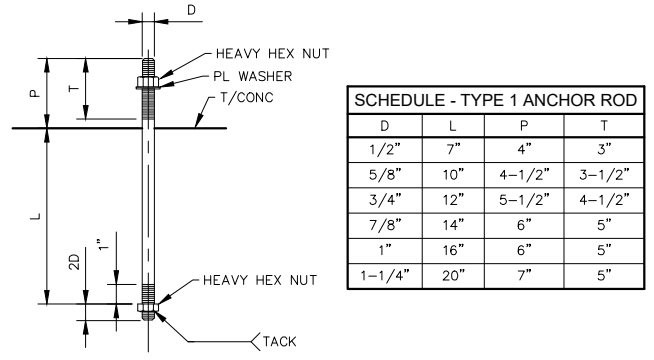
THICKENED SLAB @ PUMP PIER
NO SCALE



- NOTES:
1. SPACING SHALL BE 25 FEET MAXIMUM ALONG LENGTH OF WALL. SEE PLAN FOR APPROXIMATE LOCATIONS.
 2. MAXIMUM LENGTH OF WALL CAST IN SINGLE POUR = 50'-0"

TYPICAL WALL CONSTRUCTION JT
NO SCALE

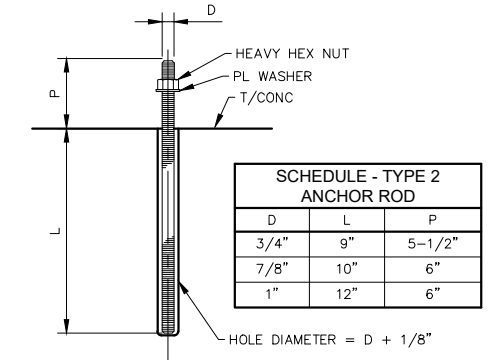
TYPICAL WALL CONTROL JT
NO SCALE



SCHEDULE - TYPE 1 ANCHOR ROD			
D	L	P	T
1/2"	7"	4"	3"
5/8"	10"	4-1/2"	3-1/2"
3/4"	12"	5-1/2"	4-1/2"
7/8"	14"	6"	5"
1"	16"	6"	5"
1-1/4"	20"	7"	5"

ALL ANCHOR RODS: ASTM F1554 GRADE 36 ROD, THREADED AS SHOWN, WITH HEAVY HEX NUTS & WASHERS UNLESS NOTED OTHERWISE. ALL ANCHOR RODS & HARDWARE HOT-DIP GALVANIZED.

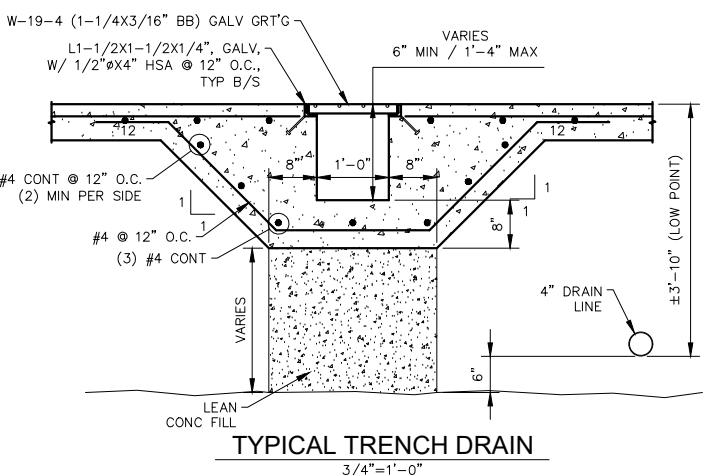
TYPICAL ANCHOR ROD - TYPE 1
NO SCALE



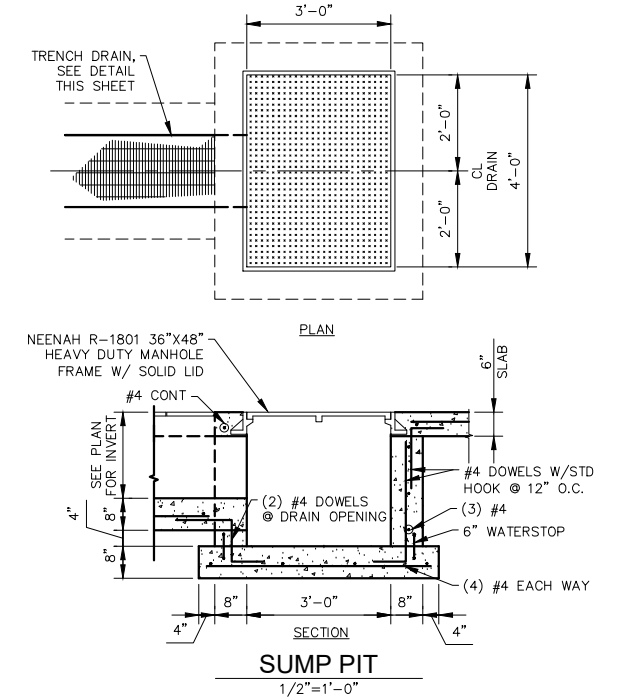
SCHEDULE - TYPE 2 ANCHOR ROD		
D	L	P
3/4"	9"	5-1/2"
7/8"	10"	6"
1"	12"	6"

ALL ANCHOR RODS: ASTM F1554 GRADE 36, HOT-DIP GALVANIZED THREADED ROD

TYPICAL ANCHOR ROD - TYPE 2
NO SCALE



TYPICAL TRENCH DRAIN
3/4"=1'-0"



SUMP PIT
1/2"=1'-0"

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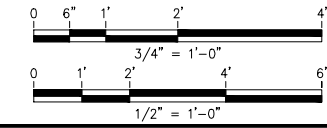
SIGNATURE: *John W. Makirinne*
TYPED OR PRINTED NAME: John W. Makirinne
DATE: 2/28/19 REG. NO.: 22540

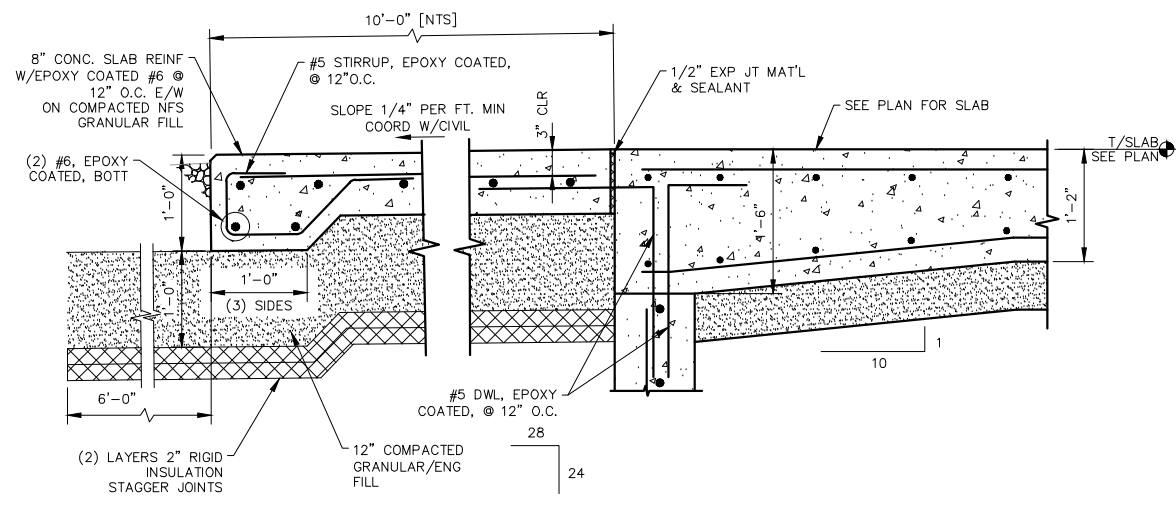
ISSUED FOR CONSTRUCTION
02/28/2019

NO	REVISION	BY DATE	APPR	APPR
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
C	ISSUED FOR BID AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/15/17	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-

ENBRIDGE
SWATARA (MN) STATION
STATION 93
PUMP BUILDING
TYPICAL FOUNDATION DETAILS 1

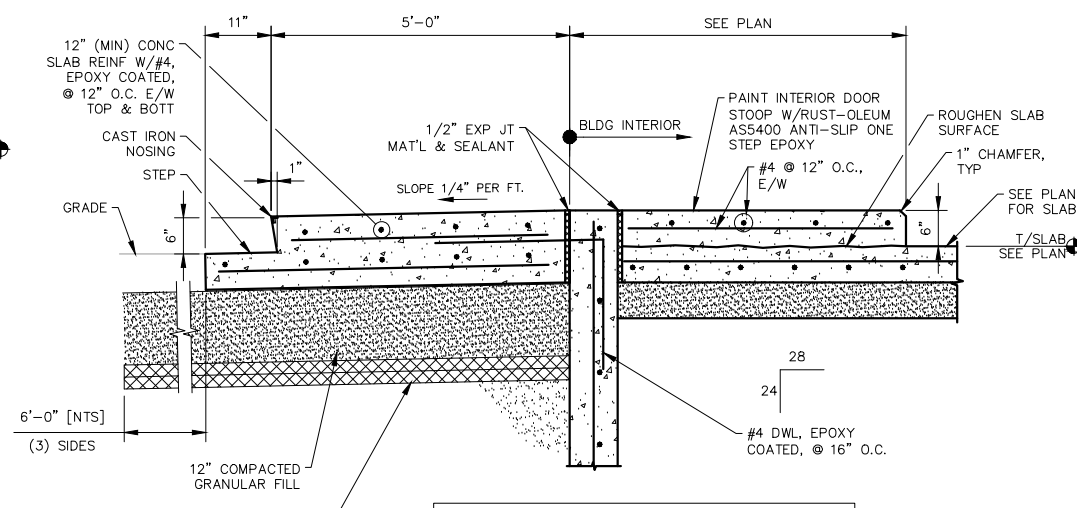
PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)	SCALE: AS NOTED	DATE: 07/09/2015	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 07/09/2015	APPR: TM
APPR: -	D-93-2.31-24753-E-1356		





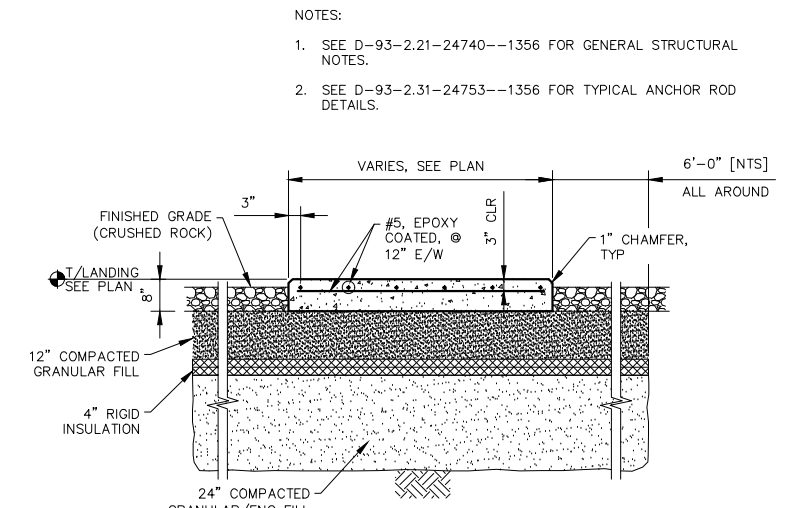
TYPICAL APRON
DETAIL 1

1"=1'-0"
FROM D-93-2.31-24752--1356



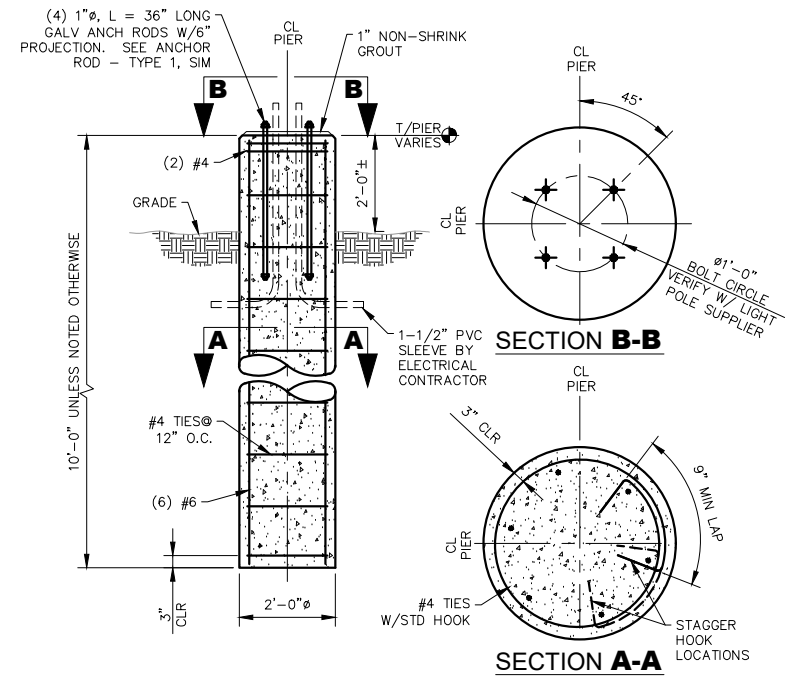
TYPICAL STOOP @ SERVICE DOOR
DETAIL 2

3/4"=1'-0"
FROM D-93-2.31-24752--1356



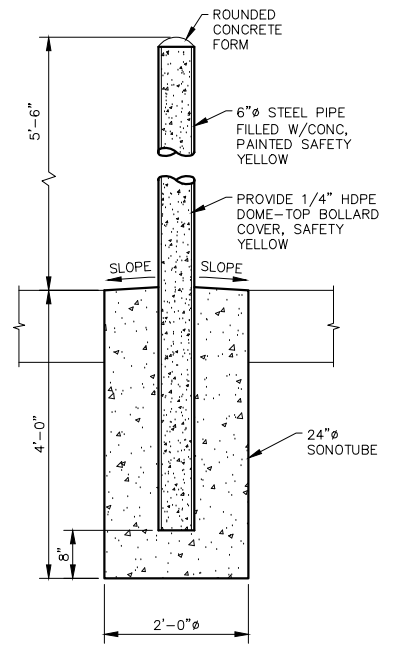
TYPICAL EXTERIOR STAIR/LADDER LANDING

1/2"=1'-0"



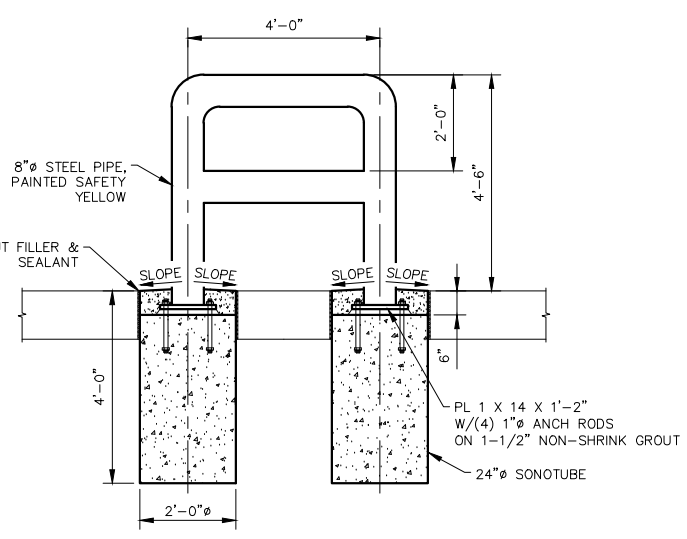
LIGHT POLE FOUNDATION

1/2"=1'-0"
(6) REQ'D FROM D-93-2.21-24741--1356
(1) REQ'D FROM D-93-2.31-24750--1356
(1) REQ'D FROM D-93-1.21-C0064--1356



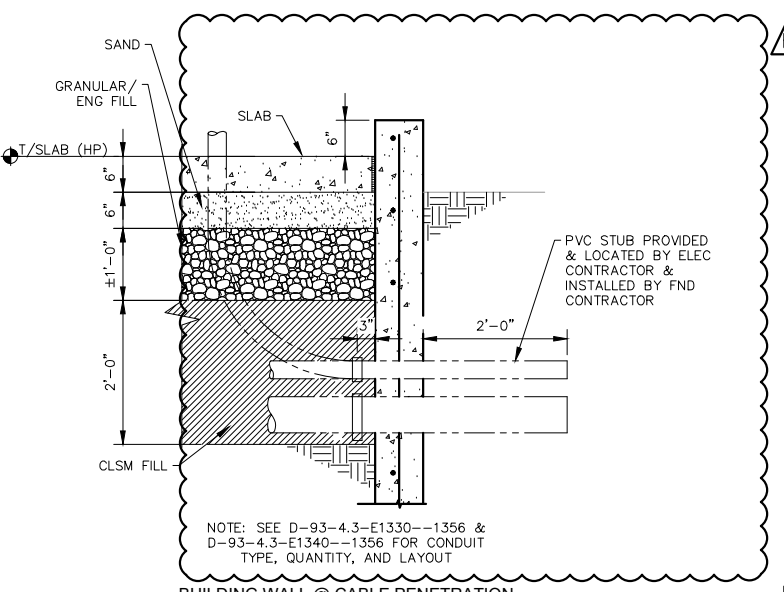
TYPICAL BOLLARD

3/4"=1'-0"



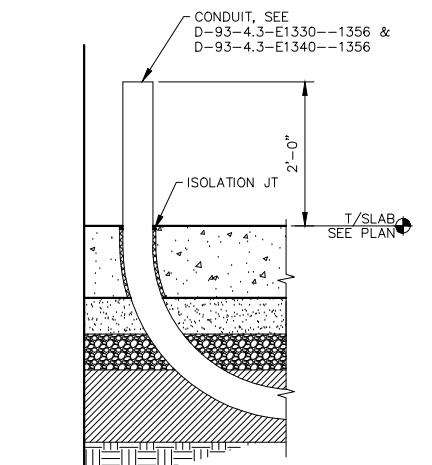
TYPICAL BARRIER

1/2"=1'-0"
FROM D-93-2.31-24752--1356



BUILDING WALL @ CABLE PENETRATION
DETAIL 3

3/4"=1'-0"
FROM D-93-2.31-24751--1356 &
D-93-2.31-24752--1356



TYPICAL CONDUIT STUB @ FLOOR

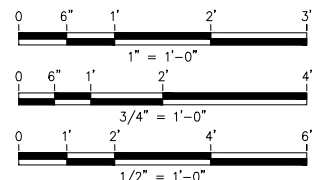
3/4"=1'-0"

- NOTES:
- SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.31-24753--1356 FOR TYPICAL ANCHOR ROD DETAILS.

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SIGNATURE: *John W. Makirinne*
TYPED OR PRINTED NAME: John W. Makirinne
DATE: 04/30/20 REG. NO.: 22540

RE-ISSUED FOR CONSTRUCTION
04/30/2020



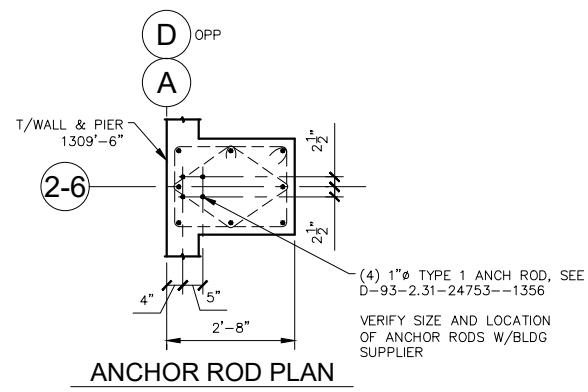
NO	REVISION	BY DATE	APPR	APPR
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E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-

ENBRIDGE

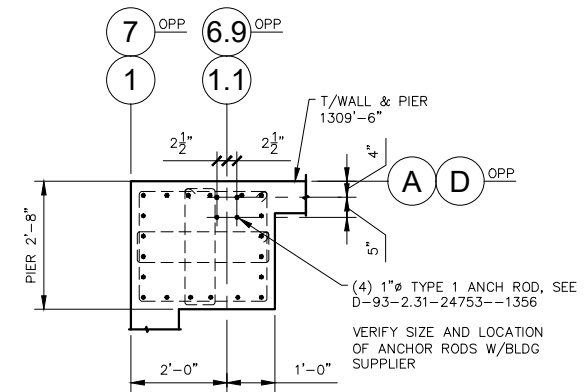
SWATARA (MN) STATION
STATION 93
PUMP BUILDING
TYPICAL FOUNDATION DETAILS 2

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)
SCALE: AS NOTED DATE: 07/09/2015 DRAWN: LHB/CLG
CHECK: LHB/JWM APPR: LHB/JWM DATE: 07/09/2015
APPR: TM
APPR: -

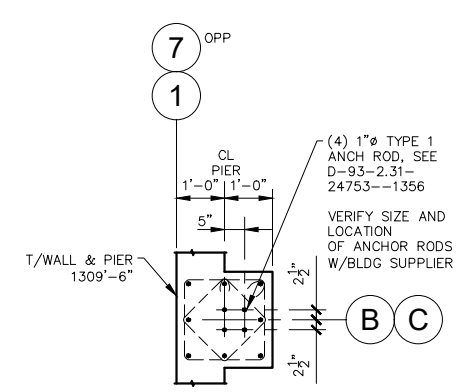
D-93-2.31-24754-F-1356



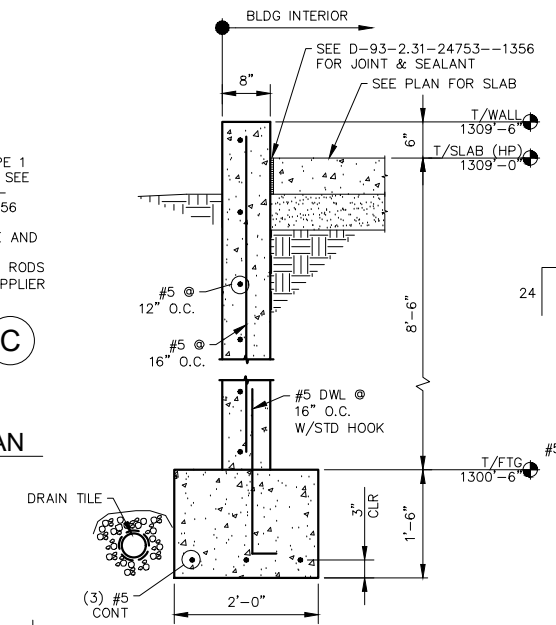
ANCHOR ROD PLAN



ANCHOR ROD PLAN

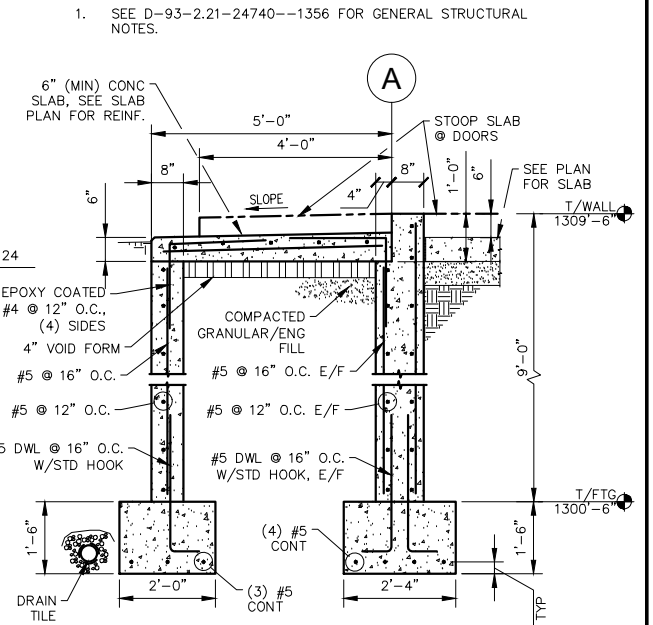


ANCHOR ROD PLAN



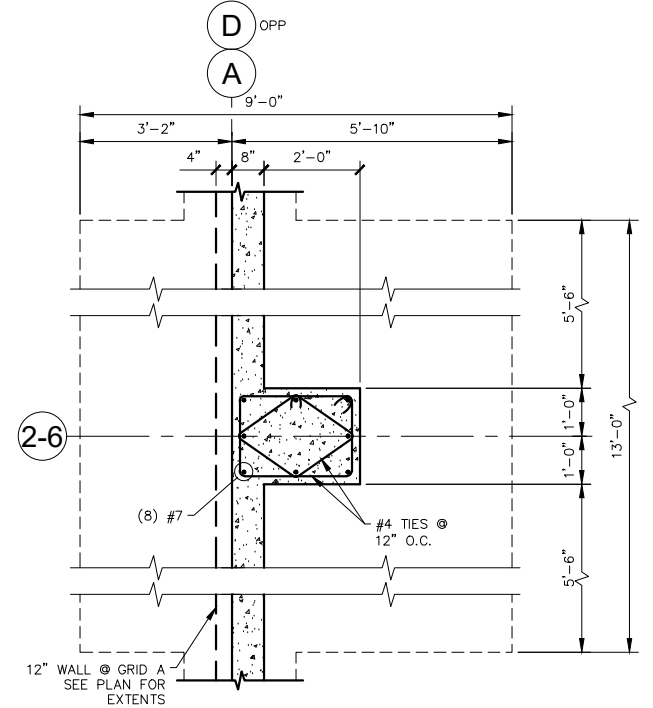
SECTION A - TYP 8" WALL

3/4"=1'-0"
FROM DWG D-93-2.31-24751--1356 & D-93-2.31-24752--1356

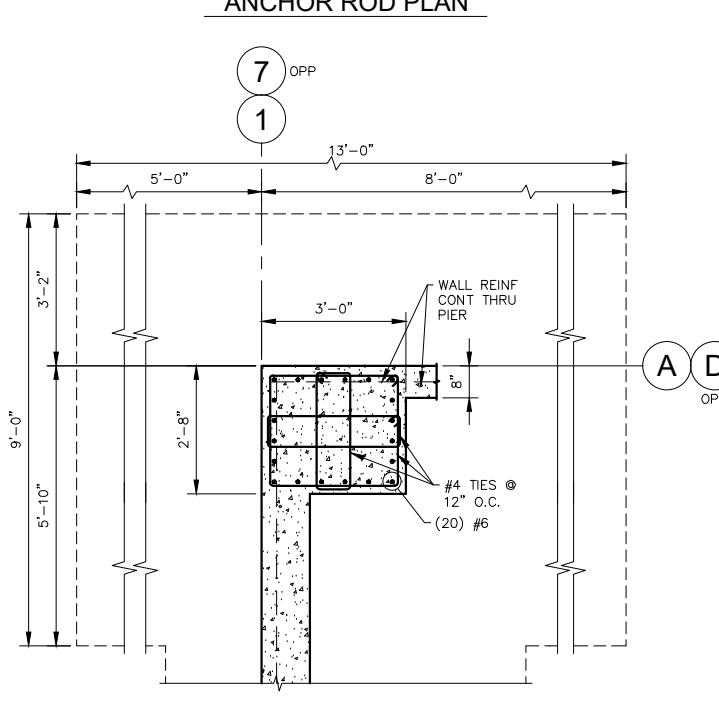


SECTION B

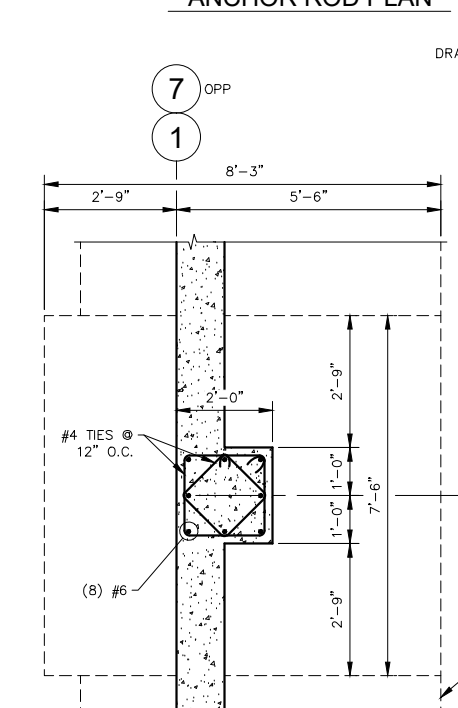
1/2"=1'-0"
FROM DWG D-93-2.31-24751--1356 & D-93-2.31-24752--1356



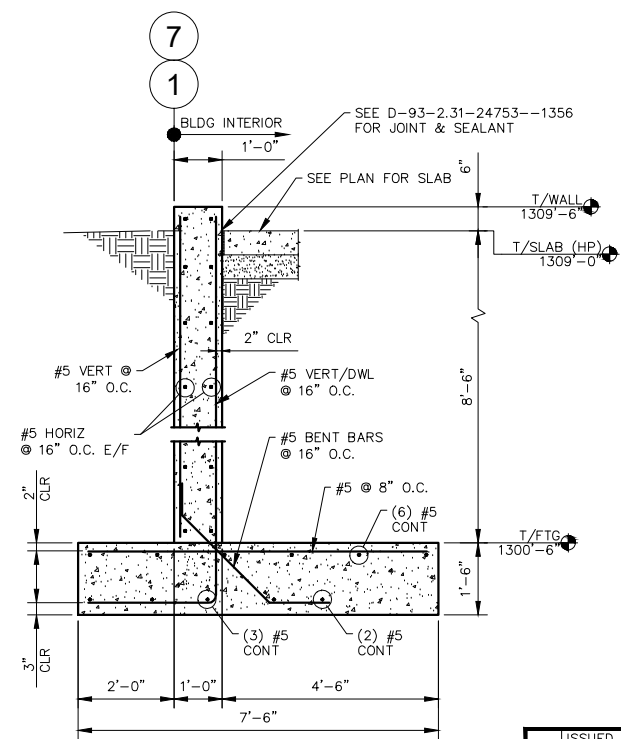
SECTION A-A



SECTION B-B

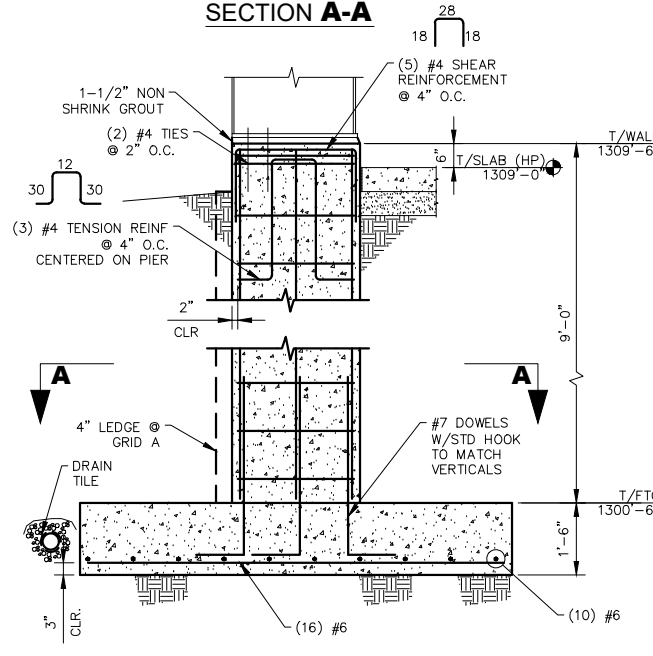


SECTION C-C



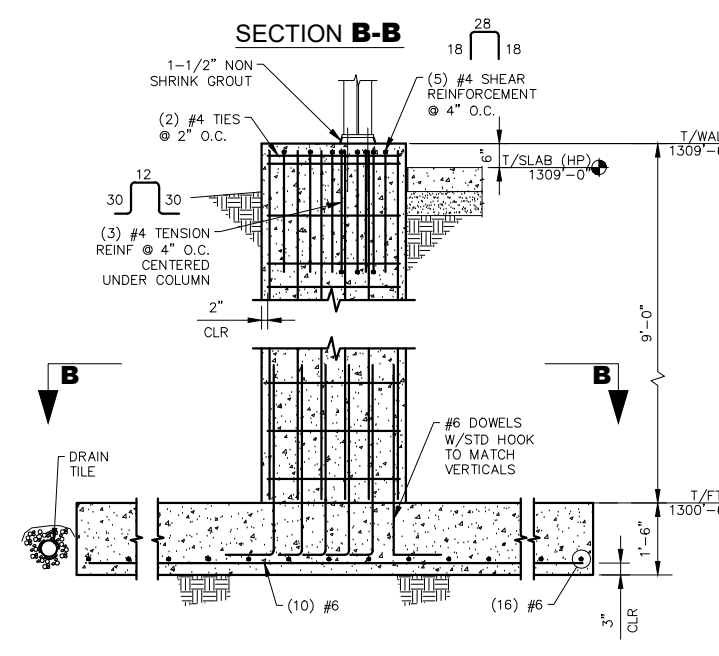
SECTION C - RETAINING WALL

1/2"=1'-0"
FROM DWG D-93-2.31-24751--1356 & D-93-2.31-24752--1356



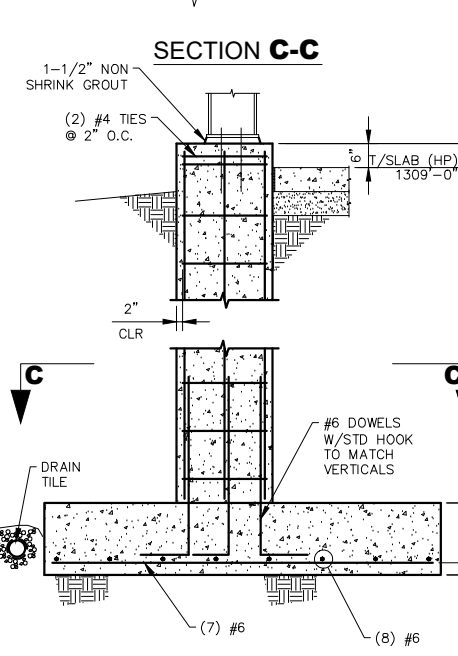
TYPE F1 FOUNDATION

1/2"=1'-0"
(10) REQUIRED
FROM DWG D-93-2.31-24751--1356



TYPE F2 FOUNDATION

1/2"=1'-0"
(4) REQUIRED
FROM DWG D-93-2.31-24751--1356



TYPE F3 FOUNDATION

1/2"=1'-0"
(4) REQUIRED
FROM DWG D-93-2.31-24751--1356

NOTES:
1. SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.

ISSUED FOR CONSTRUCTION
02/28/2019

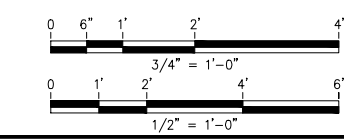
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SIGNATURE: *John W. Makirinne*
TYPED OR PRINTED NAME: John W. Makirinne
DATE: 2/28/19 REG. NO.: 22540

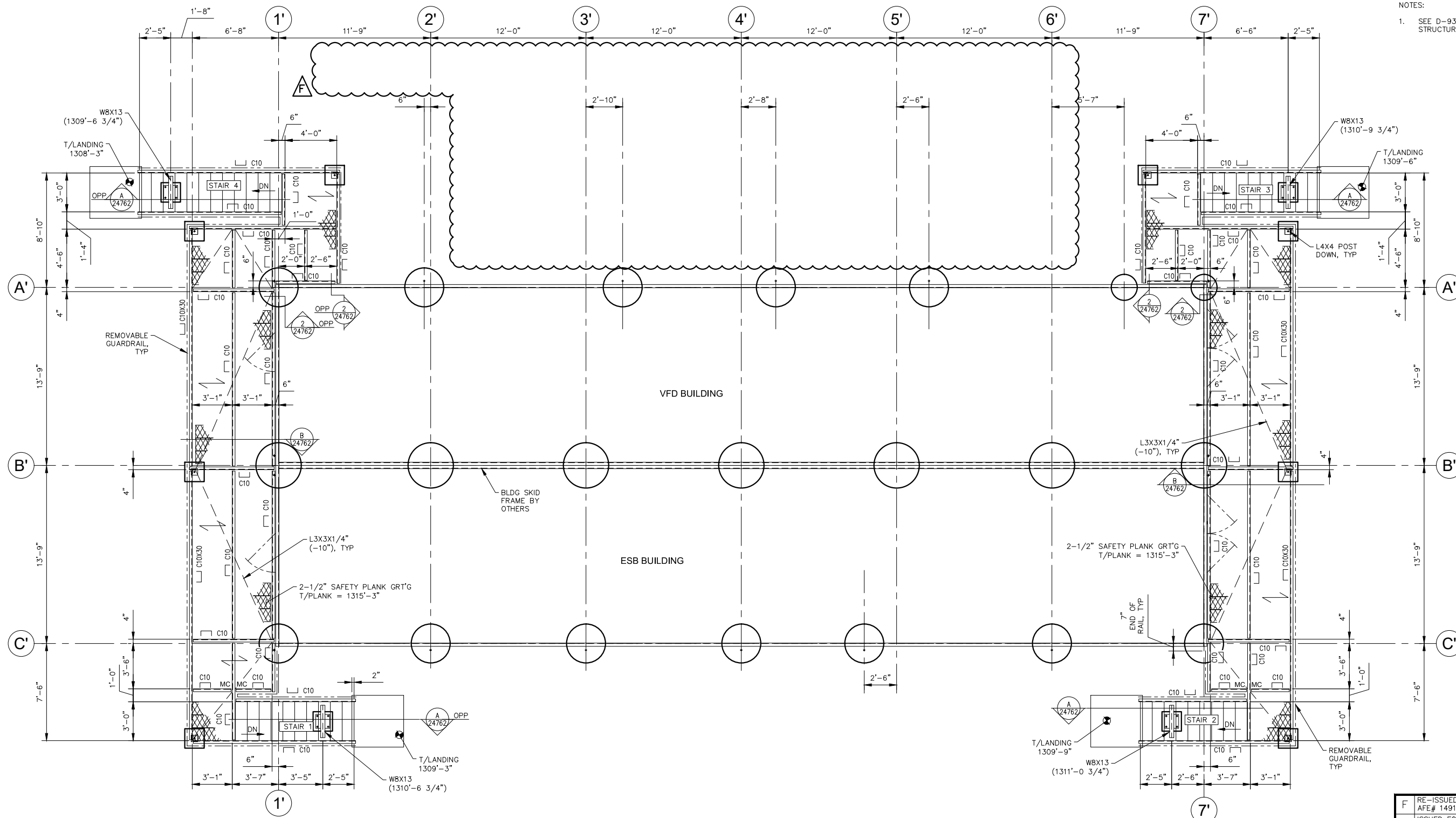
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
C	ISSUED FOR BID AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/15/17	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-
NO	REVISION	BY DATE	APPR	APPR

ENBRIDGE
SWATARA (MN) STATION
STATION 93
PUMP BUILDING
BUILDING FOUNDATION DETAILS

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)			
SCALE: AS NOTED	DATE: 07/09/2015	DRAWN: LHB/CLG	
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 07/09/2015	
APPR: TM	D-93-2.31-24755-E-1356		
APPR: -			



NOTES:
 1. SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.



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 04/30/2020

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SIGNATURE: *[Signature]*
 TYPED OR PRINTED NAME: John W. Makirinne
 DATE: 04/30/20 REG. NO.: 22540

ESB 1 BUILDING PLATFORM PLAN

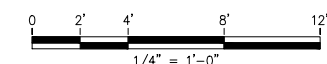
1/4" = 1'-0"
 FROM D-93-2.21-24741--1356

- NOTES:
- TOP OF STEEL ELEVATION = 1315'-0 1/2" (VERIFY TO MATCH BUILDING FLOOR).
 - GRATING: 5-DIAMOND SAFETY PLANK, 2-1/2" DEEP, 11-3/4" (MAX) WIDE, 12-GAUGE HOT-DIP GALVANIZED & SERRATED UNLESS NOTED OTHERWISE.
 - DESIGN LIVE LOAD = 100 PSF.
 - UNLESS NOTED OTHERWISE: C10 = C10X15.3
 L4X4 = L4X4X3/8"
 - SEE D-93-2.22-24762--1356 FOR TYPICAL STEEL DETAILS.
 - MC = MOMENT CONNECTION. SEE DETAIL 5 ON D-93-2.22-24762--1356.

NO	REVISION	BY DATE	APPR	APPR
F	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/AMA 04/30/20	JWM	-
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-

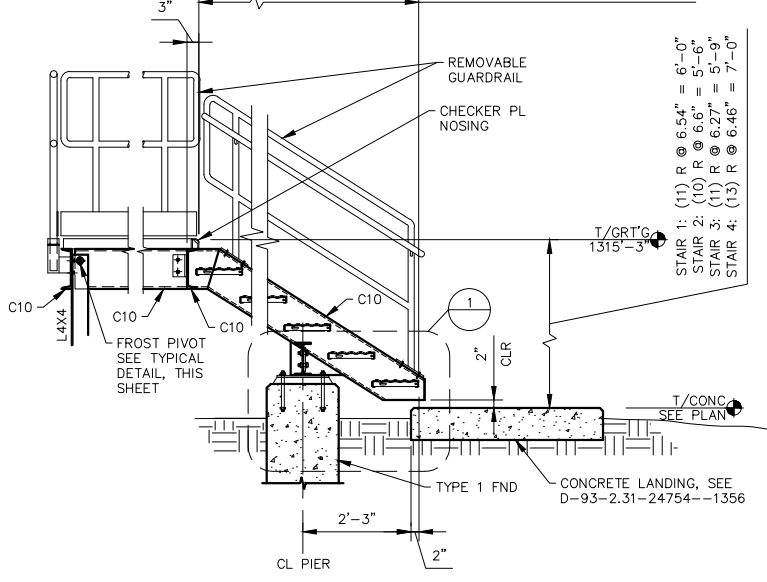
ENBRIDGE
SWATARA (MN) STATION
 STATION 93
 ESB 1 BUILDING
 PLATFORM PLAN

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)	SCALE: 1/4" = 1'-0"	DATE: 07/09/2015	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 07/09/2015	APPR: TM
PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)			DATE: 07/09/2015



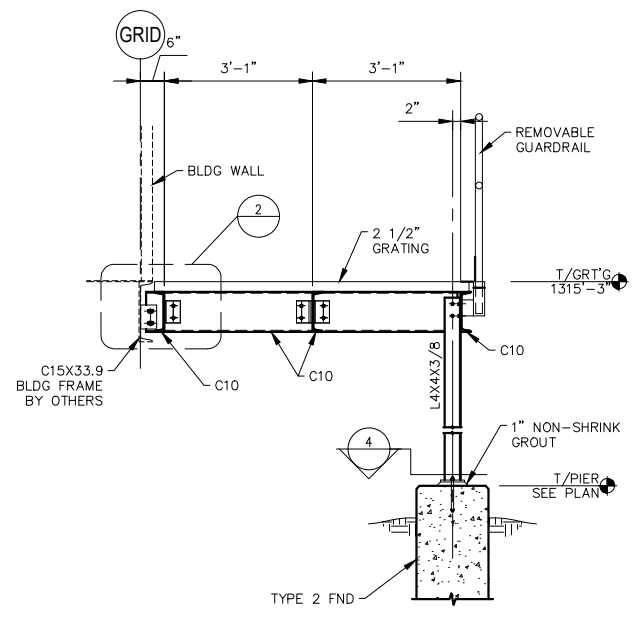
D-93-2.22-24761-F-1356

STAIR 1 & 3: (10) T @ 11" = 9'-2"
 STAIR 2: (9) T @ 11" = 8'-3"
 STAIR 4: (12) T @ 11" = 11'-0"



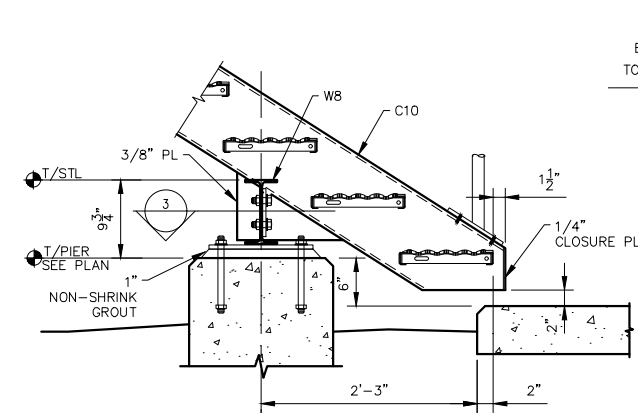
SECTION A

1/2"=1'-0"
 FROM D-93-2.22-24761--1356



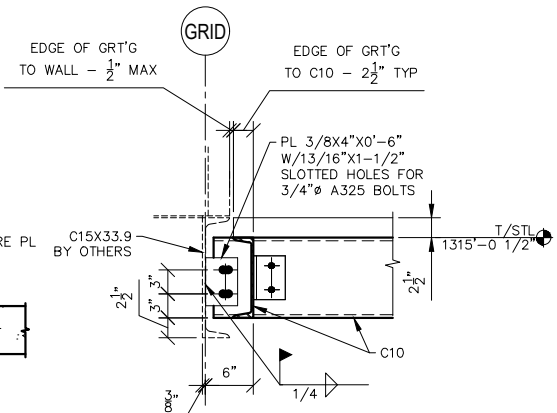
SECTION B

1/2"=1'-0"
 FROM D-93-2.21-24746--1356 & D-93-2.22-24761--1356



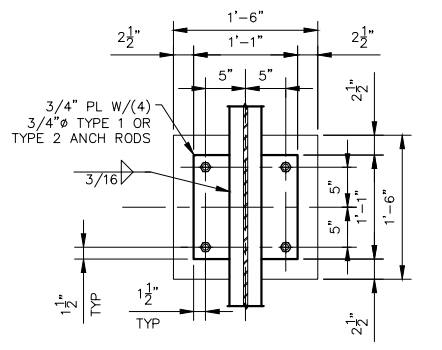
DETAIL 1

1"=1'-0"



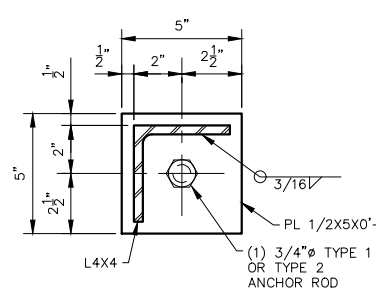
DETAIL 2

1"=1'-0"



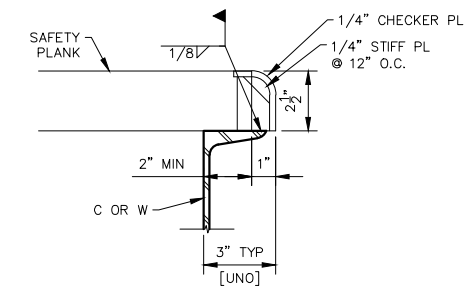
DETAIL 3

1"=1'-0"



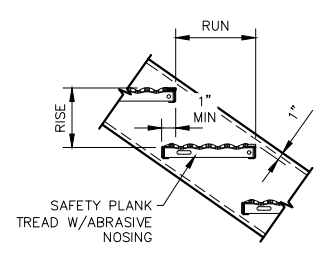
DETAIL 4

3"=1'-0"



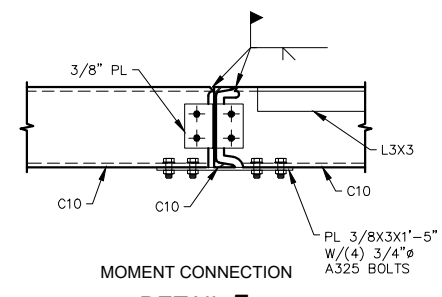
TYPICAL CHECKER PL NOSING

3"=1'-0"



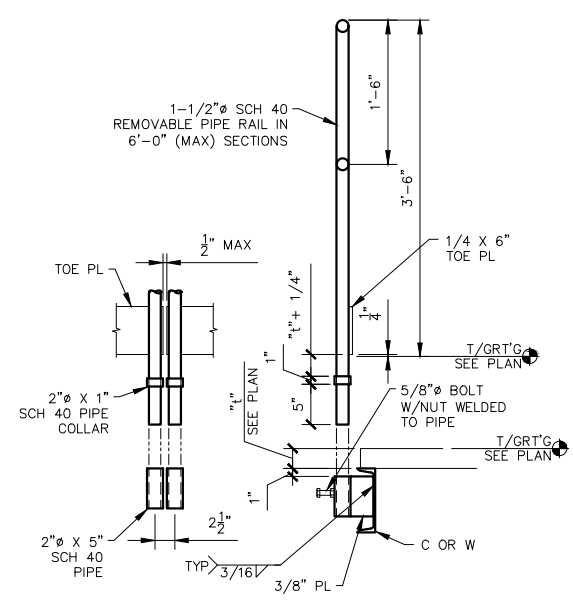
TYPICAL METAL STAIR

NO SCALE



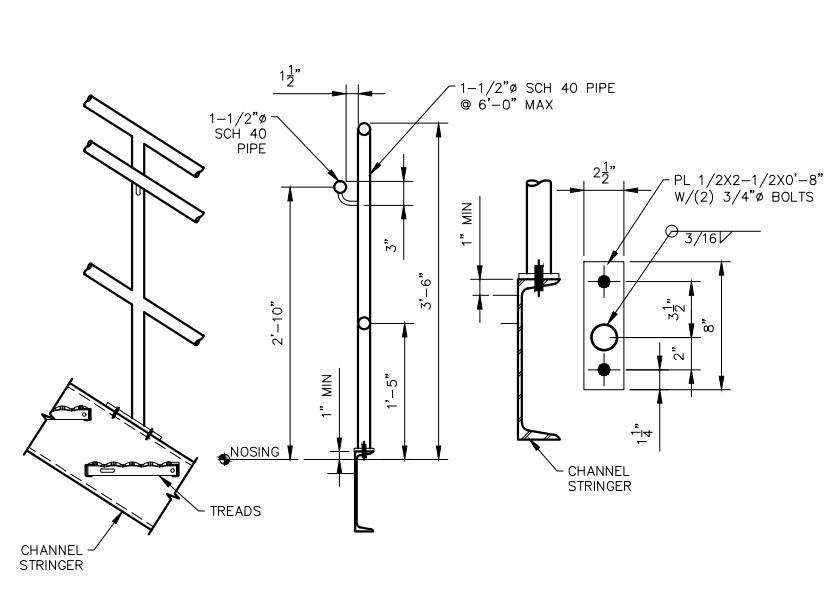
DETAIL 5

1"=1'-0"



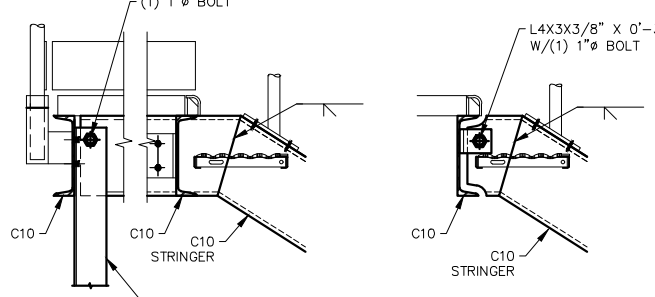
TYPICAL REMOVABLE RAILING

1"=1'-0"



TYPICAL STAIR RAILING

NO SCALE



TYPICAL STAIR ATTACHMENT DETAILS (FROST PIVOT)

NO SCALE

ISSUED FOR CONSTRUCTION
 02/28/2019

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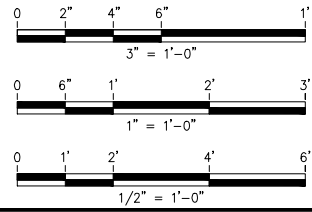
E	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
D	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
C	ISSUED FOR BID AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/15/17	JWM	-
A	ISSUED FOR 60% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 07/09/15	JWM	-
NO	REVISION	BY DATE	APPR	APPR



SWATARA (MN) STATION

STATION 93
 ESB 1 BUILDING
 PLATFORM DETAILS

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)	SCALE: AS NOTED	DATE: 07/09/2015	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 07/09/2015	
APPR: TM			
APPR: -			D-93-2.22-24762-E-1356



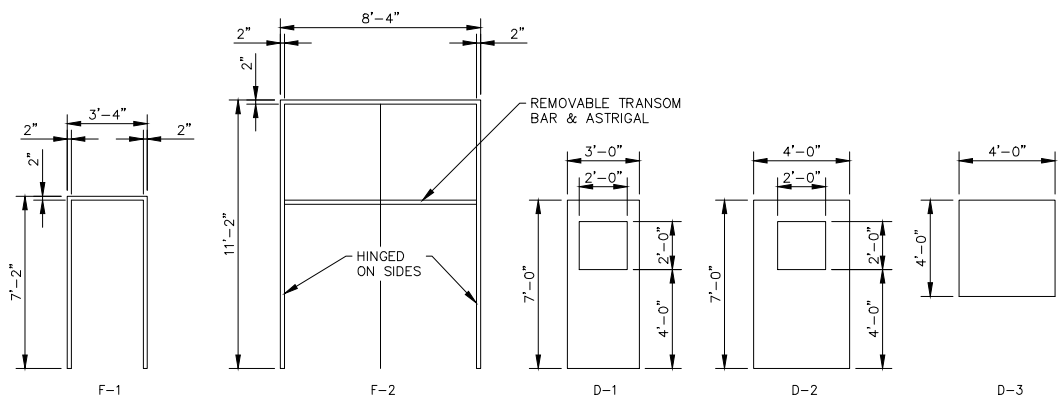
BUILDING NOTES:

- A. BUILDING SHALL BE GABLE END CLEAR SPAN RIGID FRAME CONFIGURATION W/BYPASS GIRTS, COLUMNS AND BEAMS WITH EXPANDABLE END WALLS AS NOTED. BUILDING ROOF SHALL BE INSULATED WITH INTERIOR VAPOR BARRIER.
- B. SEE DRAWING D-93-2.21-24740-1356 FOR DESIGN LOADS.
- C. BUILDING DEFLECTIONS SHALL MEET THE FOLLOWING LIVE LOAD DEFLECTION LIMITS:
- | | |
|--------------------------------|-------|
| BUILDING FRAME LATERAL DRIFT: | H/240 |
| ROOF & WALL SECONDARY MEMBERS: | L/180 |
| ROOF & WALL CLADDING: | L/180 |
- D. THE BUILDING MANUFACTURER SHALL BE A MEMBER OF MBMA & ACCREDITED UNDER THE INTERNATIONAL SERVICES IAS AC472 PROGRAM AND SHALL SUBMIT A CERTIFICATE OF COMPLIANCE.
- E. BUILDINGS SUPPLIER SHALL FURNISH SHOP DRAWINGS FOR REVIEW INCLUDING FOUNDATION LOADS, CALCULATIONS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MINNESOTA AND CERTIFIED ERECTION DRAWINGS.
- F. STEEL FRAMING MATERIAL PROPERTIES:
- | | Fy (PSI) | Fu (PSI) | ASTM |
|---------------------------|----------|----------|---------------------|
| WELDED BUILT-UP SECTIONS: | 50,000 | 65,000 | A572, A529 |
| W SHAPES: | 50,000 | 65,000 | A992, A572 |
| OTHER SHAPES, PLATES: | 50,000 | 65,000 | A572, A529 |
| RODS USED FOR BRACING: | 50,000 | 65,000 | A572, A529 |
| COLD FORMED MEMBERS: | 55,000 | 70,000 | A653 GR 55 (G90) |
| HIGH STRENGTH BOLTS: | - | 120,000 | A325 |
| NUTS: | - | - | A563 HEAVY HEX |
| WASHERS: | - | - | F436 HARDENED STEEL |
| SLOPED CAST IRON WASHERS: | - | - | A48 CLASS 30 |
| WELDING ELECTRODES: | - | E70XX | |
- G. ROOF AND WALL PANEL PROPERTIES:
- WALL PANELS SHALL BE 24 GAGE MINIMUM STEEL CONFORMING TO ASTM A653 GRADE 50 WITH G90 ZINC COATING.
 - ROOF PANELS SHALL BE 24 GAGE MINIMUM STEEL CONFORMING TO ASTM A653 GRADE 50 WITH G90 ZINC COATING.
 - PANELS SHALL BE PAINTED WITH FLUOROPOLYMER COATING PRODUCED WITH MINIMUM 70% PVDF RESIN OR SILICONE-MODIFIED POLYESTER (SMP). FINISH COLOR SHALL BE FROM MANUFACTURERS STANDARD COLORS. SUBMIT SAMPLE COLORS FOR APPROVAL.
 - PANEL SHALL BE ONE CONTINUOUS LENGTH.
- H. PANEL PROFILES
- EXTERIOR WALL PANEL: 1 1/2" DEEP MAJOR RIBS AT 12 INCH CENTER WHICH TAPER FROM 1 INCH TO 3/4 INCH AND 2 MINOR STIFFENING RIBS BETWEEN MAJOR RIBS. THE PANEL SHALL PROVIDE 36 INCHES OF COVERAGE.
 - ROOF PANEL: STANDING SEAM TYPE WITH 16 INCH WIDE PANELS WITH 3 INCH HIGH RIBS AT 16 INCH CENTERS.
- I. FLASHING / TRIM & CLOSURES:
- FLASHING AND OR TRIM SHALL BE FURNISHED AT EAVES, RAKE, CORNERS, BASE, OPENINGS AND WHEREVER REQUIRED TO SEAL AGAINST WEATHER AND DUST ON EXTERIOR AND INTERIOR SURFACES. ALL TRIM SHALL BE PREFINISHED.
 - MATERIAL FOR BASE FLASHING SHALL BE GALVANIZED 18 GAGE OF THE SAME SPECIFICATION AS THE WALL COVERING.
 - MATERIAL FOR OTHER FLASHING, TRIM, ETC. SHALL BE 24 GAGE OF THE SAME SPECIFICATION AS THE ROOF AND WALL COVERING.
 - PREFORMED, CLOSED CELL POLYETHYLENE CLOSURE STRIPS MATCHING THE PROFILE OF THE PANEL SHALL BE INSTALLED AT ALL EXTERIOR FLASHING/TRIM LOCATIONS TO PROVIDE WEATHER TIGHTNESS.
- J. FASTENERS:
- ROOF PANEL SEAMS SHALL BE FASTENED WITH GALVANIZED CONCEALED CLIPS AT SUPPORT LOCATIONS. INTERLOCKING LEGS SHALL BE FIELD SEAMED WITH SEAMING MACHINE. PANELS SHALL HAVE FACTORY APPLIED SEALANT.
 - WALL FASTENERS SHALL BE SELF DRILLING STAINLESS STEEL SCREWS WITH INTEGRAL HEX WASHER HEAD AND NEOPRENE WASHER. FASTENERS SHALL BE #12 X 1 1/4" TO STRUCTURAL SUPPORTS AND #14 X 7/8" AT PANEL SIDELAPS.
 - EXPOSED FASTENERS SHALL HAVE HEADS PAINTED TO MATCH MATERIAL COLOR.
- K. SEALANTS:
- SEALANTS FOR SIDE LAPS, END LAPS, ACCESSORIES, CLOSURES, ETC. SHALL BE A PREFORMED, BUTYL RUBBER BASED COMPOUND. THE MATERIAL SHALL BE NON-HARDENING, NON-SHRINKING, NON-CORROSIVE, NON-TOXIC AND NON-VOLATILE. SERVICE TEMPERATURE RANGE SHALL BE FROM -60 F TO 210 F.
 - CAULK AT DOORS, WINDOWS AND LOUVERS SHALL BE POLYURETHANE CAULK, SIKAFLEX 219LM OR APPROVED EQUAL MEETING REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00230C, TYPE II, CLASS A.
- L. EAVE GUTTERS AND DOWNSPOUTS:
- GUTTERS SHALL BE FORMED FROM 26 GAGE PREFINISHED GALVANIZED SHEET STEEL CONFORMING TO ASTM A653 G90 WITH GUTTER STRAPS, GOOSENECKS, OUTLETS & STRAINER BASKET. JOINTS SHALL BE FASTENED AND SEALED.
 - DOWNSPOUTS SHALL BE 4 INCH X 5 INCH
 - GUTTERS AND DOWNSPOUTS SHALL BE PREFINISHED.
- M. STANDARD DOORS AND FRAMES:
- EXTERIOR DOORS SHALL BE 3' X 7' - 1 3/4" THICK INSULATED HOLLOW METAL (R12) CONSTRUCTED OF 16 GAGE GALVANIZED SHEET STEEL IN ACCORDANCE WITH SDI A250.8
 - FRAMES SHALL BE WELDED TYPE, 16 GAGE GALVANIZED SHEET STEEL WITH MITERED OR COPED CORNERS.
 - DOORS SHALL HAVE 2 FOOT X 2 FOOT GLAZING WITH 1/4" WIRED SAFETY GLASS.
 - SEE THIS SHEET FOR DOOR SCHEDULE.

- N. DOOR HARDWARE:
- ALL DOORS SHALL BE PROVIDED WITH THE FOLLOWING:
 - (3) PAIRS HEAVY WEIGHT BALL BEARING BUTT HINGES W/NON-REMOVABLE PINS.
 - PANIC HARDWARE WITH THUMB LATCH AND LOCKSET.
 - HEAVY DUTY CLOSURE WITH HOLD OPEN ARM.
 - STORM CHAIN.
 - ALUMINUM THRESHOLD
 - BOTTOM SWEEP
 - EXTRUDED ALUMINUM/VINYL WEATHER STRIPPING
- O. OVERHEAD COILING DOOR:
- EXTERIOR SECTIONAL DOORS SHALL BE OVERHEAD COILING TYPE, 3/4", INSULATED.
 - 20 GA EXTERIOR SLAT SKIN, 20 GA INTERIOR (BOTH GALVANIZED) WITH MINIMUM 2.2 LB DENSITY POLYURETHANE FOAM CORE - R7.7.
 - GALVANIZED STEEL ANGLE GUIDES
 - BOTTOM WEATHER STRIPPING AND JAMB WEATHER SEALS
 - ELECTRIC MOTOR OPERATOR, SIZE & TYPE AS RECOMMENDED BY SUPPLIER TO MOVE DOOR AT 1 FOOT PER SECOND. OPERATOR SHALL BE RATED FOR CLASS I, DIV II, GROUP D FOR EXPLOSION/IGNITION PROOF CLASSIFICATION.
 - INTERIOR MOUNTED PUSH-BUTTON OPERATOR CONTROLS WITH OPEN, CLOSE & STOP BUTTONS.
 - ELECTRIC SENSING EDGE
 - WIRING CONNECTIONS SUITABLE FOR 230 VOLT, SINGLE PHASE, 60 HZ.
 - STANDARD SPRINGS
 - HARDWARE SHALL BE GALVANIZED.
 - FACTORY FINISH (CURTAIN) - BAKED ON WHITE POLYESTER
- P. MISCELLANEOUS:
- 5'-0" WIDE X 3'-6" DEEP OVERHEAD CANOPIES ATTACHED TO THE BUILDING WALL FRAMING SHALL BE PROVIDED AT ALL DOORS INDICATED.
 - ALL MECHANICAL EQUIPMENT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE. THE BUILDING SUPPLIER SHALL PROVIDE ALL DESIGN WORK OF SUPPORTS & COORDINATE W/ MECHANICAL SUPPLIERS.
- Q. FINISHES & COLORS:
- PAINTING SHALL BE IN ACCORDANCE WITH ENBRIDGE SPECIFICATION P-210
- | ITEM | FINISH | COLOR |
|--------------------------------|--|-------------------------------------|
| BUILDING FRAMES | MANUFACTURER STANDARD PRIMER OR HOT-DIP GALVANIZED | LIGHT GRAY |
| GIRTS & PURLINS | GALVANIZED | - |
| ROOF PANEL | PVDF OR SMP | WHITE |
| WALL PANEL | PVDF OR SMP | WHITE (INTERIOR)
GOLD (EXTERIOR) |
| BASE TRIM | PVDF OR SMP | WHITE |
| EAVE/RAKE/CORNER TRIM/GUTTERS | PVDF OR SMP | WHITE |
| DOWNSPOUTS | PVDF OR SMP | GOLD |
| OVERHEAD DOORS | MANUFACTURER STANDARD | WHITE |
| FLASHING, LOUVERS, VENTS, ETC. | PVDF OR SMP | GOLD |
| BRIDGE CRANE | MANUFACTURER STANDARD | SAFETY YELLOW |
- R. ERECTION:
- ERECTION SHALL BE IN ACCORDANCE WITH THE APPROVED ERECTION INSTRUCTIONS AND DRAWINGS, APPLICABLE PROVISIONS OF AISC CODE OF STANDARD PRACTICE AND MBMA MANUAL.
- S. WARRANTIES:
- THE BUILDING SHALL INCLUDE A THREE (3) YEAR LIMITED WARRANTY AGAINST FAILURE CAUSED BY FAULTY OR SUBSTANDARD MATERIAL AND A ONE (1) YEAR WORKMANSHIP GUARANTEE.
 - ALL WALL AND ROOF PANEL COATINGS SHALL PROVIDE A 20 YEAR WARRANTY AGAINST CHALK, FADE, CRACK, CHECK, BLISTER OR PEEL.
- T. OVERHEAD CRANE:
- CRANE SERVICE CLASSIFICATION SHALL BE CMAA CLASS C MODERATE DUTY.
 - SERVICE ENVIRONMENT - OPERATING TEMPERATURE -20° F - 100° F, HIGH HUMIDITY
 - CRANE SHALL BE DESIGNED, FABRICATED AND INSTALLED IN ACCORDANCE WITH CMAA 70, ANSI B30.2 AND OSHA 1910.179
 - CRANE SHALL BE ELECTRICALLY OPERATED, TOP RUNNING SINGLE GIRDER OR DOUBLE GIRDER HAUNCH SUPPORTED CONFIGURATION RATED FOR 20 TON. CONTROL SHALL BE PUSH BUTTON PENDANT OPERATED WITH REMOTE RADIO CONTROL STATION.
 - CRANE & HOIST COMPONENTS SHALL BE RATED FOR - CLASS I, DIVISION II, GROUP D HAZARD CLASSIFICATION WITH NON-SPARKING WHEELS, HOOKS, CABLES & GUIDES.
 - SUPPLIER SHALL INCLUDE BRIDGE, TROLLEYS, HOIST, RUNWAY CONDUCTORS, COLLECTORS, CABLES, BLOCKS, HOOK, MOTORS, MOTOR CONTROLS, DRIVE GUARDS, AND ALL RECOMMENDED SAFETY DEVICES.
 - BRIDGE, HOIST & TROLLEY SHALL ALL BE TWO SPEED OPERATION.
 - THE CRANE SHALL BE SUITABLE FOR OPERATION ON A 460 VOLT, THREE PHASE, 60 HERTZ GROUNDED SYSTEM. CONTROLS SHALL BE 120 VOLT SINGLE PHASE.
 - THE CRANE SUPPLIER SHALL PROVIDE A 100 AMP DISCONNECT LOCKABLE SWITCH IN THE POWER SUPPLY.
 - SEE DRAWINGS FOR BRIDGE SPANS, HOOK LIFT, AND HOOK APPROACH ENVELOPE.
 - SEE ENGINEERING EQUIPMENT SPECIFICATION EES009 "OVERHEAD CRANES" VERSION 8.1 FOR ADDITIONAL REQUIREMENTS.
 - MANUFACTURER SHALL SUBMIT COMPLETE BRIDGE CRANE SPECIFICATIONS TO OWNER PRIOR TO PURCHASE FOR APPROVAL.
 - THE CONTRACTOR SHALL CONDUCT A LOAD TEST IN ACCORDANCE WITH ANSI B30.2 WITH 125% OF THE RATED 20-TON BRIDGE CAPACITY USING A CONTRACTOR PROVIDED HOIST. THE CRANE EQUIPMENT SHALL BE OPERATED THROUGH A COMPLETE TRAVEL OF THE BRIDGE & TROLLEY. THE CRANE SHALL BE TESTED FOR CAPACITY, SPEED & DEFLECTION. TEST WEIGHTS SHALL BE PROVIDED BY THE CONTRACTOR. A CERTIFICATE OF THE LOAD TEST & OSHA COMPLIANCE SHALL BE PROVIDED TO THE OWNER.

- U. VENTILATION AND COOLING: SEE MECHANICAL DRAWING D-93-3.32-M0005-1356.
- V. ROOF INSULATION SHALL BE GLASS FIBER R30 WITH VAPOR BARRIER ON THE INSIDE THAT IS GLASS FIBER REINFORCED FOIL AND KRAFT OR FOIL AND VINYL FACTORY ADHERED TO THE INSULATION. NO INSULATION FOR WALLS.
- W. SNOW RETENTION SYSTEM SHALL BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR AT BUILDING EAVES & ALL PERSON DOOR CANOPIES. SNOW RETENTION SYSTEM SHALL BE BAR TYPE SYSTEM CLAMPED TO STANDING SEAM ROOF RIBS. CLAMPS SHALL BE STAINLESS STEEL AND BAR HOT-DIP GALVANIZED 16 GA STEEL. SYSTEM SHALL INCLUDE INTERMEDIATE ICE STOPS BETWEEN ROOF PANEL RIBS.
- X. CONTRACTOR SHALL PROVIDE PRECAST CONCRETE SPLASH BLOCKS AT ALL DOWNSPOUT LOCATIONS.

DOOR SCHEDULE				
MARK	SIZE	DOOR TYPE	FRAME TYPE	GLASS
100	12'-0" X 14'-0"	COILING OH	-	-
101	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
102	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
103	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
104	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
105	PAIR 4'-0 X 7'-0"	D-2	F-2	1/4" WIRED SAFETY GLASS - ACTIVE LEAF ONLY
105A	PAIR 4'-0" X 4'-0"	D-3	F-2	NONE
106	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
107	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS
108	3'-0" X 7'-0"	D-1	F-1	1/4" WIRED SAFETY GLASS



I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

SIGNATURE: *John W. Makirinne*
 TYPED OR PRINTED NAME: John W. Makirinne
 DATE: 2/28/19 REG. NO.: 22540



NO	REVISION	BY DATE	APPR	APPR
H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
G	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
F	ISSUED FOR BID AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/15/17	JWM	-
A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-

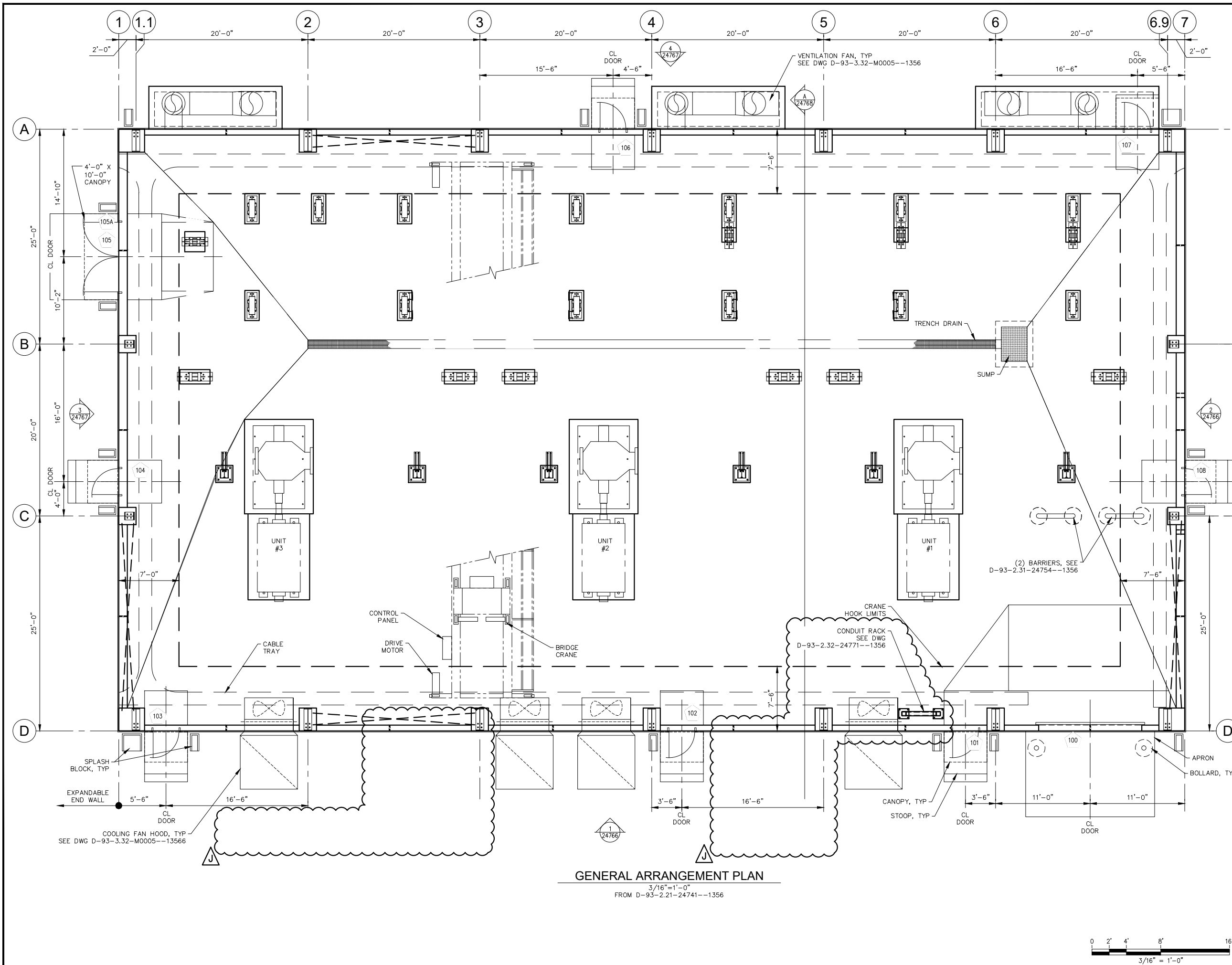
ENBRIDGE®

SWATARA (MN) STATION

STATION 93
PUMP BUILDING
BUILDING NOTES

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)

SCALE: NO SCALE	DATE: 12/18/2014	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 12/18/2014
APPR: TM	D-93-2.32-24764-H-1356	
APPR: -		




- NOTES:
- SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.32-24764--1356 FOR BUILDING NOTES.

RE-ISSUED FOR CONSTRUCTION
 04/30/2020

I HEREBY CERTIFY that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

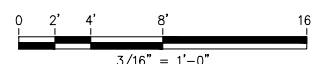
SIGNATURE: *John W. Makirinne*
 TYPED OR PRINTED NAME: John W. Makirinne
 DATE: 04/30/20 REG. NO.: 22540

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H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
G	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-
NO	REVISION	BY DATE	APPR	APPR

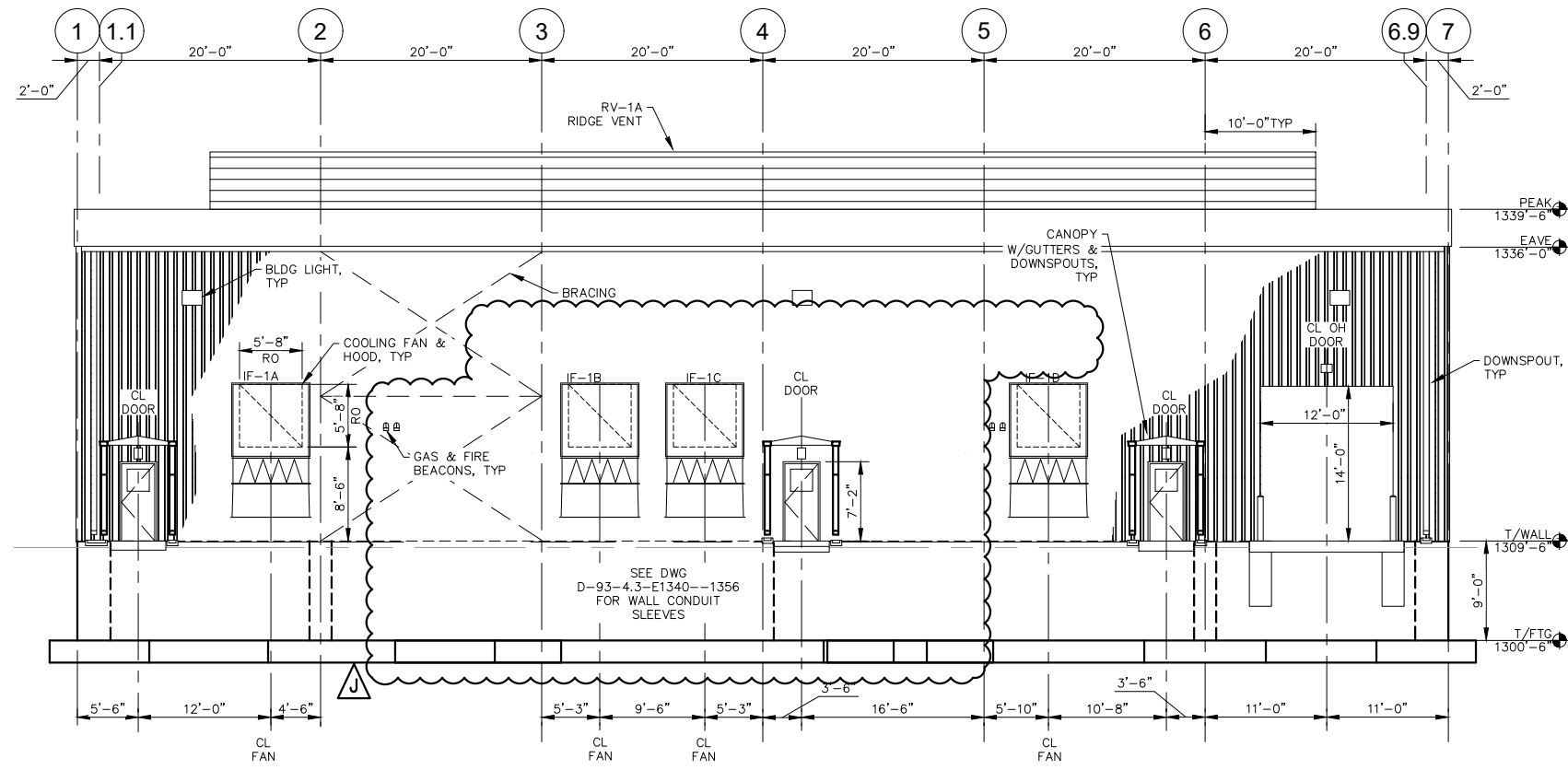

SWATARA (MN) STATION
 STATION 93
 PUMP BUILDING
 GENERAL ARRANGEMENT

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)		
SCALE: 3/16"=1'-0"	DATE: 12/18/2014	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 12/18/2014
APPR: TM	D-93-2.32-24765-J-1356	
APPR: -		

GENERAL ARRANGEMENT PLAN
 3/16"=1'-0"
 FROM D-93-2.21-24741--1356

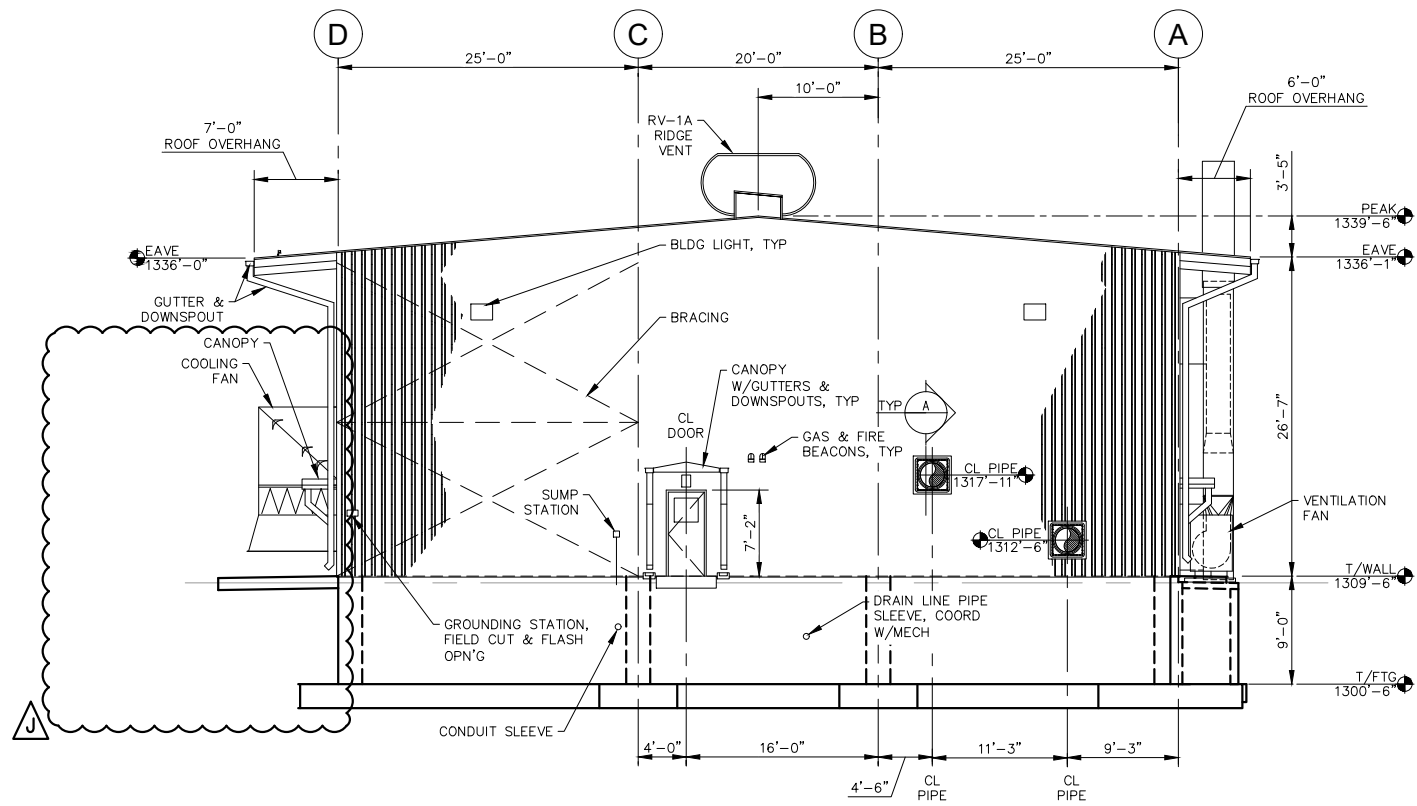


- NOTES:
- SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.32-24764--1356 FOR BUILDING NOTES.

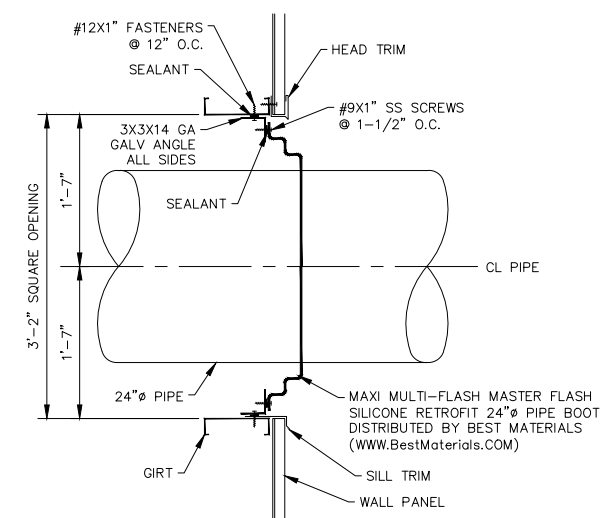


ELEVATION 1
 1/8"=1'-0"
 FROM DWG D-93-2.32-24765--1356

NOTE:
 VERIFY SIZE & LOCATION OF FAN/DUCT PENETRATIONS WITH MECHANICAL SUPPLIER. DEVIATIONS FROM FAN/DUCT OPENINGS, BRACING, DOOR, ETC. LOCATIONS SHOWN SHALL BE APPROVED BY OWNER.



ELEVATION 2
 1/8"=1'-0"
 FROM DWG D-93-2.32-24765--1356



WALL PENETRATION
DETAIL A
 1"=1'-0"

RE-ISSUED FOR CONSTRUCTION
 04/30/2020

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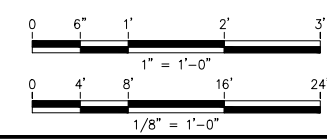
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H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
G	ISSUED FOR REVIEW AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 09/27/18	JWM	-
A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-

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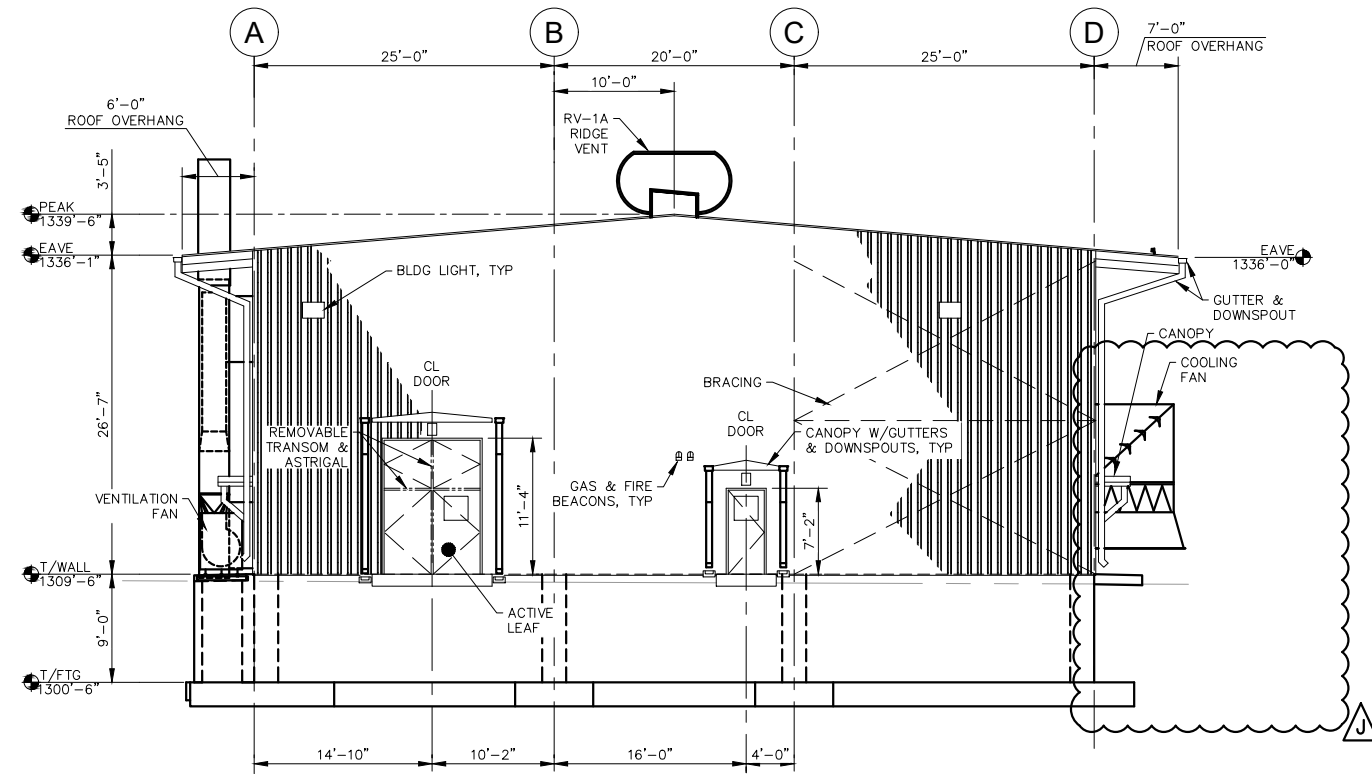
SWATARA (MN) STATION
 STATION 93
 PUMP BUILDING
 BUILDING ELEVATIONS 1

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)
 SCALE: AS NOTED DATE: 12/18/2014 DRAWN: LHB/CLG
 CHECK: LHB/JWM APPR: LHB/JWM DATE: 12/18/2014
 APPR: TM
 APPR: -

D-93-2.32-24766-J-1356

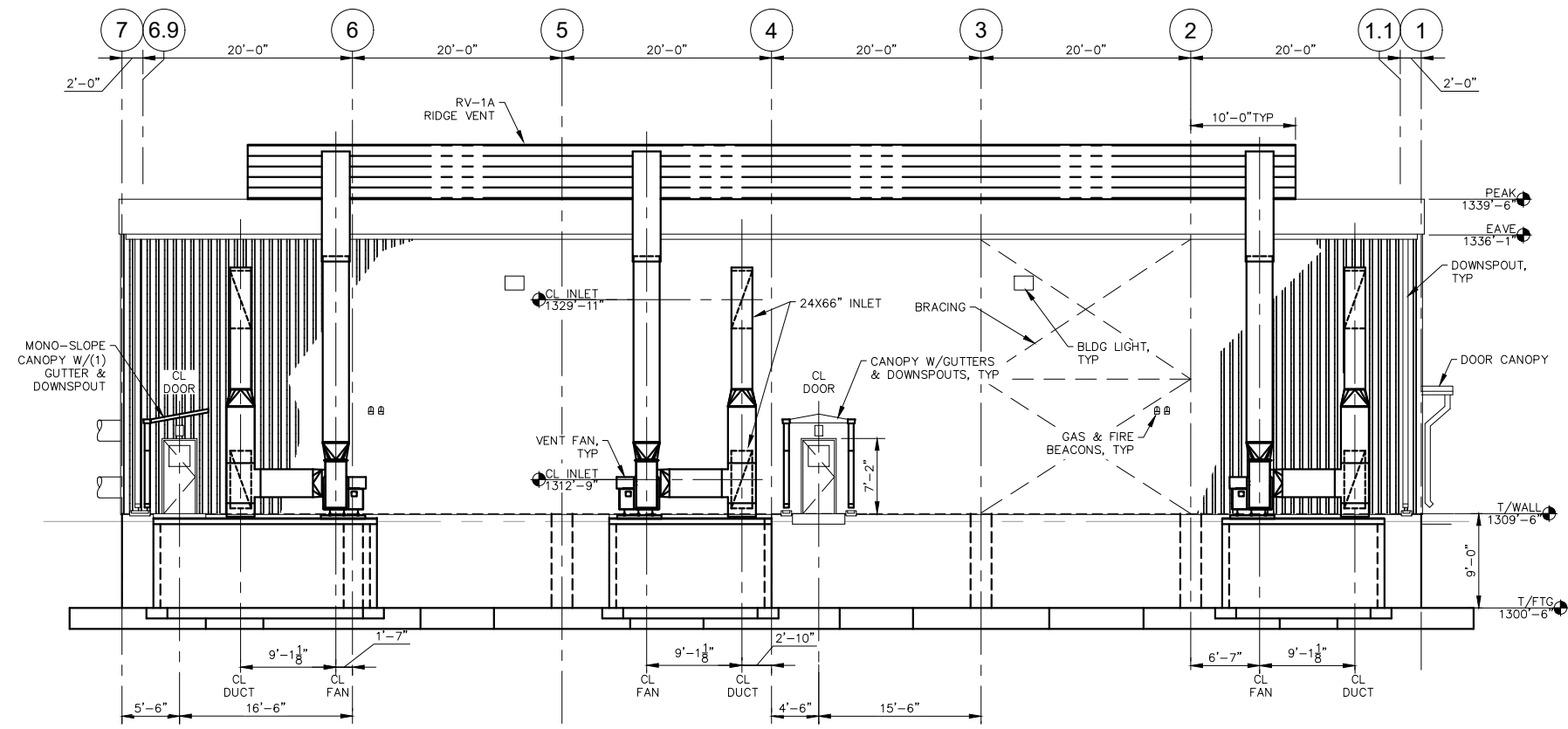


- NOTES:
- SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.32-24764--1356 FOR BUILDING NOTES.



NOTE:
 VERIFY SIZE & LOCATION OF FAN/DUCT PENETRATIONS WITH MECHANICAL SUPPLIER. DEVIATIONS FROM FAN/DUCT OPENINGS, BRACING, DOOR, ETC. LOCATIONS SHOWN SHALL BE APPROVED BY OWNER.

ELEVATION 3
 1/8"=1'-0"
 FROM DWG D-93-2.32-24765--1356



ELEVATION 4
 1/8"=1'-0"
 FROM DWG D-93-2.32-24765--1356

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DATE: 04/30/20 REG. NO.: 22540

RE-ISSUED FOR CONSTRUCTION
 04/30/2020

J	RE-ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/AMA 04/30/20	JWM	-
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A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-
NO	REVISION	BY DATE	APPR	APPR

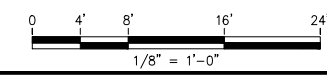
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SWATARA (MN) STATION
 STATION 93
 PUMP BUILDING
 BUILDING ELEVATIONS 2

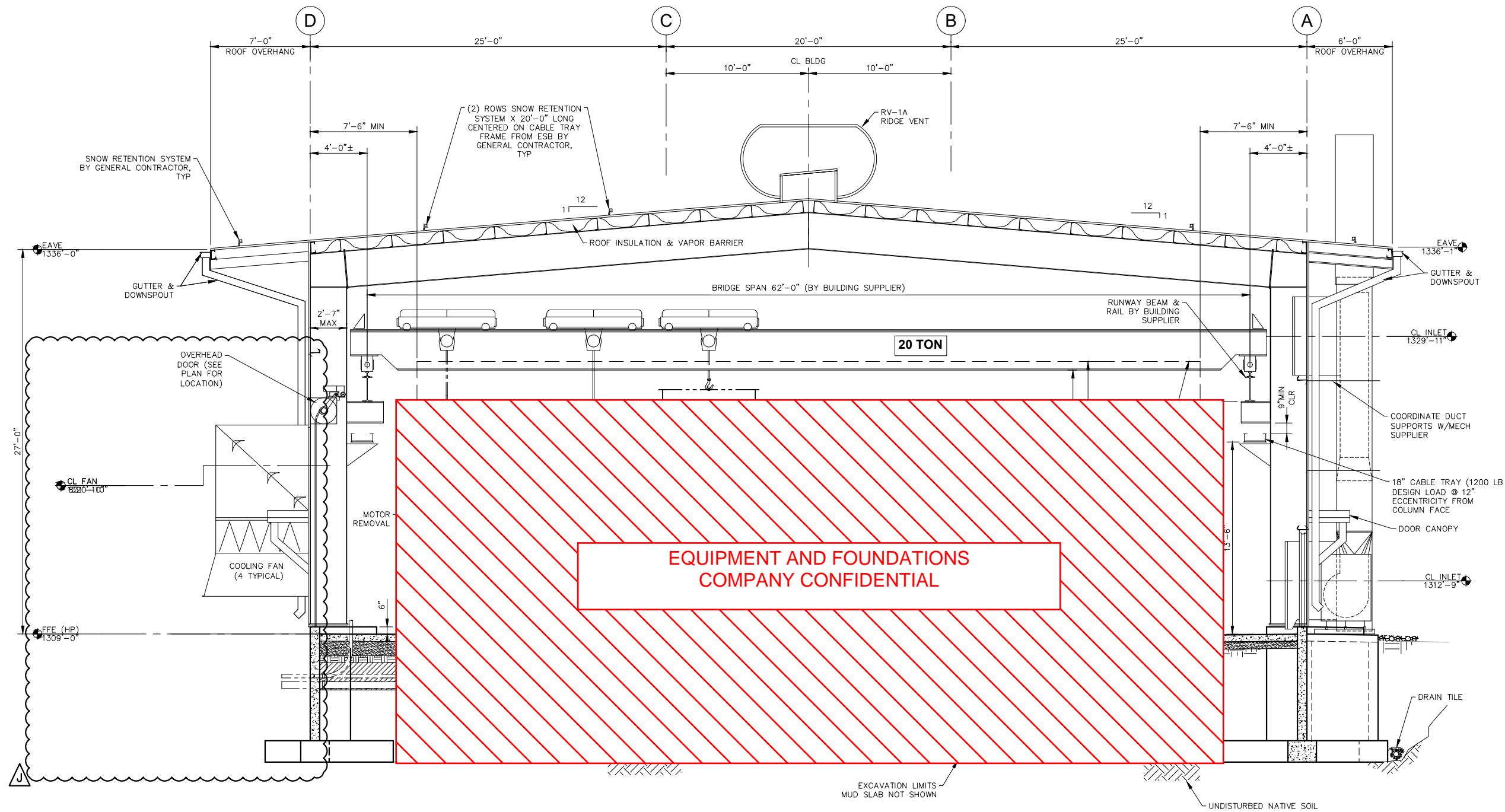
PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)

SCALE: 1/8"=1'-0" DATE: 12/18/2014 DRAWN: LHB/CLG
 CHECK: LHB/JWM APPR: LHB/JWM DATE: 12/18/2014
 APPR: TM
 APPR: -

D-93-2.32-24767-J-1356



- NOTES:
- SEE D-93-2.21-24740--1356 FOR GENERAL STRUCTURAL NOTES.
 - SEE D-93-2.32-24764--1356 FOR BUILDING NOTES.



EQUIPMENT AND FOUNDATIONS
COMPANY CONFIDENTIAL

BUILDING SECTION A-A
1/4" = 1'-0"
FROM DWG D-93-2.32-24765--1356

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DATE: 04/30/20 REG. NO.: 22540

**RE-ISSUED FOR
CONSTRUCTION**
04/30/2020

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H	ISSUED FOR CONSTRUCTION AFE# 1491292100 L3 REPL (LINE 93)	LHB/CLG 02/28/19	JWM	-
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A	ISSUED FOR 30% REVIEW AFE #1491292100 L3 REPL (LINE 93)	LHB/CLG 12/18/14	JWM	-
NO	REVISION	BY DATE	APPR	APPR



SWATARA (MN) STATION
STATION 93
PUMP BUILDING
BUILDING SECTION

PROJECT: AFE# 1491292100 LINE 3 REPLACEMENT (LINE 93)		
SCALE: 1/4" = 1'-0"	DATE: 12/18/2014	DRAWN: LHB/CLG
CHECK: LHB/JWM	APPR: LHB/JWM	DATE: 12/18/2014
APPR: TM	D-93-2.32-24768-J-1356	
APPR: -		

