

NIPOMO COMMUNITY SERVICES DISTRICT



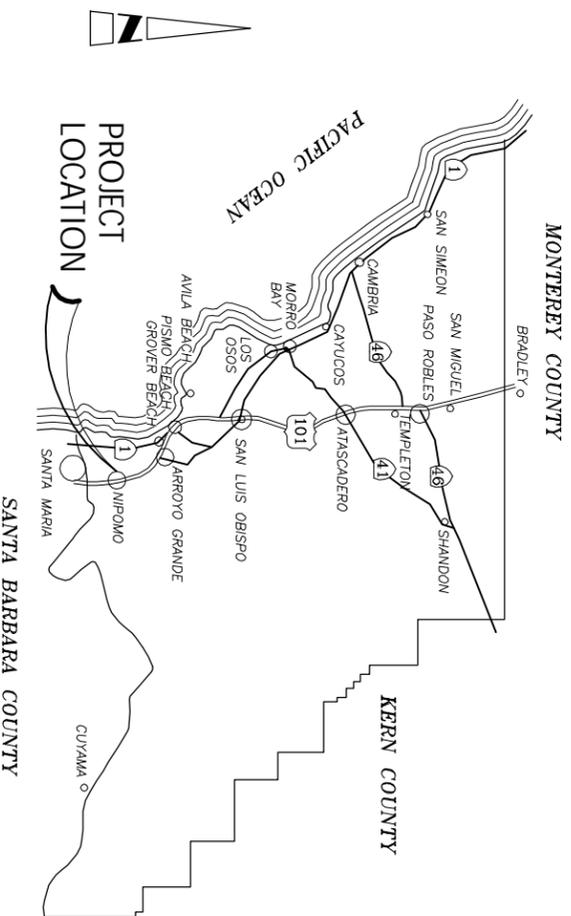
Construction Plans for

WATERLINE INTERTIE PROJECT

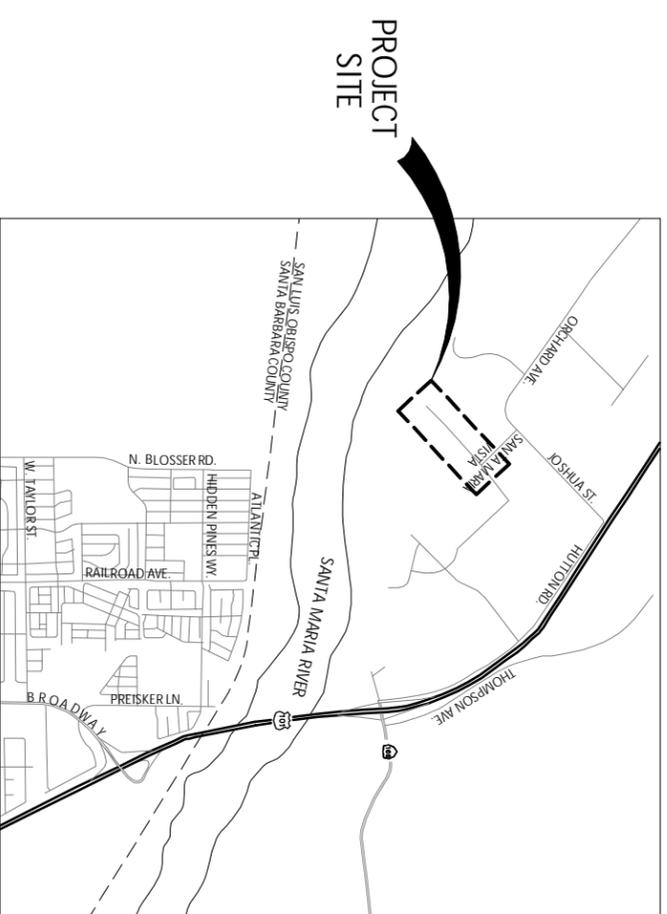
Bid Package 4

Joshua Road Pump Station and Reservoir Wellhead Chloramination Improvements

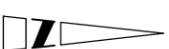
JUNE 2010



VICINITY MAP



LOCATION MAP



Know what's below.
Call before you dig.
811



PROJECT WATERLINE INTERTIE PROJECT

CLIENT NIPOMO COMMUNITY SERVICES DISTRICT

DESIGNED BY [Redacted]

DATE [Redacted]

PROJECT MANAGER MICHAEL MUNLEY, PE 6/20/10

DISTRICT OF RECORD JOSHUA REYNOLDS, PE 6/20/10

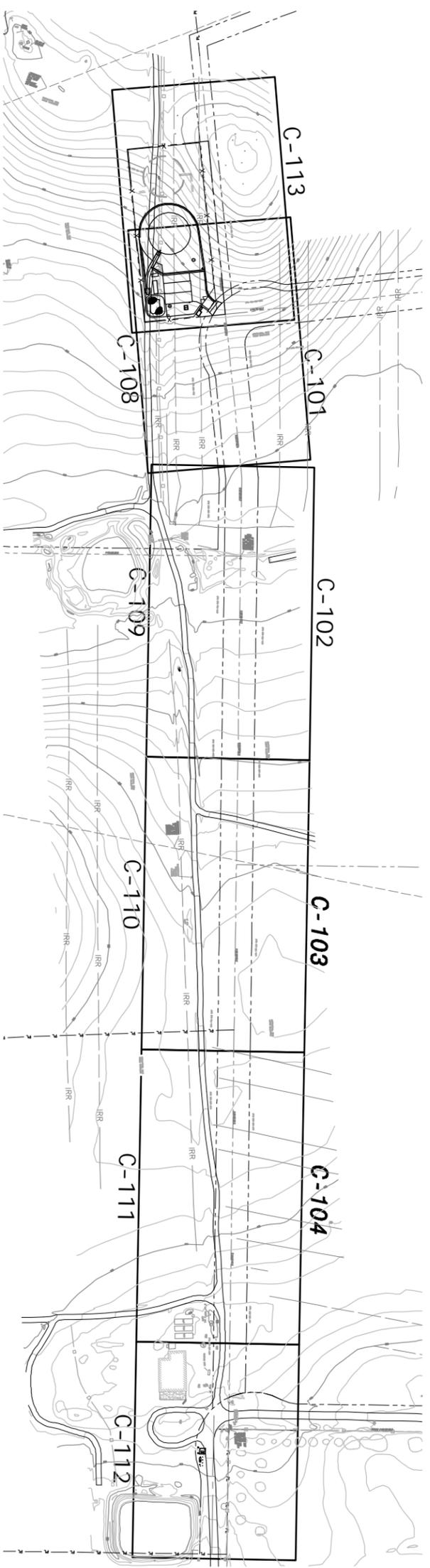
ACCOUNT NUMBER 60061295

SHEET NUMBER 1 OF 95 SHEETS

AECOM
AECOM USA, Inc.
1194 Pacific Street, Suite 204
San Jose, CA 95128
T 800.542.2840 F 800.542.9990
WWW.AECOM.COM

Sheet Index

DWG. NO.	DWG. NO.	SHEET TITLE
1	G-001	TITLE SHEET
2	G-002	SHEET INDEX
3	G-003	LEGEND, ABBREVIATION AND GENERAL NOTES
4	G-004	SURVEY CONTROL DATA
5	C-101	ACCESS ROAD PLAN & PROFILE - STA. 1+00 TO 6+00
6	C-102	ACCESS ROAD PLAN & PROFILE - STA. 6+00 TO 11+25
7	C-103	ACCESS ROAD PLAN & PROFILE - STA. 11+25 TO 16+00
8	C-104	ACCESS ROAD PLAN & PROFILE - STA. 16+00 TO 17+93.03
9	C-105	ACCESS ROAD DETAILS
10	C-108	MESA AREA PIPELINE PLAN & PROFILE - STA. 100+00 TO 102+00
11	C-109	MESA AREA PIPELINE PLAN & PROFILE - STA. 102+00 TO 106+50
12	C-110	MESA AREA PIPELINE PLAN & PROFILE - STA. 106+50 TO 111+00
13	C-111	MESA AREA PIPELINE PLAN & PROFILE - STA. 111+00 TO 115+50
14	C-112	MESA AREA PIPELINE PLAN & PROFILE - STA. 115+50 TO 117+00
15	C-113	MESA AREA PIPELINE PLAN & PROFILE - STA. 200+00 TO 201+05
16	C-114	RESERVOIR SITE PLAN
17	C-115	RESERVOIR SITE PLAN - FINISH GRADING & DRAINAGE PLAN
18	C-116	RESERVOIR SITE PIPING PLAN
19	C-117	RESERVOIR SECTION
20	C-118	RESERVOIR SITE PIPING PROFILES
21	C-119	TANK ORIENTATION & TANK PIPING DETAILS
22	C-120	TANK OVERFLOW DETAILS
23	C-121	DRAIN PIPING DETAILS
24	C-122	PUMP STATION LAYOUT PLAN
25	C-123	PUMP STATION PIPING SECTION
26	C-124	PUMP STATION PIPING PROFILES
27	C-125	PUMP STATION SURGE CONTROL FACILITY & DRAIN PIPE #2
28	C-130	PUMP STATION CHLORAMINATION FACILITY PIPELINE PLAN
29	C-401	PIG OUTLET SECTIONS
30	C-402	FLOW METER VAULT
31	C-403	PRV VAULT PLAN & SECTION
32	C-404	PRV VAULT DETAILS - 1
33	C-501	PIPELINE DETAILS - 1
34	C-502	PIPELINE DETAILS - 2
35	C-503	PIPELINE DETAILS - 3
36	C-504	PIPELINE DETAILS - 4
37	S-101	PUMP STATION - FOUNDATION PLAN
38	S-102	PUMP STATION - ROOF PLAN
39	S-103	PUMP STATION - EXTERIOR ELEVATIONS
40	S-104	PUMP STATION - BUILDING SECTION & DETAILS
41	S-105	PUMP STATION - FOUNDATION DETAILS
42	S-106	PUMP STATION - ROOF FRAMING DETAILS
43	DS-101	PUMP STATION - DETAILS
44	DS-102	PUMP STATION - FOUNDATION DETAILS
45	DS-103	PUMP STATION - DETAILS
46	M-101	HVAC PLAN
47	M-102	HVAC DETAILS
48	E-101	ELECTRICAL LEGEND & ABBREVIATIONS
49	E-102	RESERVOIR ELECTRICAL SITE PLAN
50	E-103	SINGLE LINE DIAGRAM & LOAD SCHEDULE
51	E-104	CONDUIT, LIGHTING & PANEL SCHEDULE
52	E-105	PUMP STATION LIGHTING PLAN
53	E-106	PUMP STATION POWER & CONTROL PLAN
54	E-107	CONTROL SCHEMATICS
55	E-108	ELECTRICAL DETAILS
56	E-109	MISCELLANEOUS SCHEDULES
57	E-110	SANTA MARIA VISTA PRV VAULT ELECTRICAL SITE PLAN
58	E-111	SANTA MARIA VISTA PRV STATION ELECTRICAL DETAILS
59	N-001	MISCELLANEOUS SCHEDULES
60	N-002	COMMUNICATION BLOCK DIAGRAM
61	N-501	INSTRUMENT DETAILS
62	N-601	PUMP STATION P&ID
63	N-602	PUMP STATION SODIUM HYPOCHLORITE SYSTEM P&ID
64	N-603	PUMP STATION AMMONIUM SULFATE SYSTEM P&ID
65	N-604	SANTA MARIA VISTA PRV SYSTEM P&ID
66	R-101	TANK - PLAN & SECTION
67	R-102	WALL & WALL FOOTING DETAILS
68	R-103	DETAILS
69	R-104	PIPE ENTRANCE DETAILS
70	R-105	GUARDRAIL DETAILS
71	L-1	IRRIGATION PLAN
72	L-2	PLANTING PLAN
73	L-3	PLANTING & IRRIGATION DETAILS & SPECIFICATIONS
74	WC-101	EUREKA WELL SITE
75	WC-102	EUREKA WELL - CHLORAMINATION BUILDING LAYOUT & SITE SPECIFIC DETAILS
76	WC-103	BLACKLAKE #4 WELL SITE
77	WC-104	BLACKLAKE #4 WELL SITE CHLORAMINATION BUILDING LAYOUT & SITE SPECIFIC DETAILS
78	WC-105	VIA CONCHA WELL SITE
79	WC-106	VIA CONCHA WELL SITE DEMOLITION PLAN
80	WC-107	VIA CONCHA WELL SITE NEW 6" WATERLINE PLAN & PROFILE
81	WC-108	VIA CONCHA WELL SITE CHLORAMINATION BUILDING LAYOUT & SITE SPECIFIC DETAILS
82	WC-109	SUNDALE WELL SITE
83	WC-110	SUNDALE WELL SITE CHLORAMINATION BUILDING LAYOUT & SITE SPECIFIC DETAILS
84	WC-501	CHLORAMINATION SYSTEM DETAILS - 1
85	WC-502	CHLORAMINATION SYSTEM DETAILS - 2
86	WC-503	CHEMICAL TANK SECTIONS & DETAILS
87	WS-101	CHLORAMINATION BUILDING FOUNDATION & ROOF PLAN
88	WS-102	SUNDALE WELL SITE CHLORAMINATION BUILDING ELEVATION VIEWS
89	WDS-501	CHLORAMINATION BUILDING DETAILS - 1
90	WDS-502	CHLORAMINATION BUILDING DETAILS - 2
91	WE-001	ELECTRICAL LEGEND & ABBREVIATIONS
92	WE-002	CHLORAMINATION BUILDING ELECTRICAL LAYOUT, SINGLE LINE DIAGRAM & SCHEDULES
93	WE-003	MULTIPLE SITES ELECTRICAL LAYOUT
94	WN-602	WELLS - SODIUM HYPOCHLORITE SYSTEM P&ID
95	WN-603	WELLS - AMMONIUM SULFATE SYSTEM P&ID



SHEET INDEX

SCALE: 1" = 100'

1

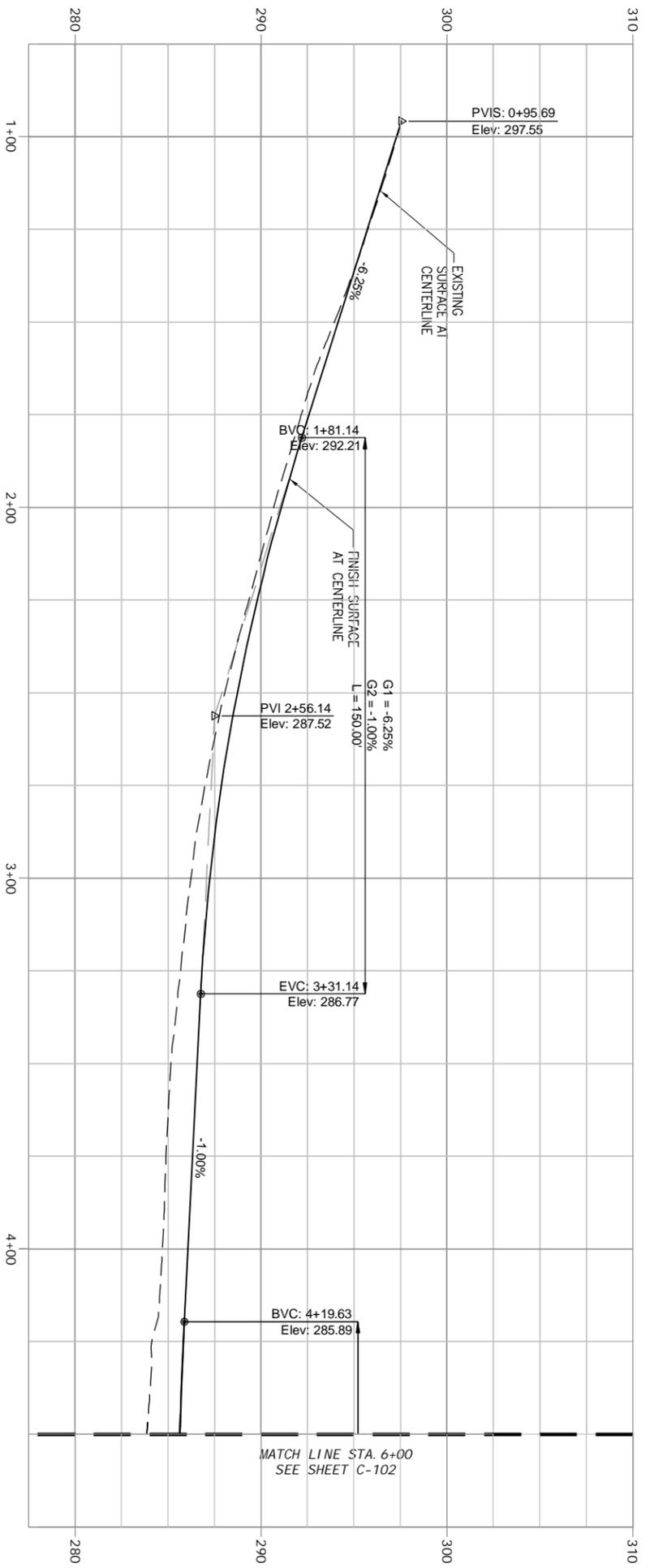
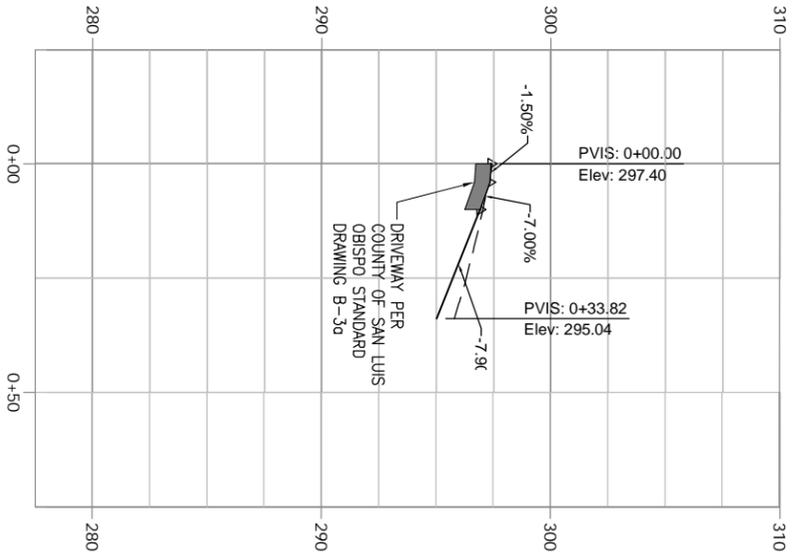
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4 SHEET INDEX		AECOM <small>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com</small>		REV	DATE	DESCRIPTION	APPR
				PROJECT ENGINEER	REG NUMBER	EXP DATE	
				JOSHUA H. REYNOLDS	C65400	09-30-2009	



ACCESS ROAD EARTHWORK VOLUMES **

FILL	200 cu yd	CUT	500 cu yd	NET	300 cu yd (FILL)
------	-----------	-----	-----------	-----	------------------

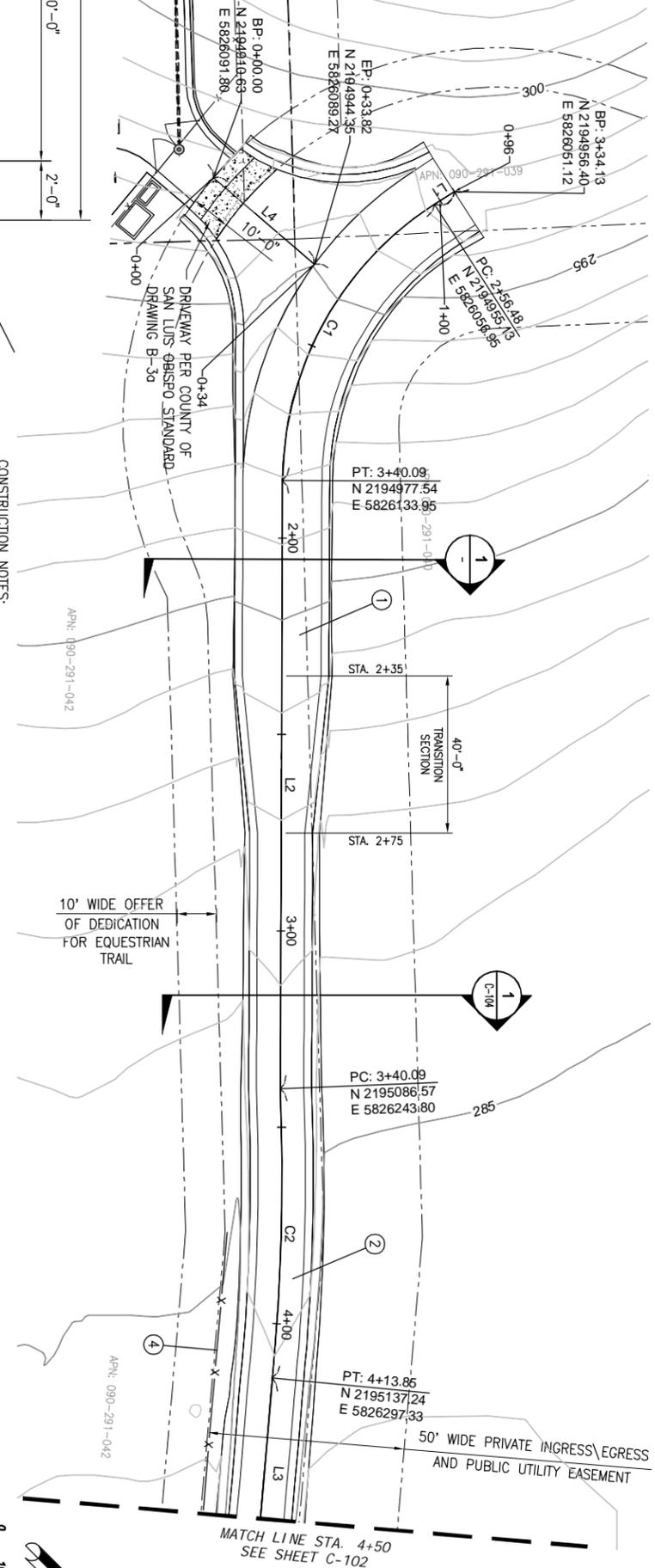
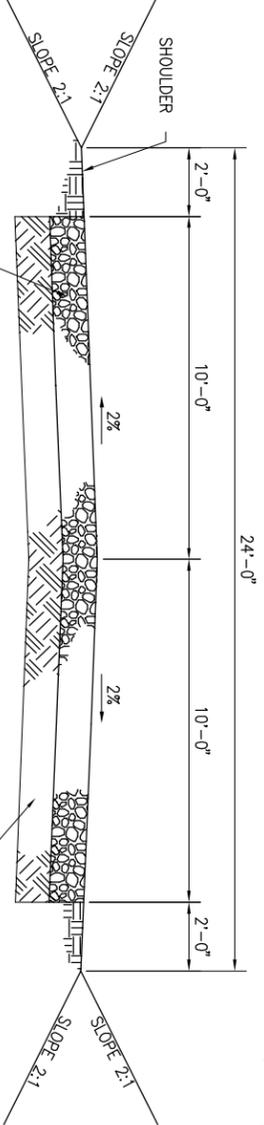
** CUT FACTOR = 1.20 AND FILL FACTOR = 0.80

Line Table

Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L3	1390.49'	N49° 49' 00.80"E	(5826297.33, 2195137.24)	(5827359.64, 2196034.43)
L2	154.77'	S45° 12' 49.43"W	(5826133.95, 2194977.54)	(5826243.80, 2195086.57)
L1	5.97'	S77° 40' 07.26"E	(5826051.12, 2194956.40)	(5826056.95, 2194955.13)
L4	33.82'	S4° 17' 28.03"E	(5826091.80, 2194910.63)	(5826089.27, 2194944.35)

Curve Table

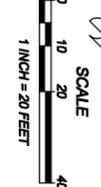
Curve #	Radius	Length	External Tangent	Delta
C2	550.480	73.76'	36.936	7.6773
C1	83.877	83.62'	45.653	57.1176



- CONSTRUCTION NOTES:
- CONSTRUCT 12" COMPACTED CL-II AGGREGATE BASE ON SUBGRADE SCARIFIED TO A DEPTH OF 12" UNIFORMLY MOISTURE CONDITIONED AND COMPACTED PER DETAIL C-101
 - CONSTRUCT 12" COMPACTED CL-II AGGREGATE BASE ON SUBGRADE SCARIFIED TO A DEPTH OF 12" UNIFORMLY MOISTURE CONDITIONED AND COMPACTED PER DETAIL C-104
 - INSTALL SILT AND/OR EXCLUSIONARY FENCING IN CONFORMANCE WITH SPECIFICATION SECTION 011160 AND OWNER'S BIOLOGICAL MONITOR.

- GENERAL NOTES:
- SEE AGRICULTURAL NOTES SHEET G-003

FOR PRELIMINARY USE ONLY
 AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



IF THIS PLAN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4

ACCESS ROAD PLAN & PROFILE STA 0+00 to 4+50

DESIGNED: JHR
 CHECKED: JHR
 APPROVED: JHR
 DATE: JUNE 2010
 AECOM PROJECT NO.: 60061295
 NCSD PROJECT NO.:
 CADW STPS.: BRYLE/AECOM

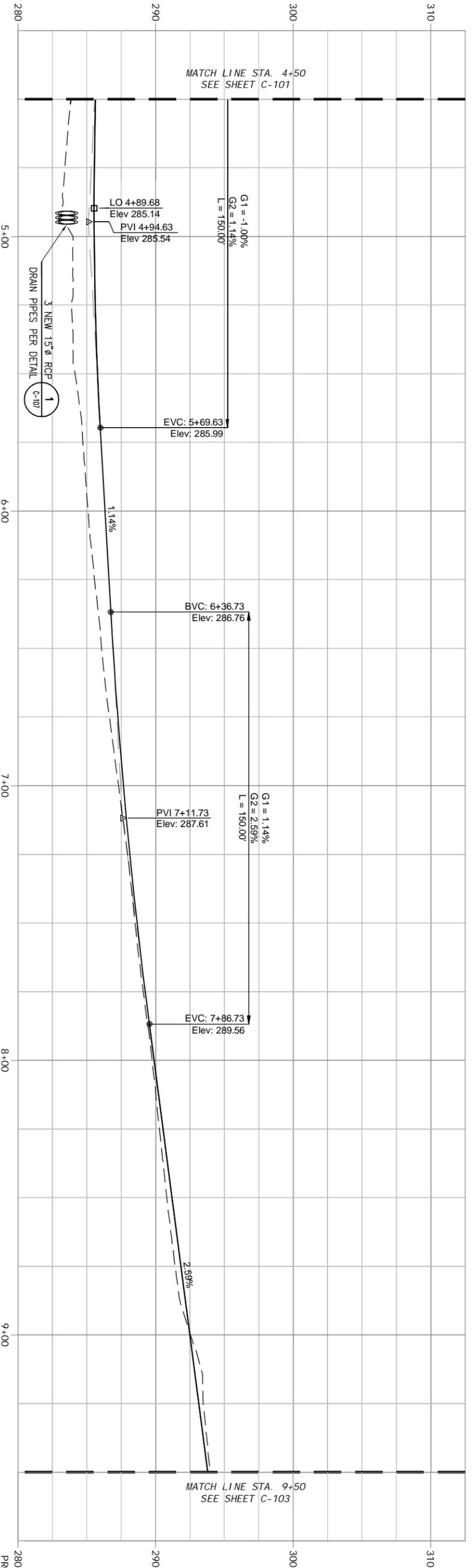


AECOM

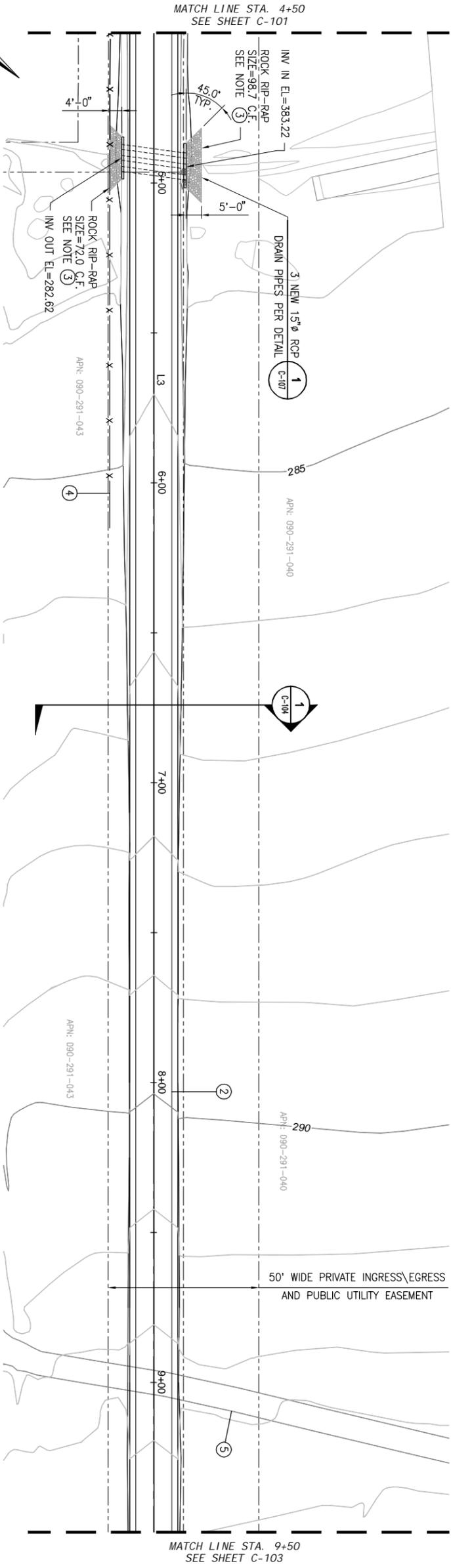
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
JOSHUA H REYNOLDS		C85400	09/30/2009



PROFILE SCALE
 HORIZONTAL 1"=20'
 VERTICAL 1"=4'



CONSTRUCTION NOTES:

- ① CONSTRUCT 12" COMPACTED CL-II AGGREGATE BASE ON SUBGRADE SCARIFIED TO A DEPTH OF 12" UNIFORMLY MOISTURE CONDITIONED AND COMPACTED PER DETAIL C-104
- ② STONE FOR RIP-RAP SHALL BE QUARRY STONE, WELL GRADED AND ANGULAR. STONE SHALL BE SUCH SHAPE AS TO FORM A STABLE PROTECTION FOR REQUIRED SECTION. DO NOT USE FLAT OR ELONGATED SHAPES UNLESS THE THICKNESS OF THE INDIVIDUAL PIECES IS AT LEAST ONE-THIRD THE LENGTH. MATERIAL SHALL BE CLEAN AND FREE FROM DELETERIOUS IMPURITIES INCLUDING ALKALI, CLAY REFUSE, AND ADHERENT CONTAMINANTS.
- ③ INSTALL SILT AND/OR EXCLUSIONARY FENCING IN CONFORMANCE WITH SPECIFICATION SECTION 011160 AND OWNERS BIOLOGICAL MONITOR.
- ④ SMOOTH EXISTING DIRT ROAD TO MATCH GRADE WITH NEW ROADWAY TO MAINTAIN FUTURE ACCESS.

GENERAL NOTES:

1. SEE AGRICULTURAL NOTES ON SHEET G-003.

AECOM WATER

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



IF THIS PLAN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

Line Table

Line #	Length	Direction	Start Point (N.E)	End Point (N.E)
L3	1390.49'	N49° 49' 00.80"E	(58276297, 33, 2195137.24)	(5827359, 64, 2196034.43)



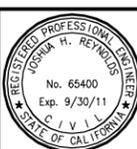
**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**ACCESS ROAD PLAN & PROFILE
 STA 4+50 to 9+50**



AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H REYNOLDS		C65400	09/30/2009

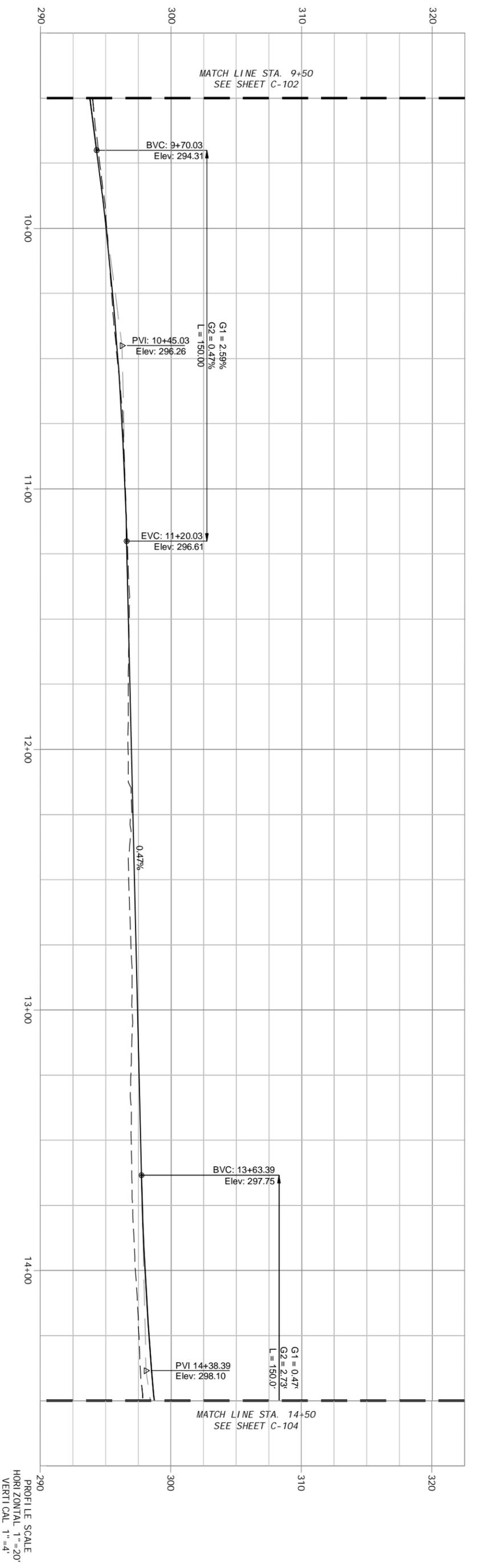
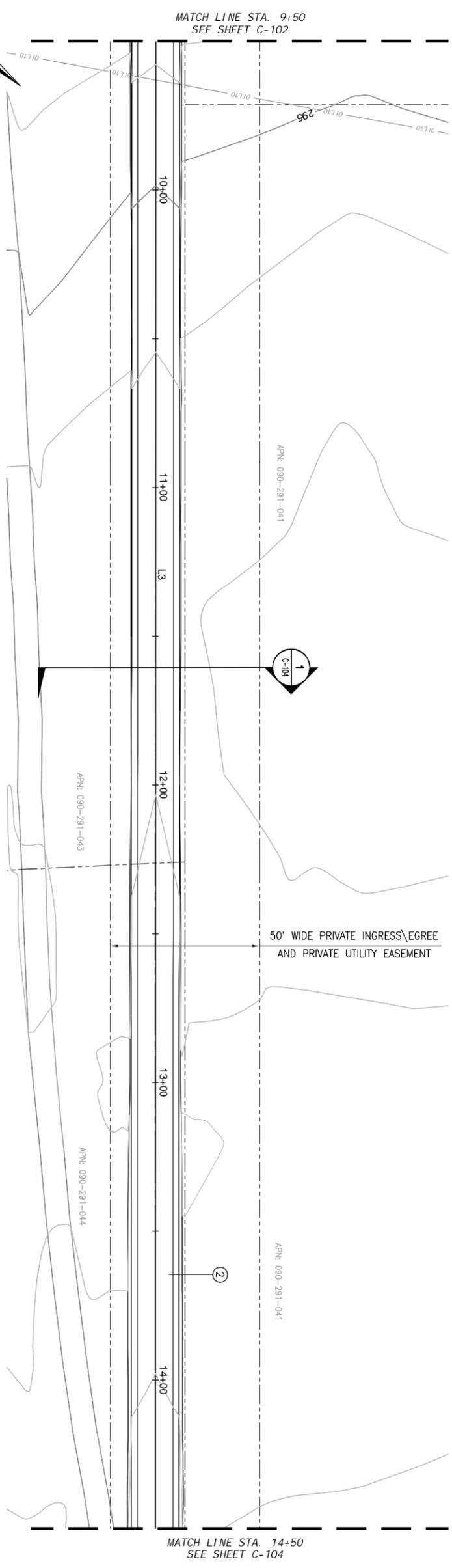
DESIGNED: JHR	DATE: JUNE 2010
CHECKED: JHR	APPROVED: JHR
DATE: JUNE 2010	APPROVED: JHR
AECOM PROJECT NO. 60061295	MSD PROJECT NO.
CADD STGS. BY: JHR	
SHEET C-102	
6 OF 95	



Line #	Length	Direction	Start Point (N.E)	End Point (N.E)
L3	1390.49'	N49° 49' 00.80"E	(5826297.33, 2195137.24)	(5827359.64, 2196034.43)

CONSTRUCTION NOTES:
 ② CONSTRUCT 12" COMPACTED CL-II AGGREGATE BASE ON SUBGRADE SCARIFIED TO A DEPTH OF 12" UNIFORMLY MOISTURE CONDITIONED AND COMPACTED PER DETAIL C-104

GENERAL NOTES:
 1. SEE AGRICULTURAL NOTES ON SHEET G-003.



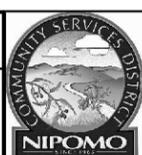
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below. Call before you dig. **811**

AECOM WATER

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

ACCESS ROAD PLAN & PROFILE
 STA 9+50 to 14+50



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

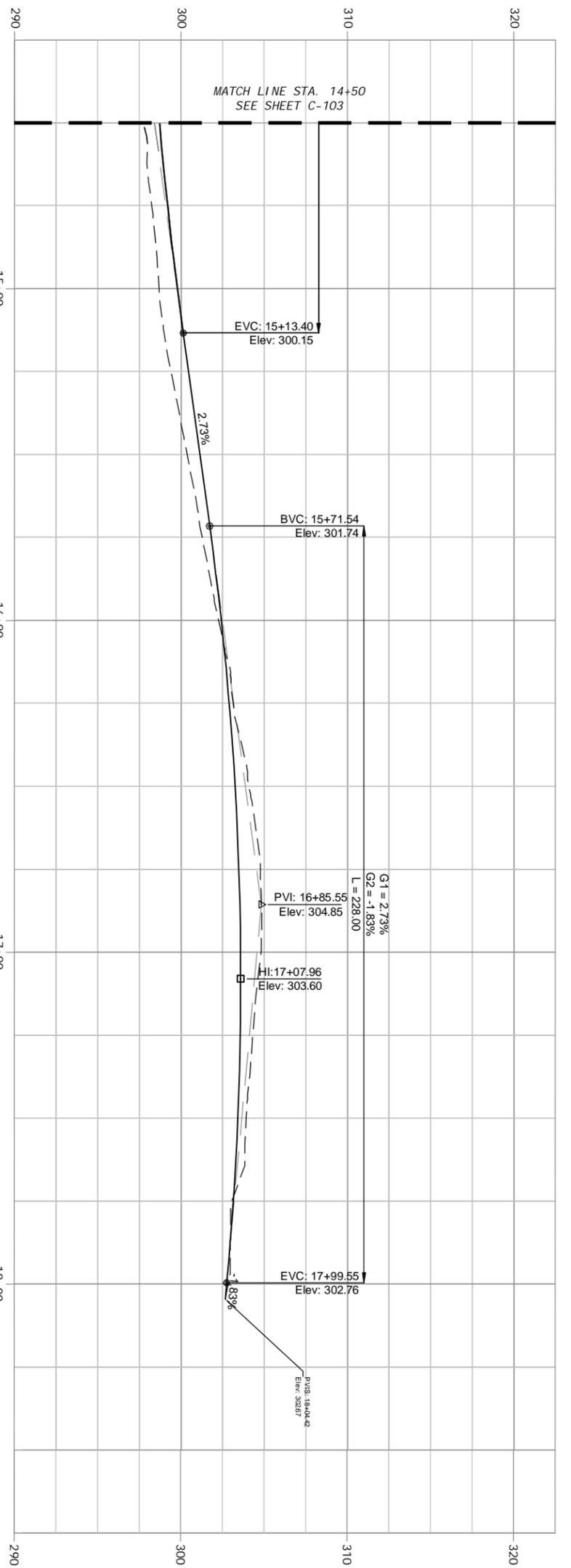
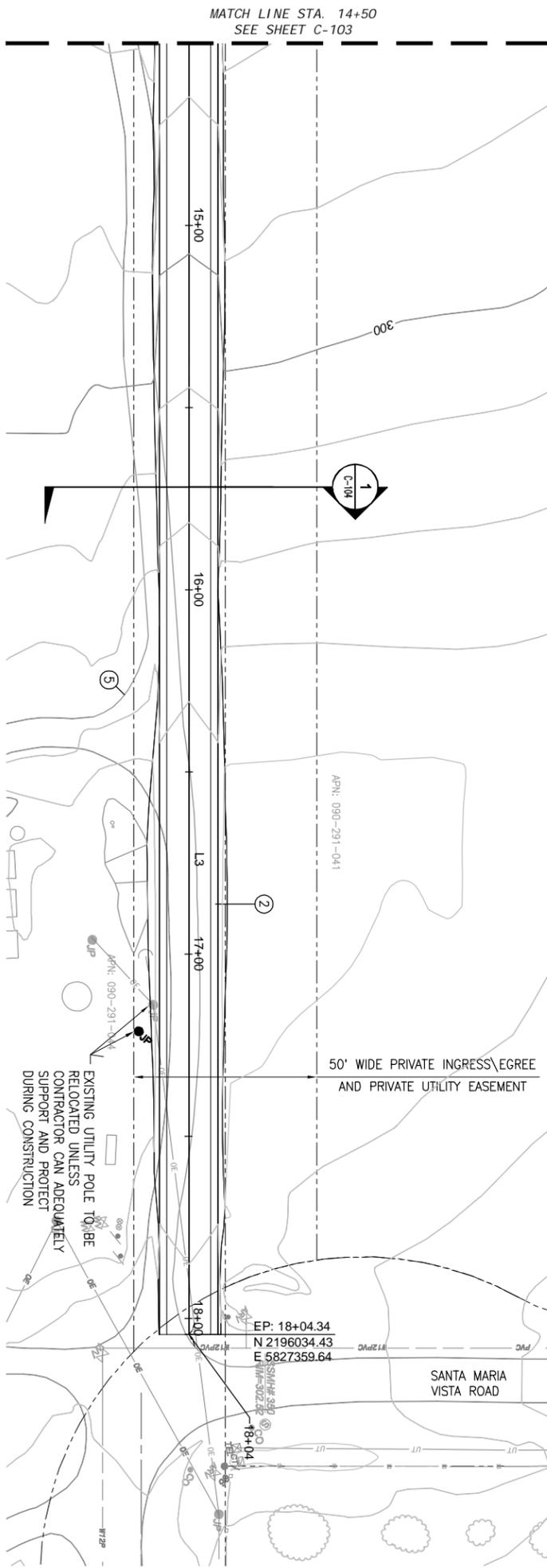
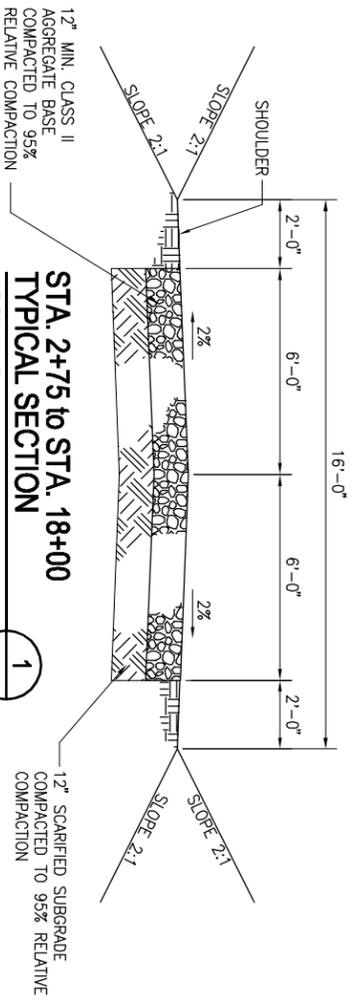


REV	DATE	DESCRIPTION	REG NUMBER	APPR
1		PROJECT ENGINEER	C65400	JOSHUA H REYNOLDS
				EXP DATE 09/30/2009

C-103
 SHEET 7 OF 95

DESIGNED: JHR
 CHECKED: JHR
 APPROVED: JHR
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. CADW STPS. BOYLE/AECOM

Line Table				
Line #	Length	Direction	Start Point (N.E)	End Point (N.E)
L3	1390.49'	N49° 49' 00.80"E	(5826297.33, 2195137.24)	(5827359.64, 2196034.43)

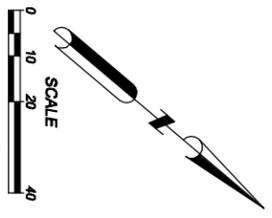


PROFILE SCALE
 HORIZONTAL 1" = 20'
 VERTICAL 1" = 4'

GENERAL NOTES:
 1. SEE AGRICULTURAL NOTES ON SHEET C-003.

CONSTRUCTION NOTES:

- ① CONSTRUCT 12" COMPACTED CL-II AGGREGATE BASE ON SUBGRADE SCARIFIED TO A DEPTH OF 12" UNIFORMLY MOISTURE CONDITIONED AND COMPACTED PER DETAIL
- ② SMOOTH EXISTING DIRT ROAD TO MATCH GRADE WITH NEW NEW ROADWAY TO MAINTAIN FUTURE ACCESS.



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
Call before you dig.

 IF THIS SIGN DOES NOT IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**ACCESS ROAD PLAN & PROFILE
 STA 14+50 to 18+04.42**

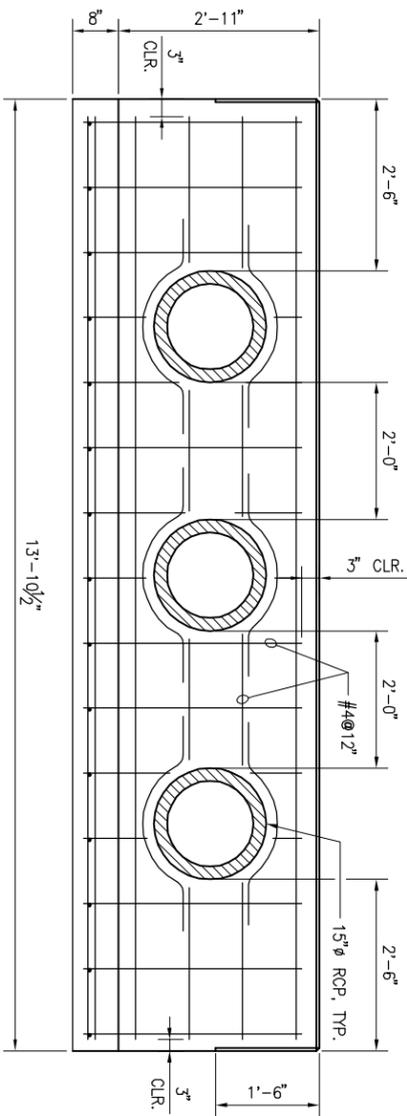


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



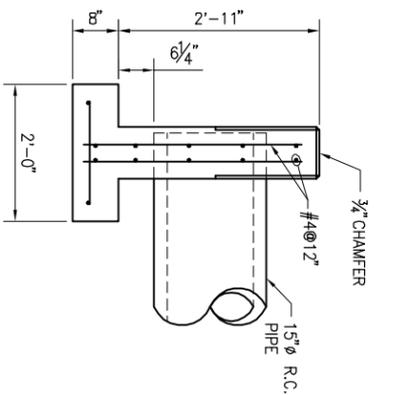
REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
JOSHUA H REYNOLDS		C65400	09/30/2009

DESIGNED: JHR	DATE: JUNE 2010
DRAWN: JHR	DATE: JUNE 2010
CHECKED: JHR	DATE: JUNE 2010
APPROVED: JHR	DATE: JUNE 2010
PROJECT NO. 60061295	
CADD STPS. BRYL/AECOM	
C-104	
SHEET	
8 OF 95	



FRONT ELEVATION

NOTE:
 1. CIRCULAR R.C.P. PER CALTRANS STANDARD SPECIFICATION SECTION 65.



SECTION VIEW

HEADWALL
 SCALE: 3/4" = 1'-0"

1
 C-102

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

AECOM WATER

Know what's Below.
811
 Call before you dig.
 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

ACCESS ROAD DETAIL



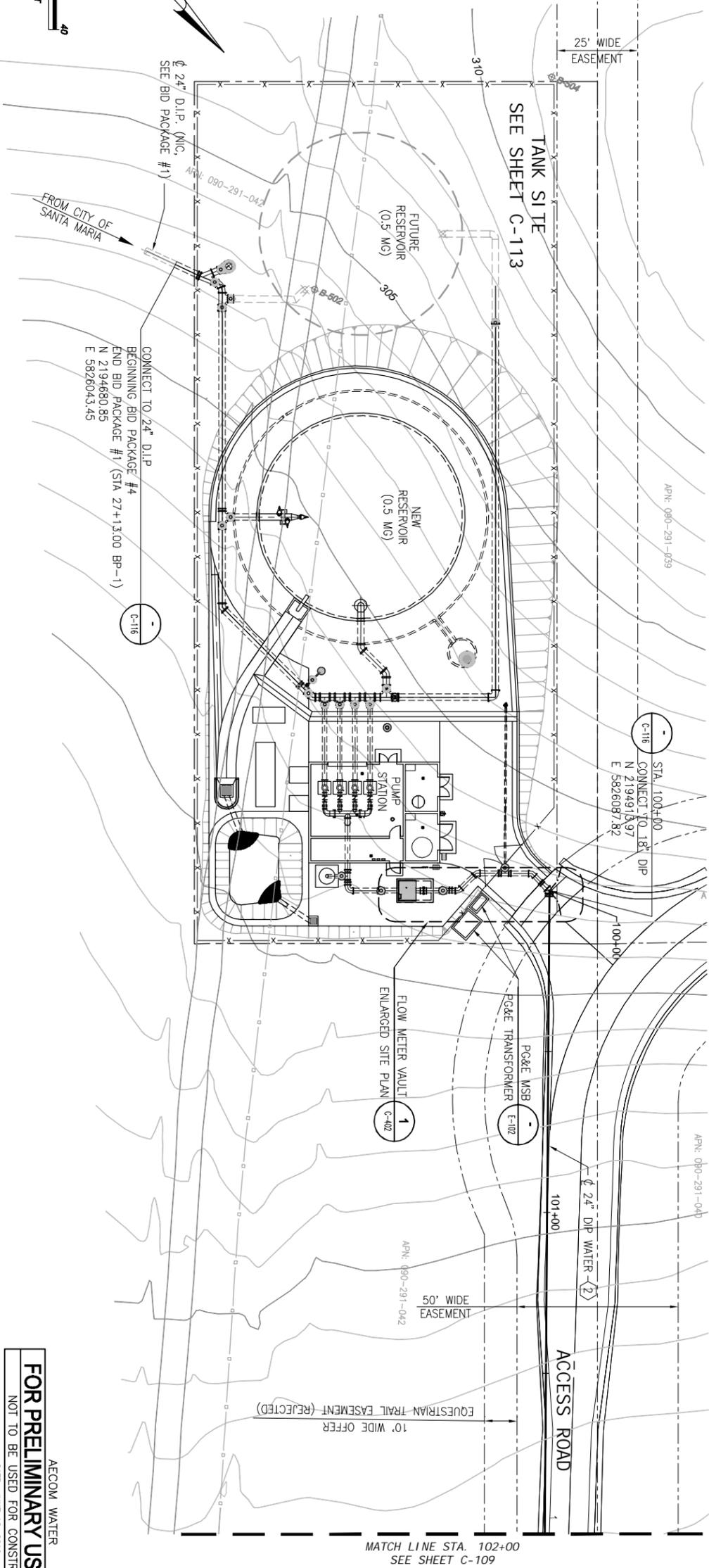
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM

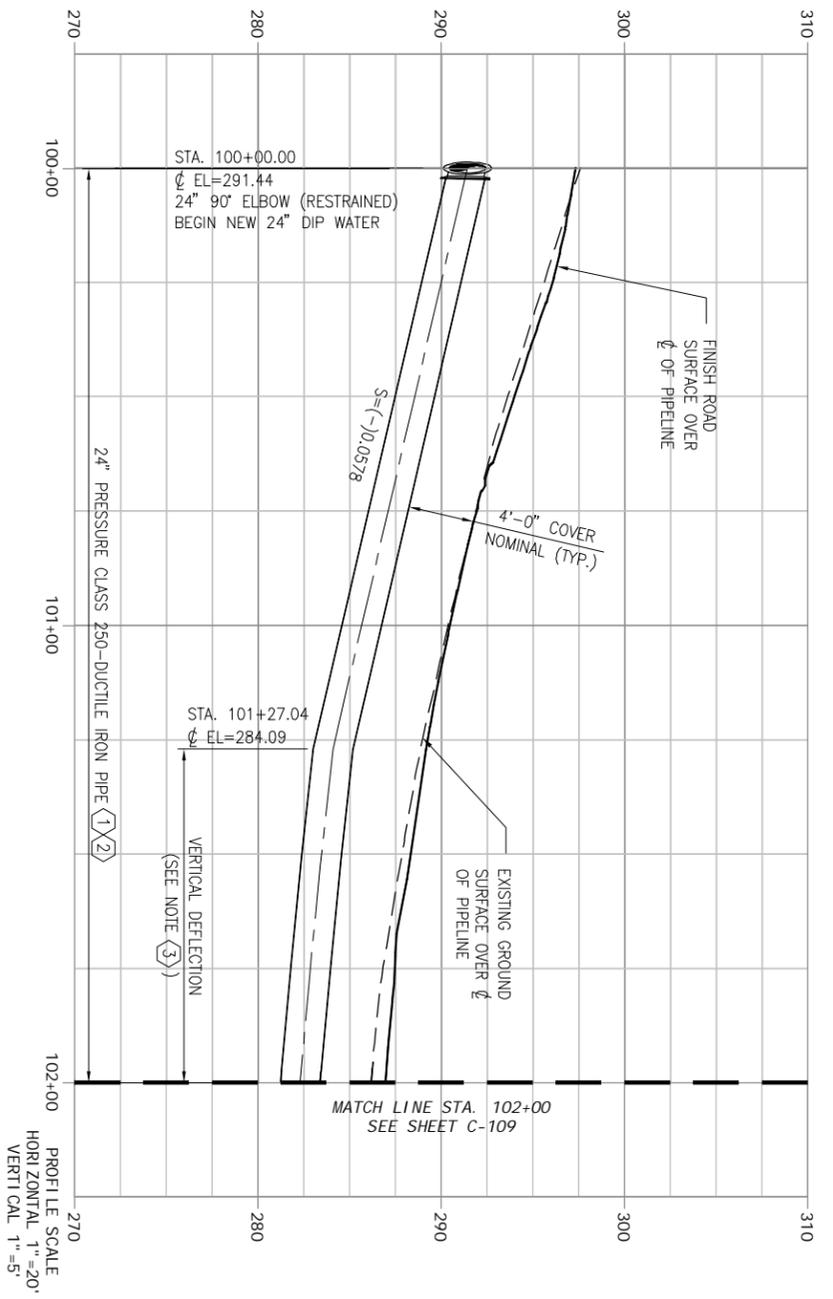


REV	DATE	DESCRIPTION	APP
PROJECT ENGINEER		REG NUMBER	EXP DATE
JOSHUA H REYNOLDS		C65400	09/30/2009

DESIGNED: JHR	DATE: JUNE 2010
DETAIL LEO: JPF	APPROVED:
CHECKED:	DATE: JUNE 2010
APPROVED:	AECOM PROJECT NO. 60061295
NCSD PROJECT NO.	
CADD STPS. BOYLE/AECOM	
C-105	
SHEET	
9 OF 95	



- CONSTRUCTION NOTES:
1. SEE AGRICULTURAL NOTES ON SHEET G-003
- CONSTRUCTION NOTES:
- 1 INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
 - 2 24" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL C-301
 - 3 TO OBTAIN CURVE ALIGNMENT DEFLECT PIPE AT THE JOINT PER SPECIFICATION SECTION 402040 AND PIPE MANUFACTURER'S RECOMMENDATION.



FOR PRELIMINARY USE ONLY

AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

**MESA AREA PIPELINE
 PLAN AND PROFILE
 STA 100+00 to 102+00**



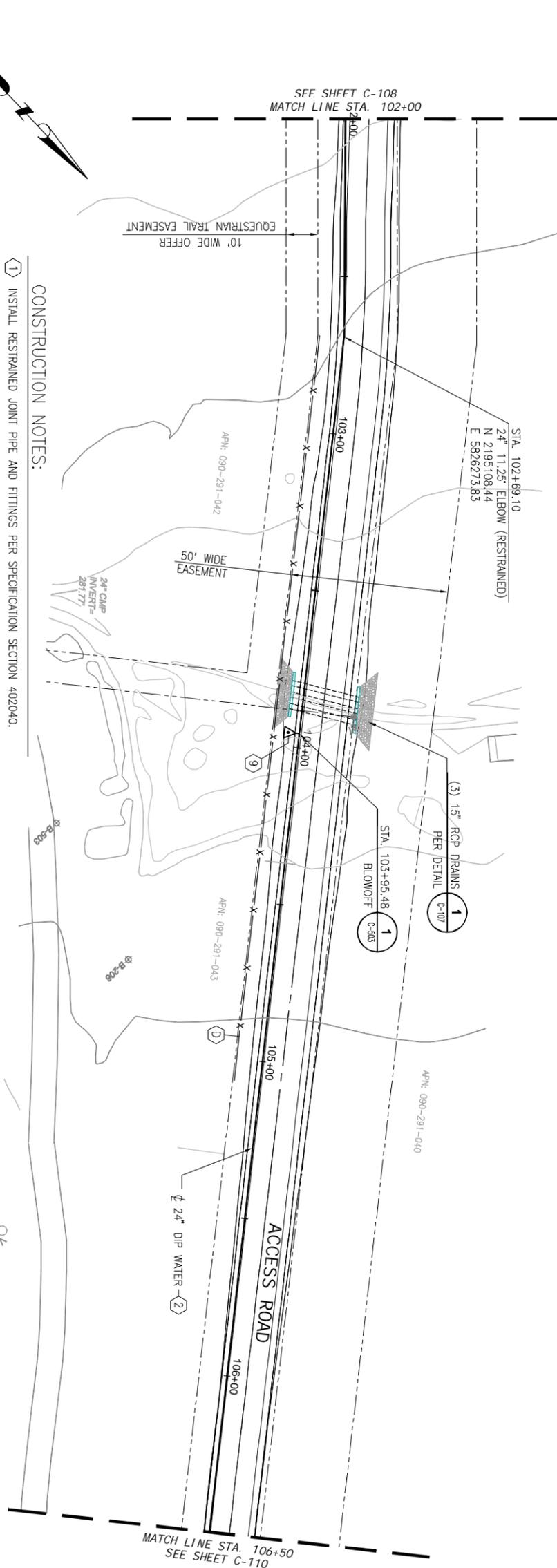
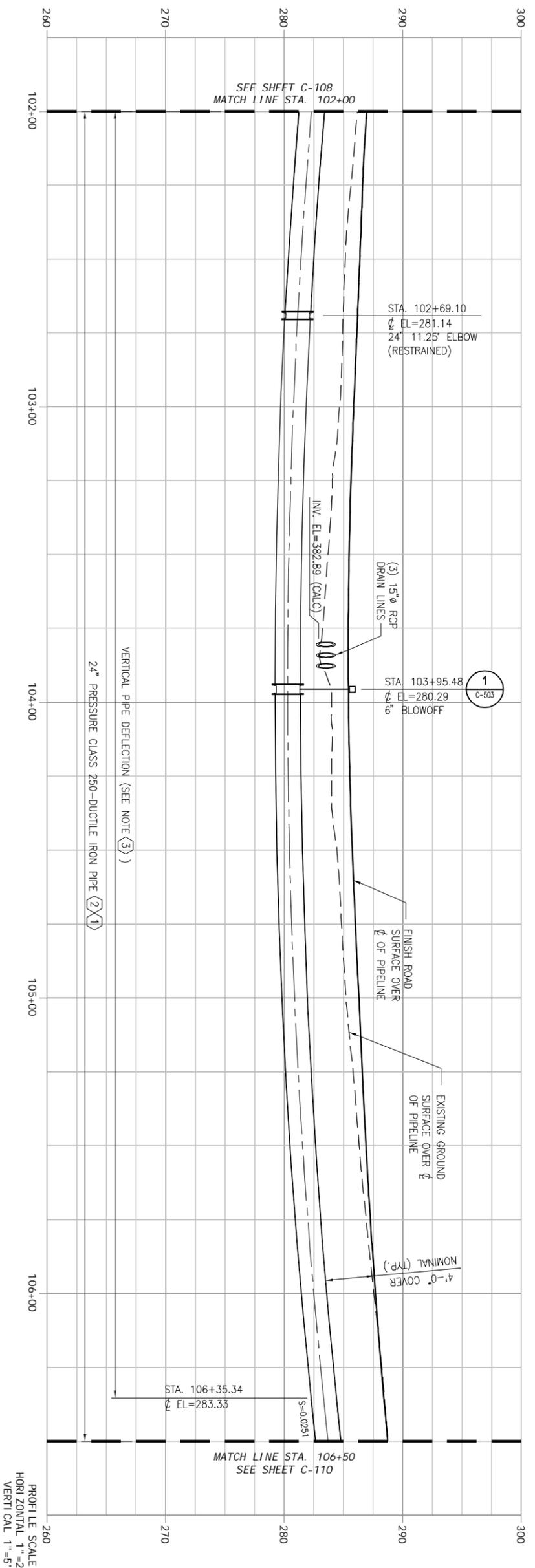
AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H REYNOLDS		C65400	09/30/2009

DESIGNED: JHR	DATE: JUNE 2010
CHECKED: JHR	APPROVED: JHR
DATE: JUNE 2010	APPROVED: JHR
AECOM PROJECT NO. 60061295	MSD PROJECT NO.
CADD STOS. BOYLE/AECOM	
C-108	
SHEET 10 OF 95	



CONSTRUCTION NOTES:

- 1 INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
- 2 24" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL
- 3 TO OBTAIN CURVE ALIGNMENT DEFLECT PIPE AT THE JOINT PER SPECIFICATION SECTION 402040 AND MANUFACTURER'S RECOMMENDATION.
- 9 LOCATE CENTER OF BLOWOFF VALVE LID 7'-FEET FROM CENTERLINE OF ROAD
- D INSTALL SLIT AND/OR EXCLUSIONARY FENCING IN CONFORMANCE WITH SPECIFICATION SECTION 011160 AND DIRECTION FROM OWNER'S BIOLOGICAL MONITOR

5 C-501

GENERAL NOTES:

1. SEE AGRICULTURAL NOTES ON SHEET G-003

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

**MESA AREA PIPELINE
 PLAN AND PROFILE
 STA 102+00 to 106+500**



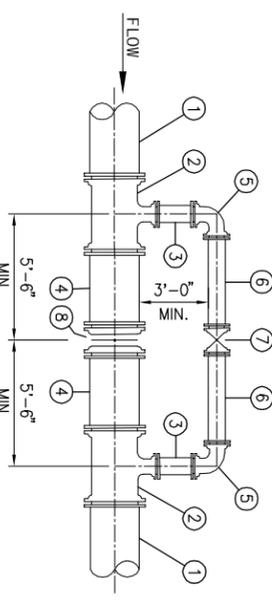
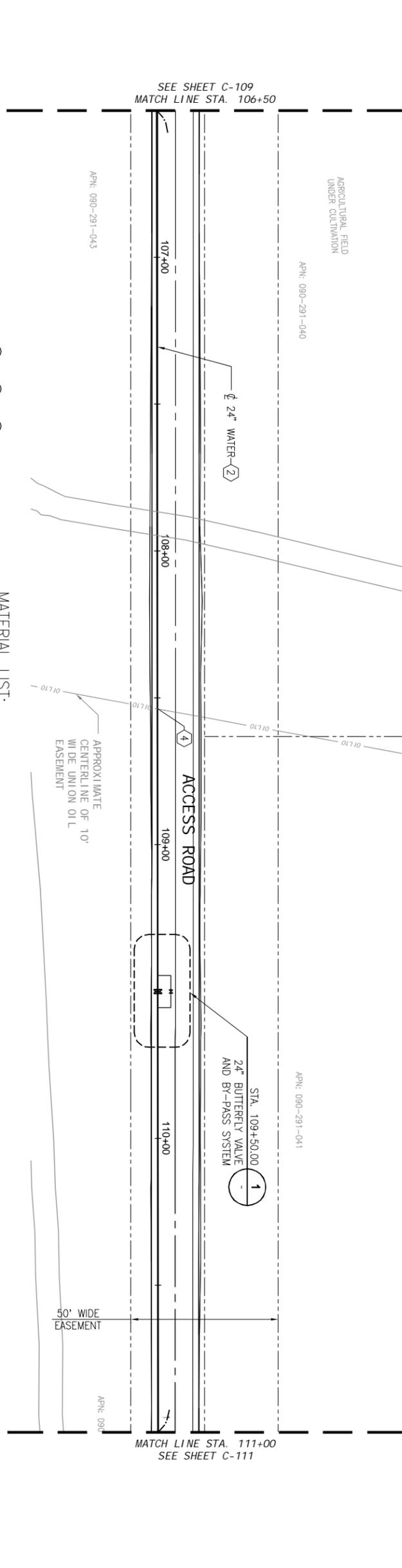
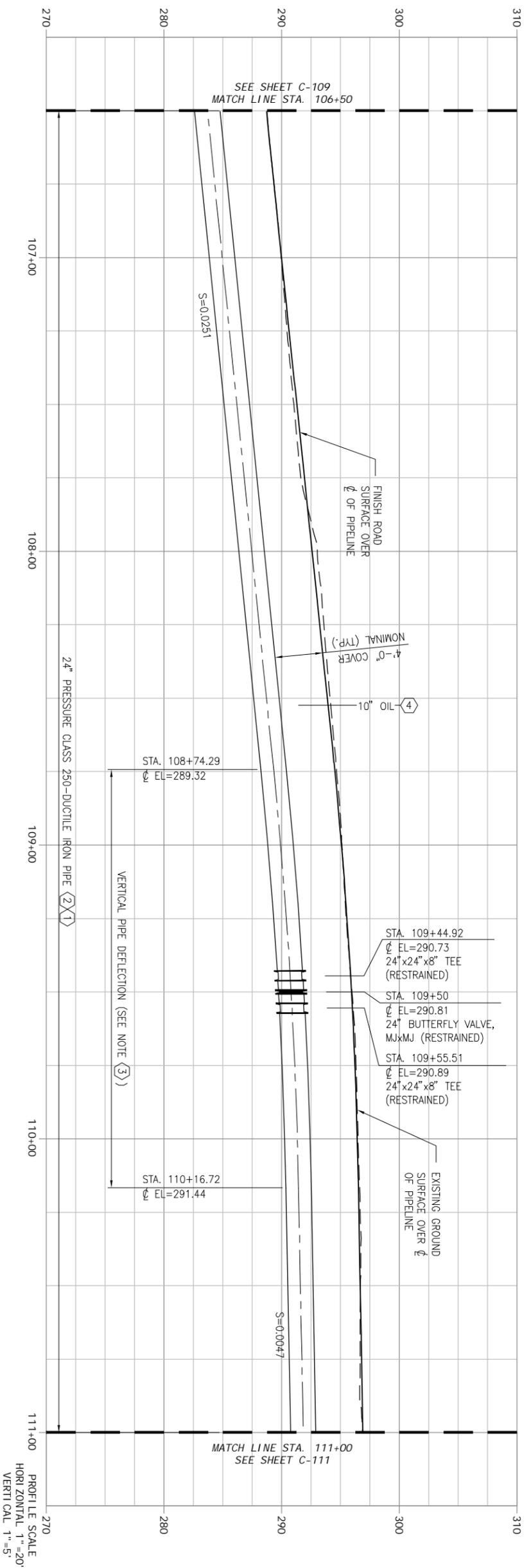
AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
1		PROJECT ENGINEER	
		JOSHUA H REYNOLDS	
		REG NUMBER	EXP DATE
		C65400	09/30/2009

DESIGNED: JHR
 CHECKED: JHR
 APPROVED: JHR
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. CDD STS. BY/E/AECOM
C-109
 SHEET 11 OF 95



MATERIAL LIST:

ITEM	DESCRIPTION
1	24" PRESSURE CLASS 250 DUCTILE IRON PIPE
2	24"x24"x8" TEE, RESTRAINED
3	8" D.I. SPOOL, PE/PE
4	24" D.I. SPOOL, PE/PE
5	8" 90° ELBOW, MxMJ RESTRAINED
6	8" D.I. SPOOL, PE/PE
7	8" GATE VALVE, MxMJ, RESTRAINED, PER DETAIL C-302
8	24" BUTTERFLY VALVE, MxMJ, RESTRAINED, PER DETAIL C-302

CONSTRUCTION NOTES:

- INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
- 24" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL C-301
- TO OBTAIN CURVE ALIGNMENT DEFLECT PIPE AT THE JOINT PER SPECIFICATION SECTION 402040 AND MANUFACTURER'S RECOMMENDATION.
- POTHOLE UTILITY CROSSING PER SPECIFICATION SECTION 023219, SUBMIT WRITTEN POTHOLE REPORT TO OWNER'S REPRESENTATIVE AND NOTIFY OWNER'S REPRESENTATIVE IF CONFLICTS ARE DISCOVERED.

GENERAL NOTES:

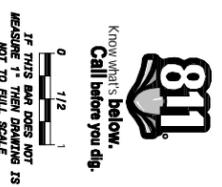
- SEE AGRICULTURAL NOTES ON SHEET G-003

24" BUTTERFLY VALVE AND BY-PASS SYSTEM

SCALE: 1/4" = 1'-0"

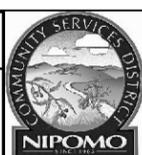


FOR PRELIMINARY USE ONLY
 AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

**MESA AREA PIPELINE
 PLAN AND PROFILE
 STA 106+50 to 111+00**

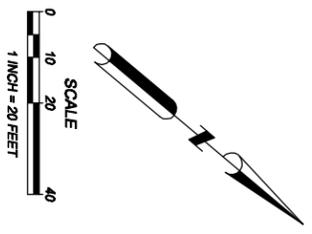
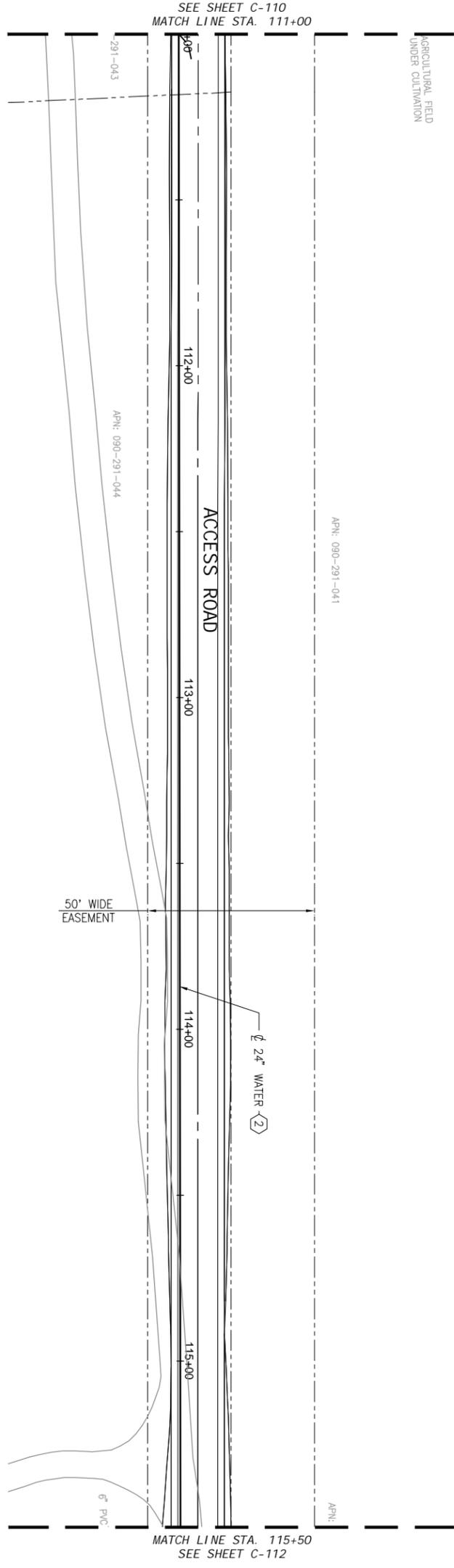
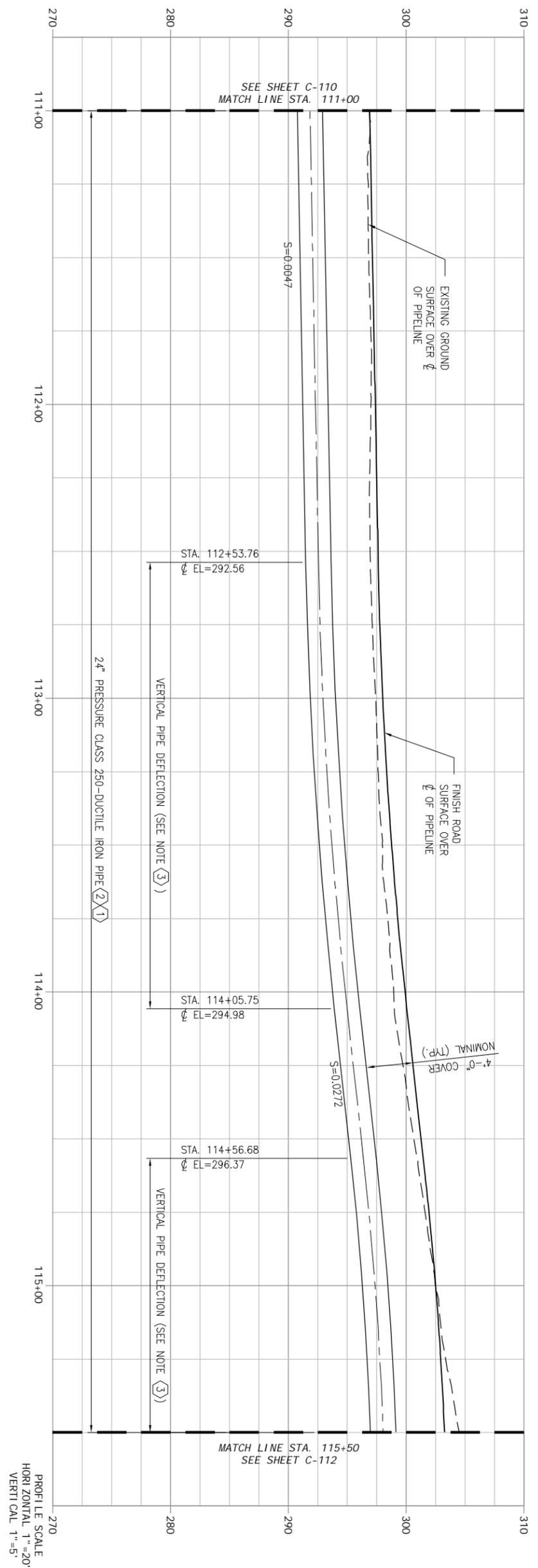


AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
1		PROJECT ENGINEER	JOSHUA H REYNOLDS
		REG NUMBER	C65400
		EXP DATE	09/30/2009



GENERAL NOTES:
 1. SEE AGRICULTURAL NOTES ON SHEET G-003

CONSTRUCTION NOTES:

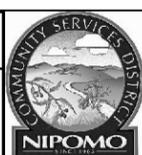
- ① INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
- ② 24" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL
- ③ TO OBTAIN CURVE ALIGNMENT DEFLECT PIPE AT THE MANUFACTURER'S RECOMMENDATION.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
Call before you dig.

 IF THIS PLAN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
**MESA AREA PIPELINE
 PLAN AND PROFILE
 STA 111+00 to 115+50**

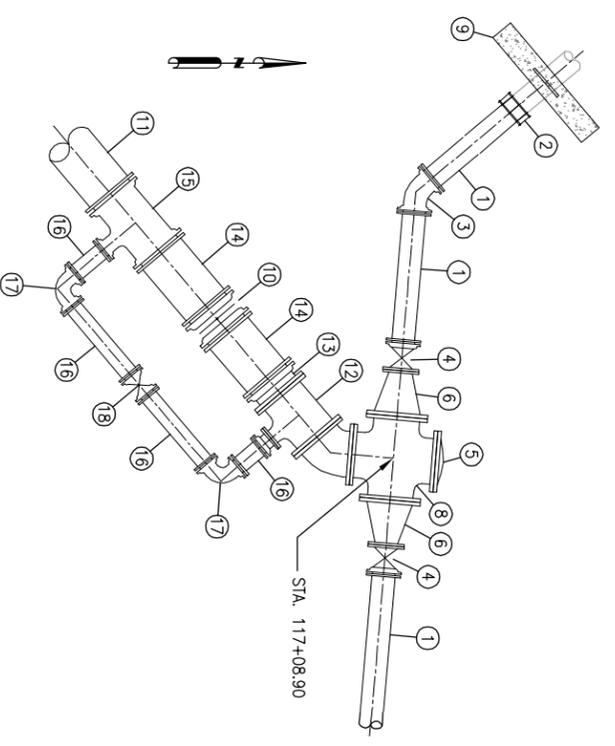
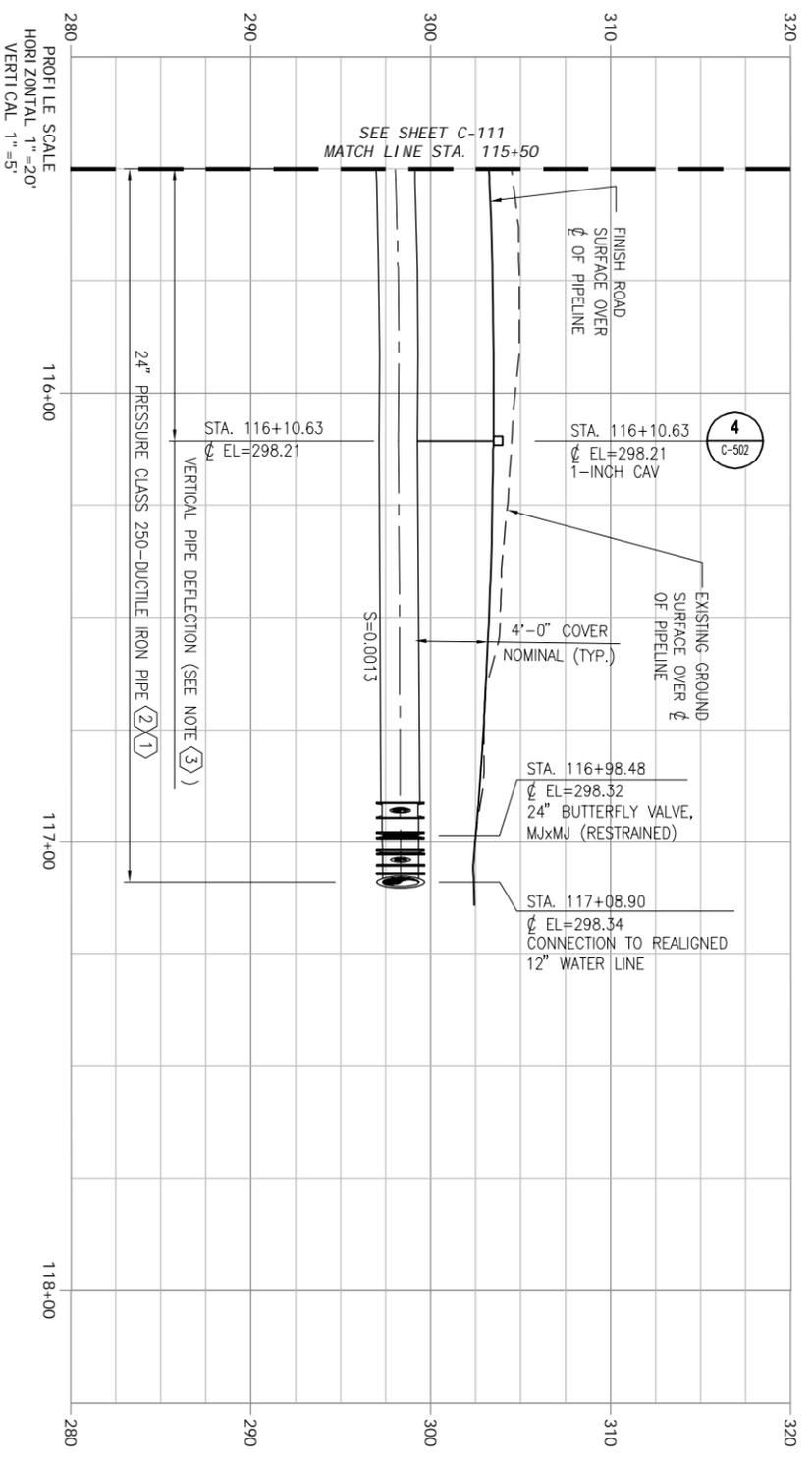


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
JOSHUA H REYNOLDS		C65400	09/30/2009

DESIGNED: JHR
 CHECKED: JHR
 APPROVED: JHR
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. C-111
 SHEET 13 OF 95

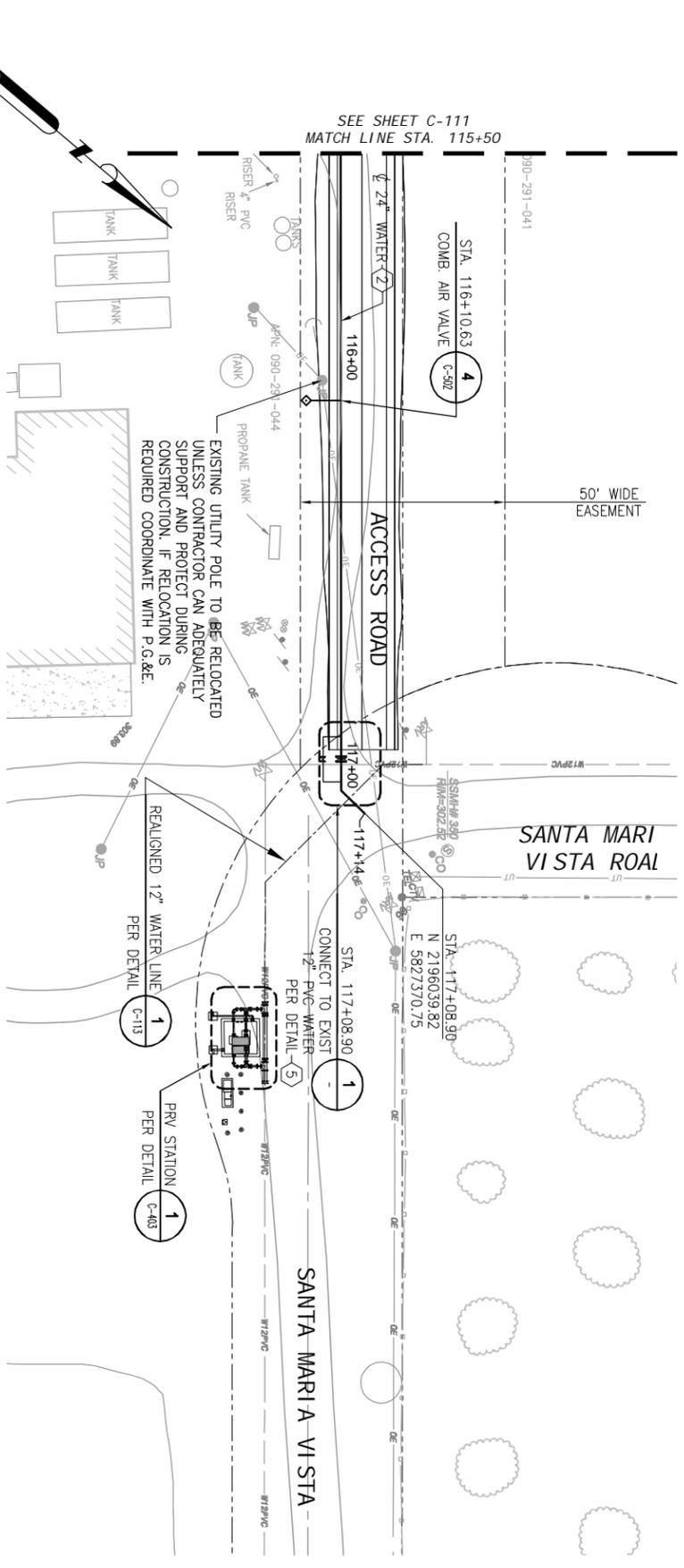


MATERIAL LIST:

ITEM	DESCRIPTION
1	12" D.I. SPOOL, PEPE
2	12" D-I-PVC TRANSITION COUPLER
3	12" 45° ELBOW, MxM, RESTRAINED
4	12" GATE VALVE, FLO-M, RESTRAINED
5	24" BUND FLANGE
6	24" x 12" ECCENTRIC REDUCER, FLO-FIG
7	24" 45° ELBOW, FLO-D
8	24" CROSS, FLO-D
9	THRUST COLLAR PER DETAIL
10	24" BUTTERFLY VALVE, MxM, RESTRAINED
11	24" PRESSURE CLASS 250 DUCTILE IRON PIPE
12	24" x 24" x 8" TEE, FLO-D
13	24" FLANGE ADAPTER, RESTRAINED
14	24" D.I. SPOOL, PEPE
15	24" x 24" x 8" TEE, MxM, RESTRAINED
16	8" D.I. SPOOL, PEPE
17	8" 45° ELBOW, MxM, RESTRAINED
18	8" GATE VALVE, MxM, RESTRAINED
19	8" FLANGE ADAPTER, RESTRAINED

STA. 117+08.90 - CONNECTION TO EXISTING

SCALE: 1/4"=1'-0"



GENERAL NOTES:

- SEE AGRICULTURAL NOTES ON SHEET G-003

CONSTRUCTION NOTES:

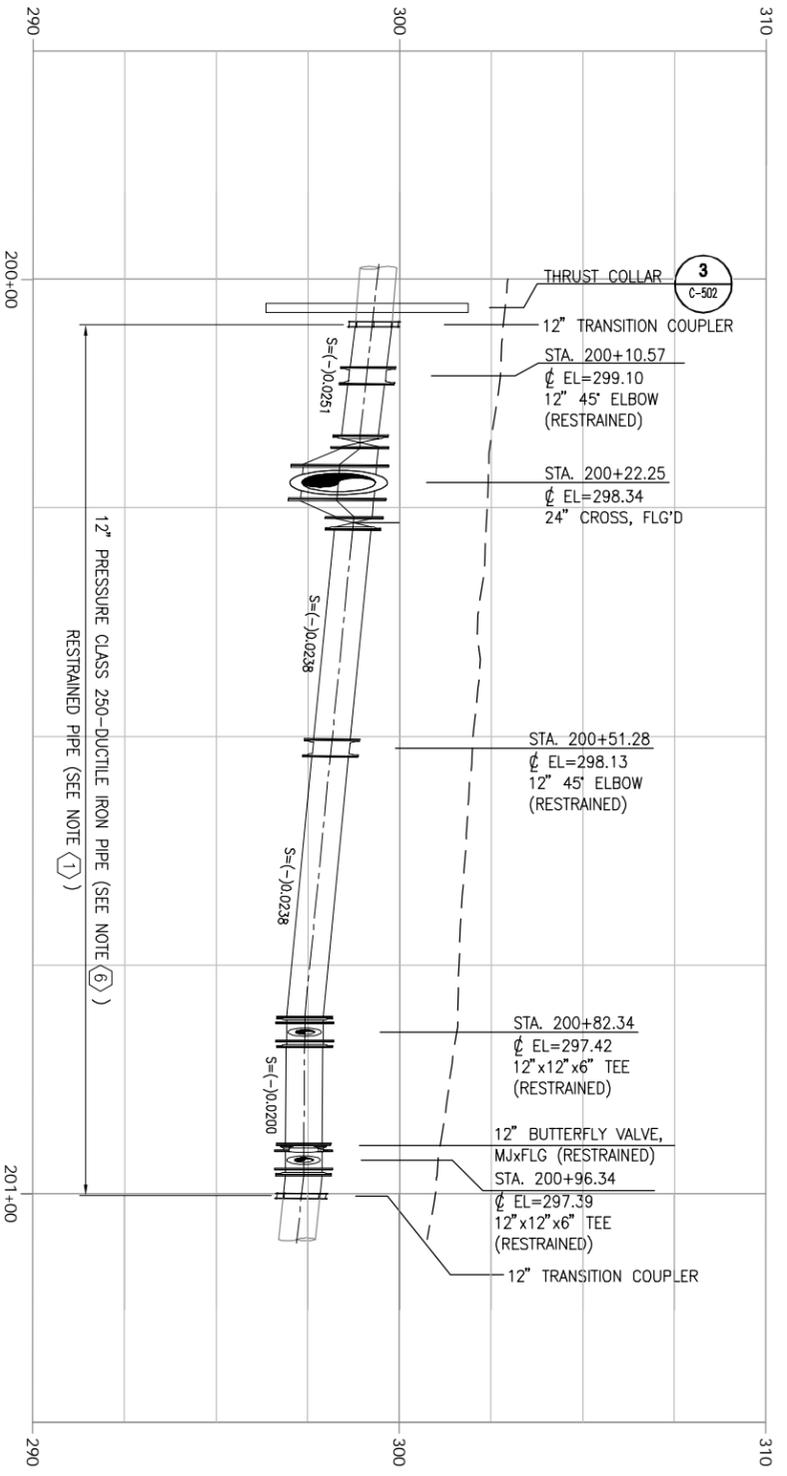
- INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
- 24" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL (C-307)
- TO OBTAIN CURVE ALIGNMENT DEFLECT PIPE AT THE JOINT PER SPECIFICATION SECTION 402040 AND MANUFACTURER'S RECOMMENDATION.
- CONTRACTOR TO POTHOLE POC @ STA. 117+00 PRIOR TO BEGINNING CONSTRUCTION. PROVIDE OWNER'S REPRESENTATIVE WITH POTHOLE REPORT.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

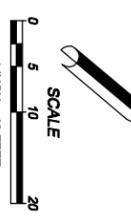
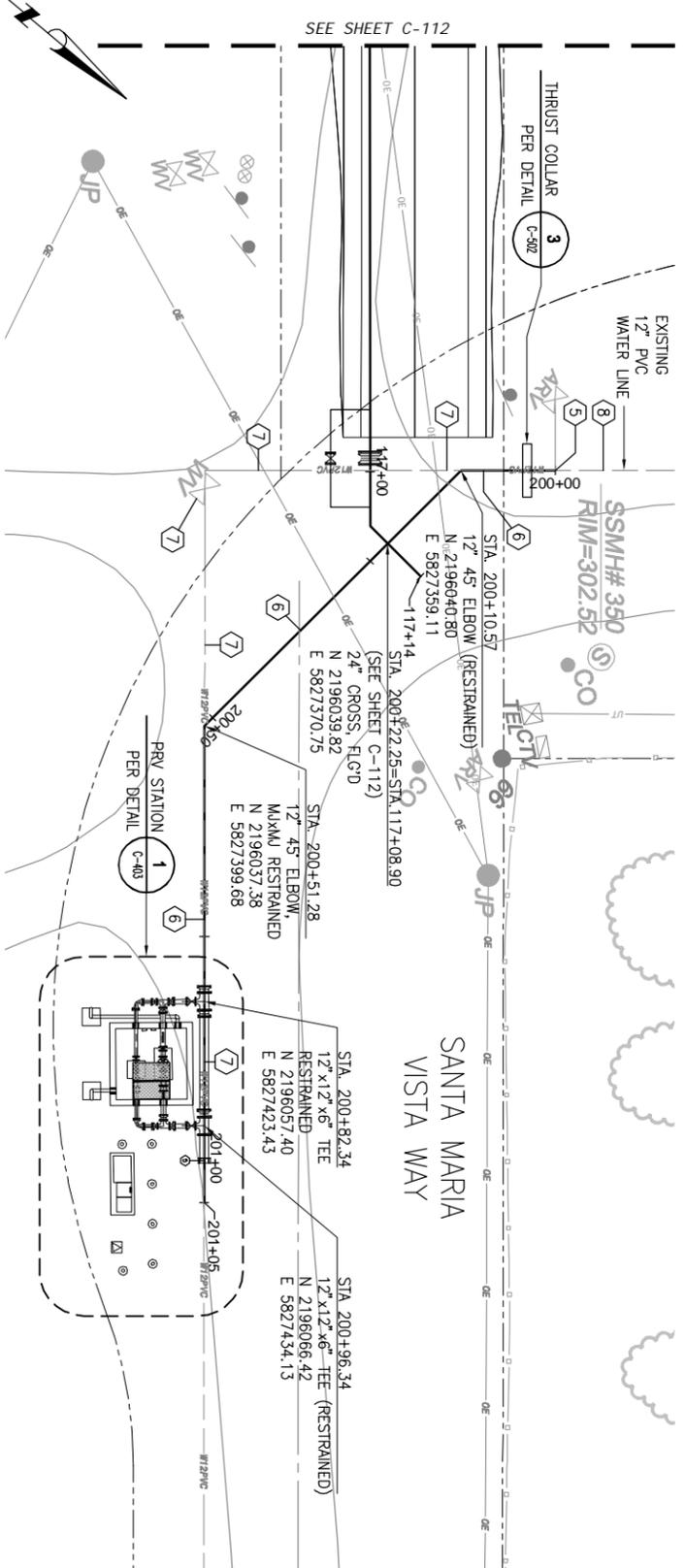
Know what's below. Call before you dig.

IF THIS SIGN DOES NOT MEASURE 11" THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4		AECOM AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com			
MESA AREA PIPELINE PLAN AND PROFILE STA 115+50 to 117+08.90		PROJECT ENGINEER JOSHUA H REYNOLDS		DESCRIPTION C65400	
DATE JUNE 2010		EXP DATE 09/30/2009		APPR	
DESIGNED: JPR CHECKED: JPR DATE: JUNE 2010		REV		APPR	
DETAIL LEAD: JPR		REG NUMBER C65400		EXP DATE 09/30/2009	
APPROVED: JPR DATE: JUNE 2010 AECOM PROJECT NO.: 60061295		PROJECT ENGINEER JOSHUA H REYNOLDS		DESCRIPTION C65400	
NCSD PROJECT NO.: 60061295		DATE JUNE 2010		EXP DATE 09/30/2009	
CAO STDS.: BNYL/AECOM		DATE JUNE 2010		EXP DATE 09/30/2009	
C-112 SHEET 14 OF 95		DATE JUNE 2010		EXP DATE 09/30/2009	



PROFILE SCALE
 HORIZONTAL 1" = 10'
 VERTICAL 1" = 2.5'



RE-ALIGNMENT OF 12" WATER LINE IN SANTA MARIA VISTA WAY

SCALE: 1" = 10'-0"
 1

GENERAL NOTES:
 1. SEE AGRICULTURAL NOTES ON SHEET G-003

CONSTRUCTION NOTES:

1. INSTALL RESTRAINED JOINT PIPE AND FITTINGS PER SPECIFICATION SECTION 402040.
5. CONTRACTOR TO POTHOLE POC @ STA. 200+00 AND 201+0.27 PRIOR TO BEGINNING CONSTRUCTION, PROVIDE OWNER'S REPRESENTATIVE WITH POTHOLE REPORT.
6. 12" DUCTILE IRON PIPE PER SPECIFICATION SECTION 402040 AND TRENCH PER DETAIL C-507
7. REMOVE PIPING, VALVES AND APPURTENANCES, INCLUDING CONCRETE KICKERS, AND DISPOSE OF AT OFFSITE FACILITIES. BACKFILL AND COMPACT ALL SITE AREAS DISTURBED BY DEMOLITION WORK WITH EARTH FILL IN ACCORDANCE WITH SPECIFICATION SECTION 312300. PROTECT EXISTING FACILITIES AND STRUCTURES THAT ARE TO REMAIN IN OPERATION. DO NOT REUSE MATERIALS SALVAGED FROM DEMOLITION WORK.
8. NOTIFY N.C.S.D. STAFF PRIOR TO INTERRUPTION OF SERVICE. INTERRUPTION OF SERVICE SHALL BE COORDINATED WITH N.C.S.D. AND DURATION SHALL BE MINIMIZED.

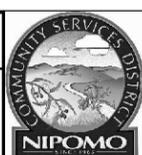
AECOM WATER
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's Below.
 Call before you dig.

 IF THIS SIGN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

MESA AREA PIPELINE
 PLAN AND PROFILE
 STA 200+00 to 201+05



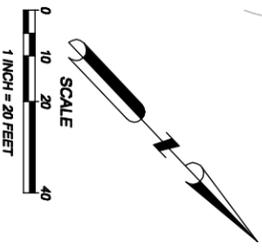
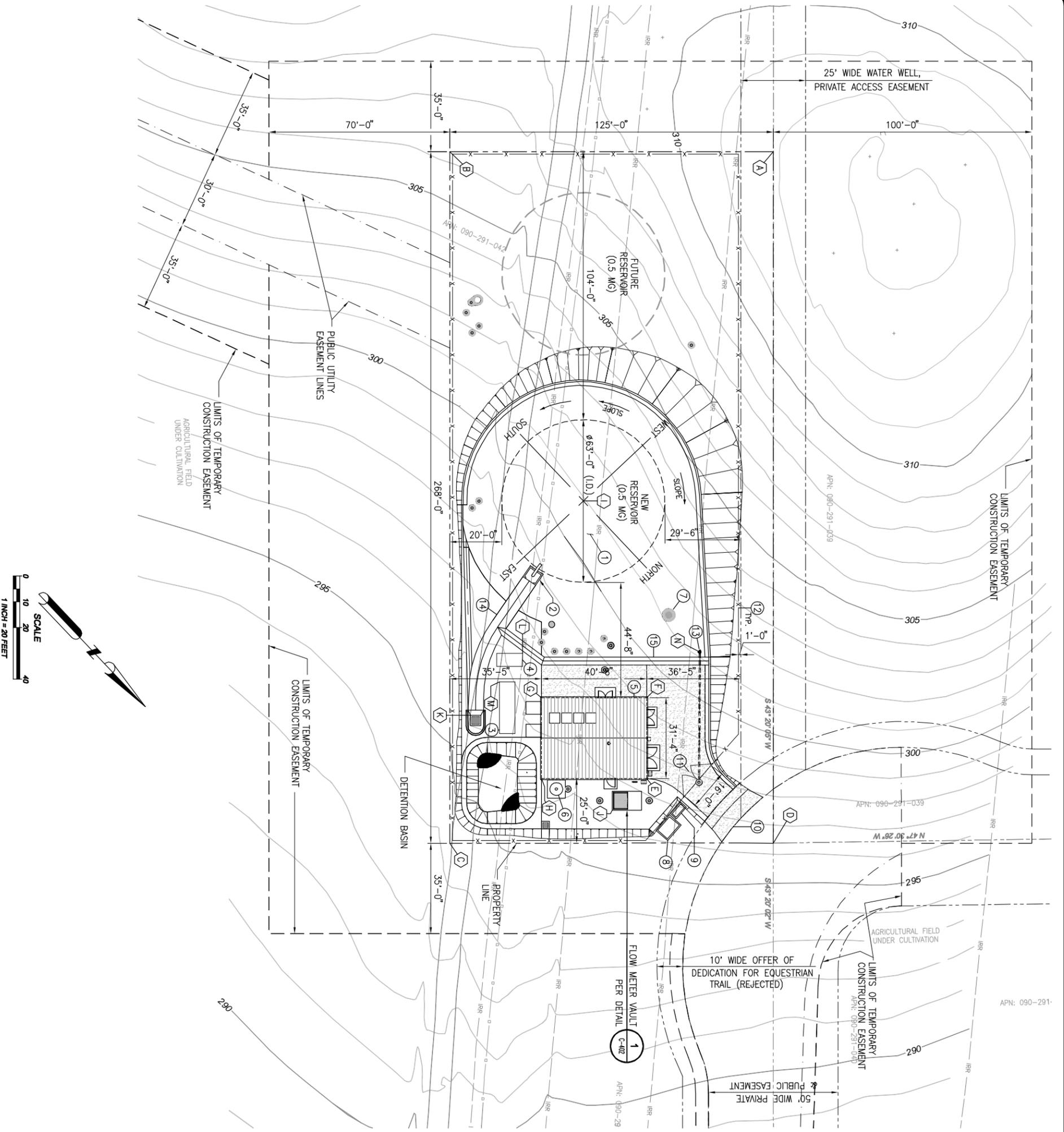
AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REB NUMBER	EXP DATE
JOSHUA H REYNOLDS		C65400	09/30/2009

DESIGNED: JHR
 CHECKED: JHR
 APPROVED: JHR
 DATE: JUNE 2010
 AECOM PROJECT NO.: 60061295
 NCSD PROJECT NO.:
 CADW STPS: BOYLE/AECOM
C-113
 SHEET 15 OF 95



MATERIAL LIST

- ① 63'-FT I.D. CONCRETE RESERVOIR
- ② 5'-0" x 6'-0" CONCRETE SPLASH PAD
SEE DETAIL C-120
- ③ EMERGENCY GENERATOR PAD
- ④ GENERATOR FUEL TANK PAD
- ⑤ PUMP STATION AND CHLORAMINATION BOOSTER BUILDING, SEE DETAIL C-122
- ⑥ SURGE TANK
- ⑦ TANK RINGDRAIN COLLECTOR SEE DETAIL C-121
- ⑧ PG&E PAD MOUNTED TRANSFORMER
- ⑨ METERING SWITCHBOARD
- ⑩ ASPHALT DRIVEWAY PER COUNTY OF SAN LUIS OBISPO STANDARD DRAWING B-3b
- ⑪ 6'-0" HIGH x 16' WIDE DOUBLE DRIVE CHAIN LINK GATE PER DETAIL C-504
- ⑫ 6'-0" HIGH CHAIN LINK FENCE WITH THREE STRANDS OF BARBED WIRE, SEE DETAIL C-504
- ⑬ FIRE HYDRANT PER N.C.S.D. STANDARD DRAWING W-6
- ⑭ 6'-0" WIDE CONCRETE V-DITCH SEE DETAIL C-115
- ⑮ 3'-0" WIDE CONCRETE V-DITCH, SEE DETAIL C-115

SITE DATA

ITEM	NORTHING	EASTING	DESCRIPTION
A	2194741.34	5825904.32	NORTHWEST PROPERTY CORNER
B	2194655.55	5825995.24	SOUTHWEST PROPERTY CORNER
C	2194850.49	5826179.16	SOUTHEAST PROPERTY CORNER
D	2194936.27	5826088.24	NORTHEAST PROPERTY CORNER
E	2194884.45	5826106.58	PUMP STATION BUILDING NORTHEAST CORNER
F	2194861.66	5826085.08	PUMP STATION BUILDING NORTHWEST CORNER
G	2194833.76	5826114.65	PUMP STATION BUILDING SOUTHWEST CORNER
H	2914856.55	5826136.16	PUMP STATION BUILDING SOUTHEAST CORNER
I	2194789.45	5826050.63	CENTER OF RESERVOIR
J	2194884.21	5826124.71	METER VAULT SOUTHEAST CORNER
K	2194819.90	5826139.34	DRAIN INLET SOUTHWEST CORNER
L	2194516.28	5826108.25	GENERATOR FUEL TANK PAD NORTHWEST CORNER
M	2194818.10	5826122.34	EMERGENCY GENERATOR PAD SOUTHWEST CORNER
N	2194862.91	5826058.02	FIRE HYDRANT CENTER

GENERAL NOTES:

1. SEE AGRICULTURAL NOTES ON SHEET G-003.

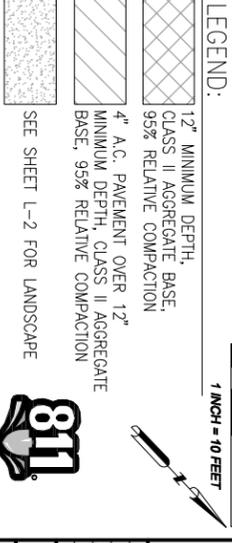
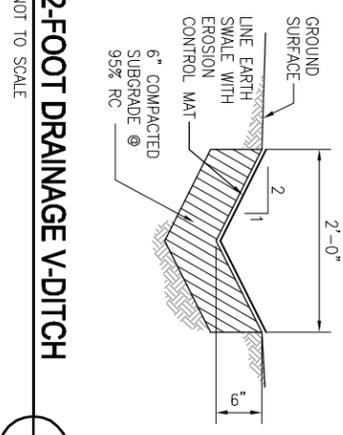
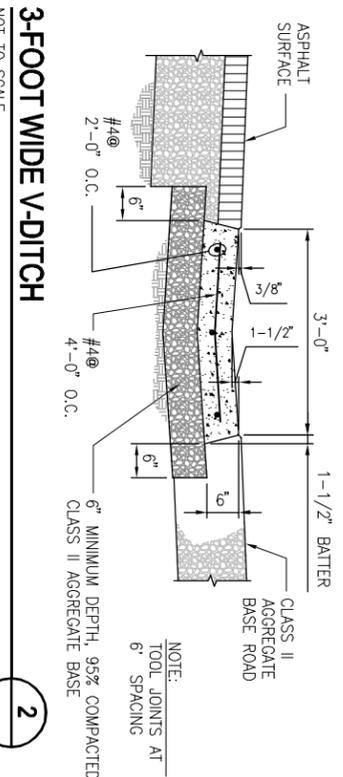
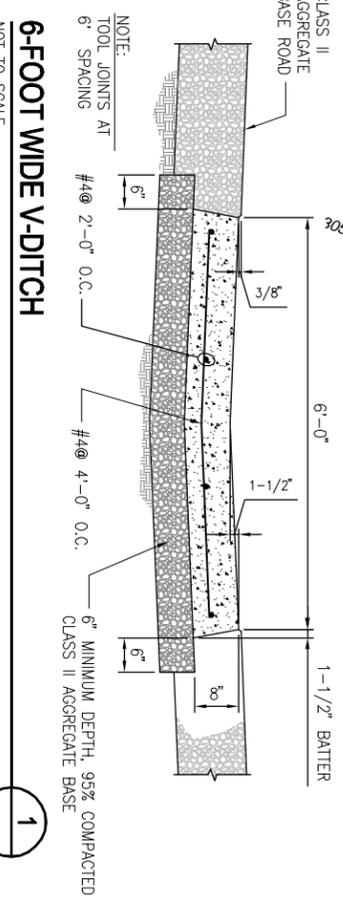
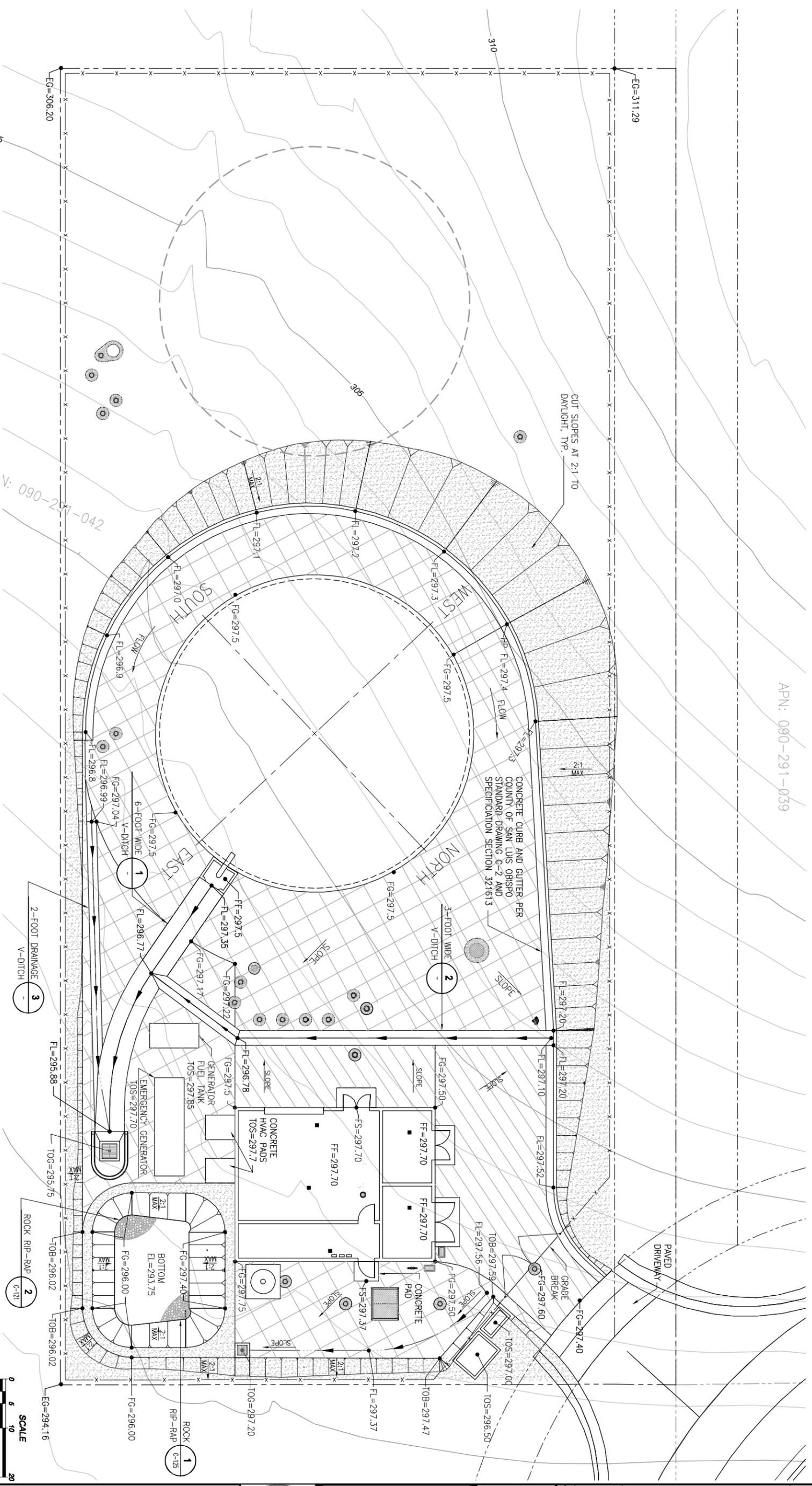
FOR PRELIMINARY USE ONLY
 AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's below.
 Call before you dig.

 IF THIS PLAN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4													
RESERVOIR SITE PLAN		AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com		<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REV	DATE	DESCRIPTION	APPR				
REV	DATE	DESCRIPTION	APPR										
DESIGNED: JHR/ES CHECKED: JHR APPROVED: JHR DATE: JUNE 2010 AECOM PROJECT NO.: 60061295 NCSO PROJECT NO.:		CADW STDS.: BNYL/AECOM		PROJECT ENGINEER: JOSHUA H. REYNOLDS REG NUMBER: C58400 EXP DATE: 09/30/2009									
C-114 SHEET 16 OF 95													

APN: 090-291-039



NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
RESERVOIR SITE PLAN
FINISH GRADEING AND DRAINAGE PLAN



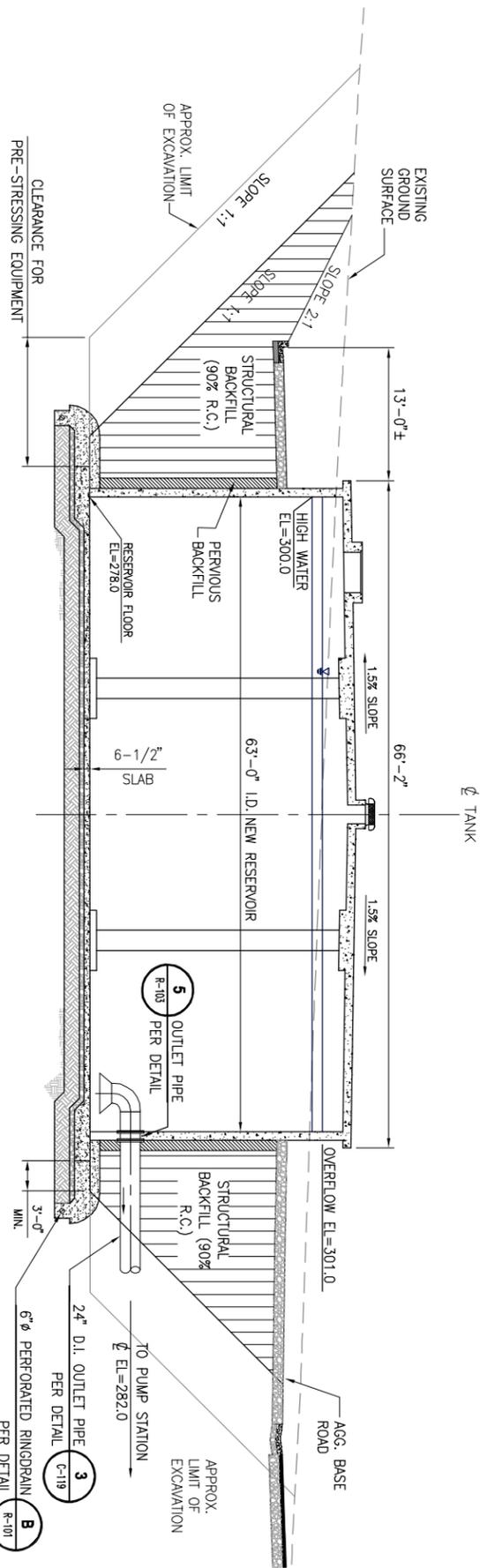
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



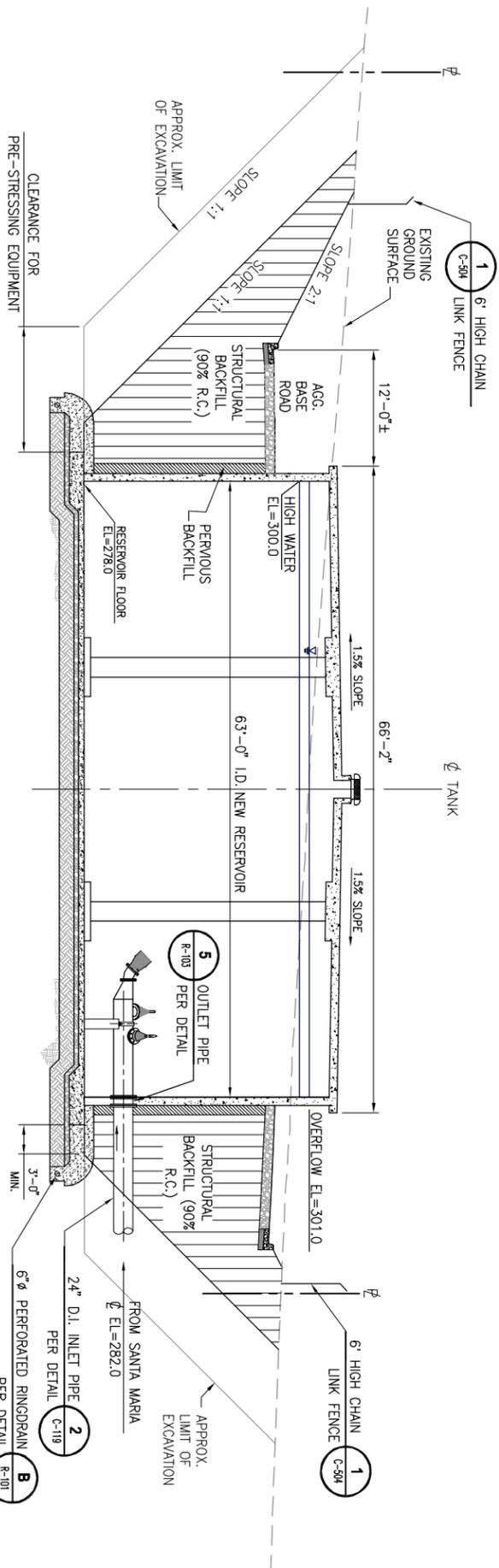
REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H. REYNOLDS		C68400	09/30/2009

C-115
 SHEET
 17 OF 95

DATE: JUNE 2010
 AECOM PROJECT NO.: 60061295
 NCSO PROJECT NO.:
 CADW STS.:
 BRYLE/AECOM



SECTION
SCALE: 1/8"=1'-0"

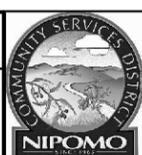


SECTION
SCALE: 1/8"=1'-0"

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
811
 Call before you dig.
 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

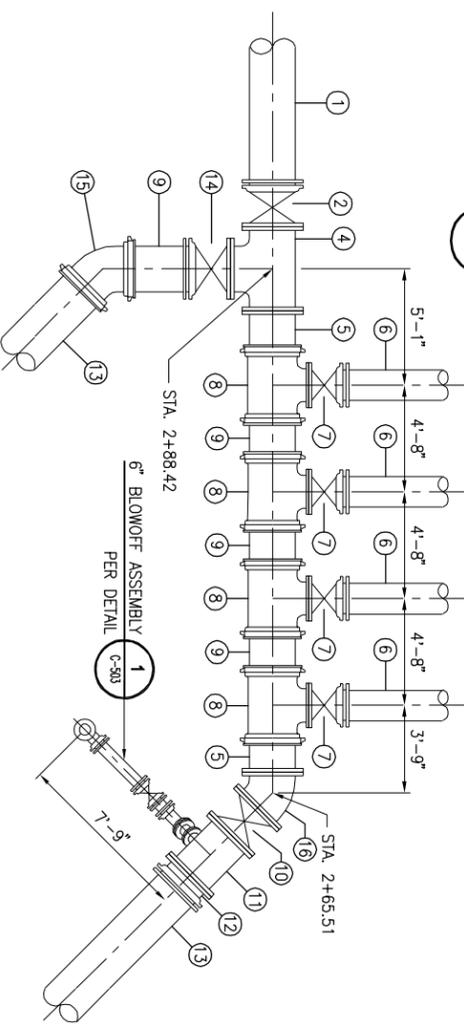
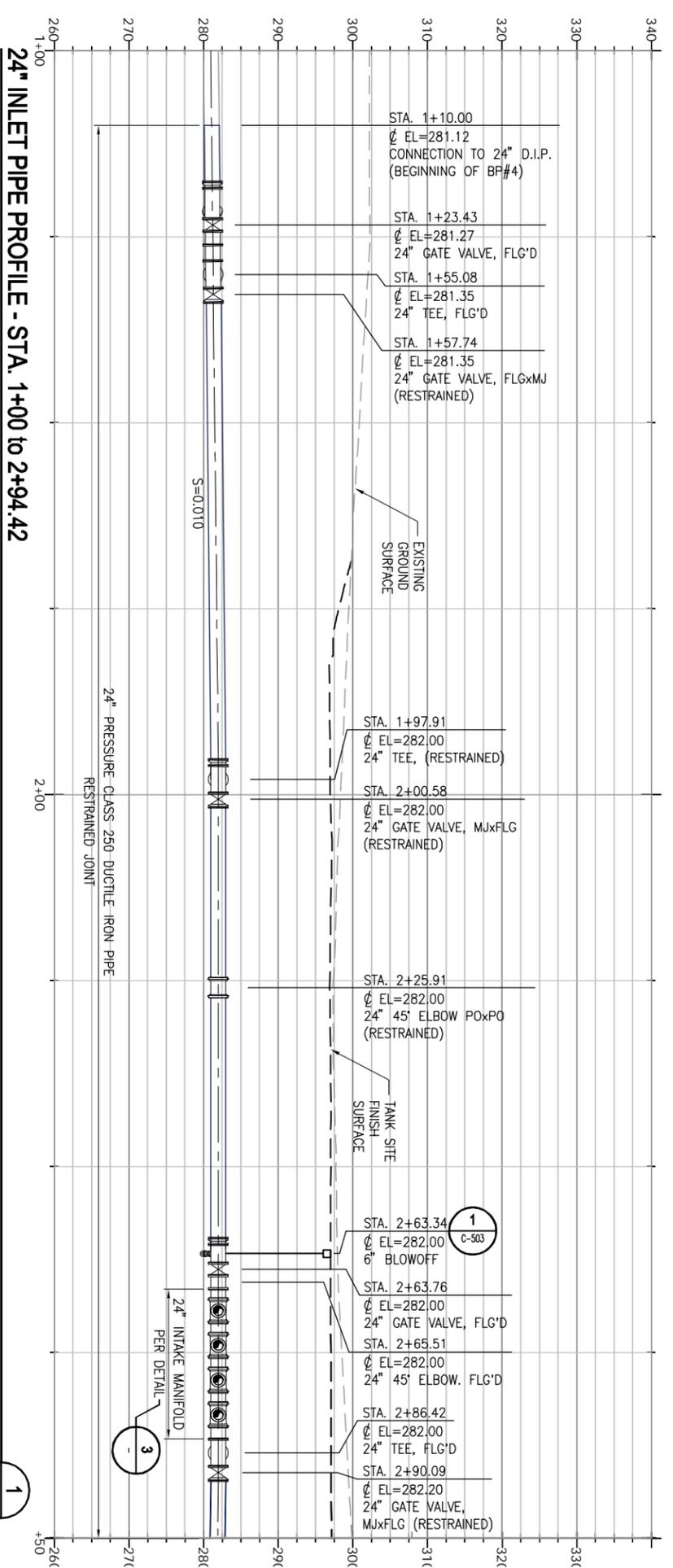
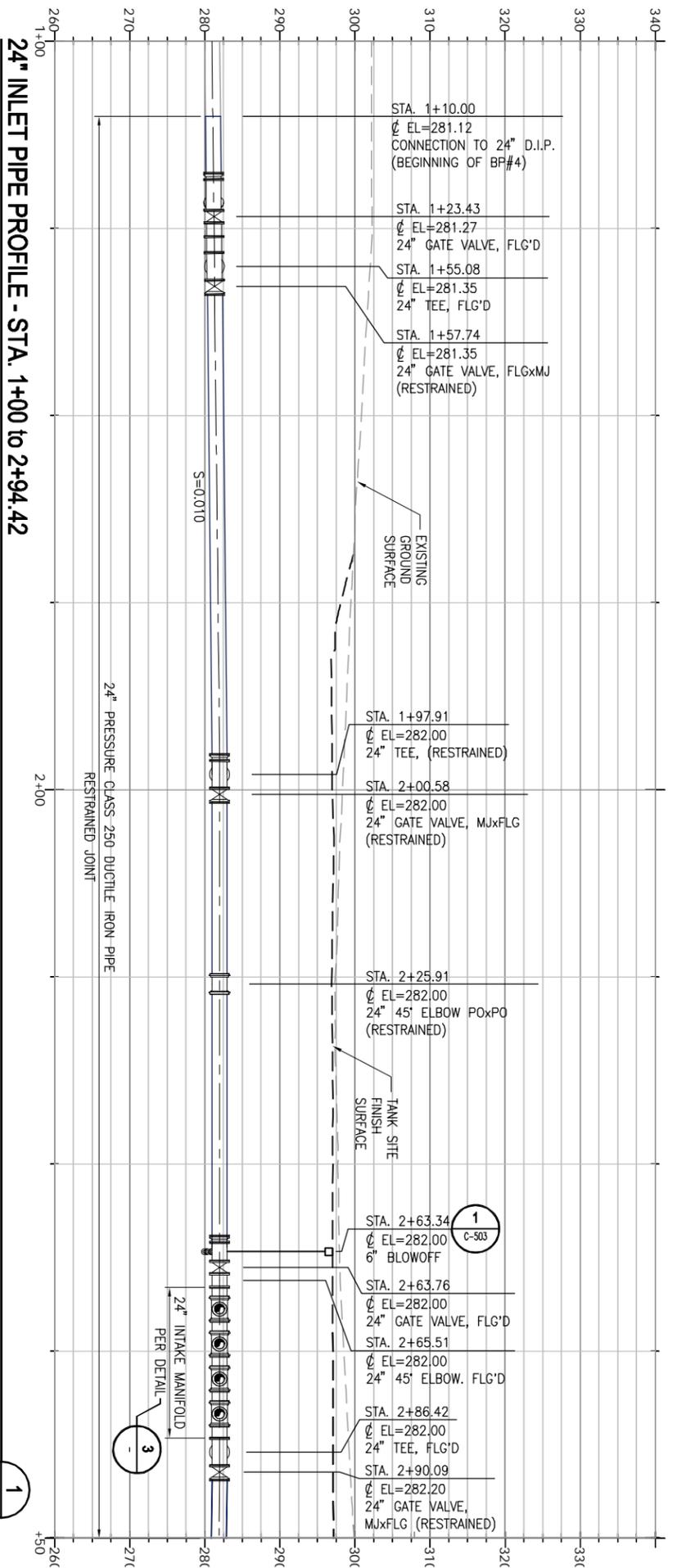
NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
RESERVOIR SECTION VIEW



AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REB NUMBER	EXP DATE
JOSHUA H. REYNOLDS		C65400	09/30/2009



MATERIAL LIST

ITEM DESCRIPTION	ITEM DESCRIPTION
1 24" ϕ PRESSURE CLASS 250 DUCTILE IRON PIPE, RESTRAINED JOINTS (FUTURE RESERVOIR DISCHARGE PIPE)	9 24" ϕ D.I. SPOOL, PE/PE
2 24" GATE VALVE, NORMALLY CLOSED, MxFLG, RESTRAINED PER DETAIL	10 24" GATE VALVE, NORMALLY CLOSED FLG'D, PER DETAIL
3 NOT USED	11 24" x 24" x 6" TEE, FLG'D
4 24" TEE, FLG'D	12 24" FLANGE ADAPTER, RESTRAINED
5 24" ϕ D.I. SPOOL, FLG/PE	13 24" ϕ PRESSURE CLASS 250 DUCTILE IRON PIPE
6 16" ϕ PRESSURE CLASS 250 DUCTILE IRON PIPE	14 24" GATE VALVE, MxFLG RESTRAINED PER DETAIL
7 16" GATE VALVE, MxFLG, RESTRAINED, PER DETAIL	15 25" 45" ELBOW, POxPO, RESTRAINED
8 24" x 24" x 16" TEE, POxFLG, RESTRAINED	16 24" 45" ELBOW FLG'D

24" INTAKE MANIFOLD

2
 PROFILE SCALE:
 HORIZONTAL 1"=10'
 VERTICAL 1"=1'

3
 IF THIS MAN DOES NOT
 REQUIRE IT, THEN DRAWING IS
 NOT TO FULL SCALE

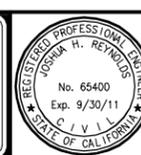
**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

RESERVOIR SITE PIPING PROFILES



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

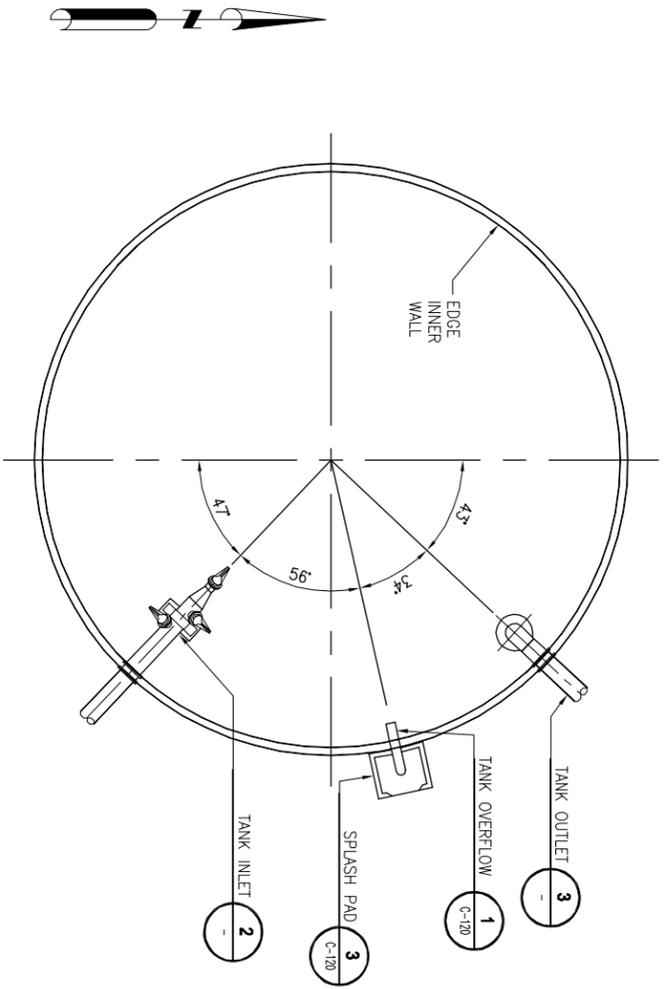


REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		RES NUMBER	EXP DATE
JOSHUA H. REYNOLDS		C58400	09/30/2009

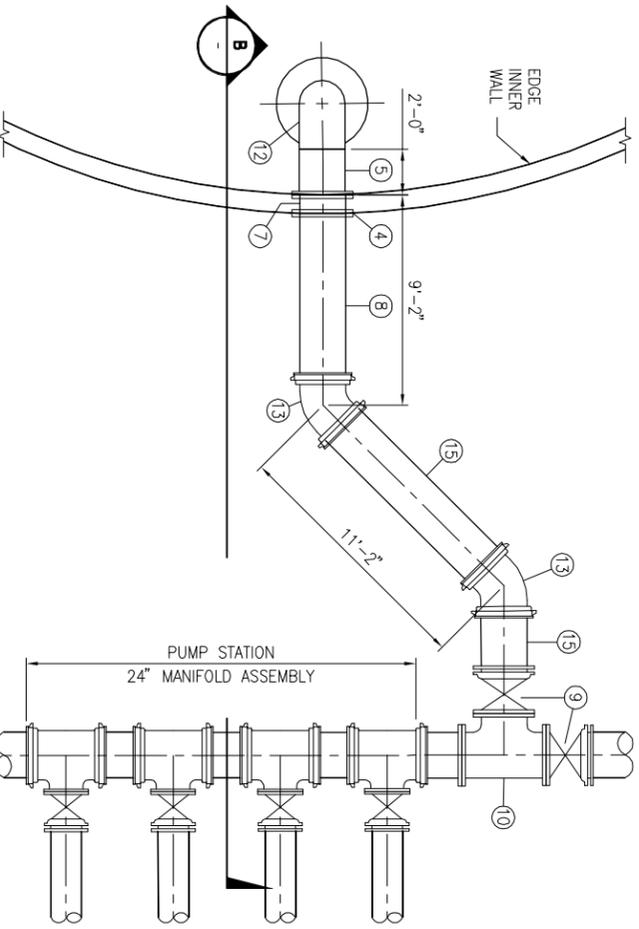
C-118

20 OF 95

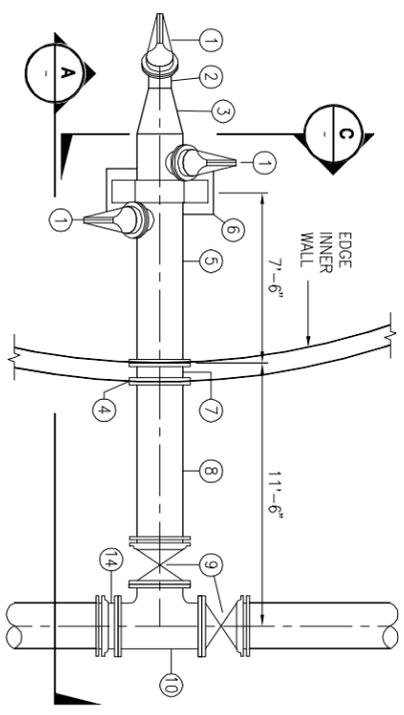
DATE: JUNE 2010
 APPROVED: JHR/JS
 DESIGNER: JHR/JS
 CHECKED: JHR/JS
 AECOM PROJECT NO.: 60061295
 NCSD PROJECT NO.:
 CADD STPS.:
 BY/LE/AECOM



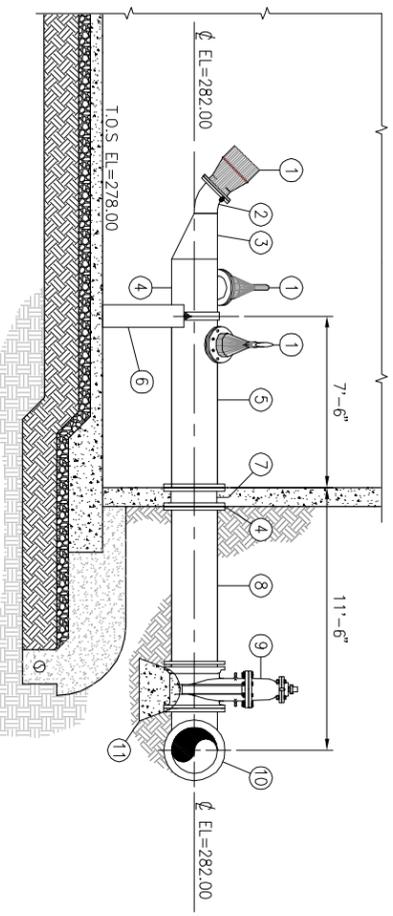
TANK PLAN
SCALE: 1"=10'-0"



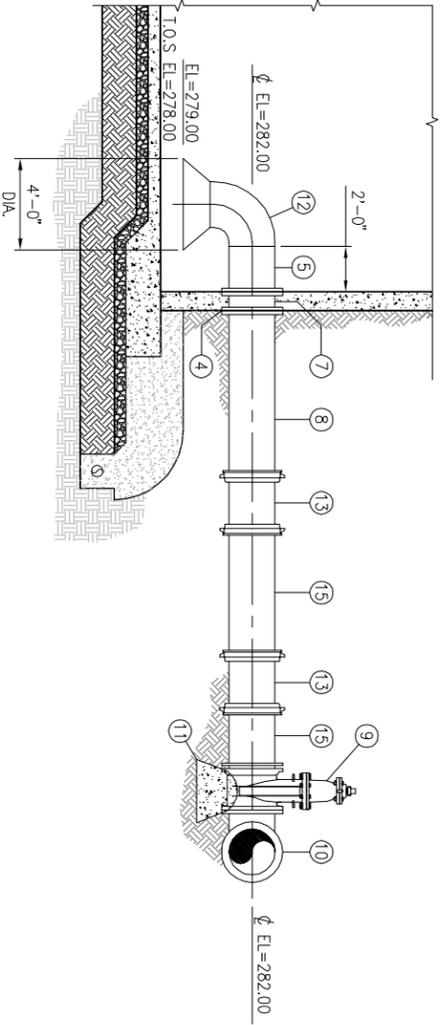
TANK OUTLET PLAN
SCALE: 1/4"=1'-0"



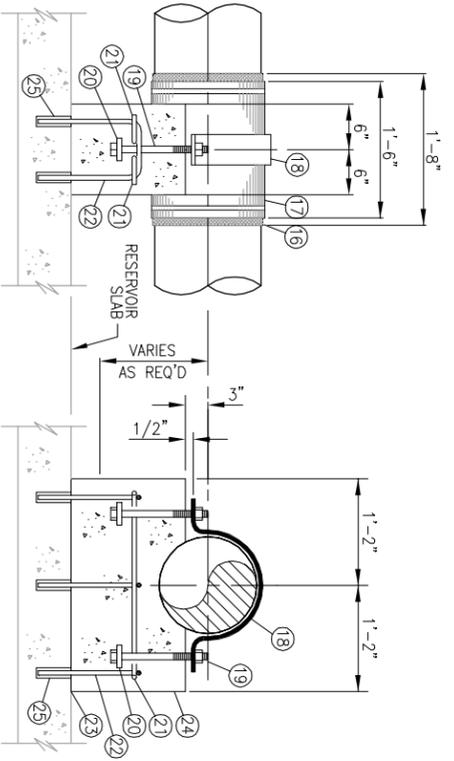
TANK INLET PLAN
SCALE: 1/4"=1'-0"



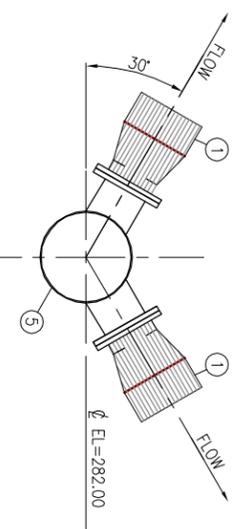
TANK INLET SECTION
SCALE: 1/4"=1'-0"



TANK OUTLET SECTION
SCALE: 1/4"=1'-0"



CONCRETE PIPE SUPPORT
NOT TO SCALE



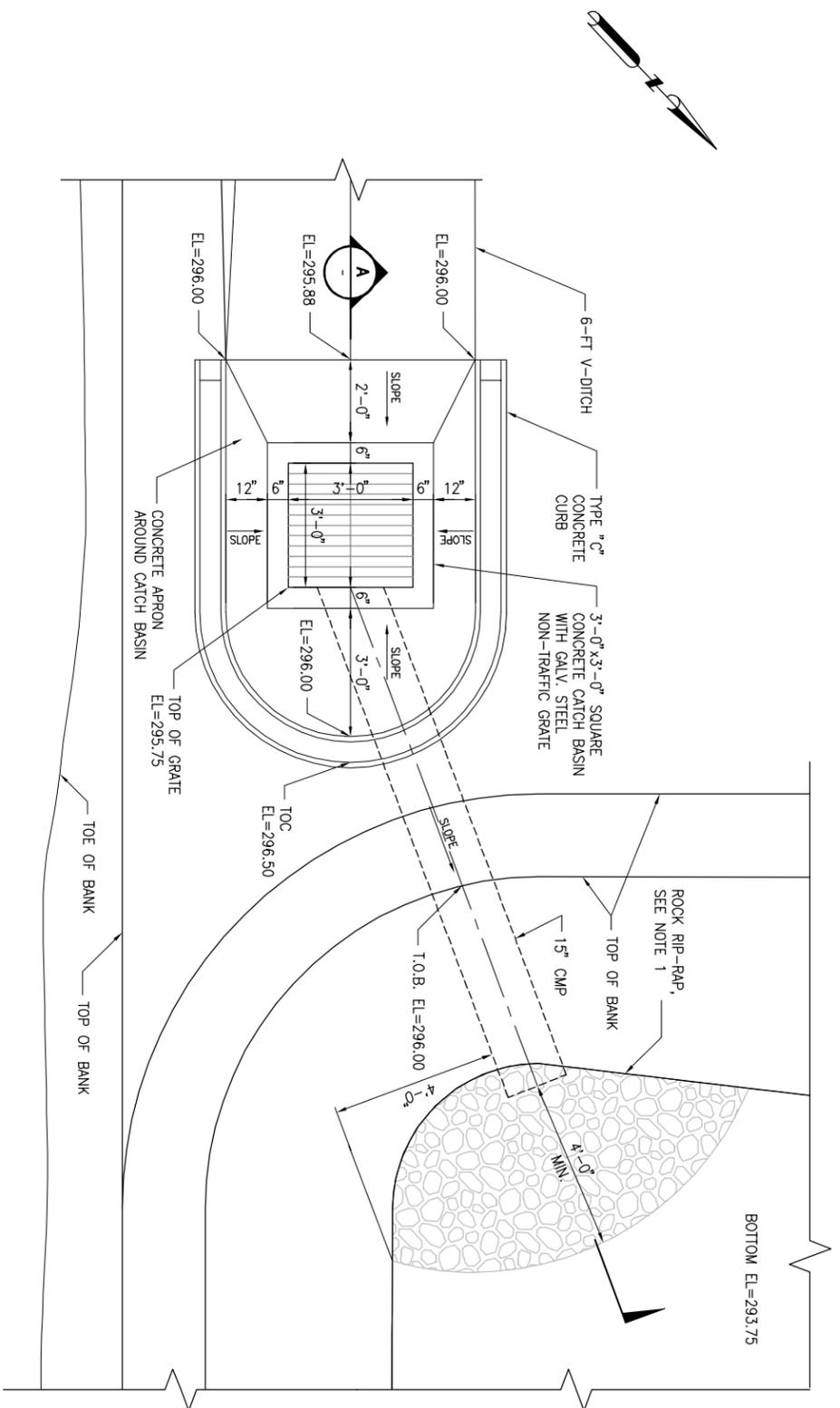
TANK INLET SECTION
SCALE: 1/2"=1'-0"

INLET & OUTLET MATERIAL LIST

ITEM	DESCRIPTION	QTY	REMARKS
1	12" ELASTOMER DISCHARGE CHECK VALVE WITH INTERNAL CLASS 150 FLANGE AND SST RETAINING RING PER SPECIFICATION SECTION 400520	1	
2	12" 45° FBEL&C STEEL ELBOW	1	
3	24" x 12" FBEL&C STEEL ECCENTRIC REDUCER	1	
4	INSULATION FLANGE PER DETAIL	3	C-581
5	24" FBEL&C WELDED STEEL PIPE	1	
6	CONCRETE PIPE SUPPORT PER DETAIL	4	
7	24" PIPE SPOOL THROUGH WALL PER DETAIL	3	R-104
8	24" Ø D.I. SPOOL, PE&FLG	1	
9	24" RESILIENT WEDGE GATE VALVE, M&FLG, RESTRAINED	1	
10	24" D.I. TEE, FLGD	1	
11	ANCHOR BLOCK	1	
12	24" SHORT RADIUS 90° FBEL&C STEEL ELBOW	1	
13	24" 45° ELBOW, POPPO RESTRAINED	1	
14	24" FLANGE ADAPTER, RESTRAINED	1	
15	24" Ø D.I. SPOOL, PE&FLG	1	
16	WAX TAPE COATING AND PRIMER	1	
17	1/8" THICK NEOPRENE SHEET W/ 2 STAINLESS STEEL BAND CLAMP	1	
18	4" WIDE x 1/2" THICK STAINLESS STEEL STRIP	1	
19	3/4" DIA x 12" LONG STAINLESS STEEL BOLT & WASHER (TYP. OF 2)	1	
20	3"x3"x 1/2" THICK STAINLESS STEEL PLATE WELD TO BOLT. (TYP. OF 2)	1	
21	#5 REINFORCING STEEL W/ 90° HOOK EACH END (TYP. OF 2)	1	
22	#5 REINFORCING STEEL: TIE TO SLAB STEEL (TYP. OF 3)	1	
23	TWO COMPONENT EPOXY ADHESIVE TO BOND MINOR CONCRETE TO SOFFIT SLAB. CLEAN CONTACT SURFACE BEFORE APPLICATION.	1	
24	3000psi CONCRETE	1	
25	CORE DRILL 5/8" DIA. HOLE INTO CONCRETE SLAB RESERVOIR. FILL WITH EPOXY ADHESIVE	1	

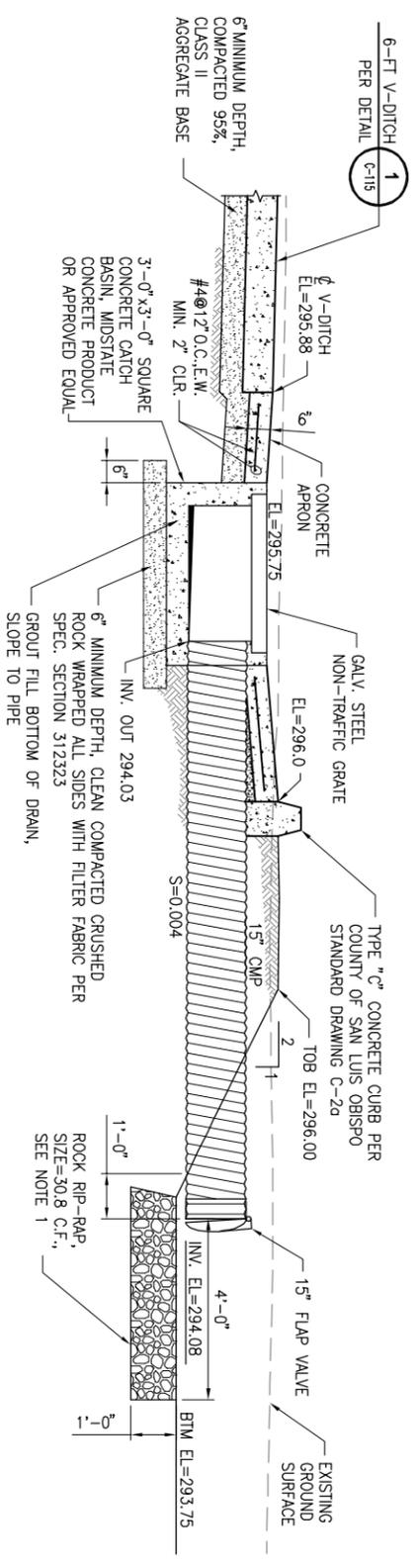
IF THIS DRAWING IS NOT TO FULL SCALE

<p>C-119 SHEET 21 OF 95</p>	<p>NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4</p> <p>TANK ORIENTATION AND TANK PIPING DETAIL</p>	<p>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com</p>		<p>REV</p>	<p>DATE</p>	<p>DESCRIPTION</p>	<p>APPR</p>
				<p>PROJECT ENGINEER</p>	<p>DATE</p>	<p>DESCRIPTION</p>	<p>EXP DATE</p>
				<p>JOSHUA H. REYNOLDS</p>		<p>C58400</p>	<p>09/30/2009</p>

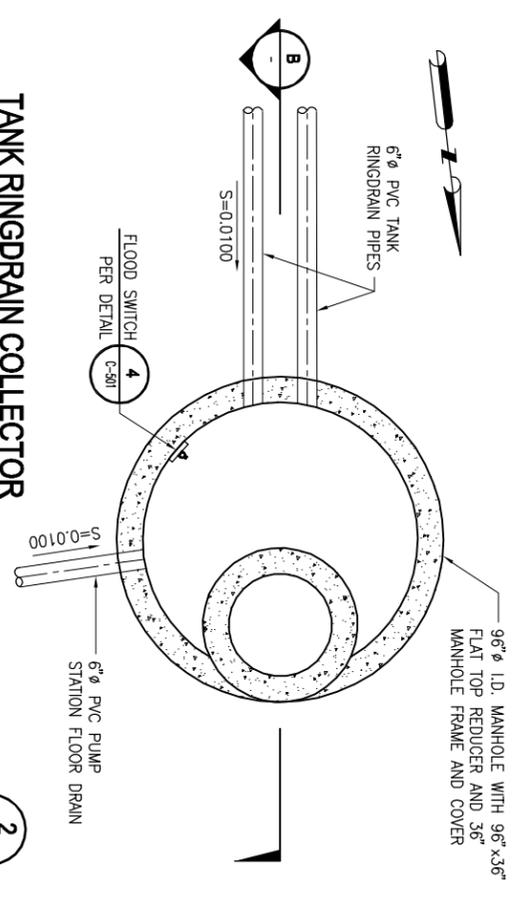


DRAIN #1 PLAN
 SCALE: 1/2"=1'-0"

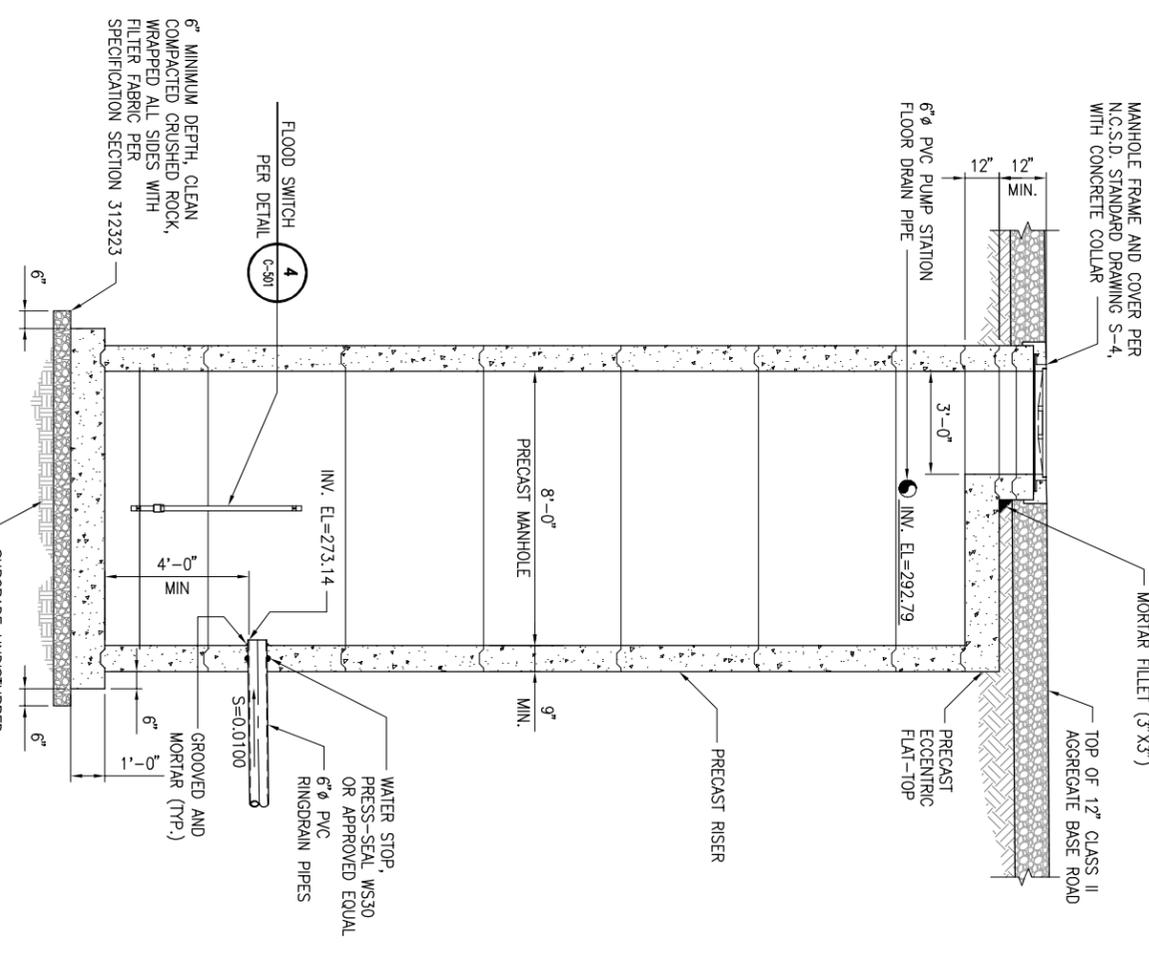
- NOTES:
 1. STONE FOR RIP-RAP SHALL BE QUARRY STONE, WELL GRADED AND ANGULAR. STONE SHALL BE OF SUCH SHAPE AS TO FORM PROTECTION FOR REQUIRED SECTION. DO NOT USE FLAT OR ELONGATED SHAPES UNLESS THE THICKNESS OF THE INDIVIDUAL PIECE IS AT LEAST ONE-THIRD THE LENGTH. MATERIAL SHALL BE CLEAN AND FREE FROM DELETERIOUS IMPURITIES INCLUDING ALKALI, EARTH, CLAY REFUSE, AND ADHERENT COATINGS.



TANK OVERFLOW SECTION
 SCALE: 1/2"=1'-0"



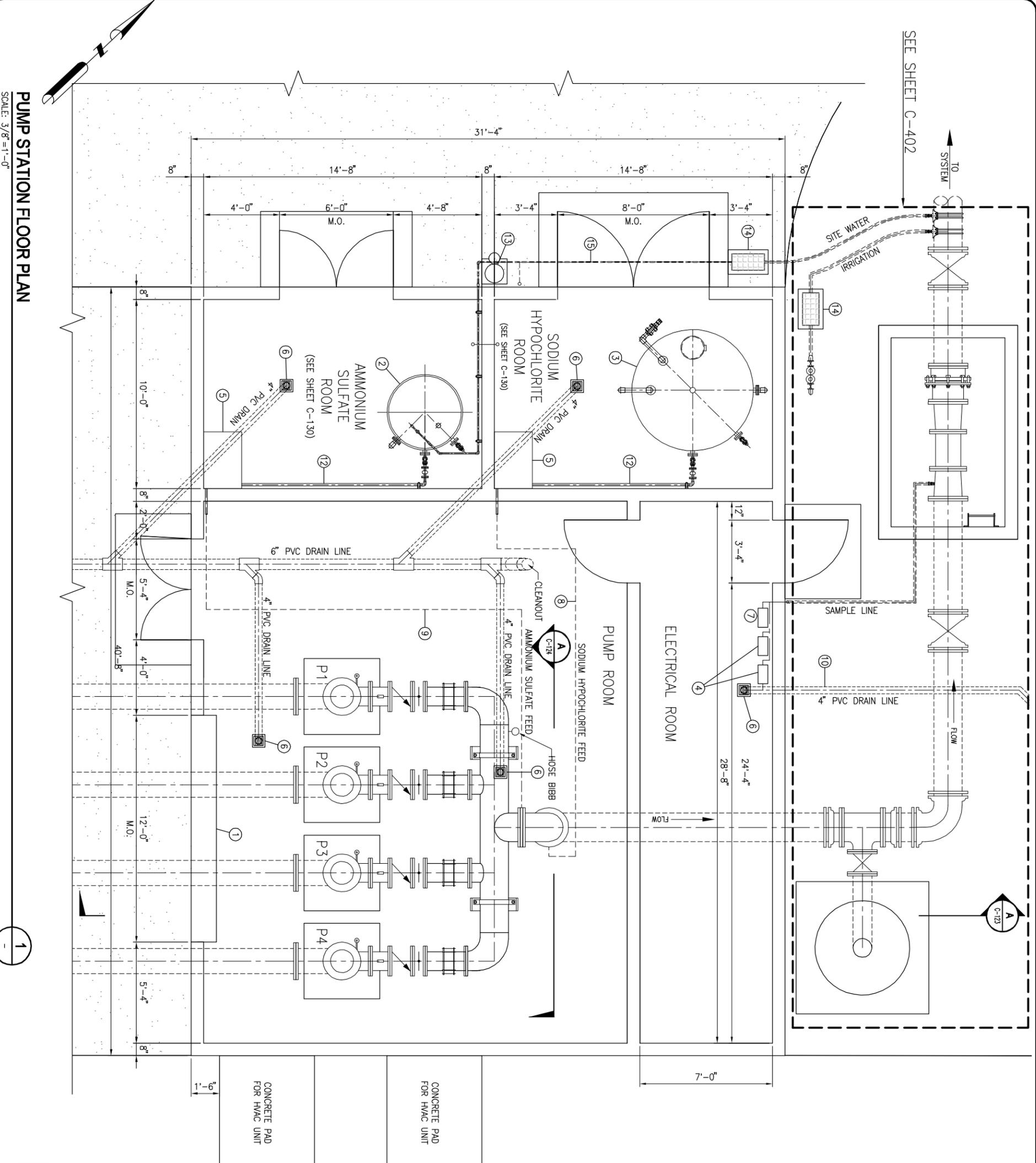
TANK RINGRAIN COLLECTOR
 SCALE: 3/8"=1'-0"



TANK RINGRAIN COLLECTOR SECTION
 SCALE: 3/8"=1'-0"

IF THIS MAN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

<p>C-121 SHEET 29 OF 95</p>	<p>NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4</p>	<p>AECOM</p>	<p>DESIGNED: JHR/ES CHECKED: JHR/ES APPROVED: JHR/ES DATE: JUNE 2010 AECOM PROJECT NO.: 60061295 NCSD PROJECT NO.: 60061295</p>	<p>DRAIN PIPING DETAILS</p>	<p>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com</p>	<p>REGISTERED PROFESSIONAL ENGINEER JOSHUA H. REYNOLDS No. 65400 Exp. 9/30/11 STATE OF CALIFORNIA</p>	<p>REV DATE DESCRIPTION APPR</p>	<p>PROJECT ENGINEER</p>	<p>REG NUMBER</p>	<p>EXP DATE</p>
							<p>JOSHUA H. REYNOLDS</p>	<p>C66400</p>	<p>09/30/2009</p>	



SEE SHEET C-402

TO SYSTEM

SITE WATER
IRRIGATION

SAMPLE LINE

4" PVC DRAIN LINE

ELECTRICAL ROOM

PUMP ROOM

SODIUM HYPOCHLORITE ROOM
(SEE SHEET C-130)

AMMONIUM SULFATE ROOM
(SEE SHEET C-130)

CONCRETE PAD FOR HVAC UNIT

CONCRETE PAD FOR HVAC UNIT

MATERIAL LIST

- ① 16-FOOT WIDE ROLL-UP DOOR
- ② 330gal AMMONIUM SULFATE SOLUTION TANK PER SPECIFICATION SECTION 434127
- ③ 1000gal SODIUM HYPOCHLORITE TANK PER SPECIFICATION SECTION 434127
- ④ RESIDUAL CHLORINE METERS PER SPECIFICATION SECTION 433277
- ⑤ SKID MOUNTED CHEMICAL METERING PUMPS PER SPECIFICATION SECTION 432160
- ⑥ FLOOR DRAIN PER DETAIL 2 W-502
- ⑦ RESIDUAL AMMONIA METER PER SPECIFICATION SECTION 433277
- ⑧ 1/2" PTFE LINED STEEL PIPE PER SPECIFICATION SECTION 402571
- ⑨ 1/2" STAINLESS STEEL TUBING PER SPECIFICATION SECTION 402078
- ⑩ 4" PVC DRAIN PIPE PER SPECIFICATION SECTION 402092
- ⑪ 1/2" COPPER SAMPLE LINE PER SPECIFICATION SECTION 402020 AND N.C.S.D. STANDARD DRAWING W-8
- ⑫ 1/2" PVC PER SPECIFICATION SECTION 402090
- ⑬ EMERGENCY EYEWASH/SHOWER PER DETAIL 4 W-502
- ⑭ WATER METER AND WATER METER BOX PER N.C.S.D. STANDARD DRAWING W-8
- ⑮ 1" PVC PER SPECIFICATION SECTION 402090

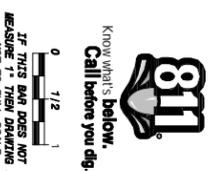
PUMP STATION FLOOR PLAN

SCALE: 3/8"=1'-0"

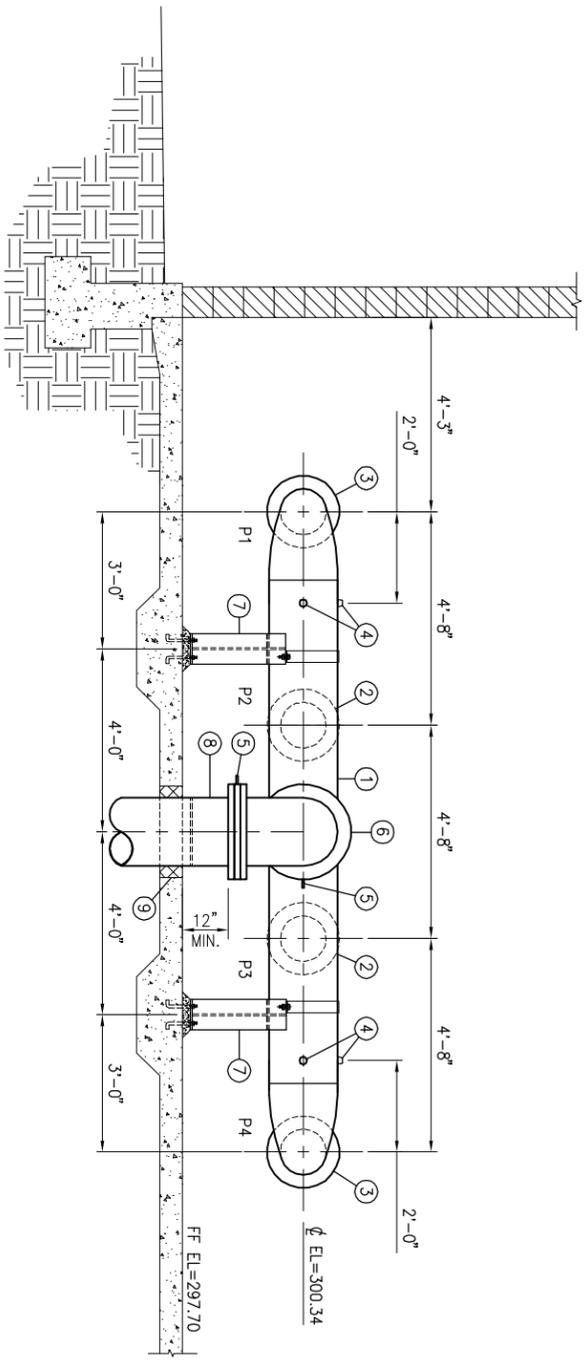
1

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

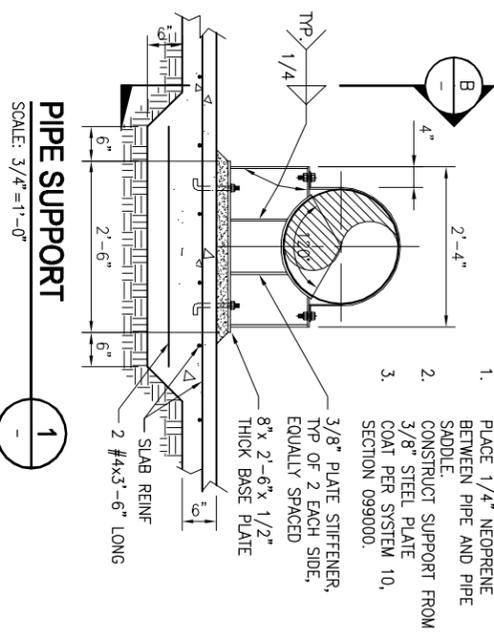


NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4		AECOM AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com		PROFESSIONAL ENGINEER JOSHUA H. REYNOLDS No. 65400 Exp. 9/30/11 N.C.S.D. STATE OF CALIFORNIA	
DESIGNED: JHR/ES CHECKED: JHR/ES DATE: JUNE 2010 APPROVED: JHR/ES AECOM PROJECT NO.: 60061295 NCSO PROJECT NO.:	CADW STDS.: BOYLE/AECOM	SHEET: C-122 24 OF 95	PROJECT ENGINEER JOSHUA H. REYNOLDS	DESCRIPTION C56400	APPR EXP DATE 09/30/2009



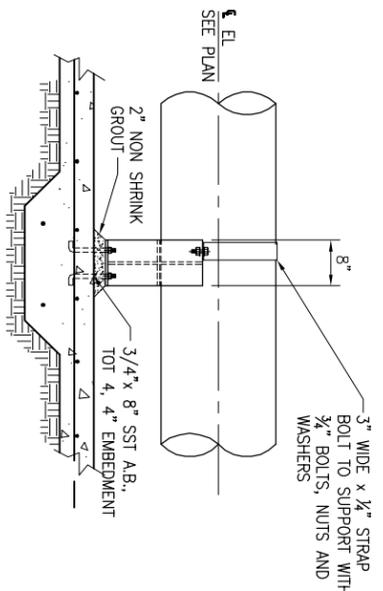
DISCHARGE PROFILE
 SCALE: 1/2"=1'-0"
 A-C-122

- MATERIAL LIST**
- ① 18-INCH DIA FBEL&C STEEL DISCHARGE MANIFOLD
 - ② 12-INCH FBEL&C FLANGED OUTLET
 - ③ 18x12-INCH DIA FBEL&C STEEL REDUCING 90° ELBOW
 - ④ 2-INCH THREAD-0-LET WITH PLUG BOTH SIDES AND TOP
 - ⑤ 18-INCH WESTFAL STATIC MIXER PER SPEC. SECTION 444249 AND PER DETAIL
 - ⑥ 18-INCH DI 90° ELBOW, FLGD
 - ⑦ STEEL SADDLE SUPPORT, PER DETAIL
 - ⑧ 18-INCH DIA DI SPOOL FLG&FLG
 - ⑨ SLAB PENETRATION PER DETAIL



PIPE SUPPORT
 SCALE: 3/4"=1'-0"
 1-B

- NOTES:**
1. PLACE 1/4" NEOPRENE BETWEEN PIPE AND PIPE SADDLE
 2. CONSTRUCT SUPPORT FROM 3/8" STEEL PLATE COAT PER SYSTEM 10, SECTION 099000.
 3. 3/8" PLATE STIFFENER, TYP OF 2 EACH SIDE, EQUALLY SPACED



SECTION
 SCALE: 3/4"=1'-0"
 1-B

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

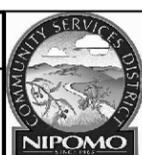
AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

PUMP STATION PIPING PROFILES



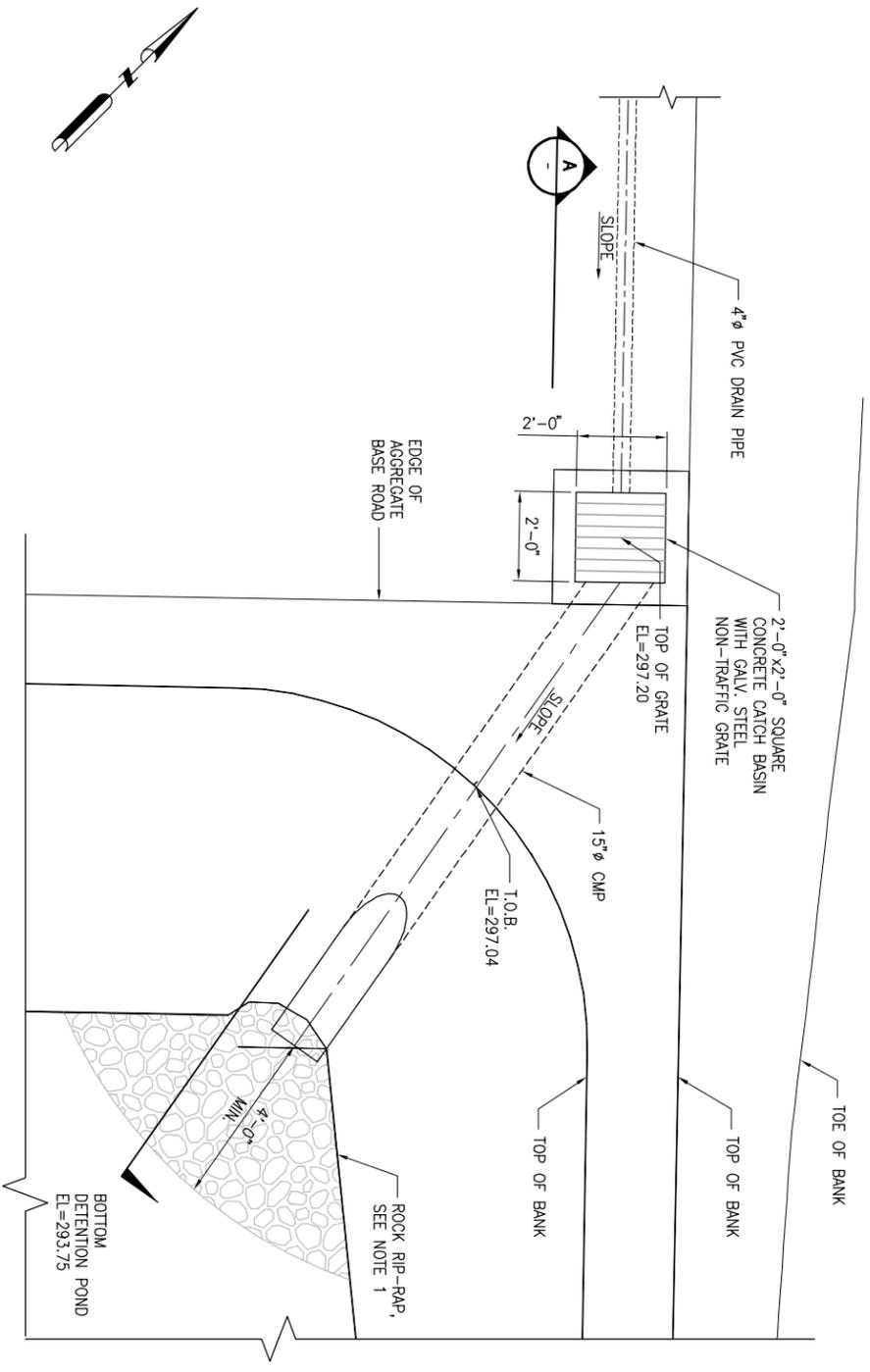
AECOM

AECOM USA, Inc.
 5001 E. Commercenter Dr. Suite 100
 Bakersfield, California 93309
 T 661.325.7253 F 661.395.0359
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H. REYNOLDS		C58400	09/30/2009

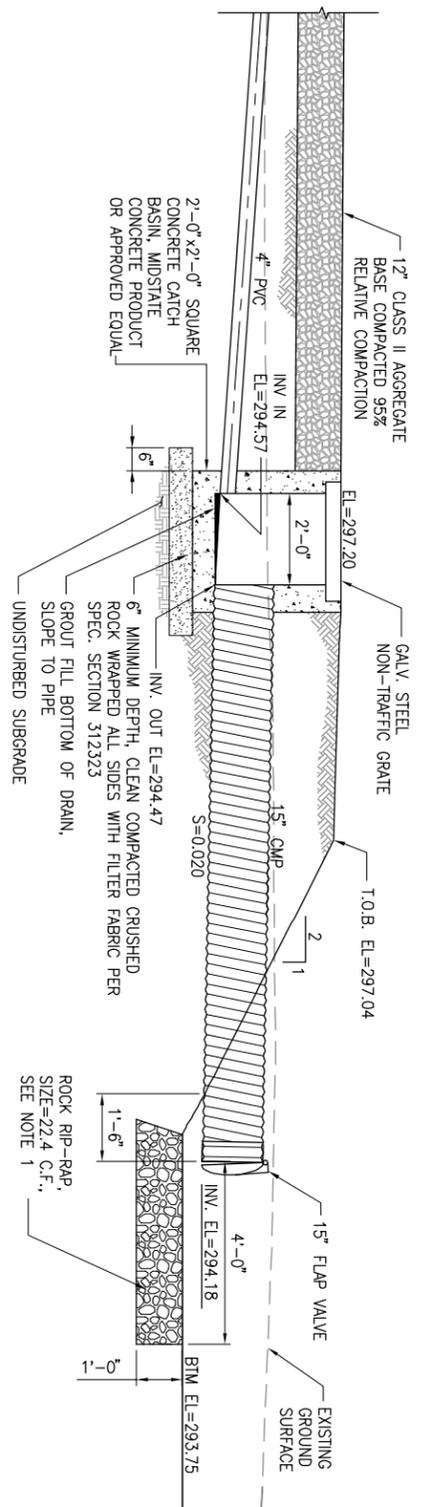
DESIGNED: JMR/ES
 DETAIL LEO: JPF
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.
 CADW STDS. BOYLE/AECOM
C-124
 SHEET
 26 OF 95



DRAIN #2 PLAN
 SCALE: 1/2"=1'-0"

1

- NOTES:
 1. STONE FOR RIP-RAP SHALL BE QUARRY STONE, WELL GRADED AND ANGULAR. STONE SHALL BE OF SUCH SHAPE AS TO FORM PROTECTION FOR REQUIRED SECTION. DO NOT USE FLAT OR ELONGATED SHAPES UNLESS THE THICKNESS OF THE INDIVIDUAL PIECE IS AT LEAST ONE-THIRD THE LENGTH. MATERIAL SHALL BE CLEAN AND FREE FROM DELETERIOUS IMPURITIES INCLUDING ALKALI, EARTH, CLAY REFUSE, AND ADHERENT COATINGS.



DRAIN #2 SECTION
 SCALE: 1/2"=1'-0"

A



SURGE TANK
 SCALE:

2

SURGE TANK PAD
 SCALE:

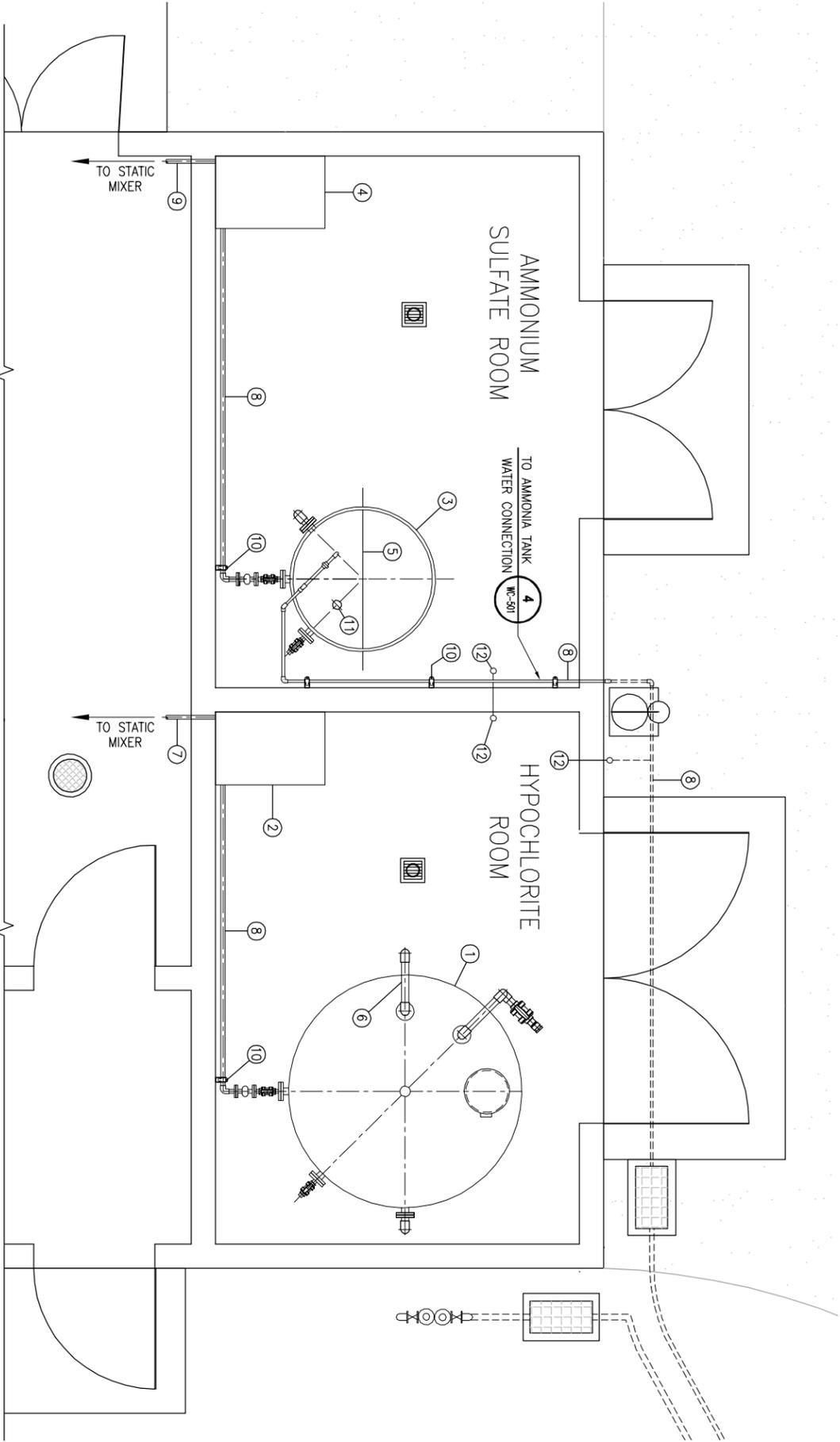
3

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's below.
811
 Call before you dig.
 IF THIS MARK DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4		AECOM AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com		REGISTERED PROFESSIONAL ENGINEER JOSHUA H. REYNOLDS No. 65400 Exp. 9/30/11 STATE OF CALIFORNIA		<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> </thead> <tbody> <tr> <td>PROJECT ENGINEER</td> <td></td> <td></td> <td></td> </tr> <tr> <td>JOSHUA H. REYNOLDS</td> <td></td> <td>C58400</td> <td>09/30/2009</td> </tr> </tbody> </table>		REV	DATE	DESCRIPTION	APPR	PROJECT ENGINEER				JOSHUA H. REYNOLDS		C58400	09/30/2009
REV	DATE	DESCRIPTION	APPR																
PROJECT ENGINEER																			
JOSHUA H. REYNOLDS		C58400	09/30/2009																
PUMP STATION SURGE CONTROL FACILITIES AND DRAIN PIPE #2		C-125 SHEET 27 OF 95		MS&S PROJECT NO. 60061295		DATE JUNE 2010													



CHEMICAL TANKS LAYOUT
 SCALE: 1/2" = 1'-0"

EQUIPMENT LIST

- ① SODIUM HYPOCHLORITE CONTAINMENT TANK (1000 GALLON, SNYDER INDUSTRIES) PER SPECIFICATION SECTION 434127.
- ② SODIUM HYPOCHLORITE FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ③ AMMONIUM SULFATE SOLUTION STORAGE TANK (330 GALLON OPEN TOP TANK WITHIN 370 GALLON OPEN TOP TANK, POLY PROCESSING COMPANY) PER SPECIFICATION SECTION 434127.
- ④ AMMONIA FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ⑤ 1/2"-HINGED LID WITH 2" INLET/OUTLET/VENT
- ⑥ MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
- ⑦ 1/2" PTFE-LINED STEEL PIPE PER SPECIFICATION SECTION 402571
- ⑧ 1"Ø P.V.C. PIPE PER SPECIFICATION SECTION 402090
- ⑨ 1/2" STAINLESS STEEL TUBING PER SPECIFICATION SECTION 402078
- ⑩ 1 1/2" CHANNEL MOUNTED ON WALL WITH PIPE CLAMP FOR PIPE SUPPORT PER SPECIFICATION SECTION 400764
- ⑪ THREADED 2" NPT BUNG FOR LEVEL SENSOR
- ⑫ HOSE BIB PER DETAIL X
C-30X

NOTES:

1. CONTRACTOR TO CONFIRM MAXIMUM SYSTEM PRESSURE AT PUMP STATION TO ENSURE PRESSURE CAPABILITY OF CHEMICAL SKID PIPING, PUMPS, AND APPURTENANCES.
2. PROVIDE AND INSTALL SEISMIC RESTRAINTS ON CHEMICAL TANKS PER SPECIFICATION SECTION 434127 AND MANUFACTURER'S RECOMMENDATIONS.
3. CHEMICAL FEED SKID FOOTPRINT SHALL BE 24"x36" MAXIMUM AS SHOWN ON PLANS.
4. ROUTE PIPING FROM FEED SYSTEMS TO STATIC MIXERS ALONG WALLS AND CEILING OF PUMP ROOM AS SHOWN ON SHEET C-122 USING SUPPORTS AND HANGERS PER SPECIFICATION SECTION 400764.
5. SEE WC-503 FOR TANK SECTIONS AND DETAILS.

1

REV	DATE	DESCRIPTION	REG NUMBER	EXP DATE	APPR
PROJECT ENGINEER					
JOSHUA H. REYNOLDS			C58400	09/30/2009	



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

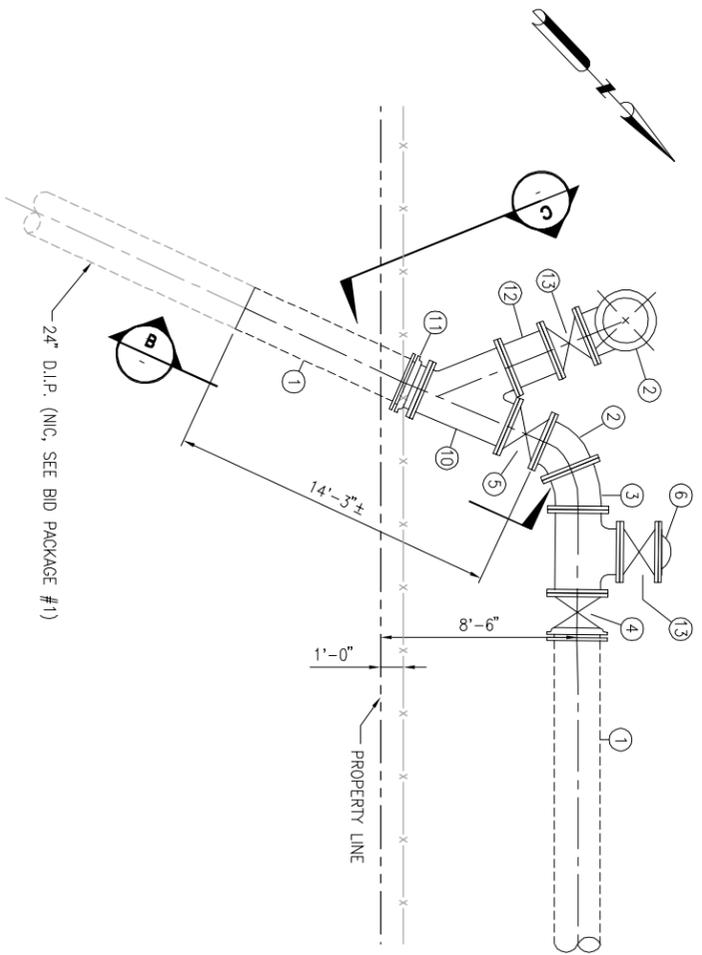
**PUMP STATION CHLORAMINATION
 FACILITY PIPING PLAN**

DESIGNED: JHR/ES
 DETAIL LED: JPF
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.

811
 Know what's below.
 Call before you dig.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

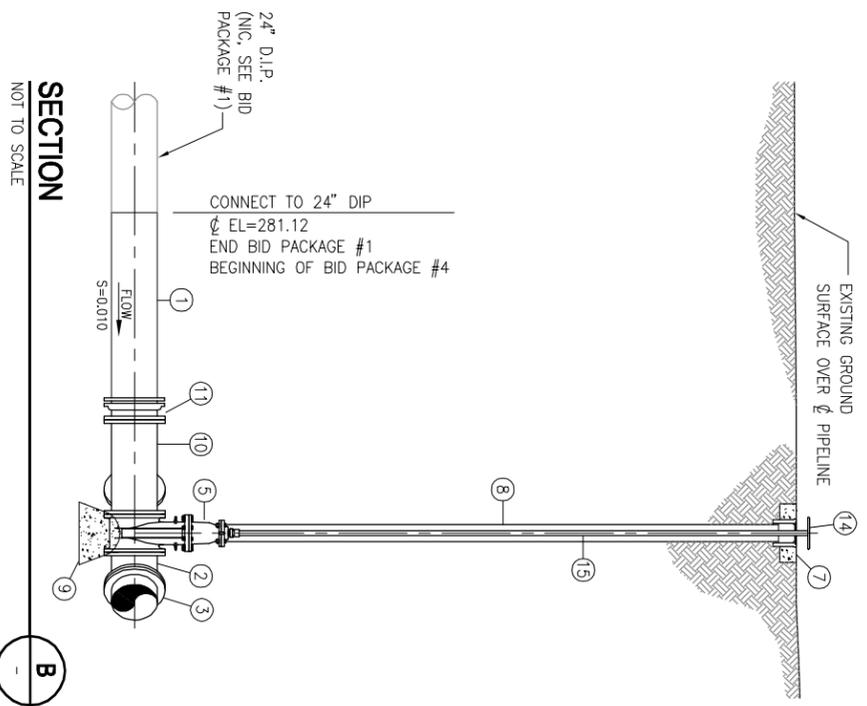
AECOM WATER
 IF THIS PLAN DOES NOT
 RESURE "I" THEN DRAWING IS
 NOT TO FULL SCALE



PIG OUTLET PIPING

SCALE: 1/4" = 1'-0"

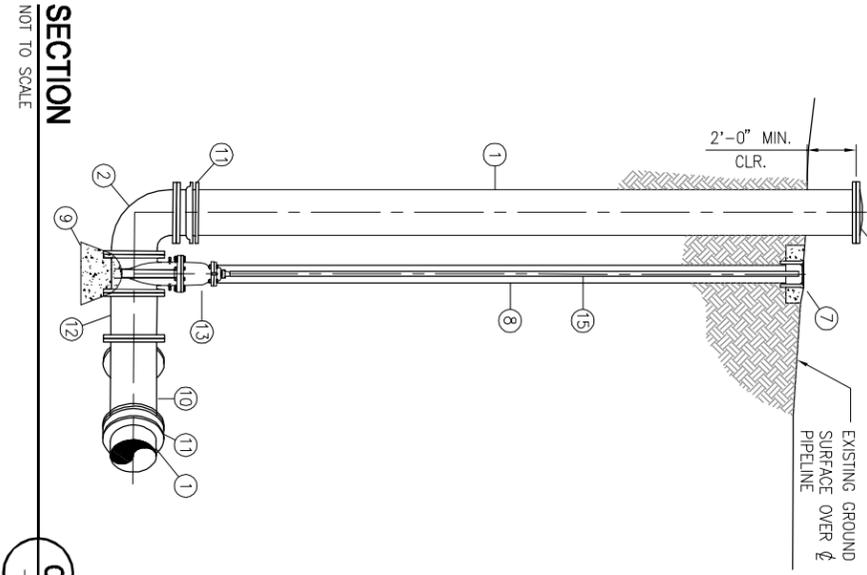
1



SECTION B

NOT TO SCALE

B



SECTION C

NOT TO SCALE

C

MATERIAL LIST:

- ① 24" ϕ DUCTILE IRON PIPE
- ② 24" D.I. 45° ELBOW, FLO&FLG
- ③ 24" D.I. 22.5° ELBOW, FLO&FLG
- ④ 24" RESILIENT WEDGE GATE VALVE, FLO&M
- ⑤ 24" RESILIENT WEDGE GATE VALVE, FLO&D
- ⑥ 24" DI BLIND FLANGE
- ⑦ VALVE BOX AND CONCRETE RING PER DETAIL C-302
- ⑧ 8" ϕ SDR-35 PVC EXTENSION
- ⑨ CONCRETE ANCHOR BLOCK
- ⑩ 24" 45° WYE, FLO&D
- ⑪ 24" FLANGE ADAPTER, RESTRAINED
- ⑫ 24" ϕ x 1'-0" D.I.P. SPOOL, FLO&D
- ⑬ 24" RESILIENT WEDGE GATE VALVE, FLO&D, NORMALLY CLOSED
- ⑭ HANDWHEEL WITH PROVISION TO BE LOCKED INTO POSITION
- ⑮ VALVE OPERATOR EXTENSION PER SPECIFICATION SECTION 400500. BRING TO WITHIN 6" OF SURFACE.

2
C-302

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010

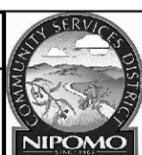
90% PRELIMINARY DESIGN PLANSET™

Know what's below.
Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

PIG OUTLET PIPING SECTIONS



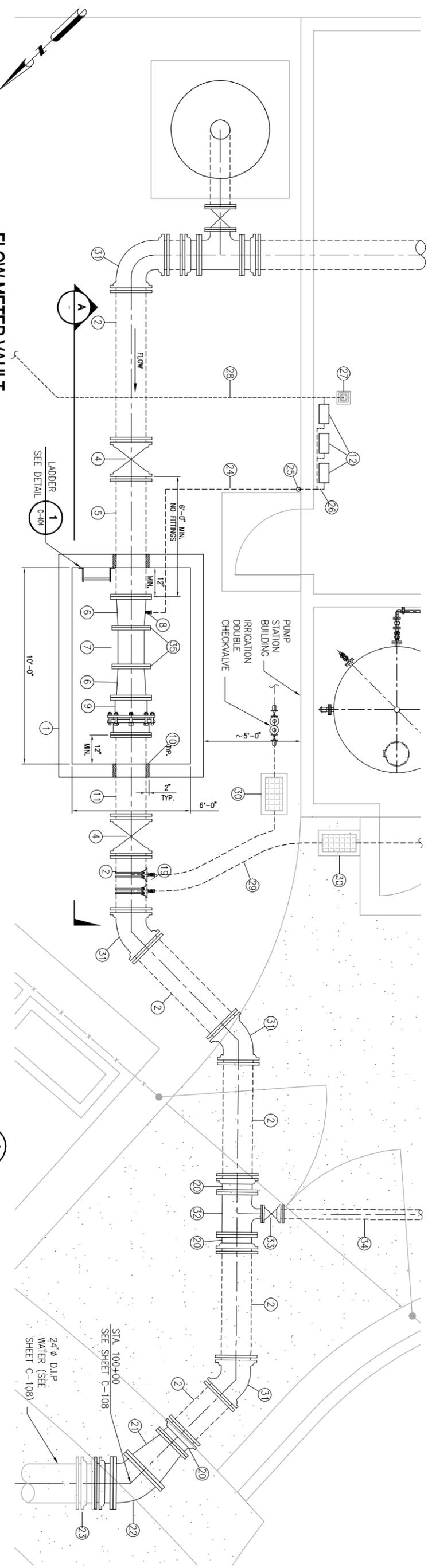
AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

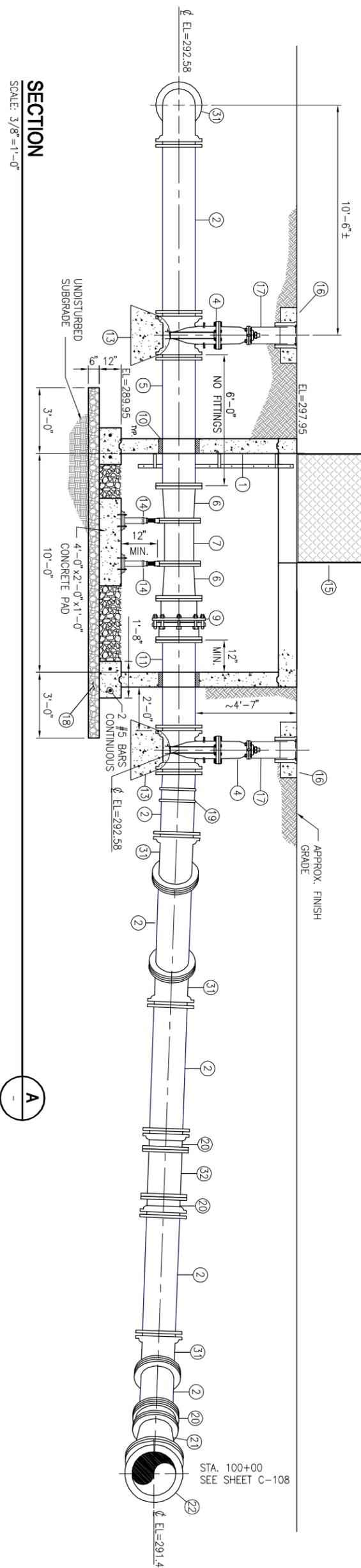


REV	DATE	DESCRIPTION	APP
PROJECT ENGINEER			
JOSHUA H. REYNOLDS		C58400	09/30/2009

DESIGNED: JHR/ES
 CHECKED: JHR/ES
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. C-401
 SHEET 29 OF 95



FLOW METER VAULT
 SCALE: 3/8"=1'-0"



SECTION
 SCALE: 3/8"=1'-0"

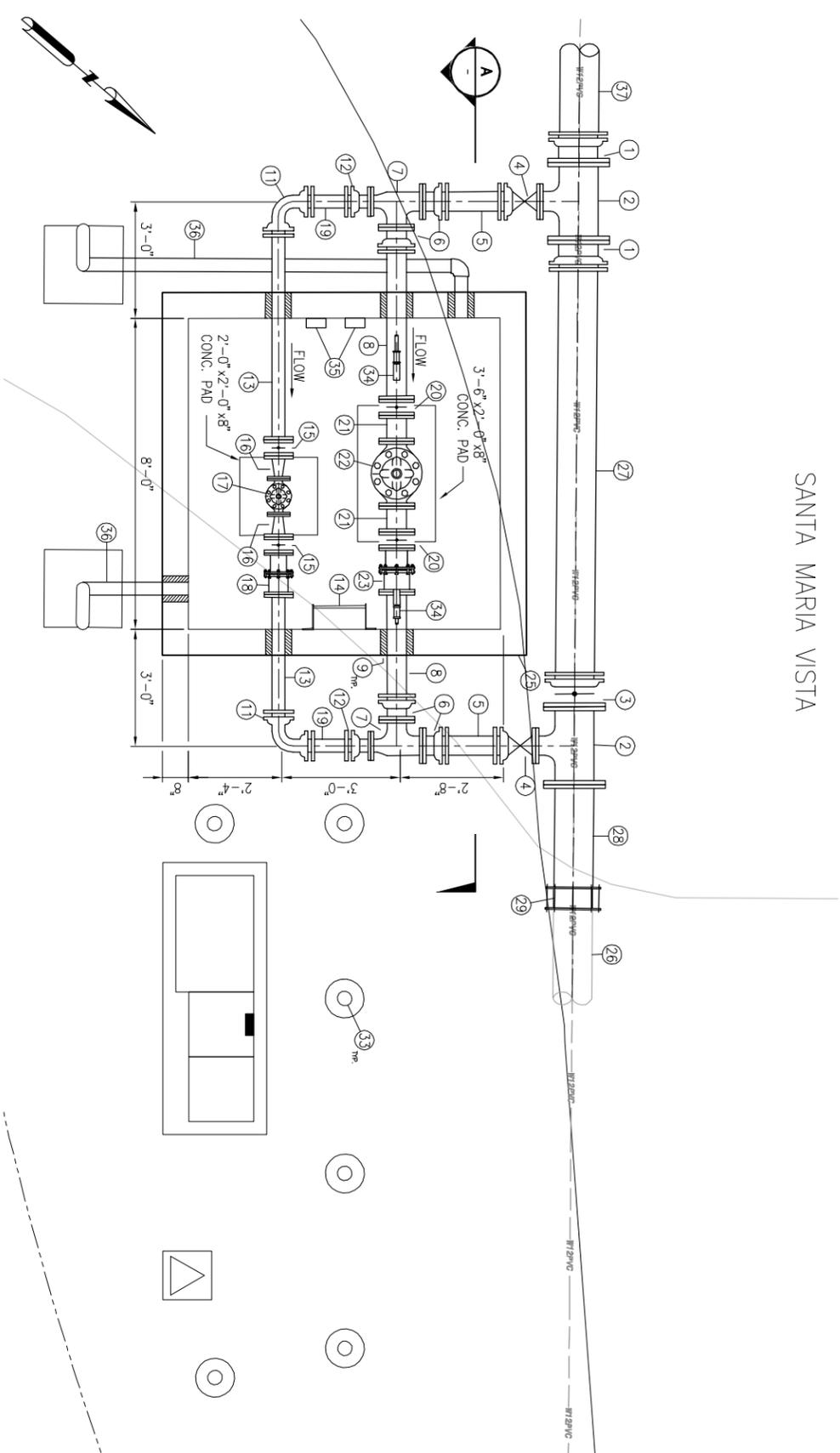
- MATERIAL LIST**
- 1 6x10' PRECAST CONCRETE VAULT PER SPECIFICATION SECTION 034220
 - 2 18" DUCTILE IRON PIPE, RESTRAINED
 - 3 NOT USED
 - 4 18" GATE VALVE, MAMU
 - 5 18" x 6'-0" DIP SPOOL, PENFLG
 - 6 18" x 18" REDUCER, FLGD
 - 7 18" WAG METERS PER SPECIFICATION SECTION 409115
 - 8 TAP FOR RESINAL SAMPLE PER N.C.S.D. STANDARD DRAWING W-8
 - 9 18" ROMAC D4045 DISMANTLING COUPLING
 - 10 LINK SEAL & GROUT PER DETAIL C-404
 - 11 18" DIP SPOOL, FLG&PE
 - 12 RESIDUAL METERS
 - 13 CONCRETE ANCHOR BLOCK
 - 14 PIPE SUPPORT PER DETAIL C-301
 - 15 6'-0" x 5'-0" DOUBLE LEAF ALUMINUM ACCESS HATCH PER SPEC SECTION 055300
 - 16 VALVE BOX AND CONCRETE RING PER DETAIL C-301
 - 17 8" SR-35 Pvc EXTENSION
 - 18 CLEAN, COMPACTED CRUSHED ROCK, WRAPPED ALL SIDES WITH FILTER FABRIC PER SPEC. SECTION 312316
 - 19 18" BRONZE DOUBLE STRAP SERVICE SADDLE PER N.C.S.D. STANDARD DRAWING W-8
 - 20 18" FLANGE ADAPTER, RESTRAINED
 - 21 18"x24" REDUCER, FLGD
 - 22 24" 45° ELBOW, FLGD
 - 23 24" FLANGE ADAPTER RESTRAINED
 - 24 1" COPPER TUBING PER SPECIFICATION SECTION 402020
 - 25 PRESSURE REGULATOR ASSEMBLY PER DETAIL WC-102
 - 26 1/2" P.V.C PER SPECIFICATION SECTION 402090
 - 27 FLOOR DRAIN PER DETAIL WC-502
 - 28 4" P.V.C DRAIN LINE PER SPECIFICATION SECTION 402092. SLOPE TO DRAIN INLET
 - 29 1" COPPER TUBING PLANT WATER PER SPECIFICATION SECTION 402020 AND N.C.S.D. STANDARD DRAWING W-8
 - 30 METER BOX AND METER PER N.C.S.D. STANDARD DRAWING W-8
 - 31 18" 45° ELBOW, MAMU RESTRAINED
 - 32 18"x18" 60° TEE, FLGD
 - 33 6" RESILIENT WEDGE GATE VALVE, FLG&M RESTRAINED
 - 34 6" DUCTILE IRON FIRE HYPDANT LATERAL PER N.C.S.D. STANDARD DRAWING W-8. SEE SHEET C-116 FOR HYDRAANT LOCATION.
 - 35 FLANGE INSULATION KIT PER SPECIFICATION SECTION 400500 AND DETAIL C-301

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



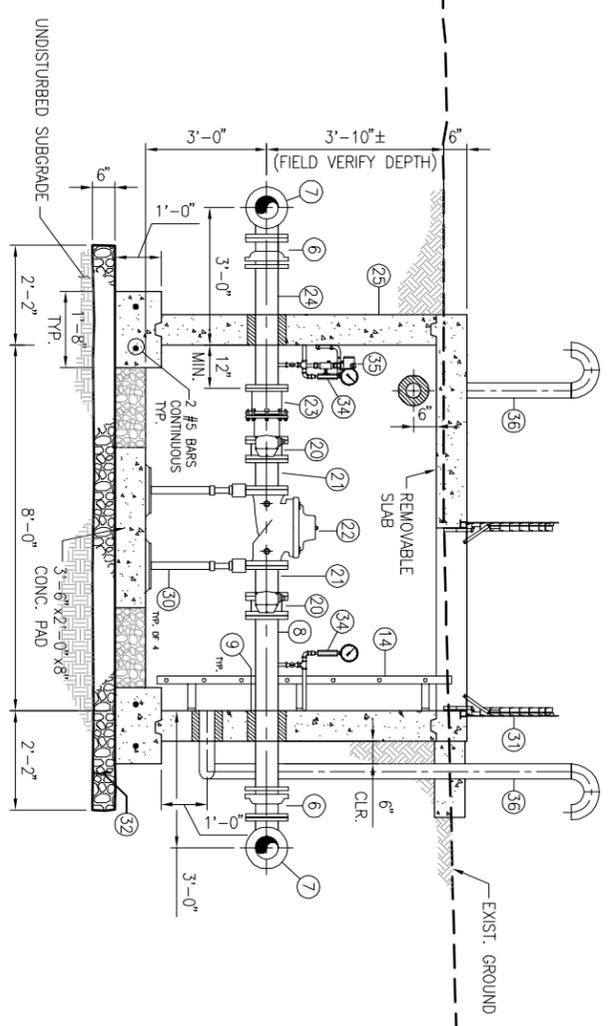
NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4		AECOM <small>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com</small>			
DESIGNED: JHR/RS DETAIL LEAD: JPF CHECKED: DATE: JUNE 2010 APPROVED:	NCSO PROJECT NO. 60061295 AECOM PROJECT NO.	PROJECT ENGINEER JOSHUA H. REYNOLDS	DESCRIPTION C68400	EXP DATE 09/30/2009	APPR

SANTA MARIA VISTA



PRESSURE REDUCING VALVE VAULT

SCALE: 1/2"=1'-0"



SECTION VIEW

SCALE: 1/2"=1'-0"

MATERIALS LIST

- 1 12" MIXFLG ADAPTER (RESTRAINED)
- 2 12"x6" TEE, FLGD
- 3 12" BUTTERFLY VALVE, FLGMU (RESTRAINED)
- 4 6" RESILIENT WEDGE GATE VALVE FLGMU
- 5 6" D.I.P. SPOOL, PEPE
- 6 6" MIXFLG ADAPTER
- 7 6"x6"x4" REDUCING ON RUN TEE, FLGD
- 8 6" D.I.P. SPOOL, FLG&PE
- 9 WALL PENETRATION PER DETAIL **2**
- 10 4" D.I.P. SPOOL, FLGD
- 11 4" 90° ELBOW, MIXMU, RESTRAINED
- 12 4" MIXFLG ADAPTER
- 13 4" D.I.P. SPOOL FLG&PE
- 14 LADDER PER DETAIL **1**
- 15 4" BUTTERFLY VALVE, FLGD
- 16 4" x 2.5" D.I. REDUCER, FLGD
- 17 2.5" PRESSURE REDUCING VALVE (CAL-VAL 90-01)
- 18 4" ROMAC D1405 DISMANTLING JOINT
- 19 NOT USED
- 20 6" BUTTERFLY VALVE, FLGD
- 21 4" D.I.P. SPOOL FLGD
- 22 6" PRESSURE REDUCING VALVE (CAL-VAL 90-01)
- 23 6" ROMAC D1405 DISMANTLING JOINT
- 24 NOT USED
- 25 8'-0" X 8'-0" (1D) PRECAST CONCRETE VAULT PER SPECIFICATION SECTION 034220
- 26 EXISTING 12" P.V.C. WATER MAIN
- 27 12" D.I.P. SPOOL PEPE
- 28 12" D.I.P. SPOOL, FLG&PE
- 29 12" TRANSITION COUPLING (ROMAC 501)
- 30 PIPE SUPPORT PER DETAIL **2**
- 31 4'-0" x 4'-0" DOUBLE LEAF ALUMINUM ACCESS HATCH PER SPEC. SECTION 055300
- 32 CLEAN COMPACTED CRUSHED ROCK, WRAPPED ALL SIDES WITH FILTER FABRIC PER SPEC. SECTION 512316
- 33 PIPE BOLLARDS PER DETAIL **3**
- 34 4" PRESSURE GAUGE AND TRANSMITTER PER DETAIL **5**
- 35 WALL MOUNTED PRESSURE TRANSMITTERS PER DETAIL **3**
- 36 4" AIR VENT PER DETAIL **3**
- 37 12" PRESSURE CLASS 250 DUCTILE IRON PIPE

FOR PRELIMINARY USE ONLY

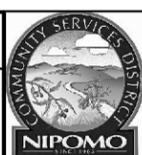
NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

AECOM WATER
 BOYLE/AECOM

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

PRV VAULT PLAN & SECTION



AECOM

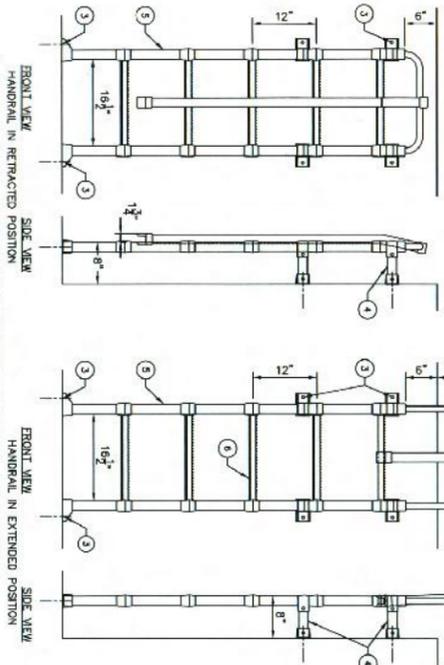
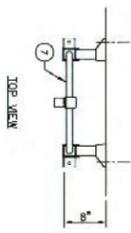
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H. REYNOLDS		C65400	09/30/2009

C-403
 SHEET
 31 OF 95

DESIGNED: SS
 CHECKED: JPF
 APPROVED: JPF
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSO PROJECT NO.



FRONT VIEW
HANDRAIL IN RETRACTED POSITION

SIDE VIEW
HANDRAIL IN RETRACTED POSITION

FRONT VIEW
HANDRAIL IN EXTENDED POSITION

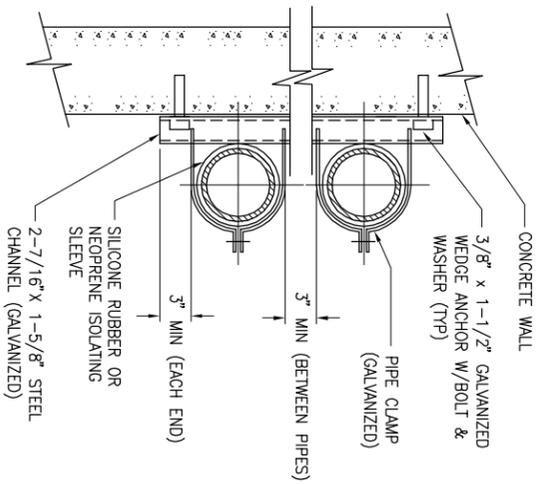
SIDE VIEW
HANDRAIL IN EXTENDED POSITION

LANE POLYPROPYLENE VAULT LADDER WITH PULL-UP HANDRAIL

- NOTES:
1. LADDERS WITH PULL-UP HANDRAIL AVAILABLE IN 5 RUNG THROUGH 25 RUNG.
 2. POLYPROPYLENE CONFORMS TO ASTM D-4101. LADDERS MEET ALL ASTM C-487 LOAD REQUIREMENTS AND OSHA 1910.28 AND 1910.27 SPECIFICATIONS.
 3. FASTEN LADDER TO FLOOR AND WALL WITH 1/2"x3-3/4" ANCHORS. ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
 4. STANDARD ADJUSTABLE MOUNTING BRACKET - 8" O.D.
 5. ALUMINUM REINFORCED COPOLYMER POLYPROPYLENE RAIL 1-3/4"x1-3/4" DIA.
 6. STEEL REINFORCED COPOLYMER POLYPROPYLENE RUNG 1-5/8"x1-1/4" DIA. WITH MOLDED FINGER GRIPS, 12" C.C.
 7. ALUMINUM AND STEEL REINFORCED COPOLYMER POLYPROPYLENE PULL-UP HANDRAIL.

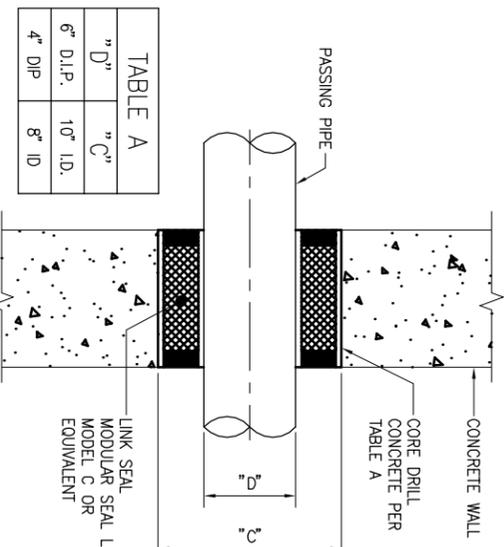
LADDER DETAIL

NOT TO SCALE



STEEL CHANNEL WALL PIPE SUPPORT

NOT TO SCALE

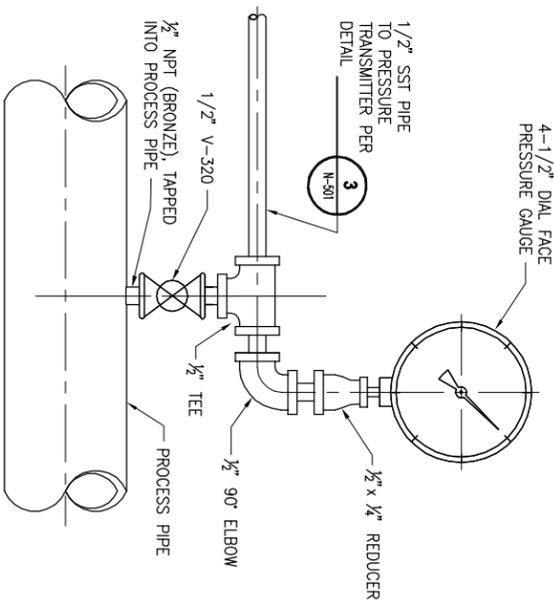


WALL PENETRATION

NOT TO SCALE



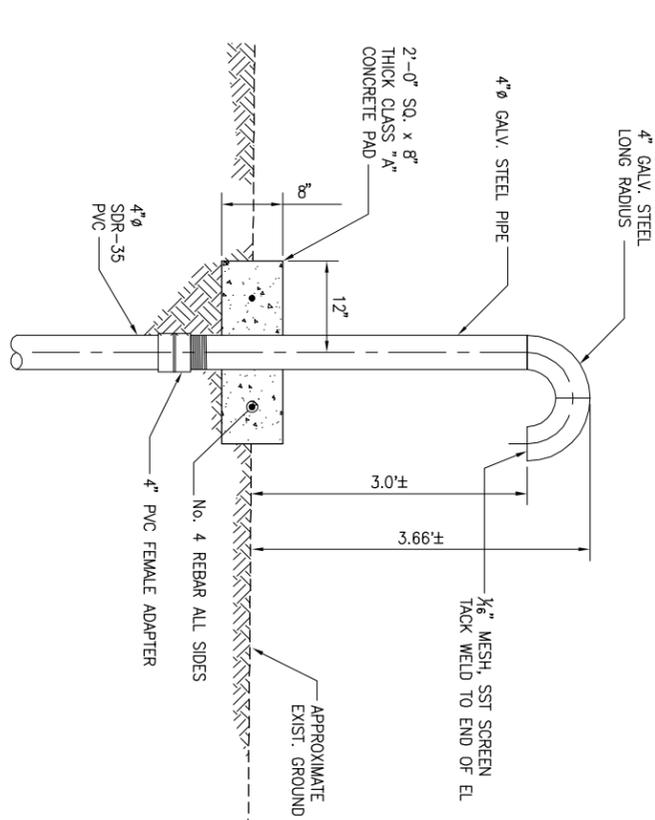
TABLE A	
"D"	"C"
6" D.I.P.	10" I.D.
4" DIP	8" ID



- NOTES:
1. SST = TYPE 316 STAINLESS STEEL
 2. UNLESS NOTED OTHERWISE PIPE TO BE BRONZE
 3. V-320: SEE SPECIFICATION SECTION 400520

PRESSURE GAUGE AND PRESSURE TRANSMITTER MOUNTING (PIPE)

NOT TO SCALE



4" AIR VENT

NOT TO SCALE



FOR PRELIMINARY USE ONLY

AECOM WATER

NOT TO BE USED FOR CONSTRUCTION

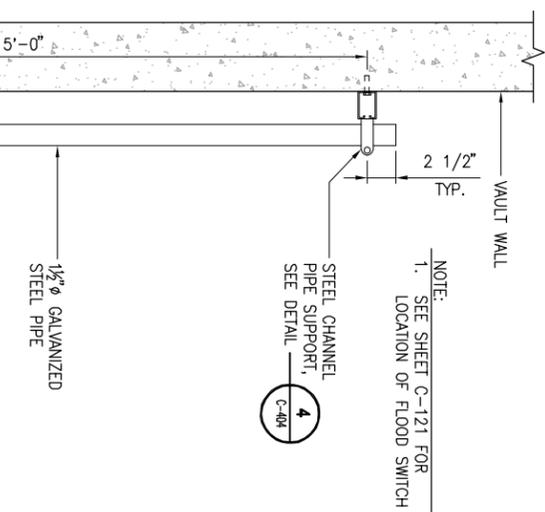
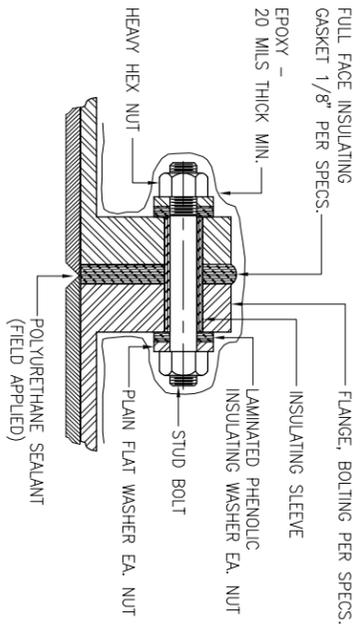
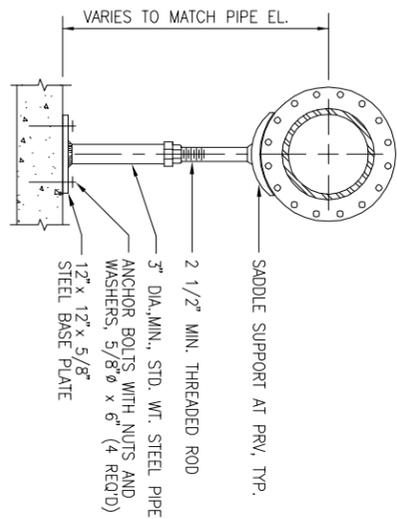
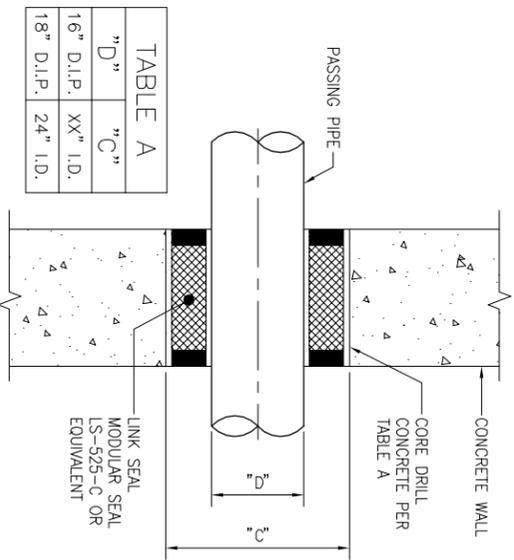
DATE: JUNE 18, 2010

90% PRELIMINARY DESIGN PLANSET™



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

	NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4		PRV STATION DETAILS - 1	
	DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295	
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
DESIGNED: ES CHECKED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JOSHUA H. REYNOLDS
APPROVED: JPF DATE: JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER J



WALL PENETRATION

NOT TO SCALE

PIPE SUPPORT

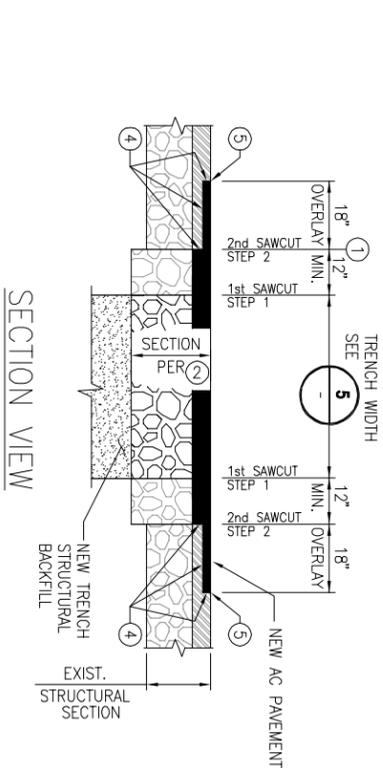
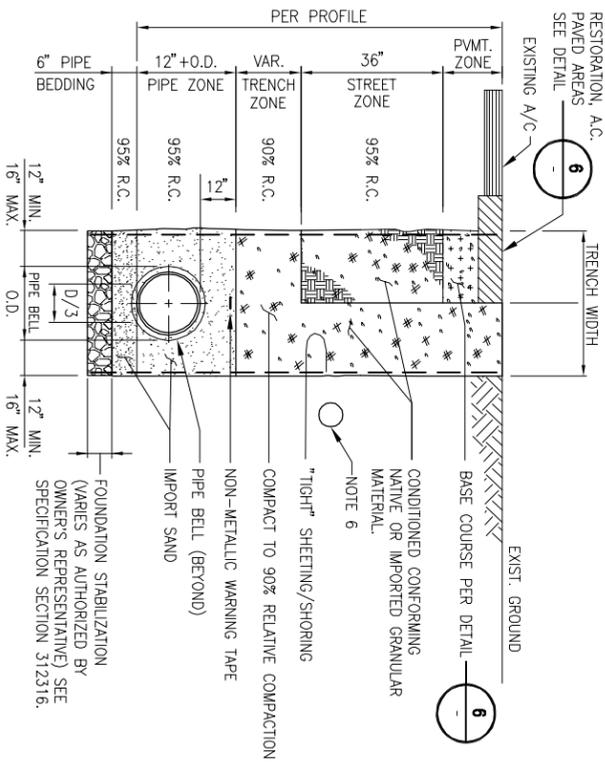
NOT TO SCALE

INSULATION FLANGE

NOT TO SCALE

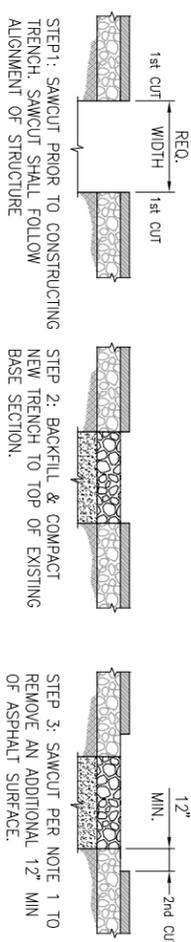
INSULATION FLANGE

NOT TO SCALE

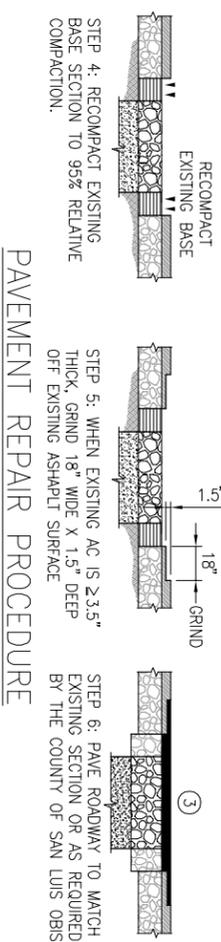


FLOOD SWITCH

NOT TO SCALE



- NOTES:
- SAWCUT TO REMOVE DAMAGED OR FAILED PAVEMENT SECTION ADJACENT TO THE EDGE OF TRENCH AS NECESSARY TO PROVIDE A CLEAN JOIN LINE. ALL SAWCUTS SHALL BE PERPENDICULAR OR PARALLEL TO CENTERLINE, OUTSIDE THE NORMAL VEHICLE TIRE PATH, WITHIN A TRAVEL LANE, AND SHALL NOT BE ALLOWED WITH DESIGNATED BICYCLE LANES. CUT EDGES SHALL BE VERTICAL WITH SQUARE CORNERS AND SHALL BE STRAIGHT AND NEAT IN APPEARANCE. ALL SAWCUTS SHALL BE TO MINIMUM SHOWN OR TO COMPETENT PAVEMENT SECTION.
 - THE STRUCTURAL ROAD REPAIR SECTION SHALL MATCH THE EXISTING STRUCTURAL SECTION THICKNESS OR AS REQUIRED BY THE COUNTY OF SAN LUIS OBISPO OF PUBLIC WORKS.
 - ASPHALT CONCRETE PER THE DESIGN STANDARDS TO 95% RELATIVE COMPACTION, OVER
 - CLASS II AGGREGATE BASE TO 95% RELATIVE COMPACTION, OVER
 - TRENCH SECTION (STRUCTURAL BACKFILL TO 95% MIN. RELATIVE COMPACTION)
 - NEW PAVEMENT SHALL BE PLACED IN LIFTS NOT EXCEEDING 3-INCHES (COMPACTED), WITH A MINIMUM LIFT NOT LESS THAN 1.5-INCHES.
 - A TACK COAT SHALL BE APPLIED TO ALL HORIZONTAL AND VERTICAL CONFORM SURFACES PRIOR TO PAVING.
 - AFTER PAVING, APPLY "CRAFCO SUPERFLEX" TO ALL SURFACE SEAMS PER MANUFACTURER'S RECOMMENDATIONS.



NOTES:

- BACKFILL MATERIALS SHALL BE PER SPECIFICATION SECTION 312316.
- SEE SPECIFICATION SECTION 312316 IF TRENCH WIDTH EXCEEDS THE MAXIMUM SHOWN ON THIS DRAWING.
- RESTORE PAVEMENT PER PLANS AND COUNTY REQUIREMENTS AND DETAIL.
- MINIMUM COVER OVER ALL DISTRIBUTION MAINS TO BE 3'-0" AS MEASURED FROM THE BOTTOM OF PAVEMENT.
- COMPACTION OF PAVEMENT ZONE SHALL BE APPROVED BY THE LOCAL DEPARTMENT OF PUBLIC WORKS (OR GOVERNING JURISDICTION) PRIOR TO THE PLACING OF THE PERMANENT PAVEMENT.
- PROVIDE ROCK REEFIL ENCASED IN FILTER FABRIC FOR OVER EXCAVATION IN SOFT, WEI, OR YIELDING SOILS AND/OR FOUNDATION STABILIZATION (WHEN AUTHORIZED OR REQUIRED BY ENGINEER) PER SPEC. SECTION 312316.
- WHERE THE WATERLINE TRENCH FOLLOWS THE EDGE OF PAVEMENT OR IS PLACED IN A EXISTING SHOULDER, THE TOP SIX INCHES (6") OF THE BACKFILL SHALL CONSIST OF CLASS II AGGREGATE BASE COMPACTED TO 95%. SHOULDERS HAVING A GREATER DEPTH OF BASE MATERIAL THAN SIX INCHES (6") SHALL BE REPLACED WITH A THICKNESS AT LEAST EQUAL TO THAT REMOVED AND THE APPROVAL OF THE ENGINEER AS TO THE EXACT TYPE OF REPLACEMENT IN-SUCH CASES IS REQUIRED. THE FINISHED REPLACEMENT SHALL BE ROLLED WITH STEEL DRUM (OR EQUAL) AND FINISHED TO MAKE THE BEST POSSIBLE CONNECTION TO THE EXISTING PAVEMENT.
- PROTECT EXISTING UTILITIES IN PLACE, SEE DETAIL

WATERLINE TRENCH

NOT TO SCALE

COUNTY OF SLO SURFACE RESTORATION

A.C. PAVED AREAS

(NOT TO SCALE)

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 IF THIS DRAWING IS NOT TO FALL SCALE

PAVEMENT REPAIR PROCEDURE

DATE: JUNE 2010

PAVEMENT REPAIR PROCEDURE

DATE: JUNE 2010

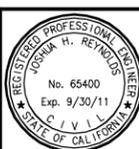
NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

PIPELINE DETAILS - 1



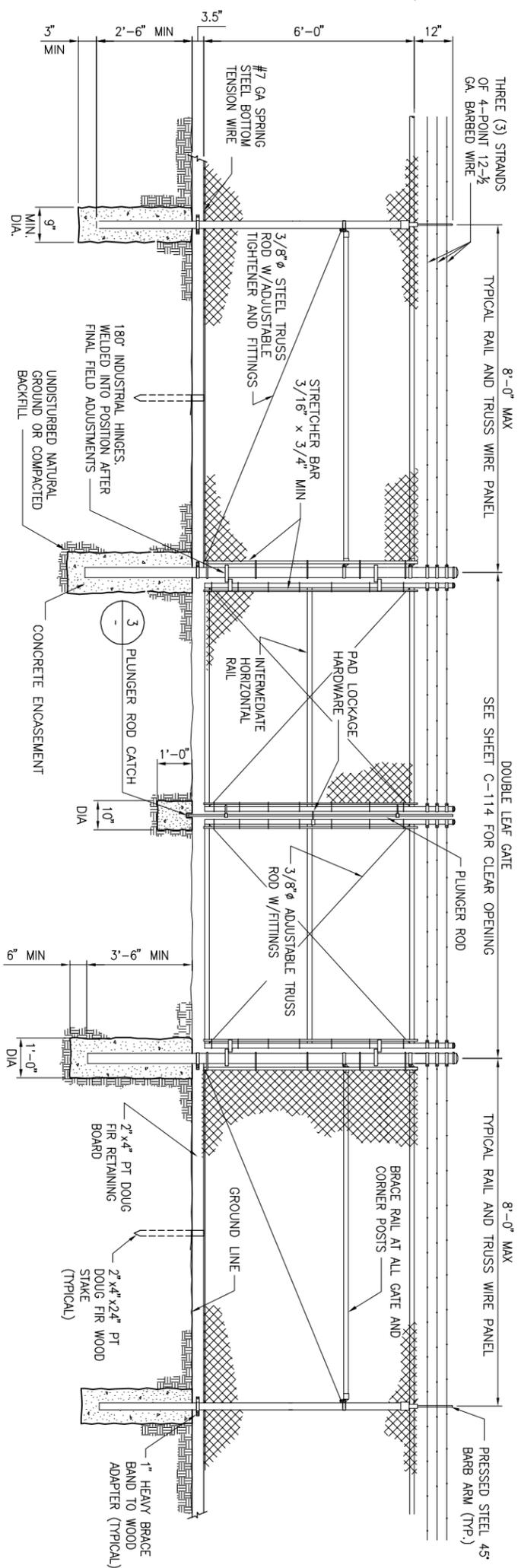
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805-542-9840 F 805-542-9990
 www.aecom.com

AECOM

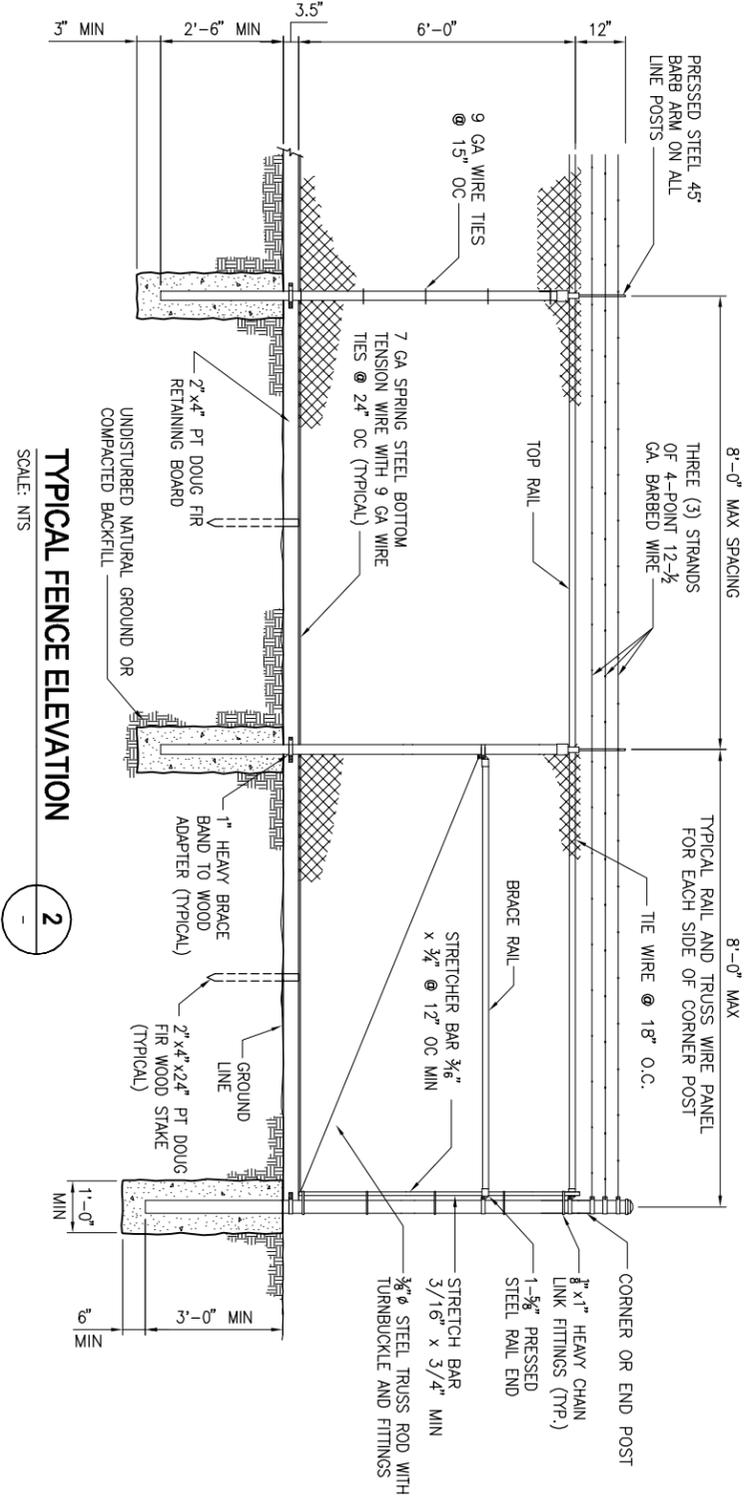


REV	DATE	DESCRIPTION	REG NUMBER	APPR	EXP DATE
		PROJECT ENGINEER	C65400		09/30/2009
		JOSHUA H. REYNOLDS			

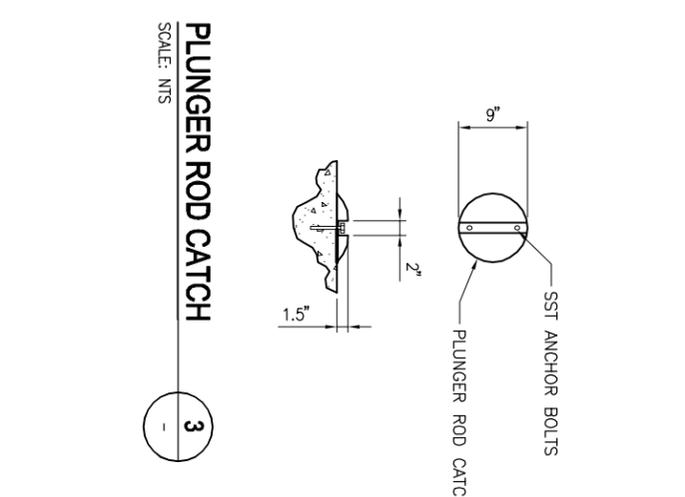
DESIGNED: OR
 DRAWN: JRF
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.
 CDD STDS. BY/EA/ACM
C-501
 SHEET 33 OF 95



DOUBLE LEAF GATE DETAIL
 NOT TO SCALE



TYPICAL FENCE ELEVATION
 SCALE: NTS



PLUNGER ROD CATCH
 SCALE: NTS



POST & MATERIALS TABLE

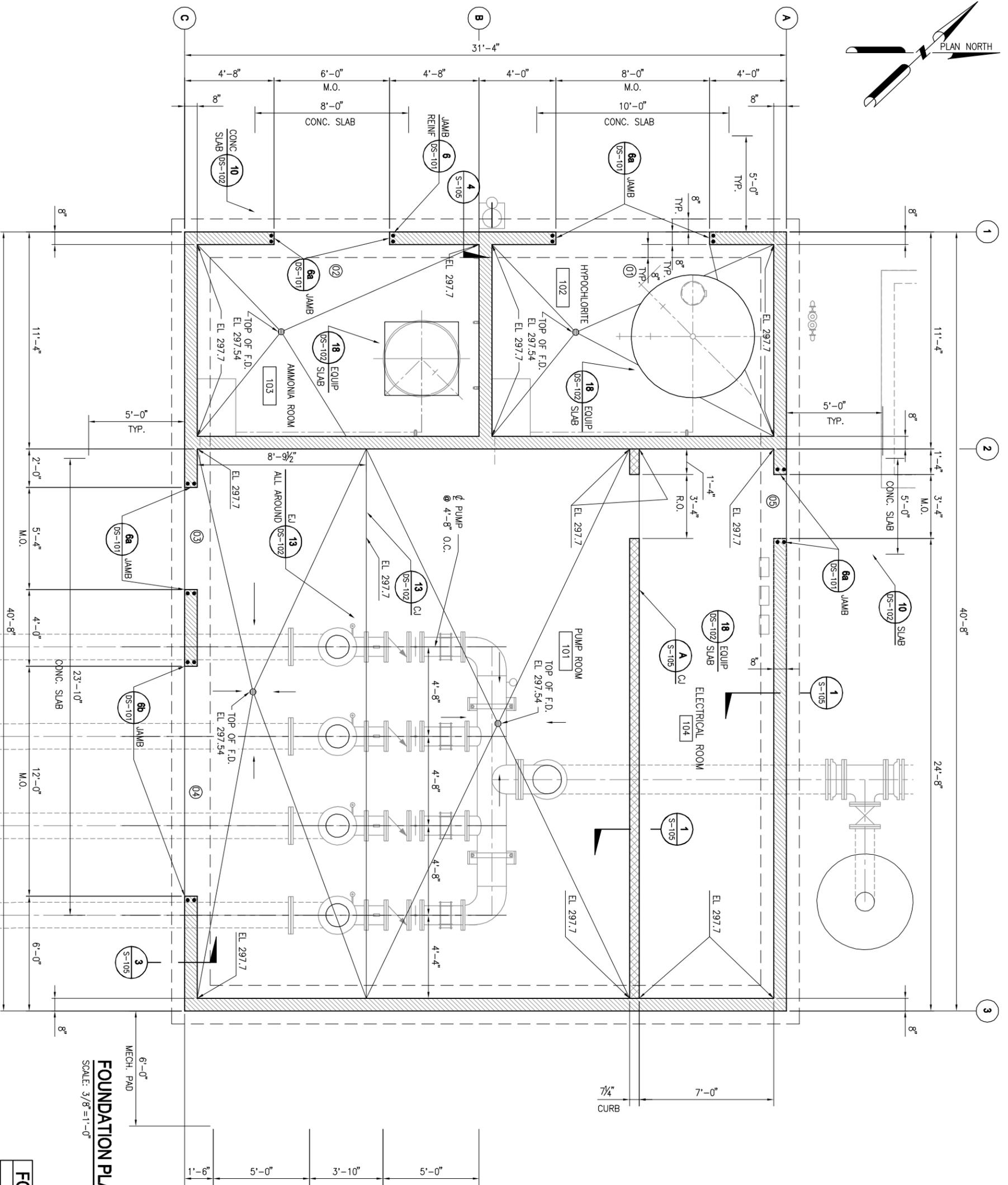
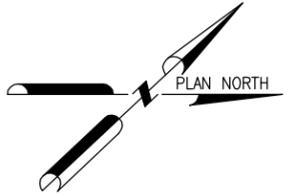
LINE POSTS	2-3/8" OD SCH 40 PIPE
CORNER & END POSTS	2-7/8" OD SCH 40 PIPE
TOP RAIL	1-5/8" OD SCH 40 PIPE
DRIVE GATE POSTS	4" OD SCH 40 PIPE
CHAIN LINK FABRIC	9 GA WIRE 2" DIAMOND WIRE, KNUCKLED TOP & BOTTOM
GATE FRAMES	1-7/8" OD SCH 40 PIPE
TENSION WIRE	7 GA GALV COIL SPRING STEEL
TRUSS RODS	3/8" GALV STEEL
BRACE RAIL	1-5/8" OD SCH 40 PIPE

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
Call before you dig.

IF THIS SIGN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4		PIPELINE DETAILS - 4													
DESIGNED: JH CHECKED: JH APPROVED: JH DATE: JUNE 2010 AECOM PROJECT NO.: 60061295 NCSO PROJECT NO.:		AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805-542-9840 F 805-542-9990 www.aecom.com													
C-504 SHEET 36 OF 95		<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		REV	DATE	DESCRIPTION	APPR								
REV	DATE	DESCRIPTION	APPR												
PROJECT ENGINEER JOSHUA H. REYNOLDS		REG NUMBER C65400 EXP DATE 09/30/2009													



LEGEND

8" CMU

6" x 20 GA METAL STUD WALL WITH 3/8" X-GYP EA SIDE & 3/4" XCC PLY EA SIDE TO 8'-4"

FOUNDATION PLAN
 1

SCALE: 3/8" = 1'-0"

MECH. PAD

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

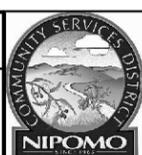
DATE: JUNE 18, 2010

90% PRELIMINARY DESIGN PLANSET



**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

PUMP STATION - FOUNDATION PLAN



AECOM

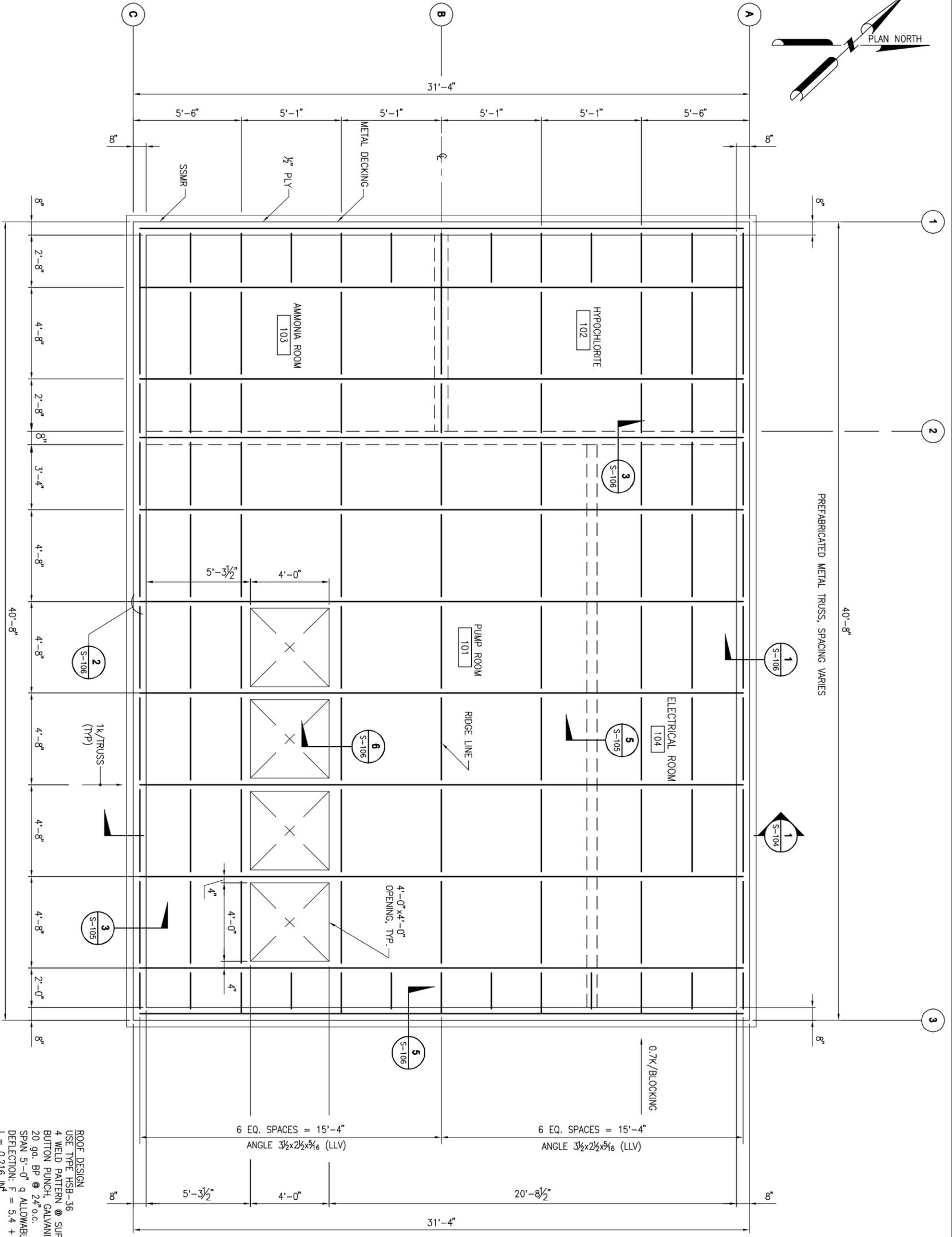
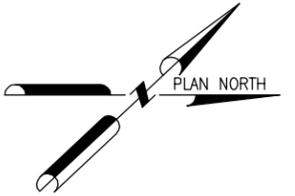
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
1			

PROJECT ENGINEER	DATE	DESCRIPTION	EXP DATE
DAVID J. SCHERSCHEL		S1572	06/30/2011

DESIGNED: JH
 CHECKED: JH
 APPROVED: JH
 DATE: JUNE 2010
 AECOM PROJECT NO.: 60061295
 NCSO PROJECT NO.:
 CADW STDS.:
 BSYL/AECOM
S-101
 SHEET
 37 OF 95



ROOF FRAMING PLAN
 SCALE: 3/8"=1'-0"

ROOF LOADS
 DL : TOP CHORD = 10 PSF
 BOT CHORD = 5 PSF
 LL = 20 PSF
 COLLATERAL = 5 PSF

ROOF DESIGN
 USE TYPE HSB-36
 4 WELD PATTERN @ SUPPORTS
 BUTT JUNCTION, GALVANIZED
 20 ga. BP @ 24" o.c.
 SPAN 5'-0" q ALLOWABLE = 459 LB/FT
 DEFLECTION: F = 5.4 + 1.30R
 I = 0.216 IN⁴
 +S = 0.235 IN³
 -S = 0.248 IN³

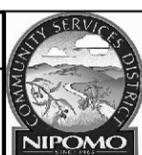
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**
PUMP STATION - ROOF PLAN



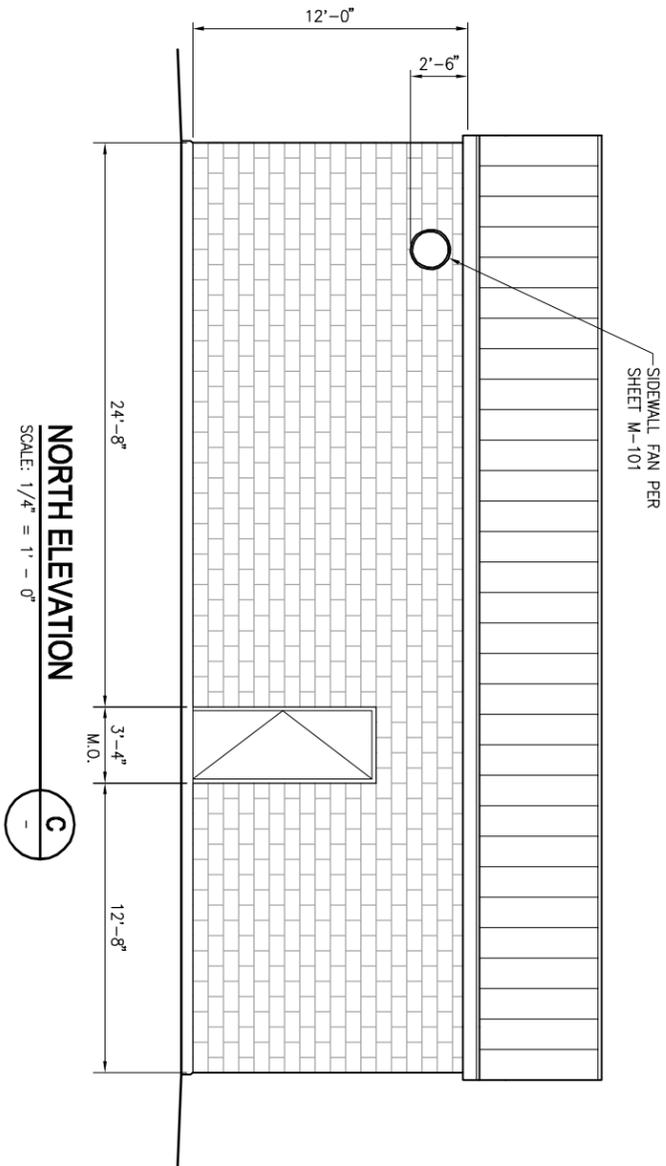
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
1			

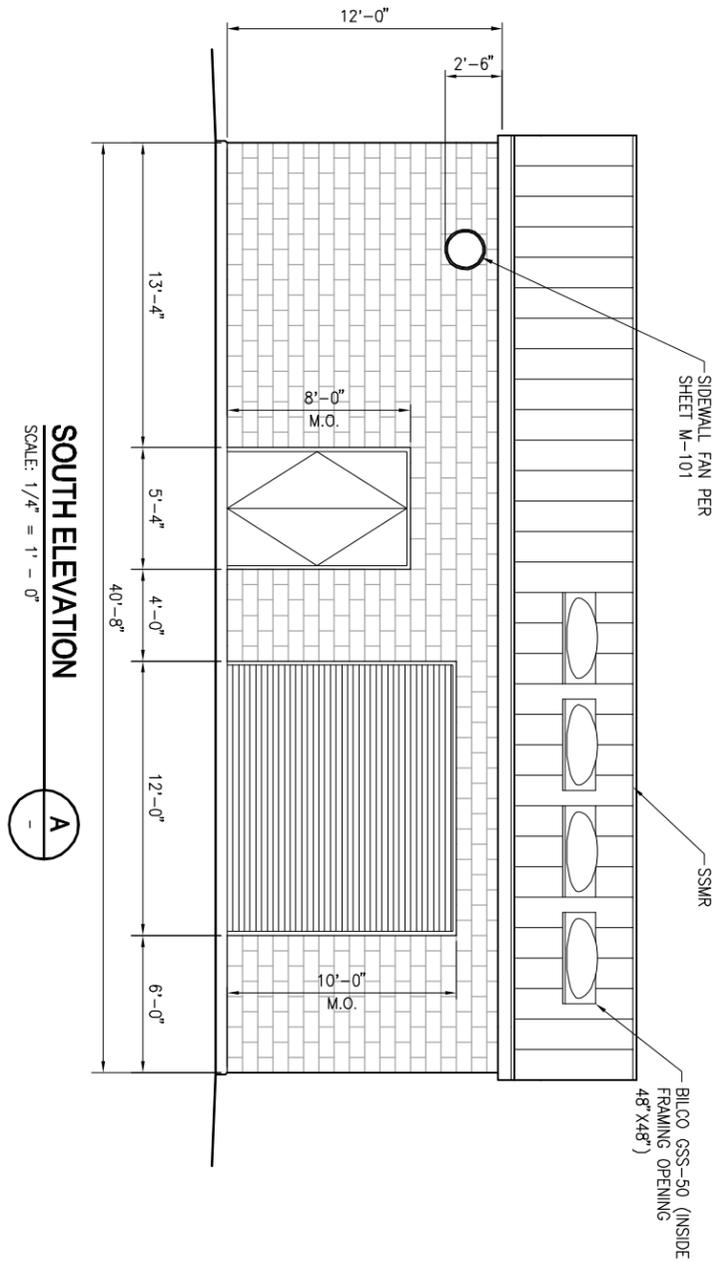
PROJECT ENGINEER	REG NUMBER	DESCRIPTION	EXP DATE
DAVID J. SCHERSCHTEL	S1572		08/30/2011

DESIGNED BY: DS
 CHECKED BY: TS
 DATE: JUNE 2010
 APPROVED: [Signature]
 AECOM PROJECT NO.: 60061295
 NCSD PROJECT NO.:
 CADW STDS.:
 BY/LE/AECOM:
S-102
 SHEET
 38 OF 95



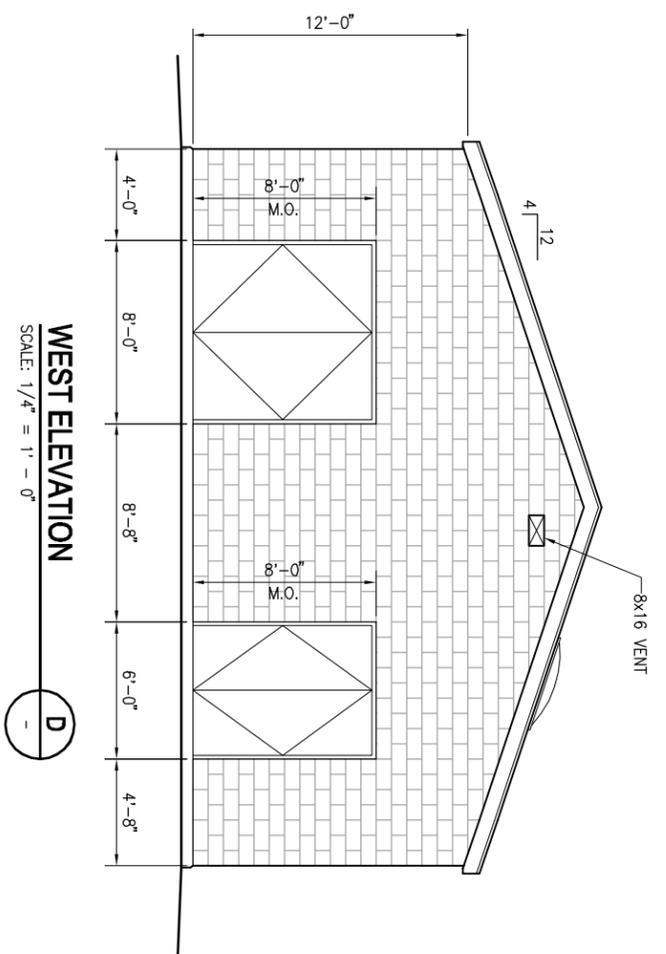
NORTH ELEVATION

SCALE: 1/4" = 1' - 0"



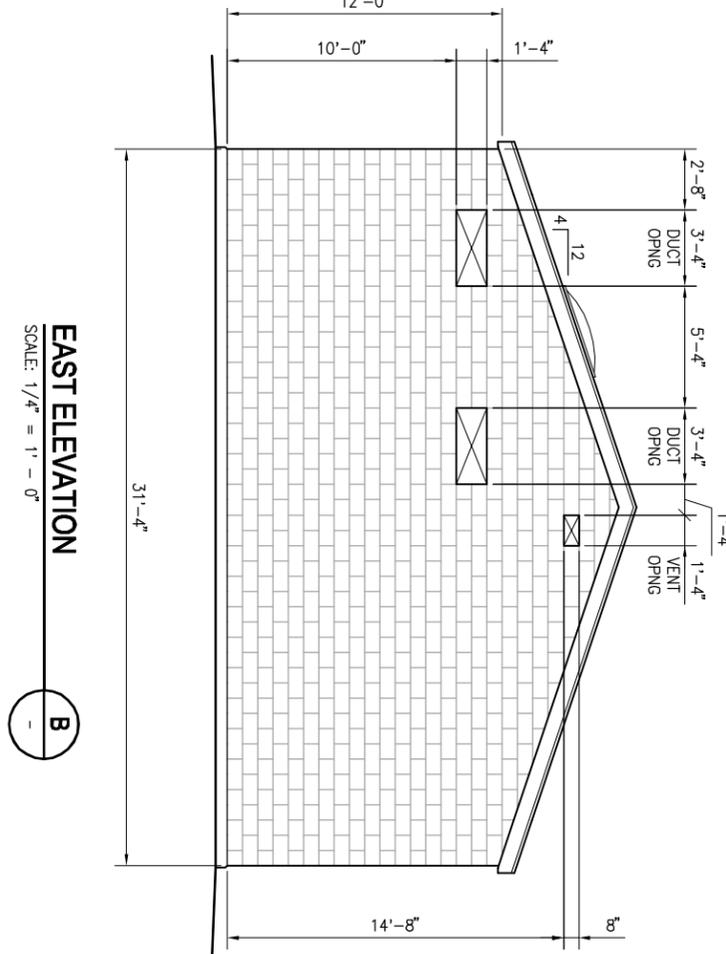
SOUTH ELEVATION

SCALE: 1/4" = 1' - 0"



WEST ELEVATION

SCALE: 1/4" = 1' - 0"



EAST ELEVATION

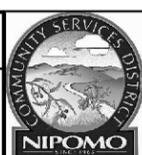
SCALE: 1/4" = 1' - 0"



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

811
 Know what's below.
 Call before you dig.
 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
PUMP STATION - EXTERIOR ELEVATIONS



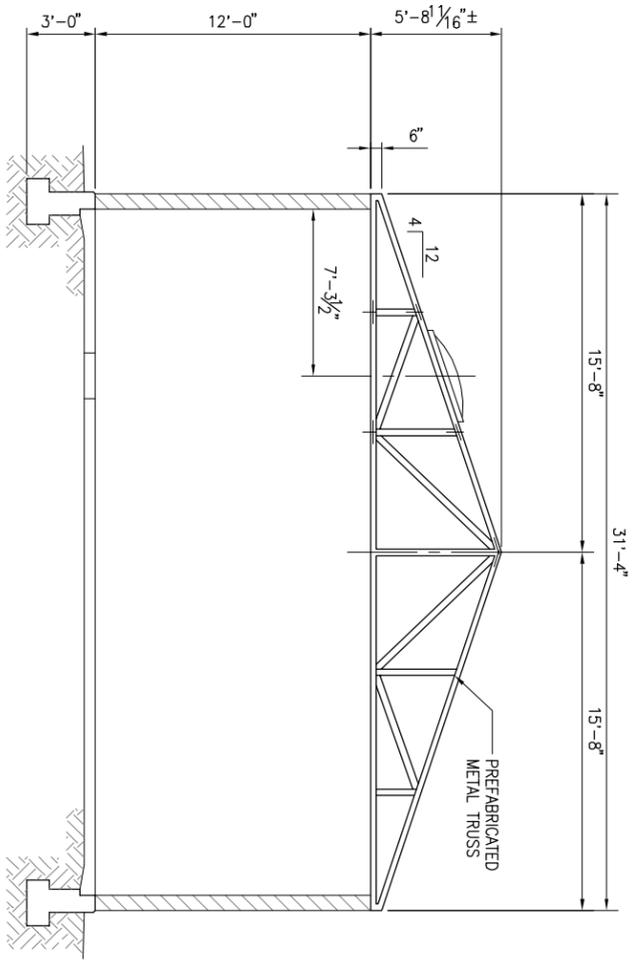
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR

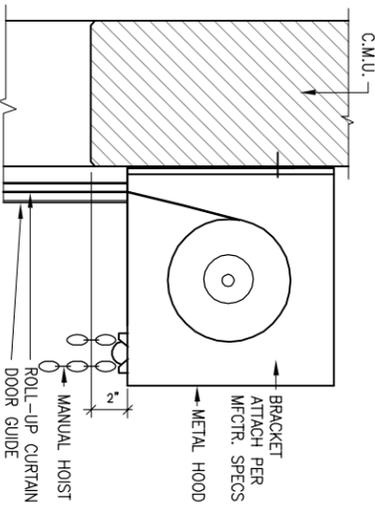
PROJECT ENGINEER: **DAVID J. SCHERSCHEL**
 REG NUMBER: **S1572**
 EXP DATE: **06/30/2011**

DESIGNED: **DS**
 CHECKED: **TS**
 APPROVED: **TS**
 DATE: **JUNE 2010**
 AECOM PROJECT NO.: **60061295**
 NCSD PROJECT NO.:
 CADW STPS.:
 BNYL/AECOM
S-103
 SHEET
 39 OF 95



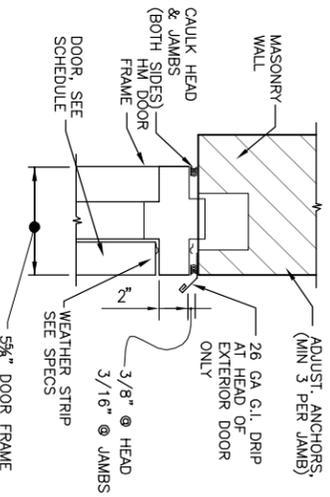
BUILDING SECTION
 SCALE: 1/4" = 1' - 0"

A



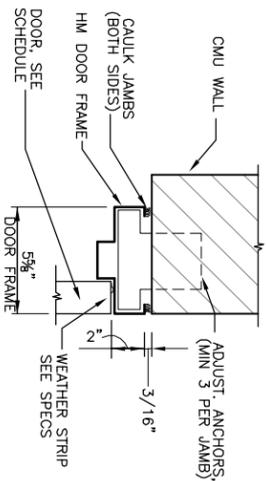
COILING DOOR HEAD
 SCALE: NOT TO SCALE

5



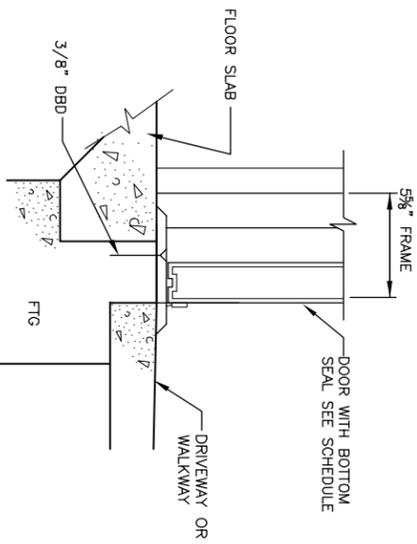
DOOR HEAD DETAIL
 SCALE: NOT TO SCALE

4



DOOR JAMB DETAIL
 SCALE: NOT TO SCALE

3



THRESHOLD DETAIL
 SCALE: NOT TO SCALE

2

FINISH SCHEDULE

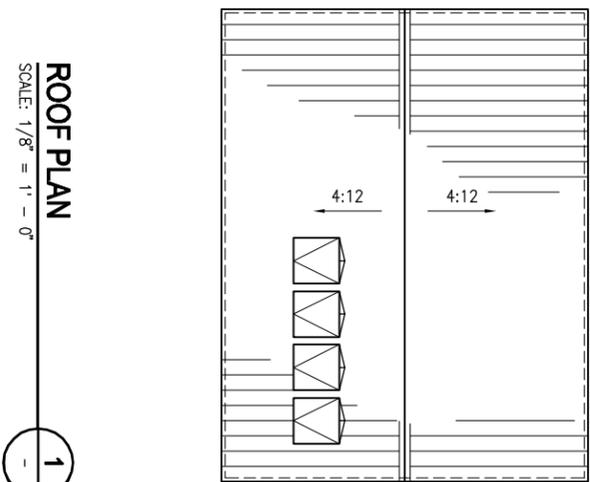
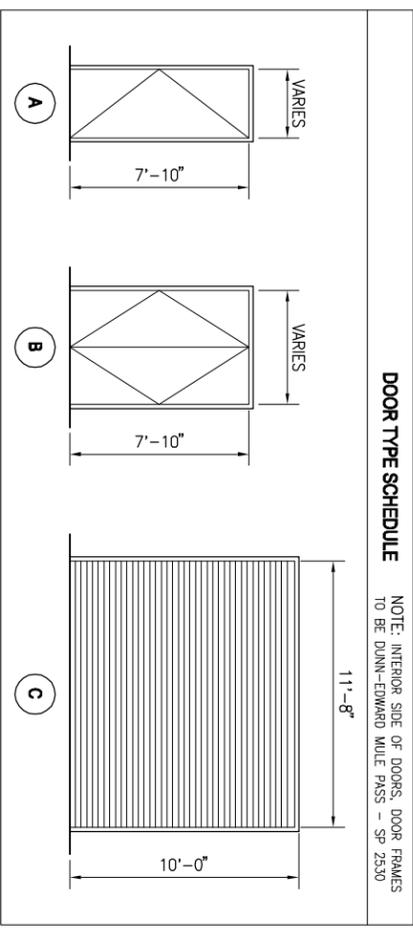
ROOM	NAME	FLOOR	BASE	WAINSCOT	HEIGHT	NORTH	EAST	SOUTH	WEST	CEILING	FINISH	HEIGHT
101	PUMP ROOM	CONC	-	-	-	MAT. CMU	MAT. CMU	MAT. CMU	MAT. CMU	-	VARIES	VARIES
102	HYDROCHLORIC ROOM	CONC	-	-	-	MAT. CMU	MAT. CMU	MAT. CMU	MAT. CMU	-	VARIES	VARIES
102	AMMONIA ROOM	CONC	-	-	-	MAT. CMU	MAT. CMU	MAT. CMU	MAT. CMU	-	VARIES	VARIES

MATERIAL AND COLOR TYPES

SYMBOL	MATERIAL	MANUFACTURER MODEL / COLOR
SG	SEMI-GLOSS PAINT - ALL INTERIOR METAL	MATCH COLOR OF FRAZEE CHROME GRAB BRIGGINS (SEE SPEC. SECTION 09900, SYSTEM 10 AND SYSTEM 52)

DOOR SCHEDULE

NUMBER	LOCATION	SIZE W X H	THICK.	TYPE	FACE	CORE	LABEL	HWDR	FRAME MATL.	HEAD	JAMB	THRESH.	COMMENTS
01	EXT	3'-10 1/2" x 10'	DBL. 1 3/4"	B	HM	POLY	-	2	HM	4/S-104	3/S-104	2/S-104	
02	EXT	2'-10 1/2" x 10'	DBL. 1 3/4"	B	HM	POLY	-	2	HM	4/S-104	3/S-104	2/S-104	
03	EXT	2'-10 1/2" x 10'	DBL. 1 3/4"	B	HM	POLY	-	2	HM	4/S-104	3/S-104	2/S-104	
04	EXT	12'-0 1/2" x 10'	CONC. 1 3/4"	C	HM	POLY	-	3	HM	4/S-104	3/S-104	2/S-104	SEE COILING DOORS SECTION 083323
05	EXT	3'-0 1/2" x 10'	CONC. 1 3/4"	A	HM	POLY	-	1	HM	4/S-104	3/S-104	2/S-104	



1

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
 Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**PUMP STATION - BUILDING SECTION
 AND DETAILS**



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

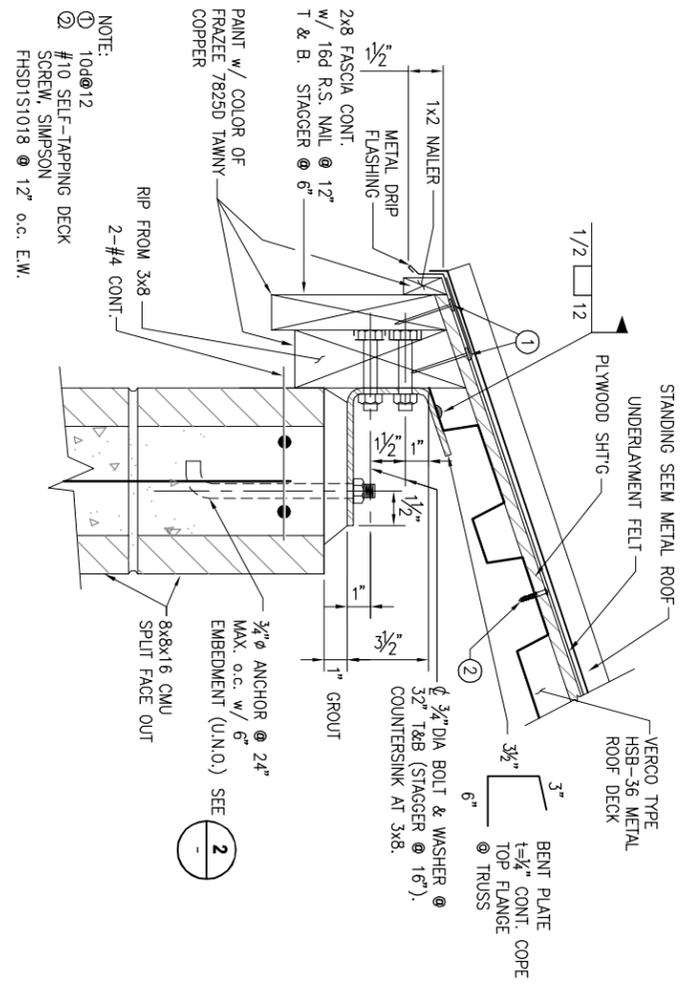


REV	DATE	DESCRIPTION	APPR

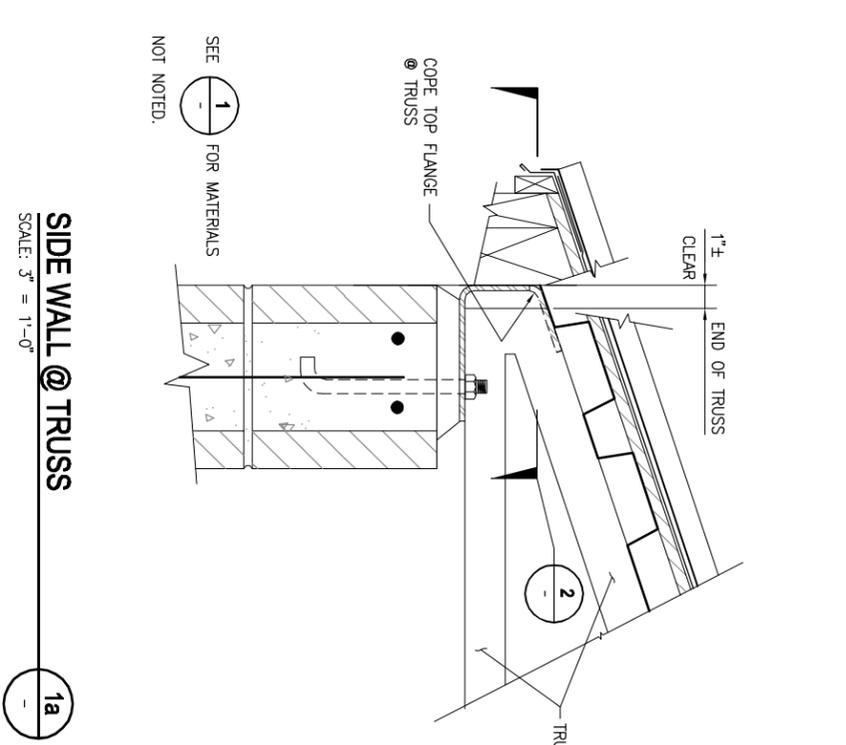
PROJECT ENGINEER	DESCRIPTION	REG NUMBER	EXP DATE
DAVID J SCHERSCHTEL	S1572		06/30/2011

S-104
 SHEET
 40 OF 95

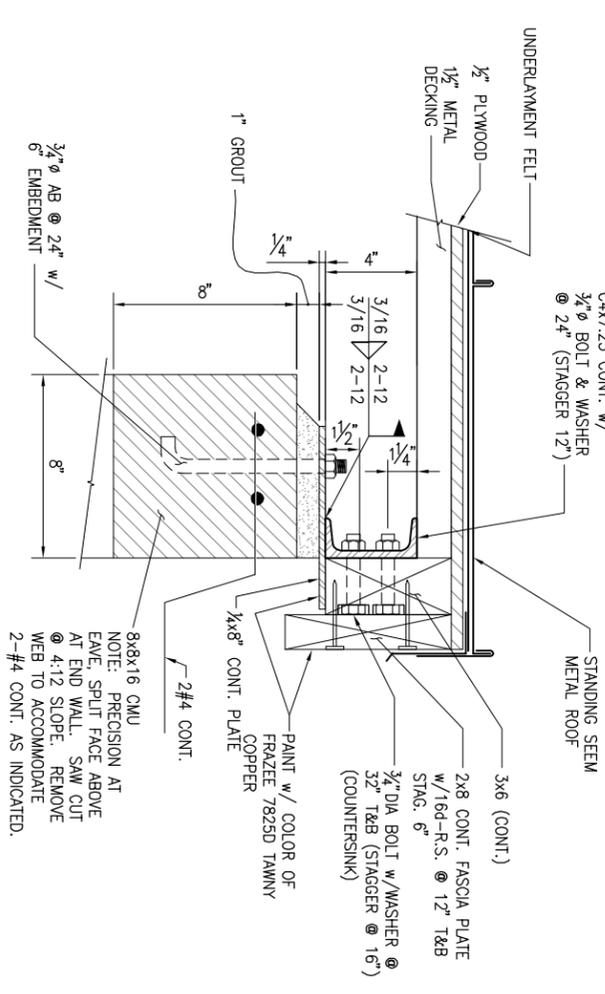
DESIGNED: BS
 DETAIL LEAD: TS
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.



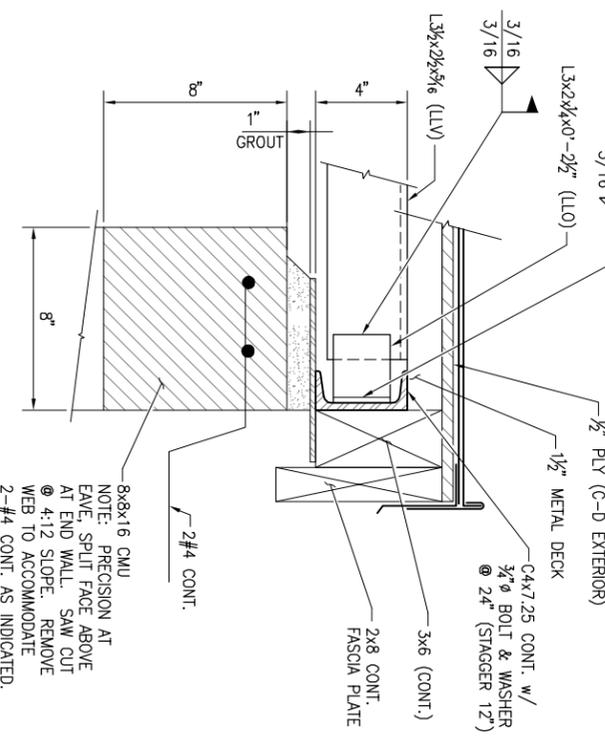
SIDE WALL
 SCALE: 3" = 1'-0"



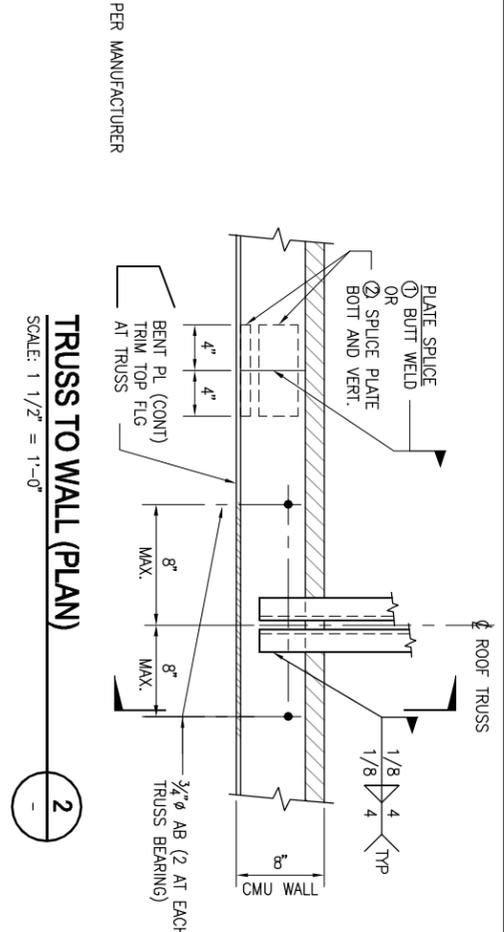
SIDE WALL @ TRUSS
 SCALE: 3" = 1'-0"



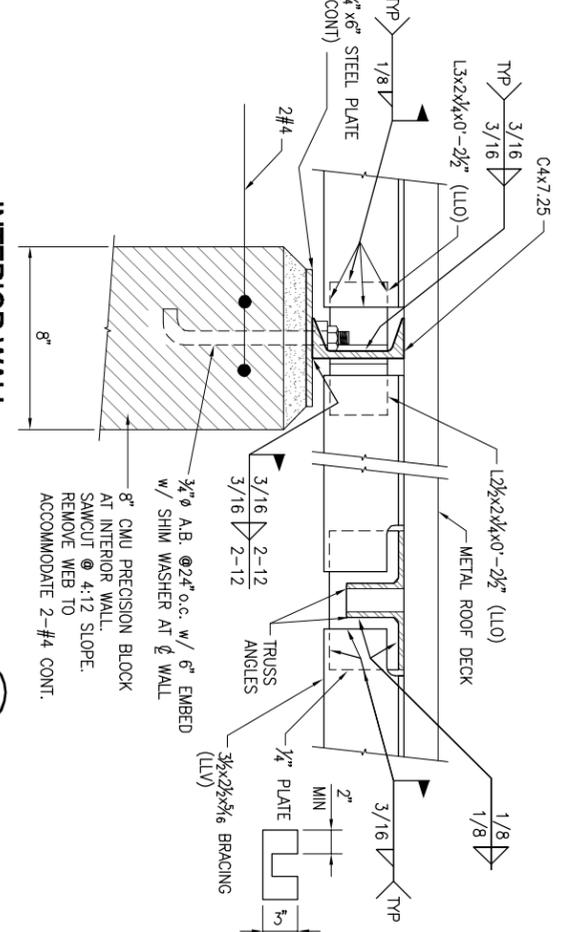
END WALL
 SCALE: 3" = 1'-0"



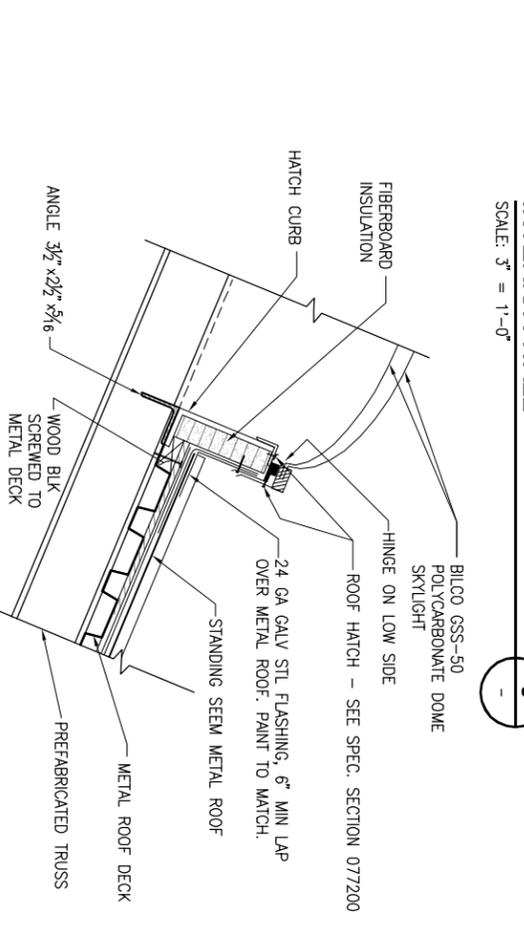
END WALL @ BRACING
 SCALE: 3" = 1'-0"



TRUSS TO WALL (PLAN)
 SCALE: 1 1/2" = 1'-0"



INTERIOR WALL
 SCALE: 3" = 1'-0"

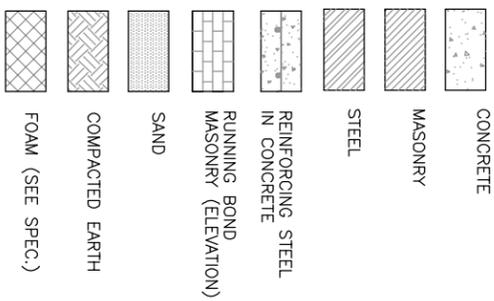


ROOF HATCH
 SCALE: 1 1/2" = 1'-0"

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

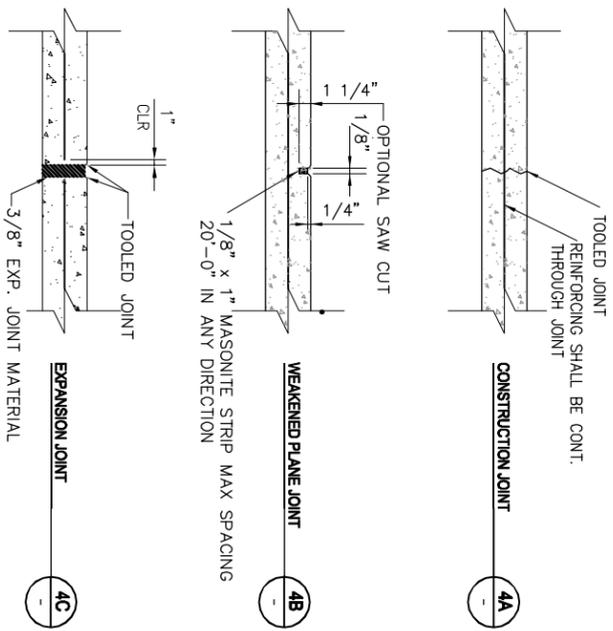


NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4 PUMP STATION - ROOF FRAMING DETAILS		AECOM AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805-542-9840 F 805-542-9990 www.aecom.com		REV DATE DESCRIPTION APPR
				PROJECT ENGINEER DAVID J. SCHERSCHTEL S1572 06/30/2011



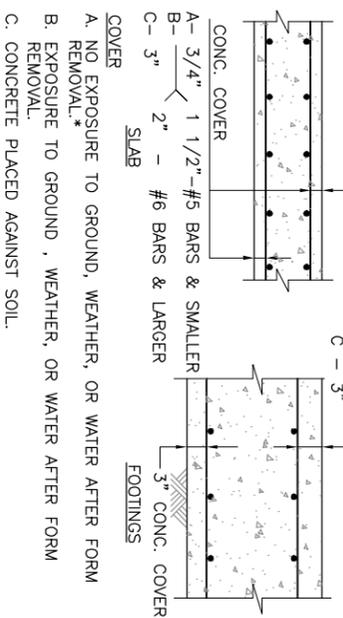
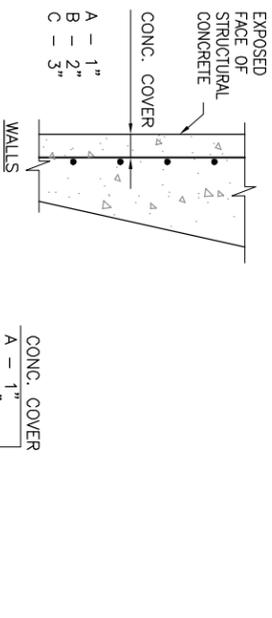
STRUCTURAL LEGEND
NOT TO SCALE

1



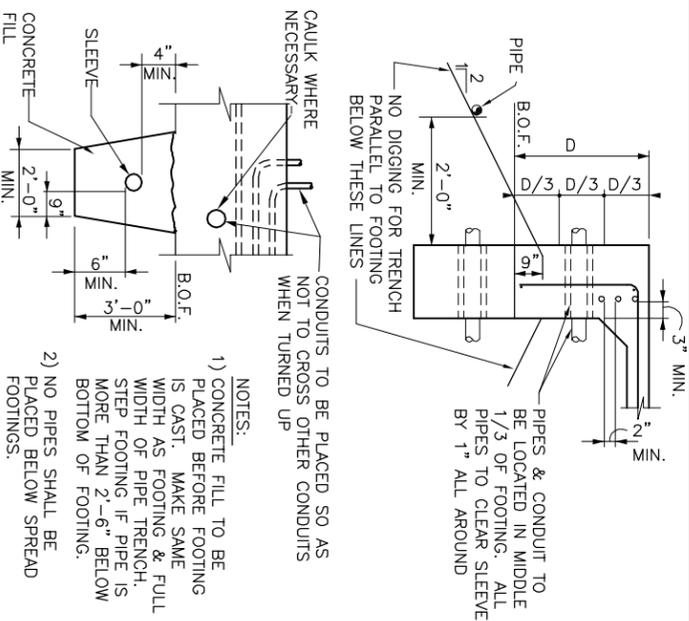
GROUND SLAB JOINTS
NOT TO SCALE

4



CONCRETE COVER OVER REINFORCING STEEL
NOT TO SCALE

2



CONCRETE FOOTING AT PIPES AND CONDUITS
NOT TO SCALE

5

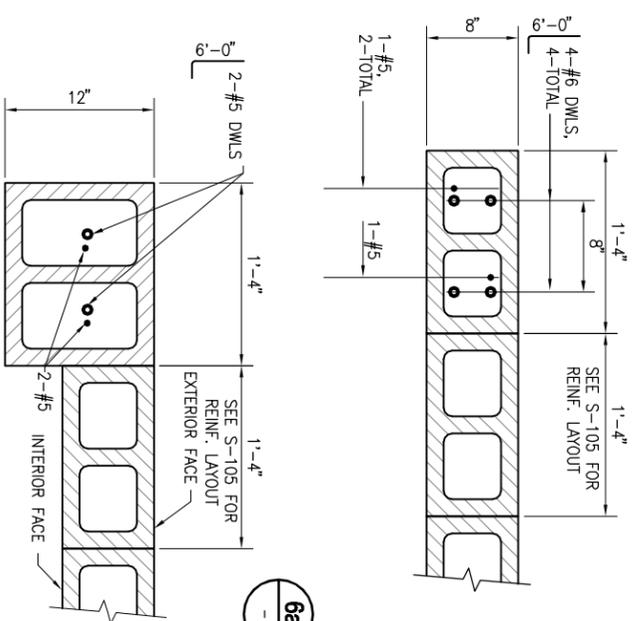
UNLESS OTHERWISE SHOWN, CONCRETE WALLS & SLABS SHALL BE REINFORCED AS FOLLOWS:
 #4 @ 12 E.W. CENTER OF 6" SECTIONS; #5 @ 12 E.W. CENTER OF 8" SECTION; #4 @ 12 E.W.F. OF 10" SECTION; #5 @ 12 E.W.F. OF 12" SECTION; SINGLE MAT REINFORCING SHALL BE CENTER OF SECTION UNLESS SHOWN OTHERWISE.
 UNLESS NOTED OTHERWISE ALL WALL REINFORCING BARS SHALL BE CONT AROUND CORNERS & THROUGH COLUMNS OR PILASTERS; ALL REINFORCEMENT LAPS, UNLESS NOTED OTHERWISE, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

COVER	BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
* TOP	OTHER BARS	24	36	48	78	96	117	190	165	165
* TOP	OTHER BARS	19	28	37	60	74	90	108	127	127
* TOP	OTHER BARS	20	29	40	64	80	98	119	141	141
* TOP	OTHER BARS	16	22	31	50	62	76	92	108	108
* TOP	OTHER BARS	20	24	29	48	60	74	91	109	109
* TOP	OTHER BARS	16	19	22	37	47	57	70	84	84
* TOP	OTHER BARS	20	24	29	42	48	60	74	89	89
* TOP	OTHER BARS	16	19	22	33	37	46	57	68	68

* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS IN ANY SINGLE POUR.

REINFORCING DETAILS
NOT TO SCALE

3



JAMB REINFORCING
NOT TO SCALE

6b

STRUCTURAL NOTES

- GENERAL
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
WHERE CONSTRUCTION DETAILS ARE NOT INDICATED OR NOTED FOR ANY PART OF THE WORK, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK AND TYPICAL DETAILS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.
CONTRACTOR SHALL FOLLOW THE PROVISIONS OF THE 1997 UNIFORM BUILDING CODE, WITH CALIFORNIA AMENDMENTS.
- FOUNDATIONS
REFER TO CONSTRUCTION SPECIFICATIONS FOR EARTHWORK AND FOUNDATION PREPARATION.

- REINFORCED CONCRETE
CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS OF 4000psi.
CEMENT SHALL BE PORTLAND CEMENT TYPE II/V.
THE MAXIMUM NOMINAL AGGREGATE SIZE SHALL BE 3/4" FOR SLAB, 1" FOR FOOTINGS.
THE MAXIMUM SLUMP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON DRAWINGS. ADDITIONAL JOINTS REQUIRED FOR CONSTRUCTION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.
BARS SHALL BE CUT AND BENT IN ACCORDANCE WITH THE PROVISIONS OF ACI 318.
PROVIDE 3/4" CHAMFER AT ALL EXPOSED CONCRETE EDGES AND CORNERS U.O.N.
UNLESS OTHERWISE DETAILED, PROVIDE 3/8" DIAMETER SPACER BARS OR TIES AT 24" ON CENTER TO KEEP REINFORCING IN PLACE.
NO PIPE OR DUCTS SHALL BE PLACED IN CONCRETE SLABS OR FOOTINGS UNLESS SPECIFICALLY DETAILED.
ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION MAY BE ADDED AT NO COST TO THE OWNER AND AS PERMITTED BY OWNER'S REPRESENTATIVE.
SECURE ITEMS TO BE EMBEDDED IN CONCRETE PRIOR TO PLACING CONCRETE.
MINIMUM REINFORCING FOR ALL SLABS IS #4@12" PER S-105 EW PLACED AT THE OF THE SLAB.
- MASONRY
CONCRETE MASONRY UNITS: ASTM C-90, MEDIUM WEIGHT.
GROUT ALL CELLS. SPECIAL INSPECTION REQUIRED.
SUPPORT UNITS UNTIL GROUT IN UNITS CELLS HAS OBTAINED THE SPECIFIED STRENGTH.
TIE AND SET EMBEDDED ANCHORS IN PLACE PRIOR TO GROUTING WALL.
MINIMUM LAP LENGTH FOR REBAR IS 48 BAR DIAMETERS.
- STRUCTURAL AND MISCELLANEOUS STEEL
MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
W SHAPES ASTM 992
OTHER SHAPES, PLATES, ETC. ASTM A36
MACHINE BOLTS ASTM A307
BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT.
ALL WASHERS ON ANCHOR BOLTS SHALL BE 2 1/4" OD MIN.
DESIGN DATA
SEISMIC
DI = 15 PSF
LL = 20 PSF
SOS = 0.31
SDI = 0.405
SITE CLASS C
SDC D
S1 = 0.409
OC = III
IP = 1.5
R = 5
CS = 0.18W
DIAPHRAGM CS = 0.356W
T_o = 0.2
- LUMBER
SEE SPECIFICATIONS AND DRAWINGS (PLYWOOD).

FOR PRELIMINARY USE ONLY

AECOM WATER
NOT TO BE USED FOR CONSTRUCTION
DATE: JUNE 18, 2010
90% PRELIMINARY DESIGN PLANSET



NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
PUMP STATION - DETAILS

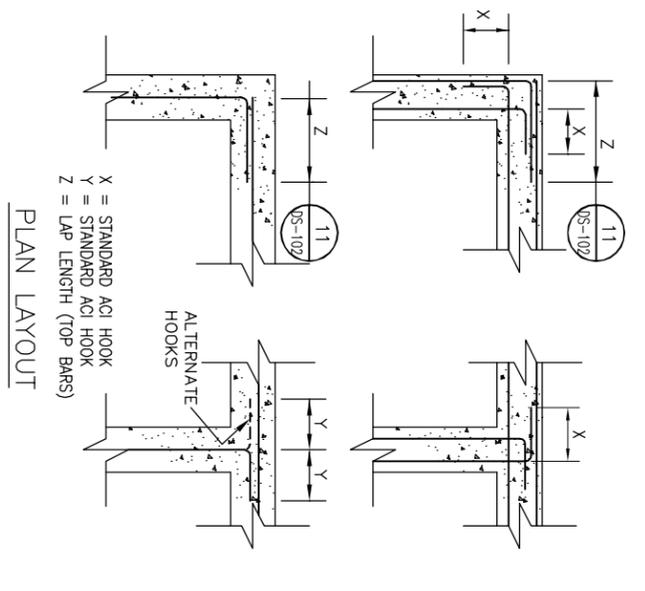


AECOM
AECOM USA, Inc.
1501 Quail Street
Newport Beach, California 92658
T 949-476-3300 F 949-721-7482
www.aecom.com

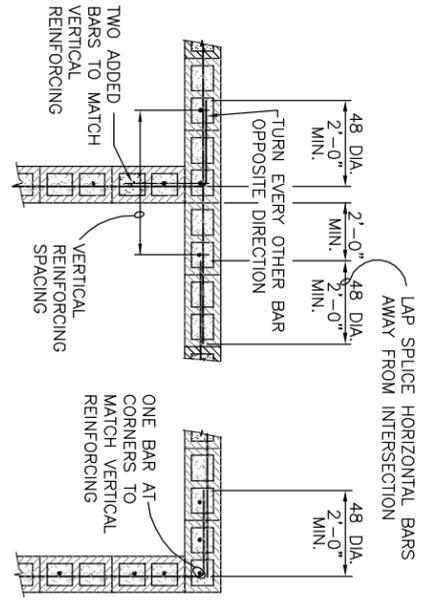
PROFESSIONAL ENGINEER
DAVID J. SCHERSCHTEL
No. S1572
Exp. 6/30/11
STRUCTURAL
STATE OF CALIFORNIA

REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER	DATE	DESCRIPTION	APPR
DAVID J. SCHERSCHTEL		S1572	06/30/2011

DESIGNED: DS
DETAIL LEB: TS
CHECKED:
APPROVED:
DATE: JUNE 2010
AECOM PROJECT NO. 60061295
NCSD PROJECT NO.
CADD STPS.
BY: L/AECOM
DS-101
SHEET
43 OF 95



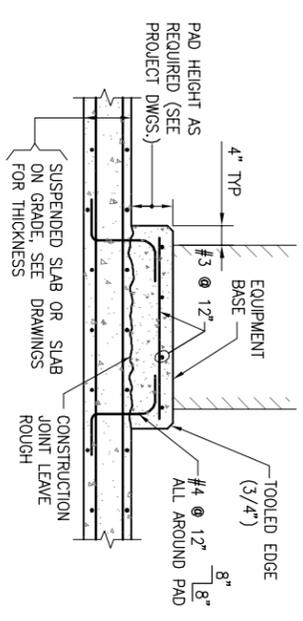
7



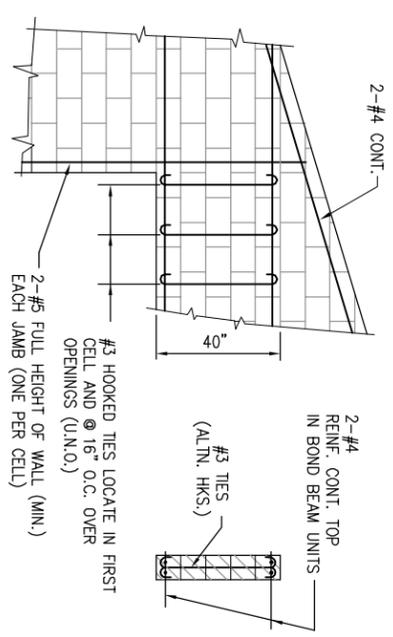
11

EQUIPMENT PAD NOTES

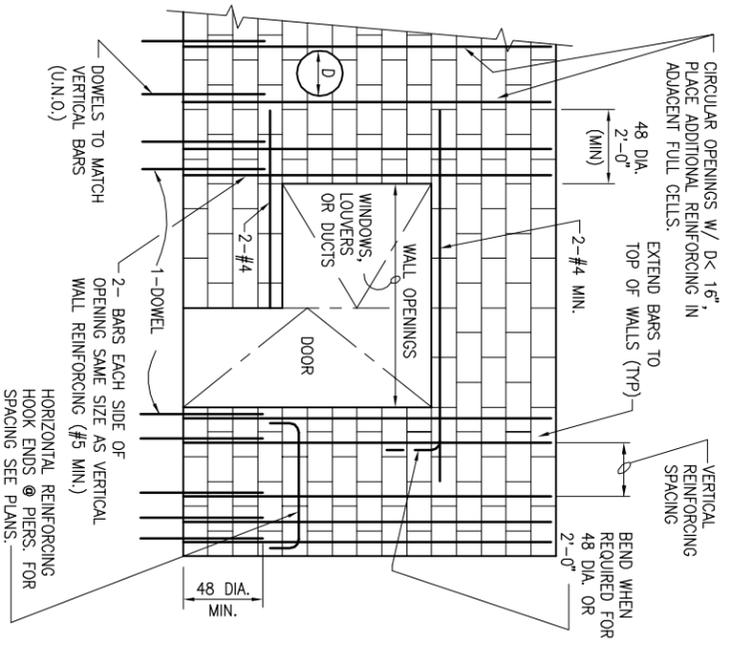
1. THE MINIMUM PAD SIZE SHALL BE AS INDICATED OR SHOWN ON THE DRAWINGS OR AS DETERMINED BY THE EQUIPMENT MANUFACTURER, WHICHEVER IS GREATER.
2. THE SIZE, NUMBER, TYPE, LOCATION AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER. HOLD CONCRETE ANCHOR BOLTS IN POSITION WITH A TEMPLATE WHILE PAD IS BEING PLACED.
3. EQUIPMENT BASSES SHALL BE INSTALLED LEVEL UNLESS NOTED OTHERWISE.



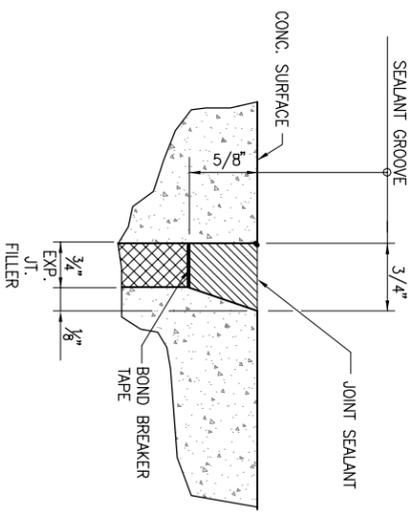
8



12

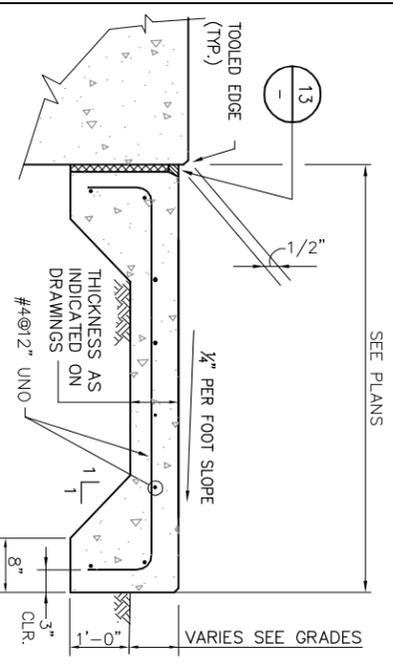


9

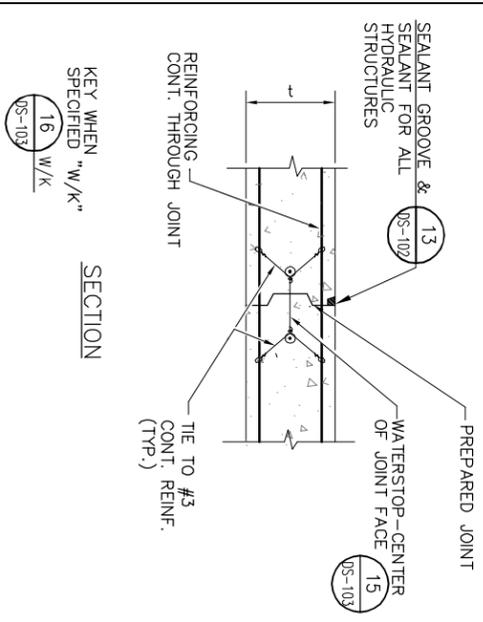


13

- NOTE**
1. SEE SPECIFICATIONS FOR SURFACE PREPARATION.
 2. PRIME VERTICAL EDGES.



10



14

EXPANSION JOINT
 SEE SPECIFICATIONS

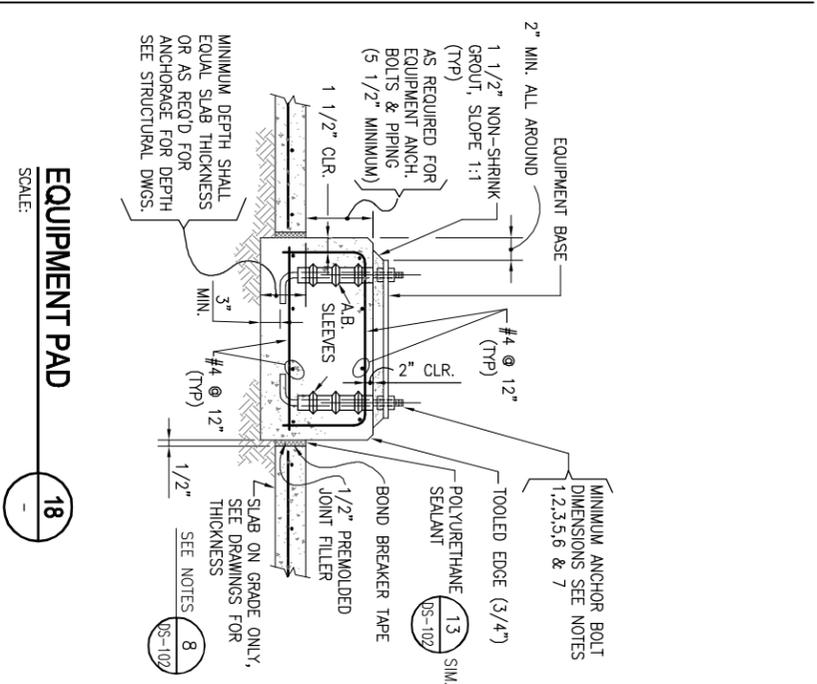
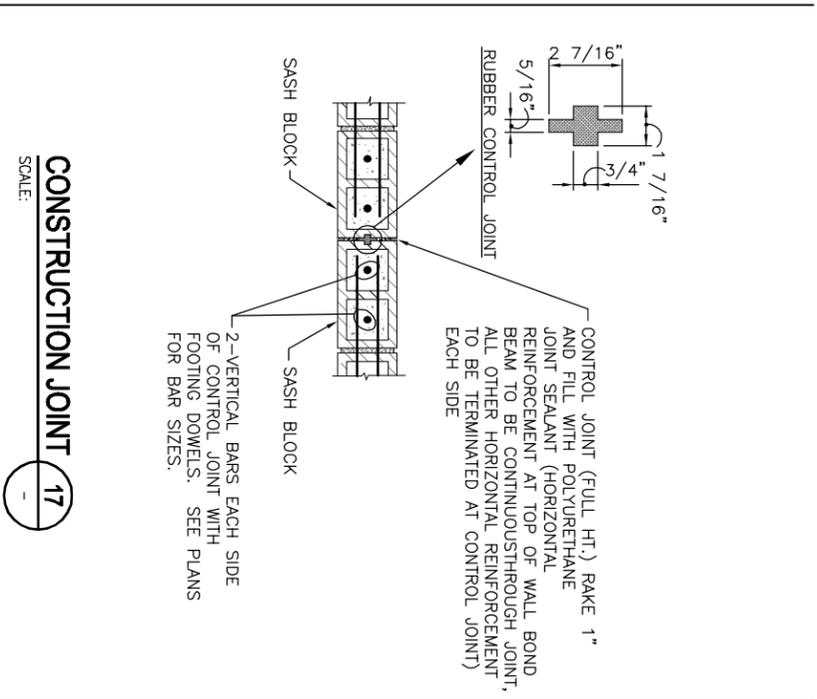
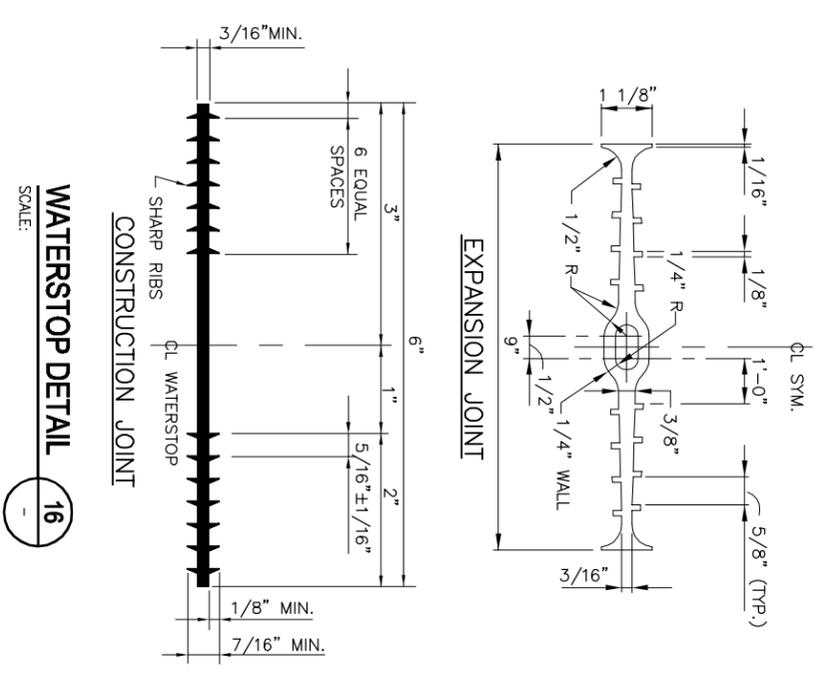
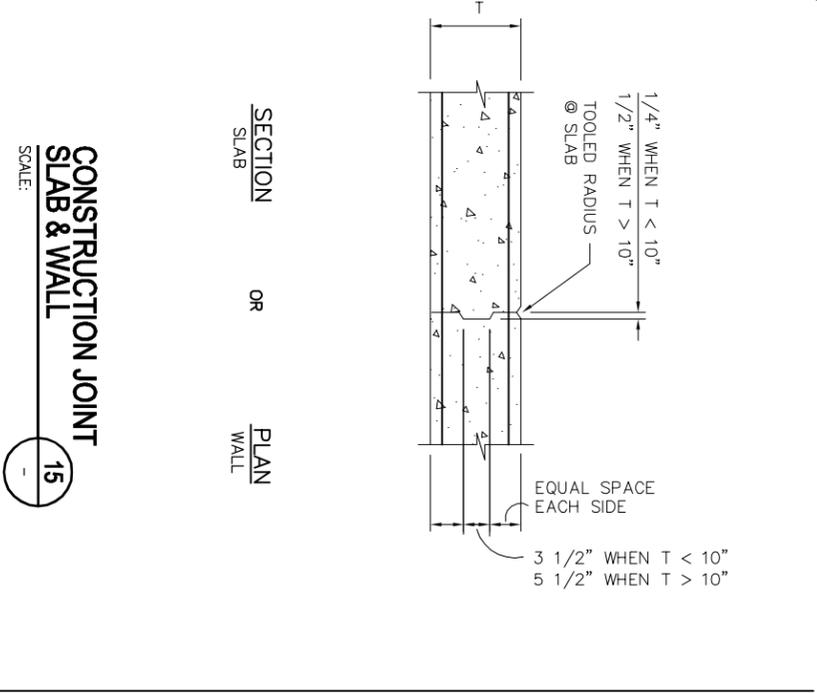
CONSTRUCTION JOINT SLAB & FOOTINGS
 NOT TO SCALE

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
 Call before you dig.
 811
 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4 PUMP STATION - FOUNDATION DETAILS			AECOM AECOM USA, Inc. 5001 E. Commercenter Dr. Suite 100 Bakersfield, California 93309 T 661-325-7253 F 661-395-0359 www.aecom.com		<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	APPR				
REV	DATE	DESCRIPTION	APPR										



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

AECOM WATER
 Know what's Below.
 Call before you dig.
 811
 IF THIS PAD DOES NOT MEASURE 1', THEN DRAWING IS NOT TO FULL SCALE

DESIGNED: JH
DETAIL LEAD: JPF
CHECKED:
APPROVED:
DATE: JUNE 2010
AECOM PROJECT NO. 60061295
NCSD PROJECT NO.
CADD STDS. BY/VE/AECOM
DS-103 SHEET 45 OF 95

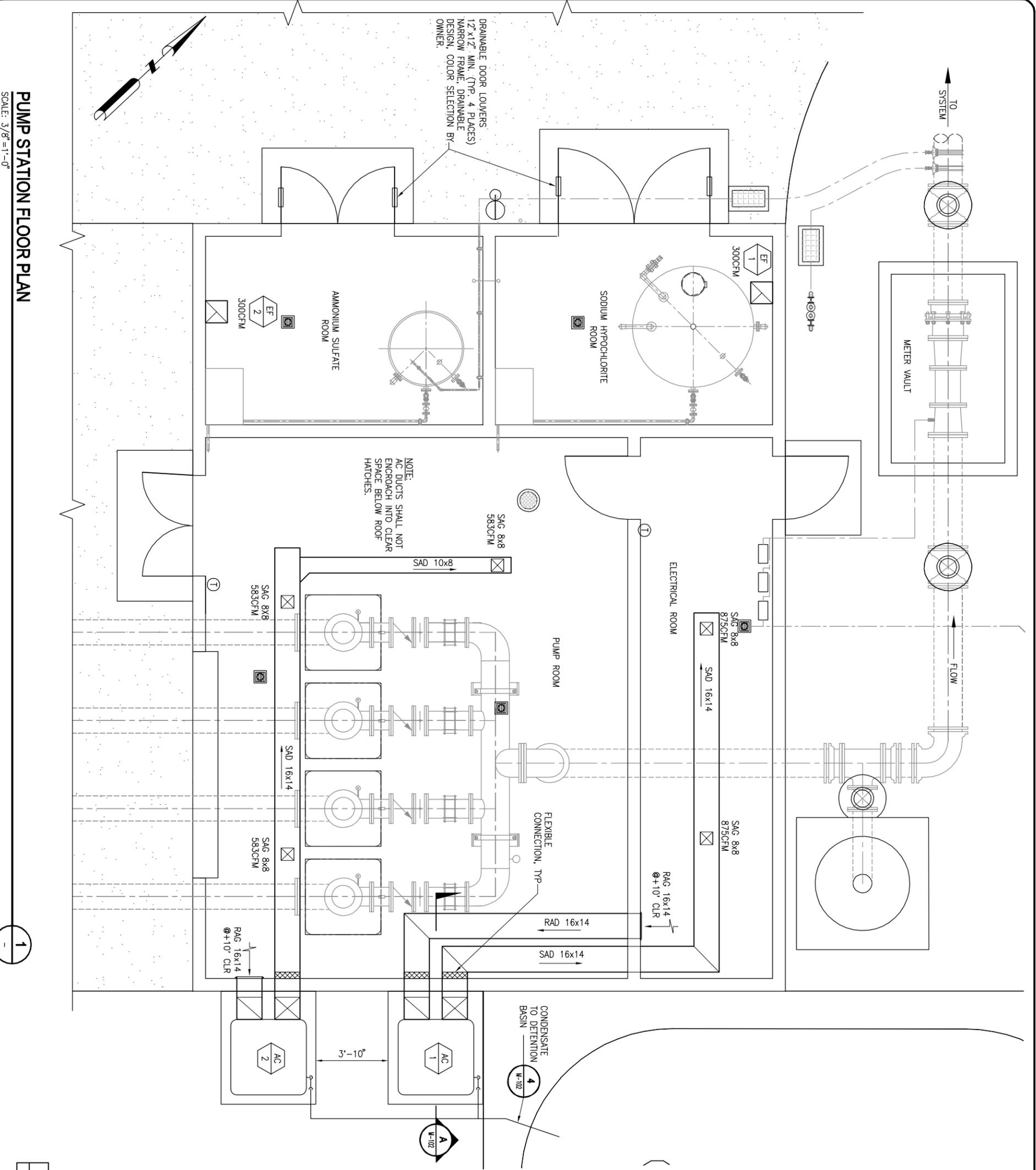
NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
PUMP STATION - DETAILS



AECOM
 AECOM USA, Inc.
 5001 E. Commercenter Dr. Suite 100
 Bakersfield, California 93309
 T 661-325-7253 F 661-395-0359
 www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
 DAVID J. SCHERSCHEL
 No. S1572
 Exp. 6/30/11
 STRUCTURAL
 STATE OF CALIFORNIA

REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER	DATE	DESCRIPTION	APPR
DAVID J. SCHERSCHEL		S1572	06/30/2011



- EQUIPMENT SCHEDULE**
- AC 1: 5-TON PACKAGED ELECTRIC HEAT PUMP, 460V, 3PH, 60Hz SUPPLY, EER=11.1 MIN, 1500 SCFM COOLING, OPERATING WEIGHT APPROXIMATELY 600 LB., CARRIER 5070QA06 OR EQUAL.
 - AC 2: ACCESSORIES: PROGRAMMABLE SET-BACK THERMOSTAT FOR ROOM CONTROL CONVENIENCE ELECTRICAL OUTLET ON OUTDOOR UNIT ECONOMIZER WITH RAIN HOOD.
- ELECTRICAL DATA:**
- 460 VOLT, 3 PHASE, 60 HZ
 - NO ELECTRIC HEAT OPTION
 - MCA = 19
 - MOCP = 25
- MECHANICAL NOTES**
- PROVIDE COMPLETE AIR CONDITIONING SYSTEM TO COOL THE PUMP ROOM, AND THE ELECTRICAL ROOM, INCLUDING ALL DUCTWORK, INSULATION, CONTROLS, AND HEAT PUMP.
 - ALL SYSTEMS SHALL MEET CURRENT LOCAL CODES AND ORDINANCES, AND BE APPROVED BY THE GOVERNING INSPECTION GENECES. OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES.
 - DUCTWORK SHALL BE GALVANIZED STEEL FABRICATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE AND SMACNA DUCT CONSTRUCTION MANUAL, LATEST VERSION.
 - RECTANGULAR DUCTWORK HAS BEEN SHOWN ON THE DRAWINGS FOR SIMPLICITY. HOWEVER, THE CONTRACTOR MAY CHOOSE TO USE ROUND OR RECTANGULAR DUCT WITH EQUAL OR GREATER CROSS SECTIONAL AREA WHERE IT IS APPROPRIATE FOR CONSTRUCTION.
 - A FIELD SUPPLIED 3/4-INCH CONDENSATE DRAIN WITH 2-INCH TRAP SHALL BE USED TO TAKE THE CONDENSATE LINE TO DETENTION BASIN.
 - ALL SQUARE OR RECTANGULAR DUCT TURNS MORE THAN 45 DEGREES SHALL INCLUDE AIR FOIL TURNING VANES LONG RADIUS ELBOWS MAY ALSO BE USED. ALL DUCT TRANSITIONS SHALL BE AS SMOOTH AS POSSIBLE WITH PROPORTIONAL SPLITS.
 - ALL DUCT TRANSVERSE JOINTS SHALL BE TAPED AIR-TIGHT WITH 4-INCH WIDE CANVAS AND ARABOL.
 - SYSTEMS TO BE BALANCED FOR PROPER AIR DELIVERY AND DISTRIBUTION OF HEATING AND COOLING.
 - PROVIDE ALL CONTROLS, THERMOSTATS, RELAYS AND CONTACTORS NECESSARY FOR PROPER AUTOMATIC OPERATION OF THE SYSTEMS. THERMOSTATS SHALL BE TITLE 24 APPROVED.
 - LOUVERS TO BE GREENHECK ESD DRAINABLE BLADE OR APPROVED EQUAL. COLOR SELECTION BY OWNER.
 - VERIFY VOLTAGE AND PHASE AVAILABLE ON JOBSITE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010

90% PRELIMINARY DESIGN PLANS

AECOM WATER

Know what's Below.
 Call before you dig.

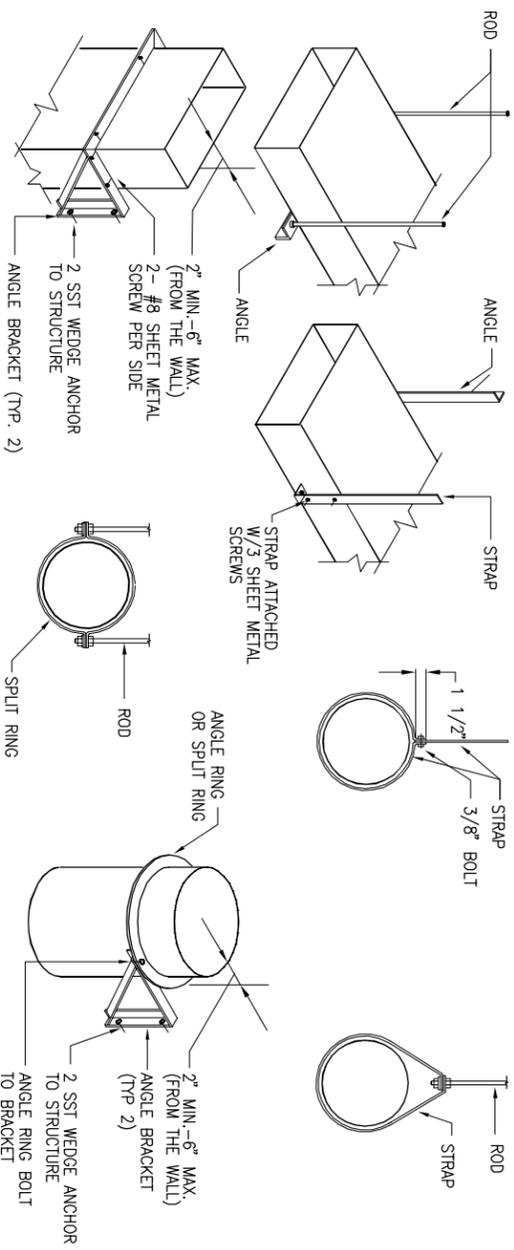
811

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4		AECOM													
HVAC PLAN		AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com													
DESIGNED: JB CHECKED: VSK APPROVED: VSK DATE: JUNE 2010 AECOM PROJECT NO.: 60061295 NCSO PROJECT NO.:	CADW STDS: BNYL/AECOM M-101 SHEET 46 OF 95	<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	APPR	1				<table border="1"> <thead> <tr> <th>PROJECT ENGINEER</th> <th>EXP DATE</th> </tr> </thead> <tbody> <tr> <td>JAN GARCIA</td> <td></td> </tr> </tbody> </table>	PROJECT ENGINEER	EXP DATE	JAN GARCIA	
REV	DATE	DESCRIPTION	APPR												
1															
PROJECT ENGINEER	EXP DATE														
JAN GARCIA															

DUCT DIMENSIONS ROUND & MAXIMUM RECTANGULAR	ROD SIZE	ANGLE SIZE	STRAP SIZE	HANGER SPACING		WEDGE ANCHOR SIZE	ANGLE BRACKET SIZE
				RECOMMENDED	MAXIMUM		
0 - 18"	3/8"	1"x1"x1/8"	1 1/2"x1/4 GA	6'-0"	10'-0"	3/8"	1 1/2"x1 1/2"x3/16"
0 - 24"	1/2"	1 1/2"x1 1/2"x3/16"	2"x1/8"	6'-0"	10'-0"	1/2"	2"x2"x1/4"
19" - 48"							
25" - 60"							

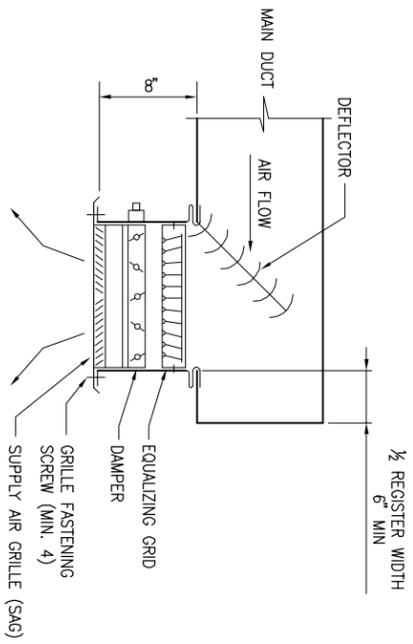
NOTE: ALL BOLTS, WASHERS, NUTS, SCREWS, AND ANCHORS SHALL BE ST. STEEL. STRAPS, RINGS AND ANGLES FOR THE BRACKETS, HANGERS OR SUPPORTS SHALL BE ALUMINUM.



DUCT HANGERS

SCALE: NOT TO SCALE

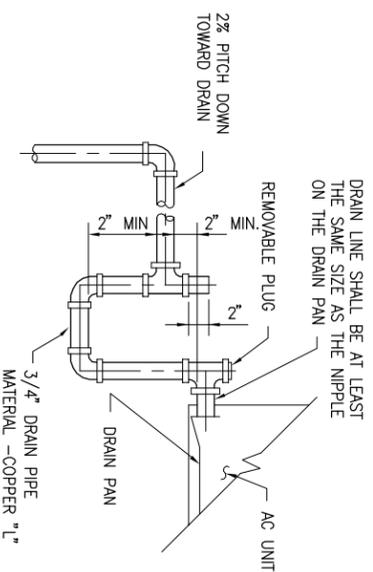
1



SUPPLY AIR REGISTER

SCALE: NOT TO SCALE

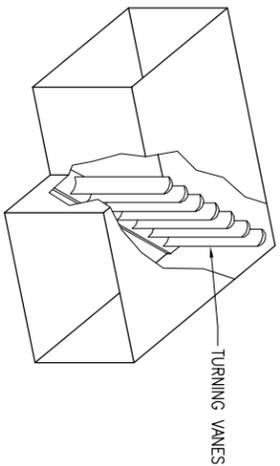
2



CONDENSATE TRAP

SCALE: NOT TO SCALE

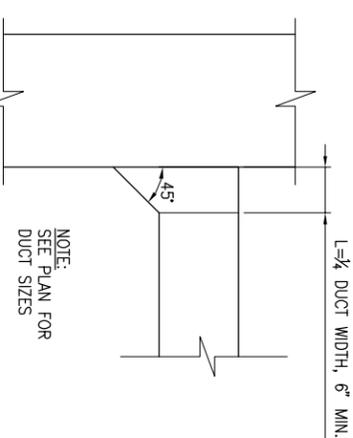
4



TYPICAL DUCT ELBOW

SCALE: NOT TO SCALE

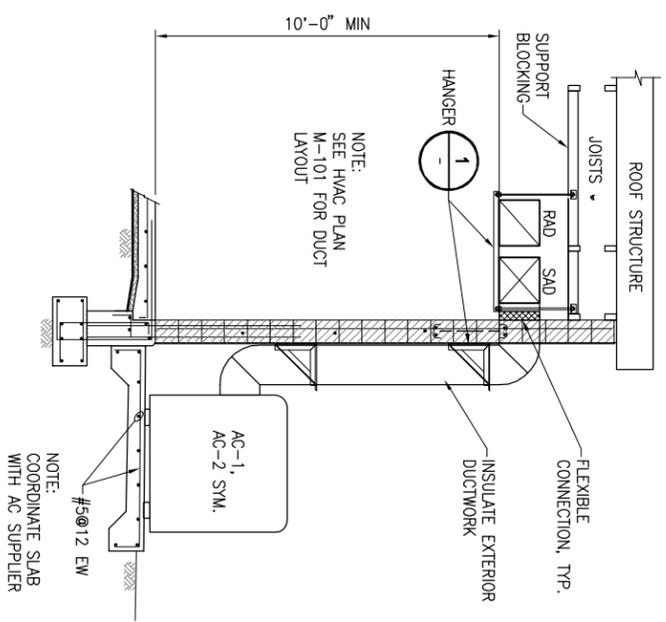
3



SIDE ENTRY

SCALE: NOT TO SCALE

6



TYP SECTION

SCALE: 3/8"=1'-0"

A

AECOM WATER
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



DESIGNED: JB	DATE: JUNE 2010
CHECKED: VEK	APPROVED:
DATE: JUNE 2010	AECOM PROJECT NO. 60061295
NCSD PROJECT NO.	
CADD STPS. BY: EACOM	
M-102	
SHEET	
47 OF 95	

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

HVAC DETAILS



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

REV	DATE	DESCRIPTION	REG NUMBER	APPR
PROJECT ENGINEER				
JAN GARCIA				

CEILING	WALL	SYMBOL DESCRIPTION
		HIGH PRESSURE SODIUM FIXTURE
		FLUORESCENT FIXTURE - CIRCLE INDICATES OUTLET
		SINGLE POLE LIGHTING SWITCH
		DUPLEX RECEPTACLE
		THERMOSTAT OUTLET + 66" UON
		JUNCTION BOX
		3-WAY LIGHTING SWITCH
		MANUAL STARTER
		CONDUIT REFERENCE
		SMOKE DETECTOR
		HEAT DETECTOR
		EXIT/EMERGENCY LIGHT
		RIGID CONDUIT IN SLAB OR UNDER GROUND
		RIGID CONDUIT EXPOSED UNDER CEILING AND ON WALLS
		GROUNDING CONDUCTOR 30" BELOW GRADE
		HOME-RUN TO PANELBOARD, CIRCUITS 1 & 3
		CONDUIT BENDS TOWARD OBSERVER, COORDINATE LOCATION WITH EQUIPMENT
		CONDUIT BENDS AWAY FROM OBSERVER, COORDINATE LOCATION WITH EQUIPMENT
		FLEXIBLE CONDUIT CONNECTION
		FIXTURE TYPE 'A', SEE FIXTURE SCHEDULE
		PANELBOARD
		30A/3P DISCONNECT SWITCH
		MANUAL STARTER
		CONDUIT BODY
		+ 18" UON
		+ 48" UON
		WIRES PER CONDUIT SCHEDULE, OR AS REQUIRED

NORMALLY OPEN	NORMALLY CLOSED	SYMBOL DESCRIPTION
		CONTACT
		TIMED CONTACT. CONTACT ACTION RETARDED ON ENERGIZATION
		TIMED CONTACT. CONTACT ACTION RETARDED ON DEENERGIZATION
		PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT
		SELECTOR SWITCH
		PILOT LIGHT - PUSH-TO-TEST TYPE R = RED, W = WHITE, G = GREEN, A = AMBER
		RELAY
		TIME DELAY RELAY, TODD - TIME DELAY ON DEENERGIZATION
		SOLENOID OPERATED VALVE
		ELAPSED TIME METER
		FUSE
		CONTROL POWER TRANSFORMER
		GROUND
		WIRING BY EQUIPMENT MANUFACTURER, UON
		FIELD WIRING, UON
		WIRE TERMINAL

DEVICE	SYMBOL DESCRIPTION
	CONDUIT REFERENCE
	UTILITY METER
	DRY-TYPE TRANSFORMER
	CIRCUIT BREAKER, 3P - 3 POLE, MCP - MOTOR CIRCUIT PROTECTOR
	MOTOR, 5 HORSEPOWER
	GROUND
	TRANSIENT VOLTAGE SUPPRESSOR
	CONTACTOR
	FUSE
	DISCONNECT SWITCH
	CONTROL POWER TRANSFORMER
	CURRENT TRANSFORMER
	VARIABLE FREQUENCY DRIVE
	POWER QUALITY MONITOR

NOTES

1. NOT ALL SYMBOLS AND OR ABBREVIATIONS INCLUDED IN THIS SHEET ARE NECESSARILY USED IN THIS PROJECT.
2. WHERE CONDUIT IS NOT CALLED OUT WITH A CONDUIT REFERENCE, AND WIRE QUANTITY IN CONDUITS IS NOT SHOWN, PROVIDE #12 WIRES, QUANTITY AS REQUIRED, INCLUDING GROUNDING, UNLESS OTHERWISE NOTED, OR UNLESS CONDUIT IS LABELED 'C' IN WHICH CASE CONDUIT SHALL BE PROVIDED WITH PULL ROPE FOR FUTURE INSTALLATION OF CONDUCTORS.
3. BOND MAGNETIC FLOW SENSOR AND ADJOINING PIPES PER MANUFACTURER'S RECOMMENDED METHOD, BASED ON PIPE TYPE AND CATHODIC PROTECTION OF PIPES WHERE APPLICABLE.
4. CONDUIT STUB-UPS SERVING EQUIPMENT SUCH AS MOTORS SHALL BE LOCATED AS CLOSE TO THE EQUIPMENT AS PRACTICABLE. EXTEND STUBBED-UP CONDUITS TO HEIGHTS THAT WOULD LIMIT FLEX CONDUIT LENGTHS TO 5 FEET. USE UNISTRUT SUPPORTS FOR THE STUBBED-UP CONDUIT AS REQUIRED BY NEC.
5. RECORD DRAWINGS SHALL SHOW OFFSET DISTANCES OF UNDERGROUND CONDUITS FROM FIXED ABOVE-GRADE OBJECTS SUCH AS FENCES, BUILDINGS, OR FROM UNDERGROUND MAJOR PIPING.

ELECTRICAL ABBREVIATIONS

A	AMPERES, ANALOG
AC	ALTERNATING CURRENT
AICS	AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
BC	BARE COPPER
BV	BAYVIEW
C	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER
CW	COOL WHITE
DC	DIRECT CURRENT
ELEV	ELEVATION
ETM	ELAPSED TIME METER
EXIST	EXISTING
F	FLUORESCENT
FT	FLOW TRANSMITTER
FLEX	FLEXIBLE
G, GND	GROUND
GF	GROUND FAULT INTERRUPTER
H	HEIGHT
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LIT	LEVEL INDICATOR TRANSMITTER
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MV	MEDIUM VOLTAGE
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
O/H	OVERHEAD
OLS	MOTOR OVERLOAD CONTACTS
P	POLE
PB	PUSHBUTTON, PULLBOX
PH	PHASE FAILURE MONITOR
PH	PHASE
POC	POINT OF CONNECTION
PSHL	PRESSURE SWITCH HIGH/LOW
PSL	PRESSURE SWITCH LOW
PIT	PRESSURE TRANSMITTER
SCCR	SHORT CIRCUIT CURRENT RATING
SV	SOLENOID OPERATED VALVE
SSRS	SOLID STATE REDUCED VOLTAGE STARTER
SWBD	SWITCHBOARD
T	TELEPHONE
TEL	TELEMETRY
TSP	TWISTED SHIELDED PAIR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT, WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER
ZS	LIMIT SWITCH

UTILITY CONTACTS
COMPANY: PG&E
ADDRESS: 2445 SKYWAY DR. SANTA MARIA, CA. 93455
CONTACT: MIKE ORBAN TEL: (805) 346-2225

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

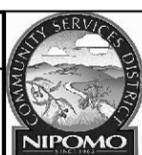
AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's Below.
 Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

ELECTRICAL LEGEND AND ABBREVIATIONS



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

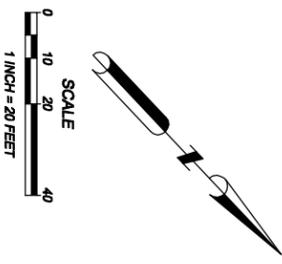
REGISTERED PROFESSIONAL ENGINEER
 PARSEKH L. TOPJIAN
 No. E 012846
 Exp. 9/30/10
 ELECTRICAL
 STATE OF CALIFORNIA

REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
PARSEKH TOPJIAN		E012846	09/30/2010

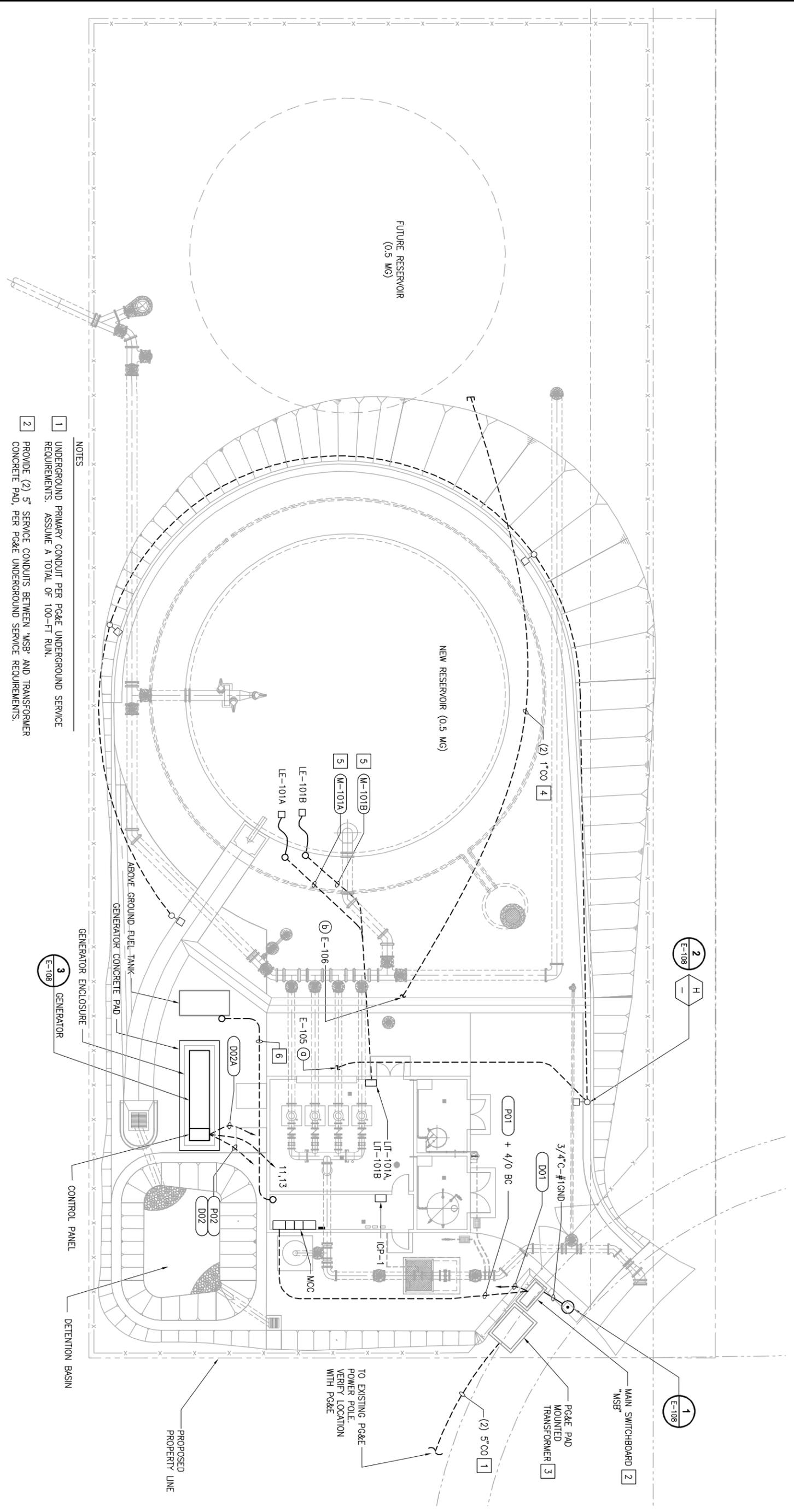
E-101
 SHEET
 48 OF 95

CSDD STDS.
 BNYL/AECOM

DATE: JUNE 2010
 APPROVED: [Signature]
 CHECKED: [Signature]
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.



- NOTES**
- 1 UNDERGROUND PRIMARY CONDUIT PER PG&E UNDERGROUND SERVICE REQUIREMENTS. ASSUME A TOTAL OF 100-FT RUN.
 - 2 PROVIDE (2) 5" SERVICE CONDUITS BETWEEN 'MSB' AND TRANSFORMER CONCRETE PAD, PER PG&E UNDERGROUND SERVICE REQUIREMENTS.
 - 3 PRECAST CONCRETE PAD FOR UTILITY TRANSFORMER WITH GROUNDING SYSTEM AND PROTECTIVE BARRIERS, ALL PER PG&E UNDERGROUND SERVICE REQUIREMENTS. ALLOW PG&E REQUIRED CLEARANCES AROUND XEMR.
 - 4 FOR FUTURE LE @ FUTURE RESERVOIR.
 - 5 USE PVC-COATED RS CONDUIT.
 - 6 1" CO FOR FUTURE MONITORING.



ELECTRICAL SITE PLAN
 SCALE: 1" = 10'-0"

1

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

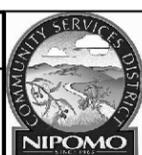
AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
 Call before you dig.

 IF THIS PLAN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

RESERVOIR ELECTRICAL SITE PLAN

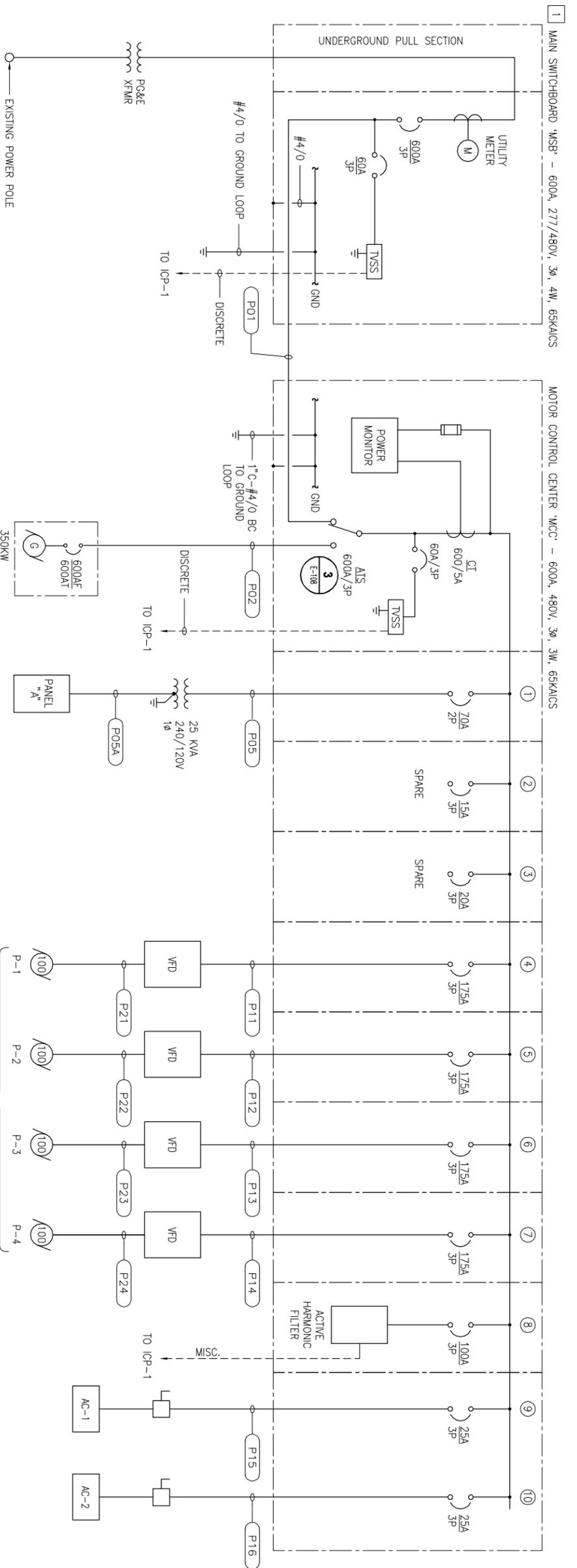


AECOM

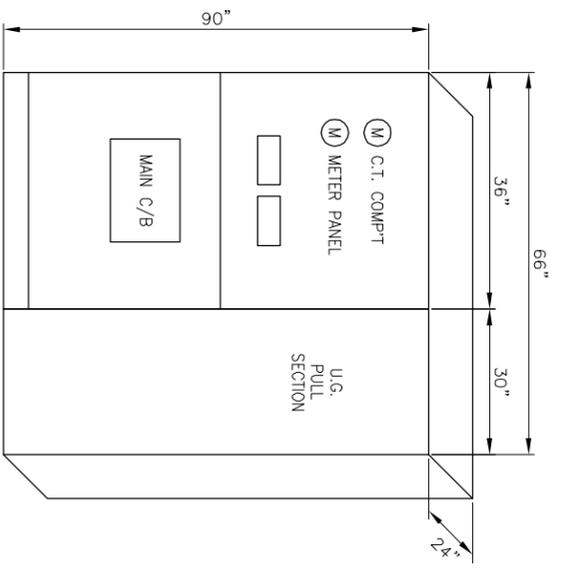
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



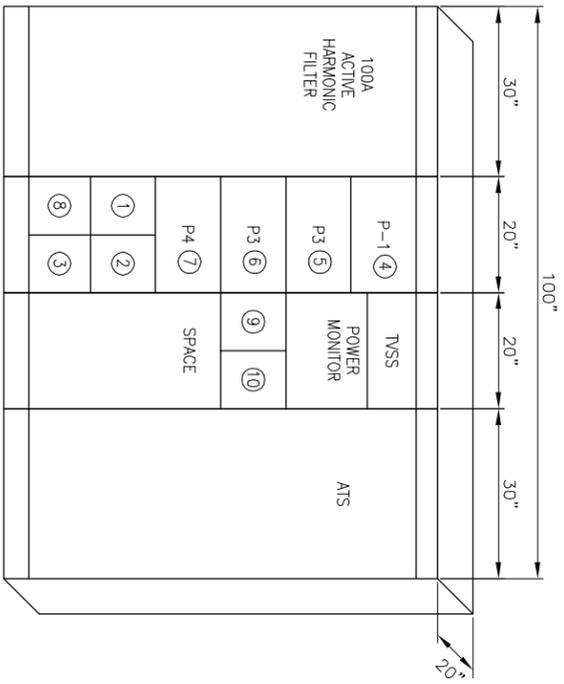
REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REB NUMBER	EXP DATE
JOSHUA H. REYNOLDS		C58400	09/30/2009



SINGLE LINE DIAGRAM
NOT TO SCALE



MSB ELEVATION
NOT TO SCALE



MCC ELEVATION
NOT TO SCALE

LOAD SCHEDULE

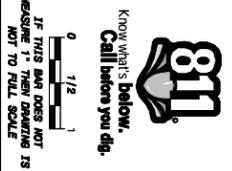
DESCRIPTION	HP/KVA	FLA
PUMP P-1	100HP	124.0
PUMP P-2	100HP	124.0
PUMP P-3	100HP	124.0
PUMP P-4	100HP	**
480-240/120V XFMR	25KVA	52.0
AC-1	15KVA	20
AC-2	15KVA	20
SUB TOTAL:		464
25% OF LARGEST MOTOR (100HP)		31
TOTAL:		495

** STANDBY PUMP NOT INCLUDED IN LOAD CALCULATION

1 DRAWINGS FOR THE MSB SHALL BE SUBMITTED TO PG&E FOR THEIR APPROVAL PRIOR TO MANUFACTURE.

NOTES:

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4		AECOM AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com		REGISTERED PROFESSIONAL ENGINEER JOSHUA H. REYNOLDS No. E 012846 Exp. 9/30/10 ELECTRICAL STATE OF CALIFORNIA	
PROJECT NO. 60061295 AECOM PROJECT NO. 60061295 NCSD PROJECT NO. 60061295	DATE JUNE 2010 APPROVED: BOYLE/AECOM CHECKED:	REV DATE DESCRIPTION REVISION NUMBER C66400	APPR EXP DATE 09/30/2009	E-103 SHEET 50 OF 95	

CONDUIT RUN REF.	PARALLEL CONDUITS PER RUN (=1 UON)	CONDUIT SIZE	CONDUCTORS PER CONDUIT			FROM	TO	REMARKS
			QTY	SIZE	GND			
P01	2	4"	4	500kcmil	# 1/0	MSB	MCC(ATS)	
P02	2	4"	3	500kcmil	# 1/0	GENERATOR	MCC(ATS)	
P05	1-1/4"	2	2	# 2	# 8	MCC	XFMR - 1A	
P05A	2"	3	3	# 10	# 6	XFMR - 1A	PHL A	
P11	2-1/2"	3	3	# 3/0	# 4	MCC	PUMP 1 VFD	
P21	2-1/2"	3	3	# 3/0	# 4	PUMP 1 VFD	PUMP 1	
P12	2-1/2"	3	3	# 3/0	# 4	MCC	PUMP 2 VFD	
P22	2-1/2"	3	3	# 3/0	# 4	PUMP 2 VFD	PUMP 2	
P13	2-1/2"	3	3	# 3/0	# 4	MCC	PUMP 3 VFD	
P23	2-1/2"	3	3	# 3/0	# 4	PUMP 3 VFD	PUMP 3	
P14			3			MCC	PUMP 4 VFD	
P24	2-1/2"	3	3	# 3/0	# 4	PUMP 4 VFD	PUMP 4	
P15	3/4"	3	3	# 10	# 10	MCC	AC-1	
P16	3/4"	3	3	# 10	# 10	MCC	AC-2	
D01	3/4"	2	2	# 14	# 14	ICP-1	MSB	
D01A	1"	12	12	# 14	# 14	ICP-1	MCC	
D02	3/4"	2	2	# 14	# 14	MCC	GENERATOR	
D02A	1"	12	12	# 14	# 14	ICP-1	GENERATOR	
D11	3/4"	2	2	# 14	# 14	MCC(ATS)	PUMP 1 VFD	
D12	3/4"	2	2	# 14	# 14	MCC(ATS)	PUMP 2 VFD	
D13	3/4"	2	2	# 14	# 14	MCC(ATS)	PUMP 3 VFD	
D14	3/4"	2	2	# 14	# 14	MCC(ATS)	PUMP 4 VFD	
D21	3/4"	2	2	# 14	# 12	PUMP 1 VFD	PUMP 1	
D22	3/4"	2	2	# 14	# 12	PUMP 2 VFD	PUMP 2	
D23	3/4"	2	2	# 14	# 12	PUMP 3 VFD	PUMP 3	
D24	3/4"	2	2	# 14	# 12	PUMP 4 VFD	PUMP 4	
D31	1"	10	10	# 14	# 14	ICP-1	PUMP 1 VFD	
A31	1"	2	2	# 18TSP		ICP-1	PUMP 1 VFD	
D32	1"	10	10	# 14	# 14	ICP-1	PUMP 2 VFD	
A32	1"	2	2	# 18TSP		ICP-1	PUMP 2 VFD	
D33	1"	10	10	# 14	# 14	ICP-1	PUMP 3 VFD	
A33	1"	2	2	# 18TSP		ICP-1	PUMP 3 VFD	
D34	1"	10	10	# 14	# 14	ICP-1	PUMP 4 VFD	
A34	1"	2	2	# 18TSP		ICP-1	PUMP 4 VFD	

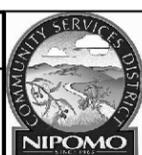
CONDUIT RUN REF.	PARALLEL CONDUITS PER RUN (=1 UON)	CONDUIT SIZE	CONDUCTORS PER CONDUIT			FROM	TO	REMARKS
			QTY	SIZE	GND			
A101A		3/4"	1	# 18TSP	# 14	ICP-1	LIT-101A	
M101A			2	# 14	# 14			
M101B		3/4"	1	(REMARKS)		LIT-101A	LIT-101A	MANUF SUPPLIED CABLE
A109		3/4"	1	(REMARKS)	# 14	LIT-101B	LE-101B	MANUF SUPPLIED CABLE
M109			4	# 14	# 14	ICP-1	FIT-109	FAL SIGNAL
M109				(REMARKS)		FIT-109	FE-409	MANUF SUPPLIED CABLE
D262		1-1/4"	18	# 14	# 14	ICP-1	SODIUM HPO SKID	
A262		1"	2	# 18TSP		ICP-1	SODIUM HPO SKID	
D362		1-1/4"	18	# 14	# 14	ICP-1	AMMONIUM SULF SKID	
A362		1"	2	# 18TSP		ICP-1	AMMONIUM SULF SKID	
A251		3/4"	1	# 18TSP		ICP-1	LIT 251	
A351		3/4"	1	# 18TSP		ICP-1	LIT 351	
A401		1"	2	# 18TSP		ICP-1	RESIDUAL ANALYZER 1	
A402		1"	2	# 18TSP		ICP-1	RESIDUAL ANALYZER 2	
A403		1"	2	# 18TSP		ICP-1	RESIDUAL ANALYZER 3	
D419		3/4"	2	# 14	# 14	PUMP 1 VFD	PSHL-119	
D429		3/4"	2	# 14	# 14	PUMP 2 VFD	PSHL-129	
D439		3/4"	2	# 14	# 14	PUMP 3 VFD	PSHL-139	
D449		3/4"	2	# 14	# 14	PUMP 4 VFD	PSHL-149	

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



DESIGNED: **CU**
 CHECKED: **DB**
 APPROVED: **DB**
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSO PROJECT NO. **E-104**
 CADW STPS. BOYLE/AECOM
 SHEET 51 OF 95

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
CONDUIT, LIGHTING AND PANEL SCHEDULE

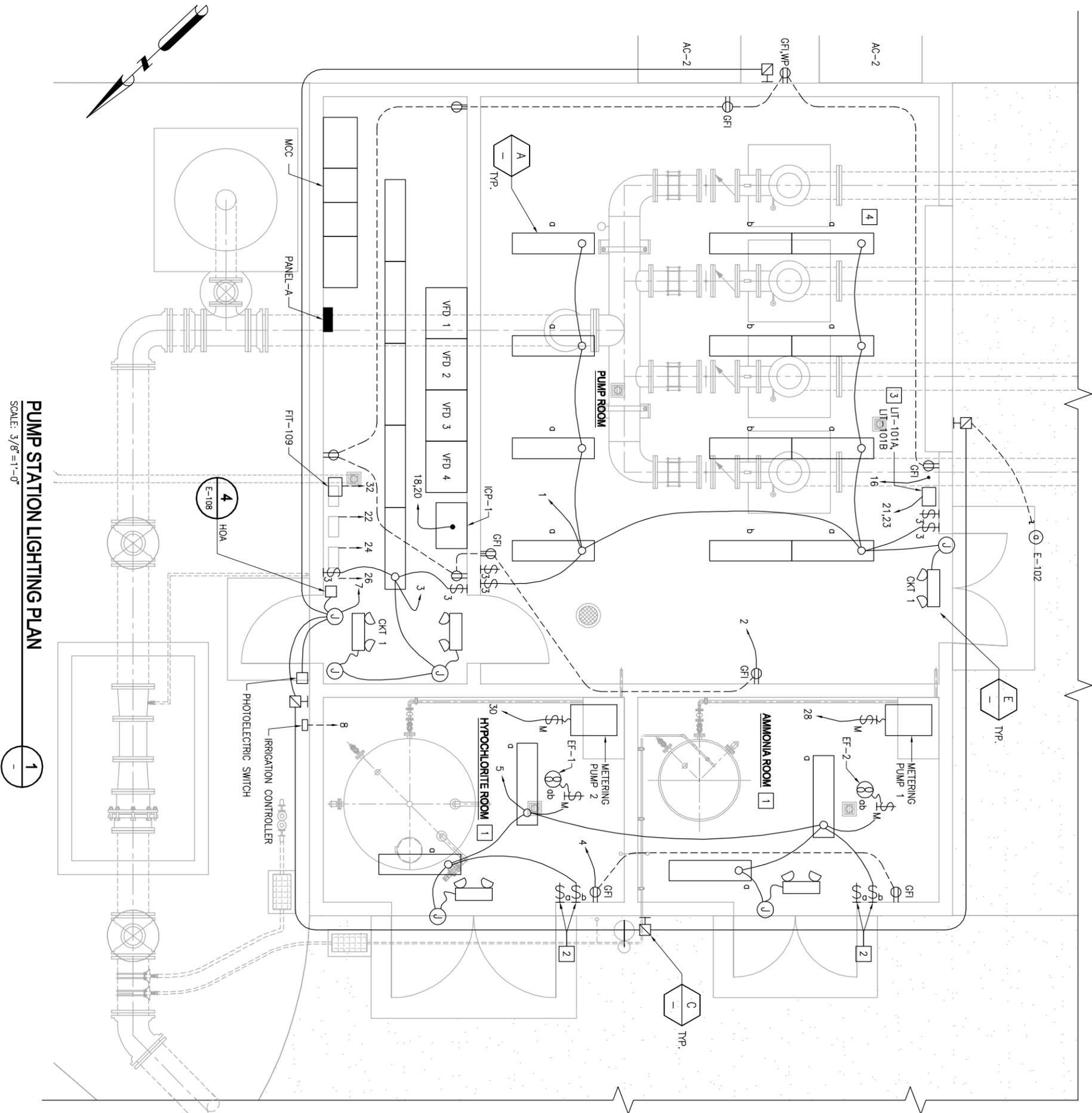


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9940 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR

PROJECT ENGINEER: **JOSHUA H. REYNOLDS**
 REG NUMBER: **C68400**
 EXP DATE: **09/30/2009**



PUMP STATION LIGHTING PLAN

SCALE: 3/8"=1'-0"

1

- NOTES:
- 1 CORROSIIVE LOCATION.
 - 2 FAN SHALL TURN ON WHEN EITHER SWITCH "c" OR "b" IS TURNED ON. LIGHTING SHALL TURN ON ONLY WHEN SWITCH "d" IS TURNED ON.
 - 3 PROVIDE EACH AIR WITH A 15A LOCAL DISCONNECT SWITCH.
 - 4 ENSURE LIGHTING FIXTURES DO NOT INTERFERE WITH PUMP BEING LIFTED THROUGH ROOF HATCHES.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
811
 Call before you dig.
 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**PUMP STATION
 LIGHTING PLAN**

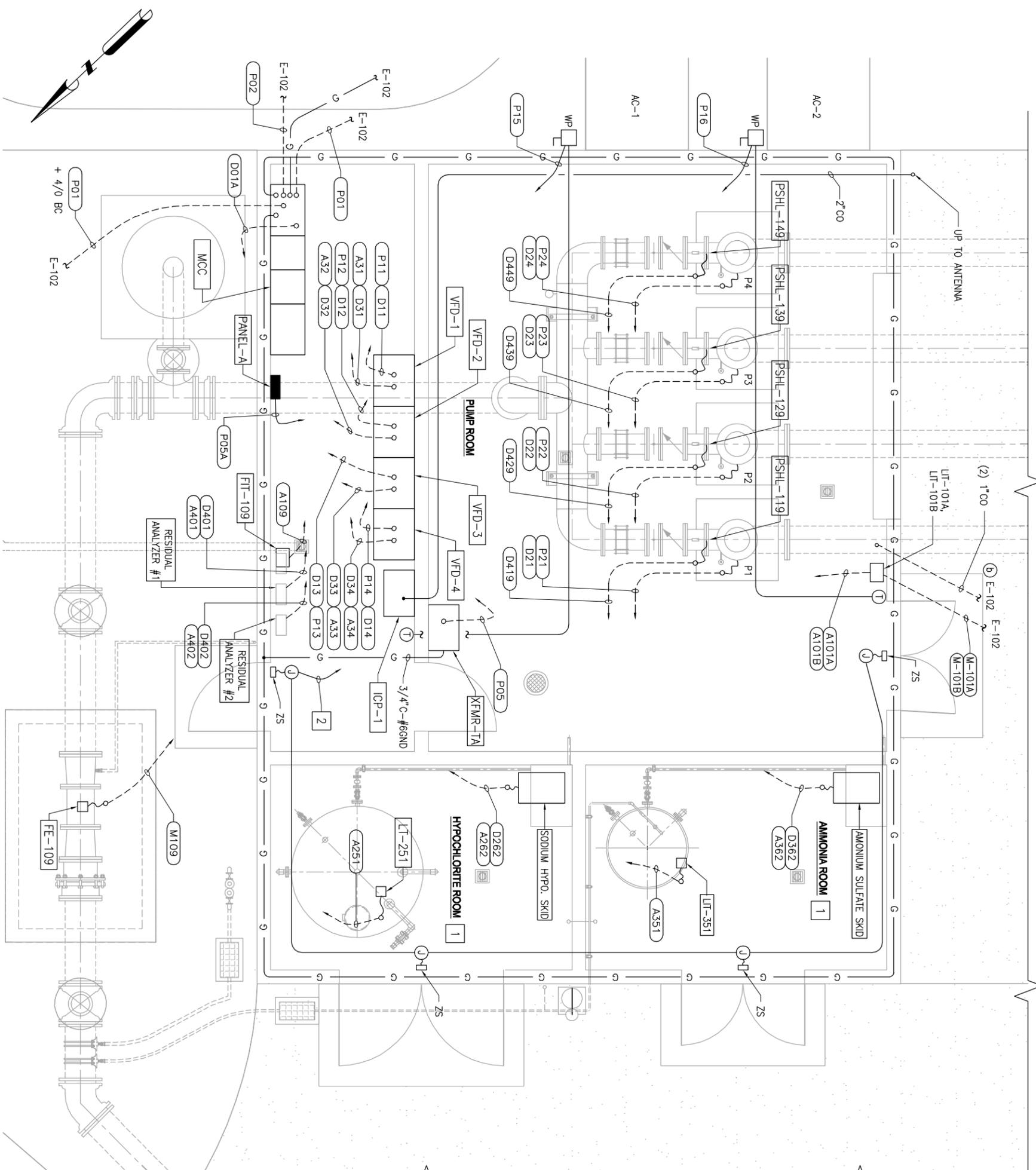


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	REG NUMBER	APPR
PROJECT ENGINEER				
JOSHUA H. REYNOLDS		C58400		09/30/2009

DESIGNED: 00
DRAWN: 00
CHECKED:
APPROVED:
DATE: JUNE 2010
AECOM PROJECT NO. 60061295
NCSD PROJECT NO.
CADD STOPS: BRYLE/AECOM
E-105
SHEET 52 OF 95



PUMP STATION POWER AND CONTROL PLAN

SCALE: 3/8"=1'-0"

1

- NOTES
- 1 CORROSIVE LOCATION.
 - 2 3/4" C-2#14, #14 GND. TO ICP-1

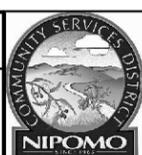
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's below.
 Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**PUMP STATION
 POWER AND CONTROL PLAN**

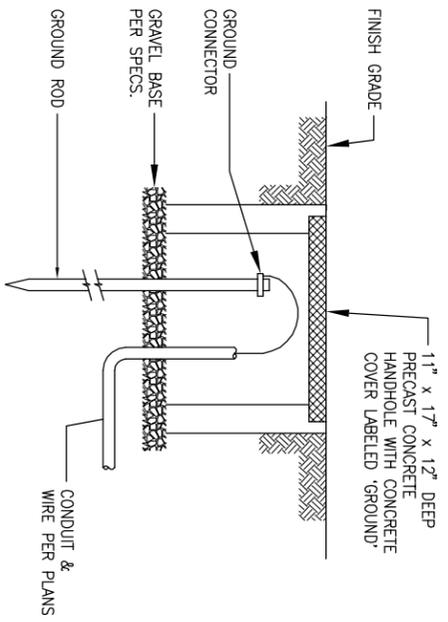


AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

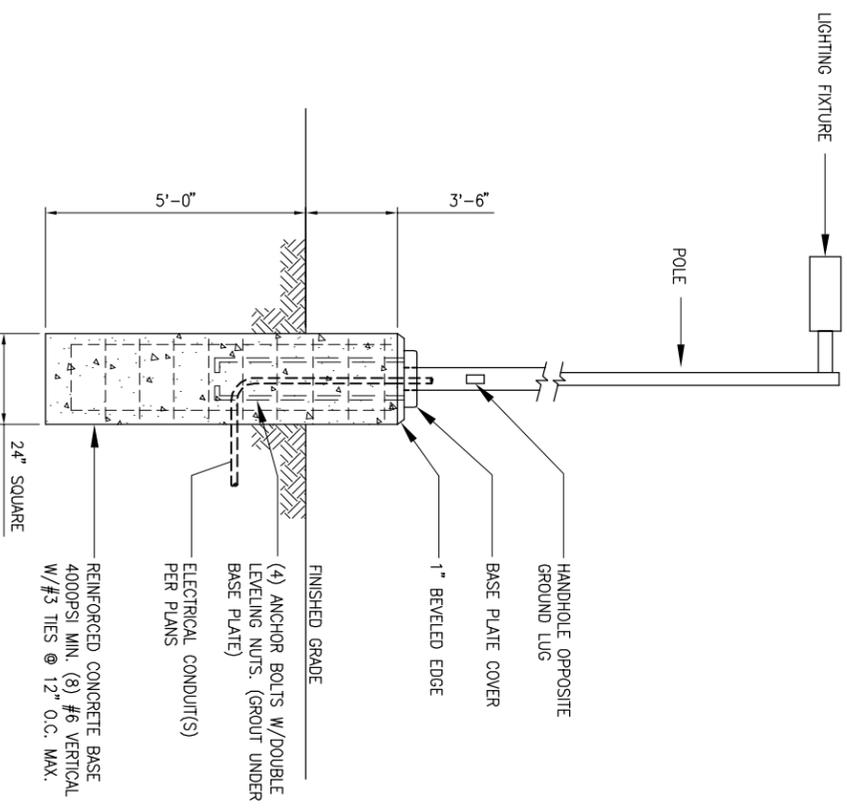


REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JOSHUA H. REYNOLDS		C68400	09/30/2009



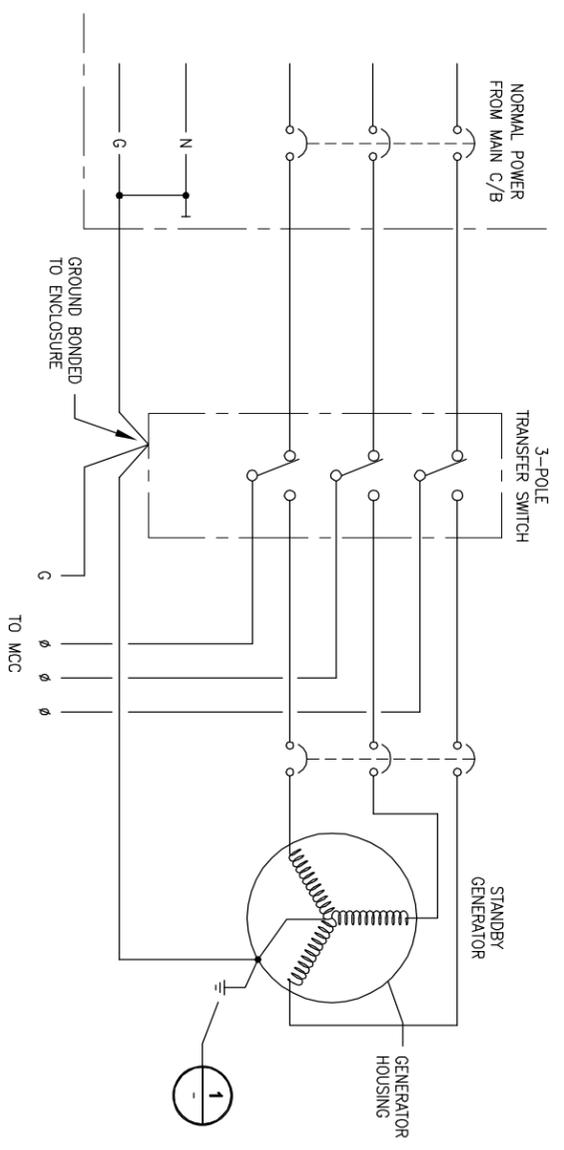
GROUND WELL DETAIL
 NOT TO SCALE

1



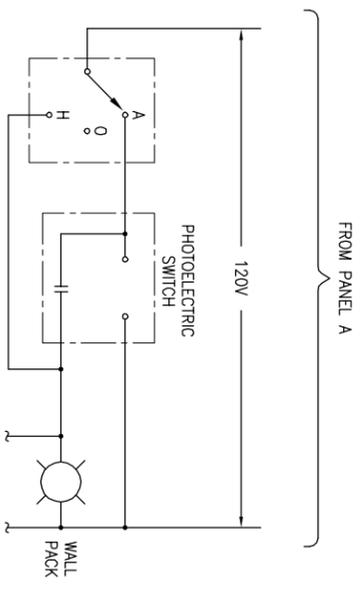
LIGHTING POLE MOUNTING DETAIL
 NOT TO SCALE

2



GENERATOR POWER CONNECTION
 NOT TO SCALE

3



EXTERIOR LIGHTING CONTROL
 WIRING SHOWN IN THIS CONTROL SCHEMATIC DIAGRAM IS FIELD WIRING AND SHALL BE #12 AWG MINIMUM.

4

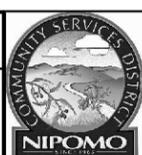
FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



IF THIS PLAN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**



AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



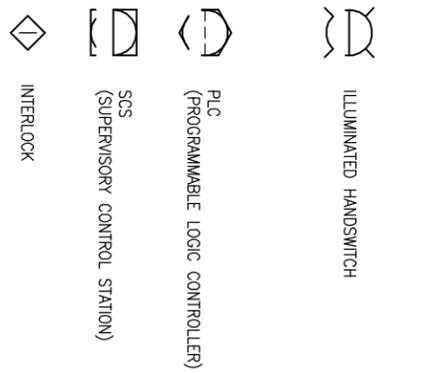
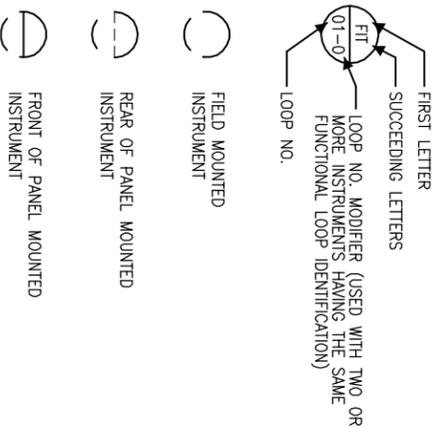
REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
JOSHUA H. REYNOLDS		C58400	09/30/2009

DESIGNED: **BO**
 CHECKED: **CU**
 DATE: JUNE 2010
 APPROVED: **BOYLE/AECOM**
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. **E-108**
 SHEET 55 OF 95

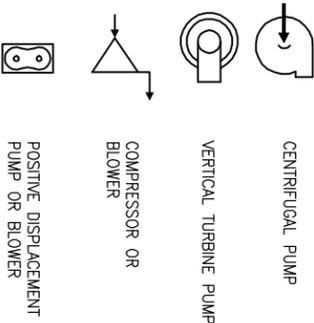
INSTRUMENT SOCIETY OF AMERICA TABLE IDENTIFICATION LETTERS

FIRST-LETTER	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	ALARM	USER'S CHOICE CONTROL	USER'S CHOICE
B	BURNER, COMBUSTION	USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			
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 (ELECTRICAL)	INDICATE		
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE	CONTROL STATION	
L	LEVEL	LIGHT		LOW, MIDDLE, INTERMEDIATE
M	USER'S CHOICE	MOMENTARY		
N	USER'S CHOICE	PI/C/RTU INPUT	USER'S CHOICE	NORMAL
O	USER'S CHOICE	ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM	POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION	RECORD		
S	SPEED, FREQUENCY	SAFETY	SWITCH	
T	TEMPERATURE		TRANSMIT	
U	MULTIVARIABLE	MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS		VALVE, DAMPER LOUVER	
W	WEIGHT, FORCE	WELL		
X	UNCLASSIFIED	UNCLASSIFIED(*)	UNCLASSIFIED(*)	UNCLASSIFIED(*)
Y	EVENT, STATE OR PRESENCE	Y AXIS	RELAY, COMPUTE CONVERT	
Z	POSITION, DIMENSION	Z AXIS	DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

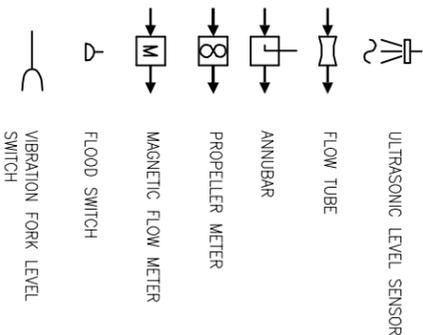
INSTRUMENT IDENTIFICATION



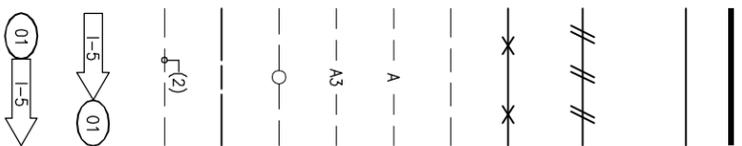
PUMPS & COMPRESSORS



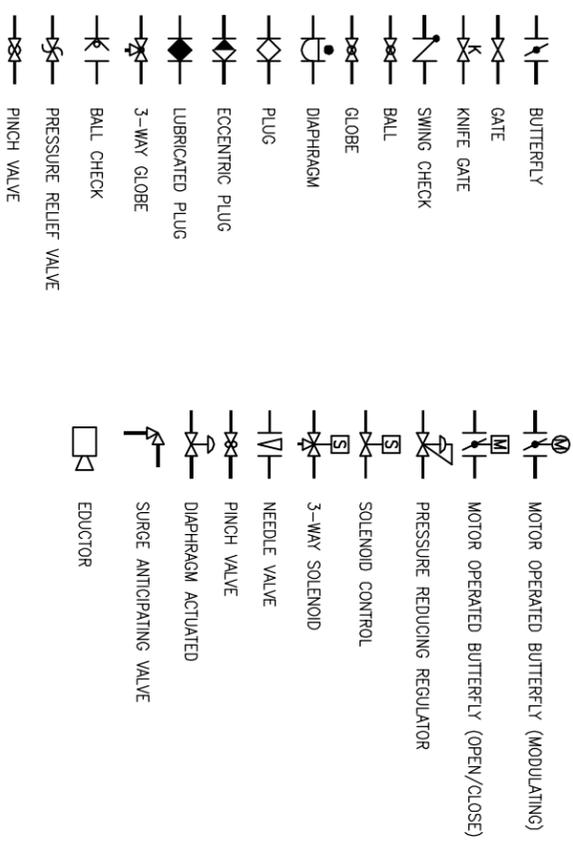
PRIMARY ELEMENTS



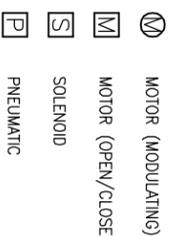
INSTRUMENT LINE SYMBOLS



VALVES & GATES



ACTUATORS OR OPERATORS



INSTRUMENT ABBREVIATIONS

AC	ALTERNATING CURRENT	OSCA	OPEN-STOP-CLOSE-AUTO
AI	ANALOG INPUT	OOR	ON-OFF-REMOTE
AO	ANALOG OUTPUT	OO	ON-OFF
AM	AUTO-MANUAL	OOA	ON-OFF-AUTO
BW	BACKWASH	OC	OPEN-CLOSE
C	CLOSE	OSC	OPEN-STOP-CLOSE
DC	DIRECT CURRENT	OSCR	OPEN-STOP-CLOSE-REMOTE
DI	DISCRETE INPUT		
DO	DISCRETE OUTPUT	PID	PROPORTIONAL-INTEGRAL-DERIVATIVE PROGRAMMABLE LOGIC CONTROLLER
DTM	ELAPSED TIME METER	PLC	PROGRAMMABLE LOGIC CONTROLLER
HA	HAND-AUTO	P5	DC POWER SUPPLY
HL	HIGH-LOW	P&ID	PROCESS & INSTRUMENTATION DIAGRAM
I/O	INPUT/OUTPUT	PZV	POSITIVE ZERO RETURN
ICP	INTRUMENT CONTROL PANEL	RIOP	REMOTE I/O PANEL
LR	LOCAL-REMOTE	RTD	RESISTANCE TEMPERATURE DETECTOR
LOS	LOCK-OUT-STOP	RTDI	REMOTE TERMINAL UNIT
LOR	LOCAL-OFF-REMOTE	RTU	REMOTE TERMINAL UNIT
LPU	LINE PROTECTION UNIT	SCS	SUPERVISORY CONTROL STATION
LCP	LOCAL CONTROL PANEL	SS	START-STOP
MCC	MOTOR CONTROL CENTER	SP	SET POINT
O	OPEN	STCD	STATUS-TO-COMMAND-DISAGREEMENT
OAC	OPEN-AUTO-CLOSE	TURB	TURBIDITY
		TPC	TIME PROPORTIONAL CONTROL
		TOT	TOTALIZATION
		TEMP	TEMPERATURE

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

 IF THIS TAG DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

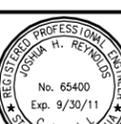
**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

INSTRUMENTATION LEGEND AND SYMBOLS



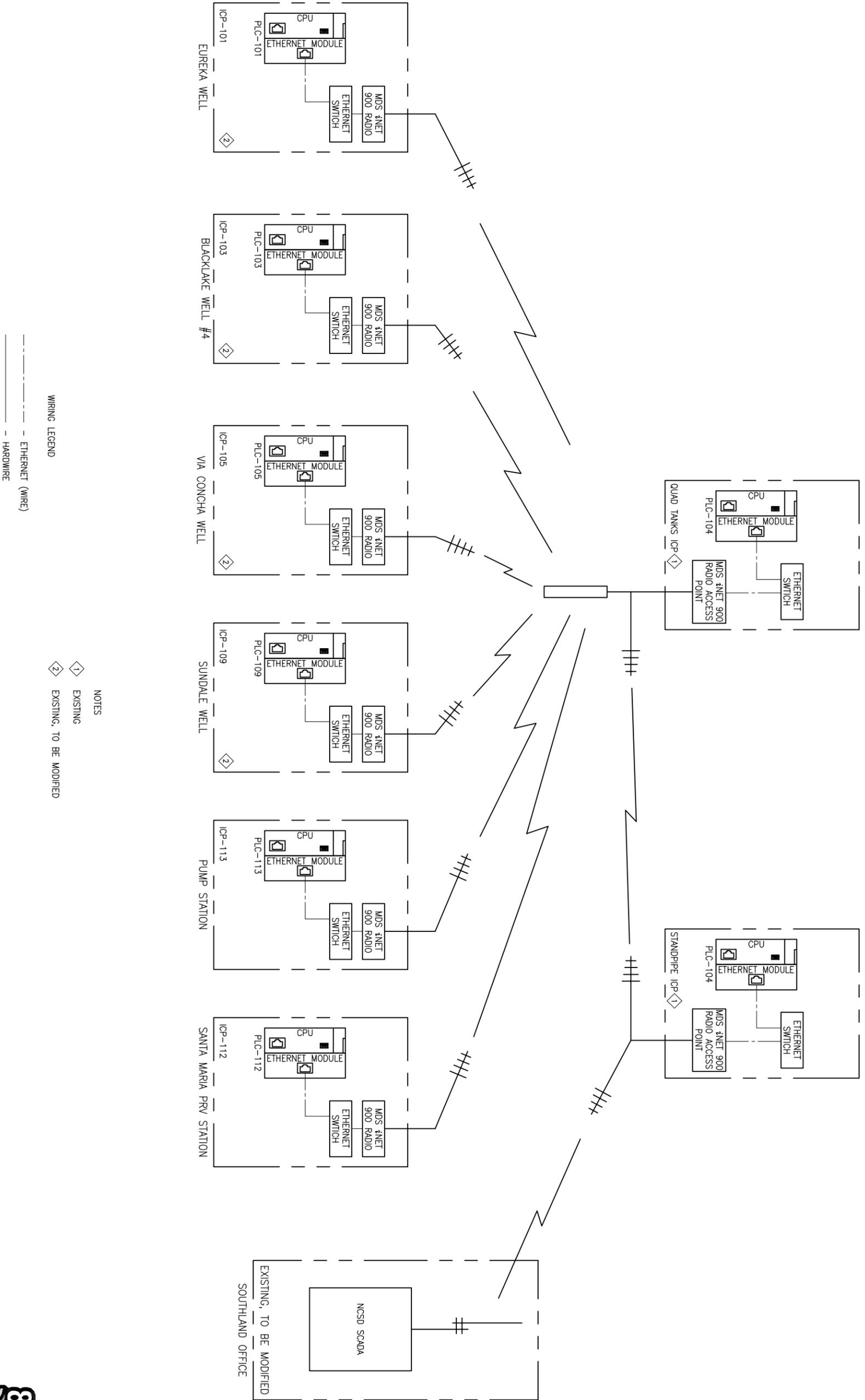
AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805-542-9840 F 805-542-9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR	EXP DATE

DESIGNED: **ES**
 DETAIL LEB: **AB**
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
AECOM PROJECT NO.
 60061295
NCSD PROJECT NO.
 CADW STDS.
 BNYL/AECOM
N-001
 SHEET
 59 OF 95



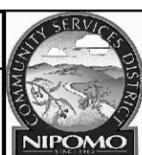
WIRING LEGEND
 --- ETHERNET (WIRE)
 - - - HARDWARE

NOTES
 1 EXISTING
 2 EXISTING, TO BE MODIFIED

AECOM WATER
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
COMMUNICATION BLOCK DIAGRAM



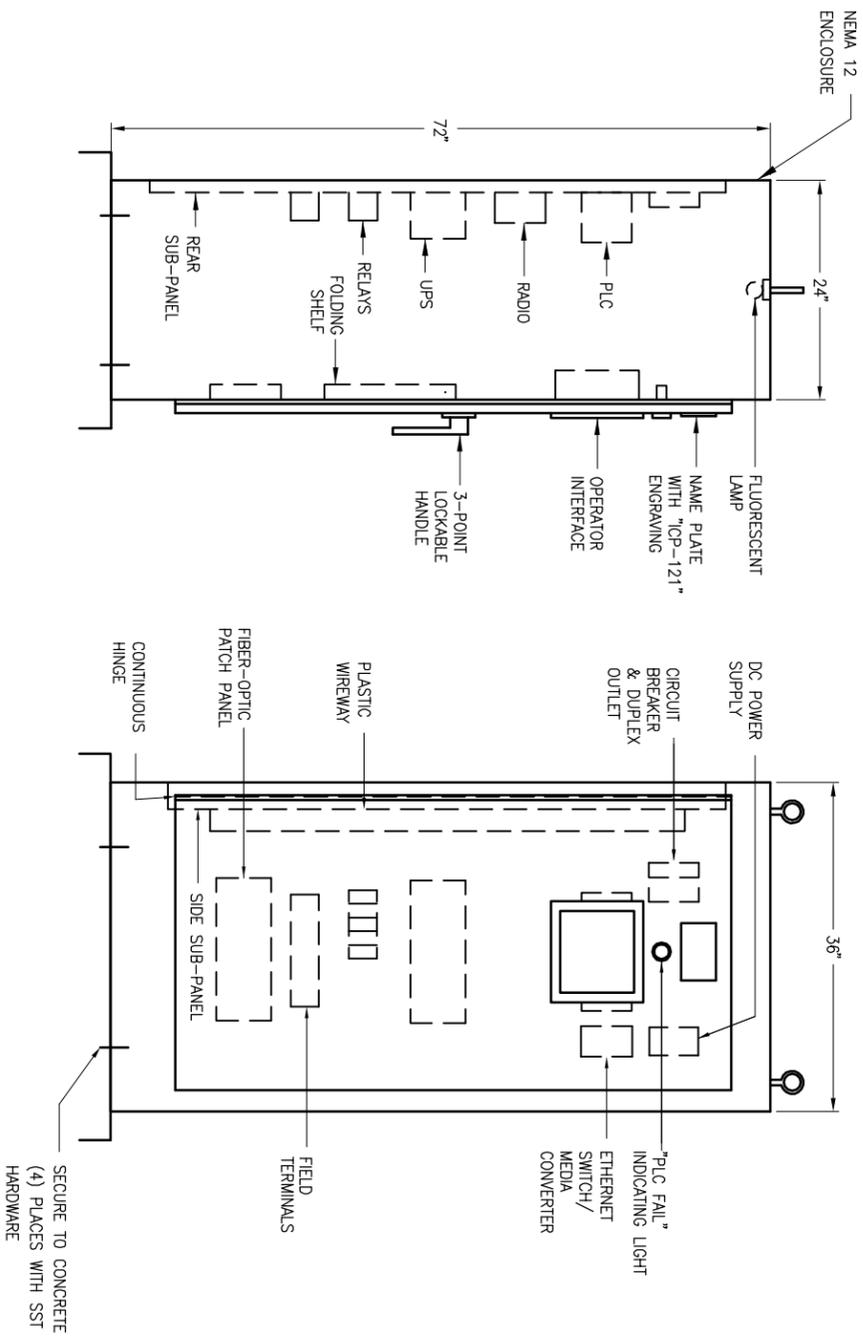
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



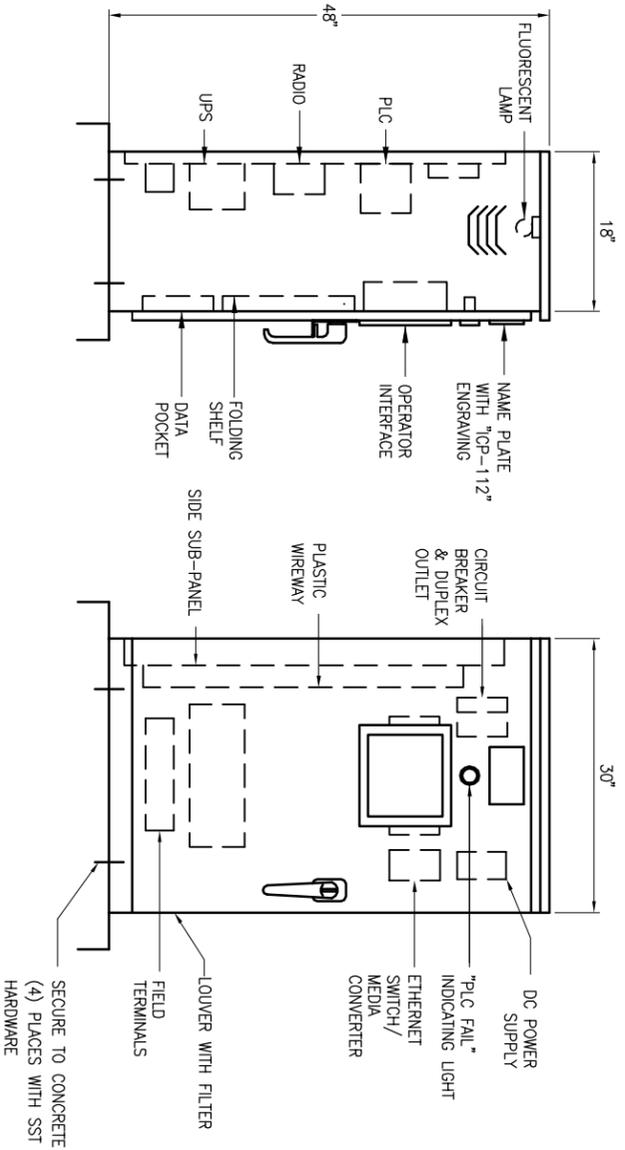
REV	DATE	DESCRIPTION	REG NUMBER	APPR

PROJECT ENGINEER

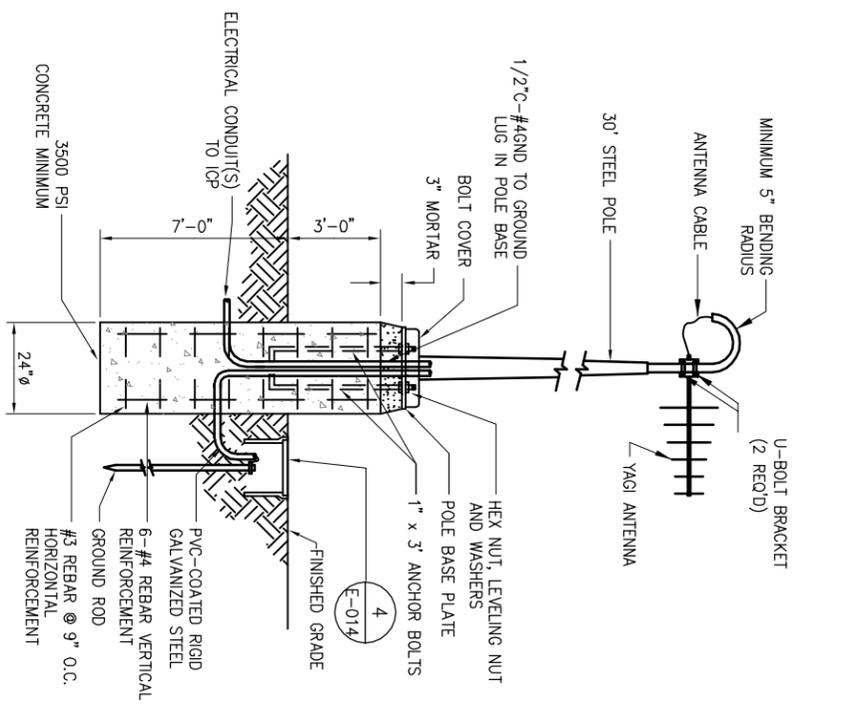
DESIGNED: CR
 CHECKED: CR
 APPROVED: [Signature]
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSO PROJECT NO. [Blank]
 CAD STDS. BY/LE/AECOM
N-002
 SHEET
 60 OF 95



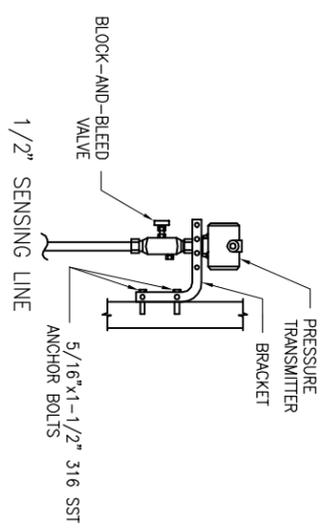
PUMP STATION INSTRUMENT CONTROL PANEL (ICP-113) LAYOUT
 SCALE: NONE
 1



SANTA MARIA VISTA PRV INSTRUMENT CONTROL PANEL (ICP-112) LAYOUT
 SCALE: NONE
 4



MONOPOLE ANTENNA MAST
 NOT TO SCALE
 2



PRESSURE TRANSMITTER MOUNTING
 NOT TO SCALE
 3

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



N-501
 SHEET
 61 OF 95

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4	
INSTRUMENT DETAILS	
DESIGNED: OR	CHECKED: OR
DATE: JUNE 2010	DATE: JUNE 2010
APPROVED: OR	APPROVED: OR
AECOM PROJECT NO. 60061295	NCSO PROJECT NO.
CADD STDS. BNY/E/AECOM	

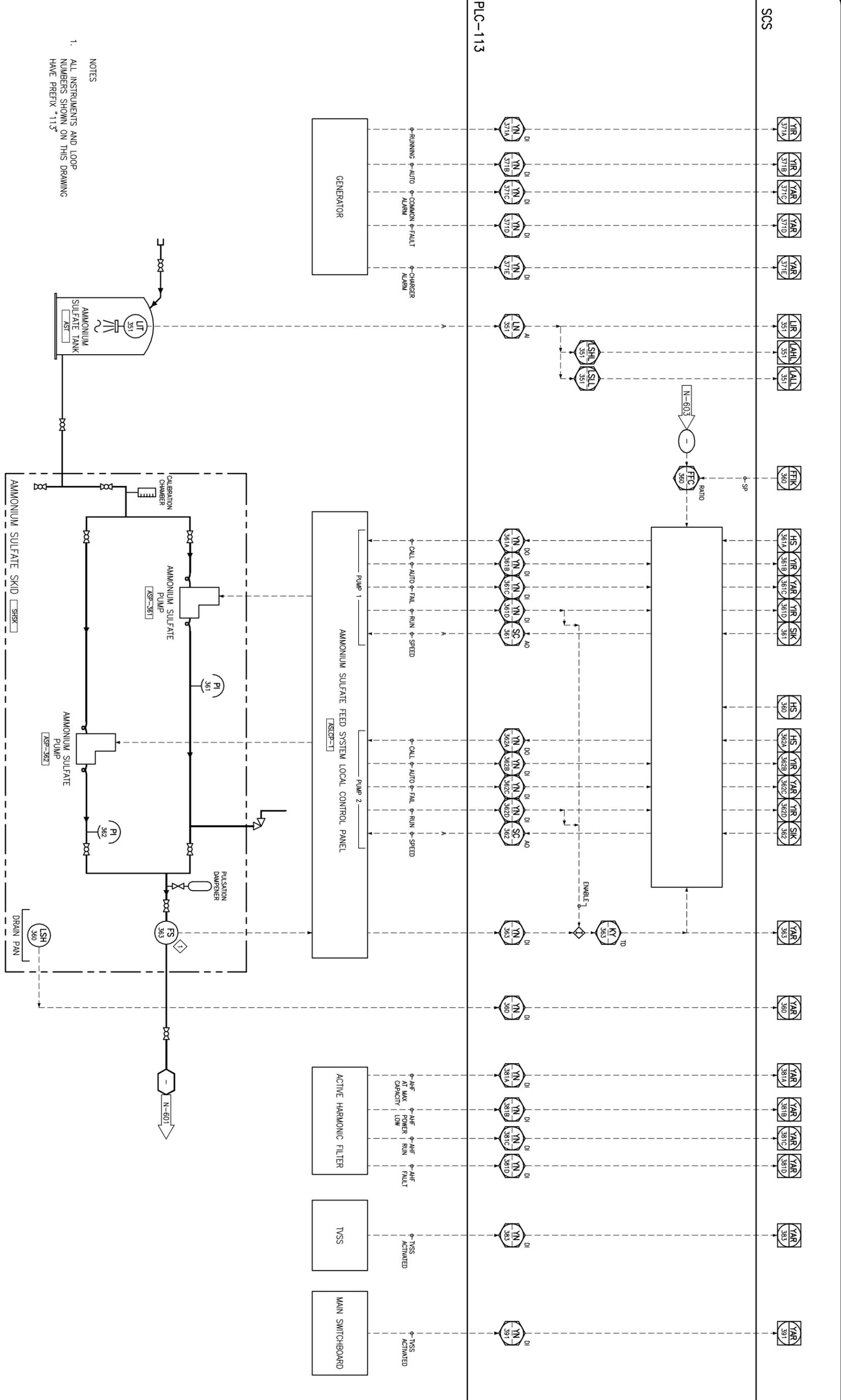


AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR



NOTES
 1. ALL INSTRUMENTS AND LOOP NUMBERS SHOWN ON THIS DRAWING HAVE PREFIX "113"

AECOM WATER

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
 Call before you dig.

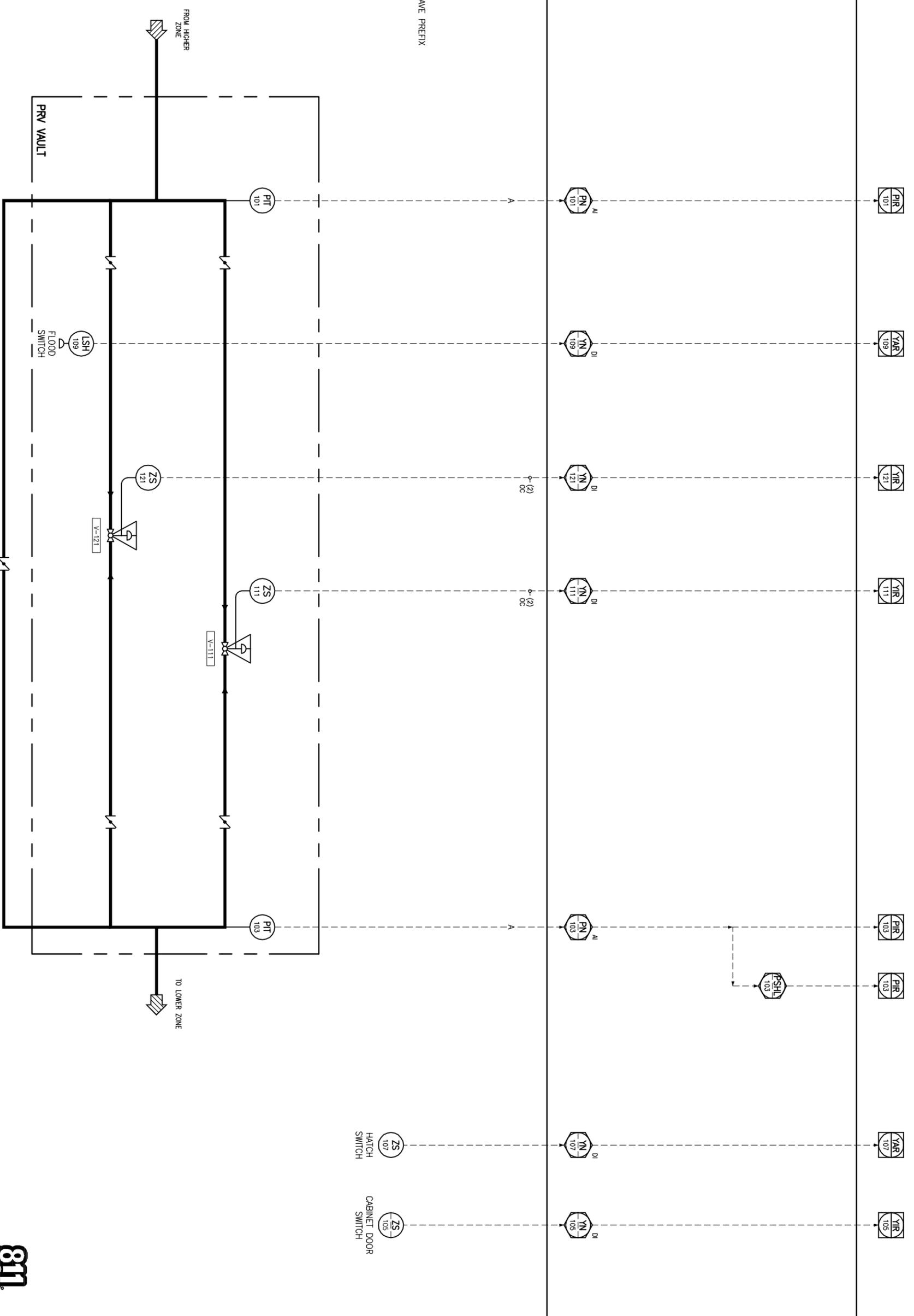
AECOM PROJECT NO. 60061295
 CADW STDS. BNYL/AECOM

<p>NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4</p> <p style="text-align: center;">PUMP STATION AMMONIUM SULFATE SYSTEM P&ID</p>	 AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>APPR</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	APPR								
REV	DATE	DESCRIPTION	APPR												

SCS

PLC-112

NOTES
 112 LOOP NUMBERS SHALL HAVE PREFIX



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's Below.
 Call before you dig.

 IF THIS AREA DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**SANTA MARIA VISTA
 PRV SYSTEM P&ID**



AECOM

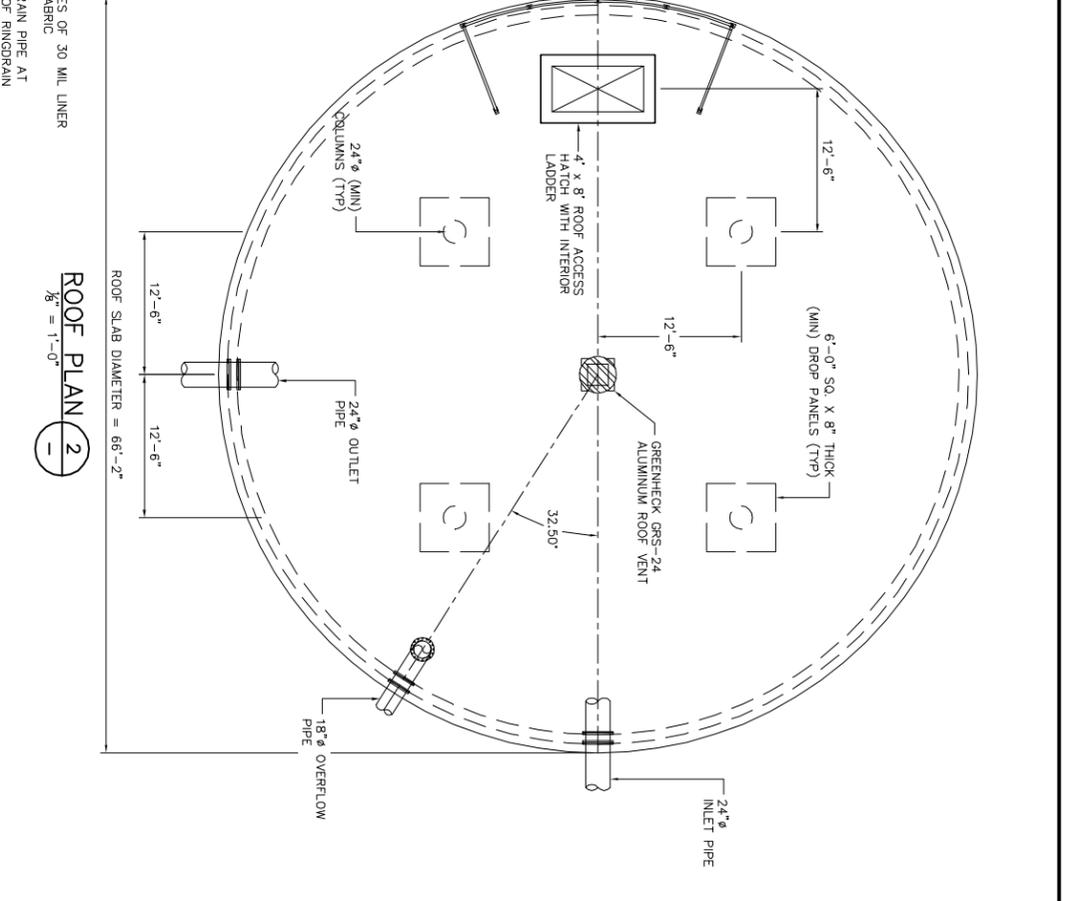
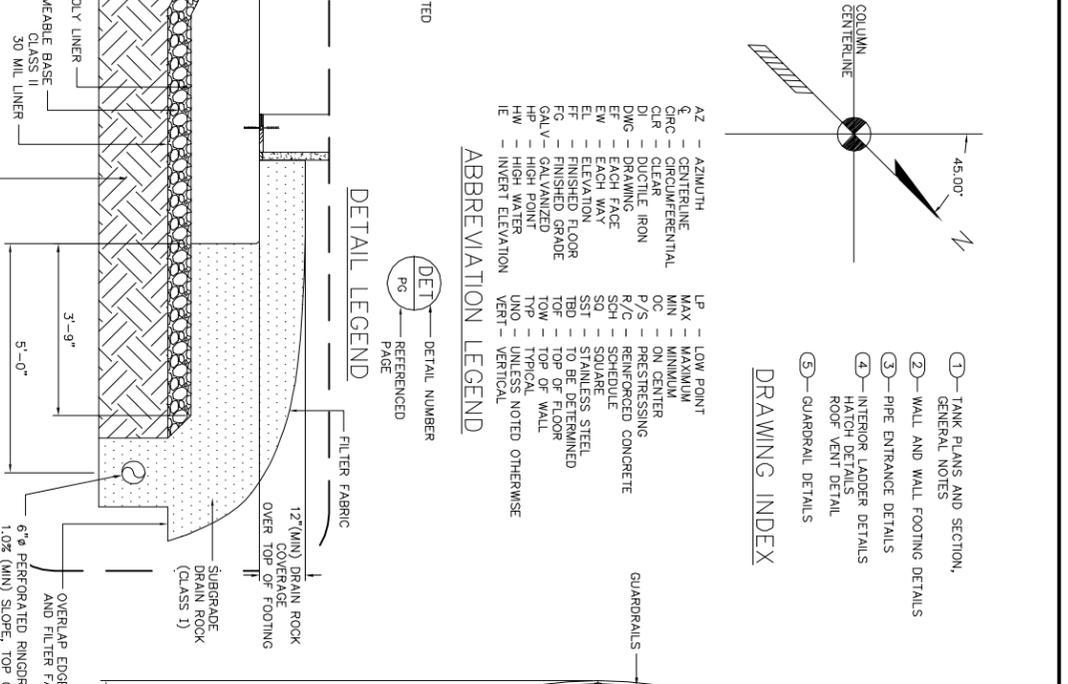
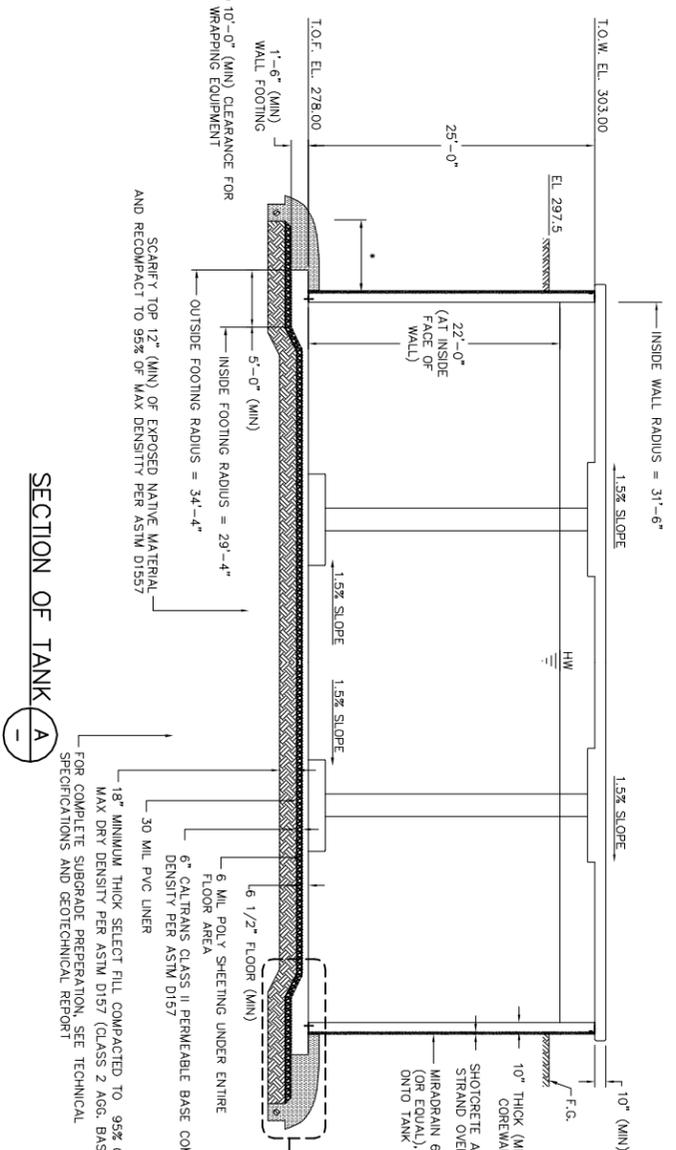
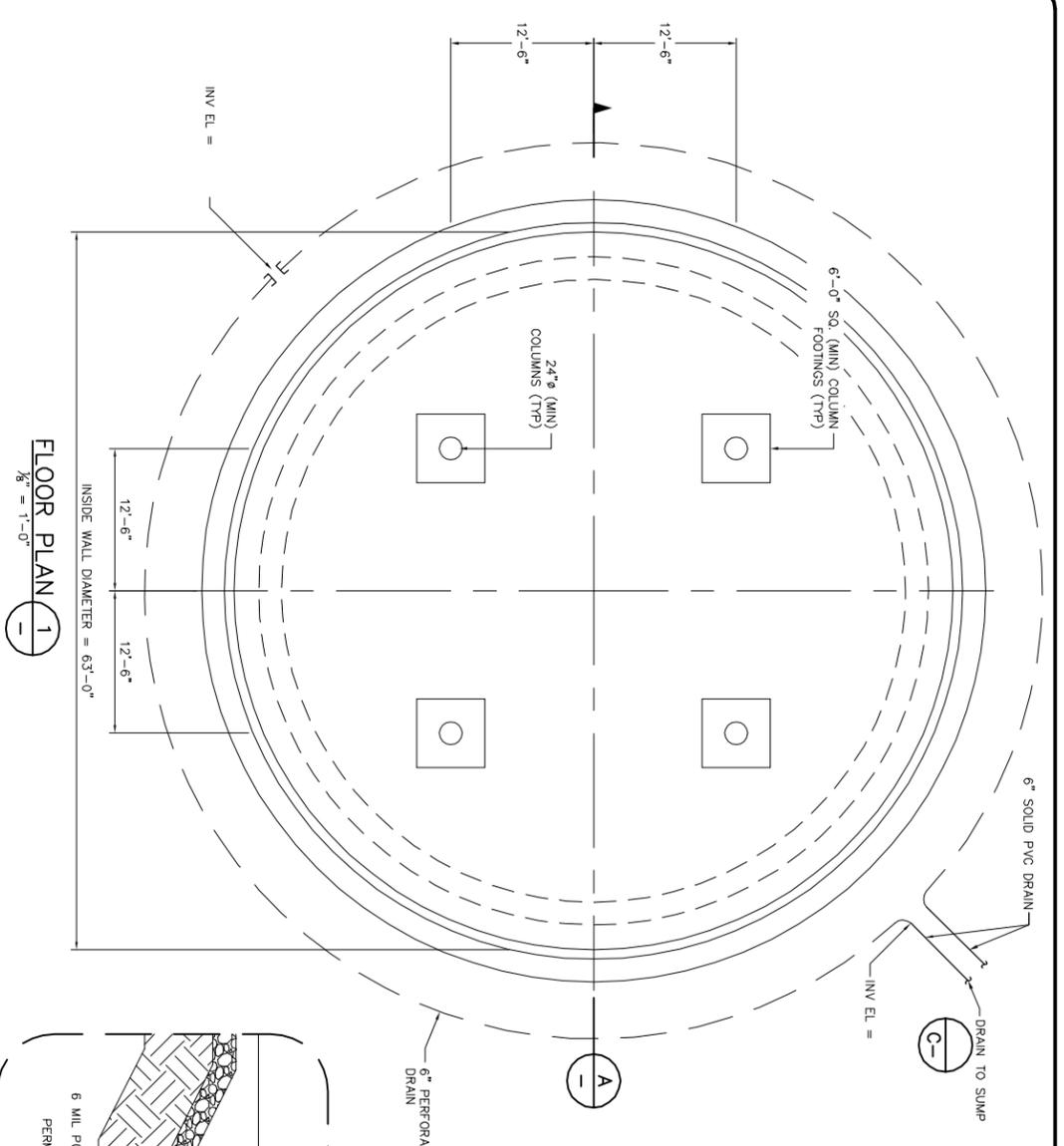
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	REG NUMBER	APPR

PROJECT ENGINEER

DESIGNED: ES
 DETAIL: AB
 CHECKER:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.
 CAD STDS. BY/EA/AECOM
N-604
 SHEET
 65 OF 95



DRAWING INDEX

- ① TANK PLANS AND SECTION, GENERAL NOTES
- ② WALL AND WALL FOOTING DETAILS
- ③ PIPE ENTRANCE DETAILS
- ④ INTERIOR LADDER DETAILS, ROOF VENT DETAIL
- ⑤ GUARDRAIL DETAILS

ABBREVIATION LEGEND

AZ	— AZIMUTH	LP	— LOW POINT
CG	— CENTERLINE	MAX	— MAXIMUM
CHG	— CHANGELINE	MAN	— MANHOLE
CH	— CHIMNEY	MC	— ON CENTER
DIR	— DUCTILE IRON	P/S	— PRESTRESSING
DWG	— DRAWING	R/C	— REINFORCED CONCRETE
EF	— EACH FACE	SCH	— SCHEDULE
EF	— EACH WAY	SQ	— SQUARE
EL	— ELEVATION	SST	— STAINLESS STEEL
FF	— FINISHED FLOOR	TDB	— TO BE DETERMINED
FR	— FINISHED FLOOR	TOP	— TOP OF FLOOR
FR	— FINISHED FLOOR	TYP	— TYPICAL
HP	— HIGH POINT	UNO	— UNLESS NOTED OTHERWISE
HW	— HIGH WATER	VERT	— VERTICAL
IE	— INVERT ELEVATION		

DETAIL LEGEND

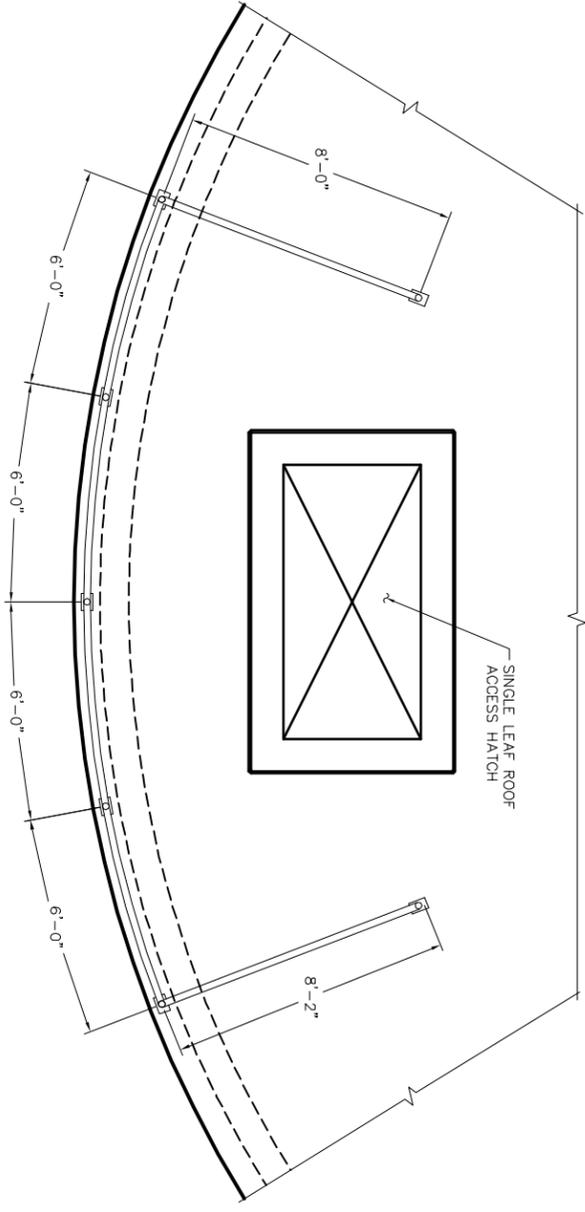
DET	— DETAIL NUMBER
PC	— REFERENCED PAGE

GENERAL NOTES:

- DESIGN LOADS
 - 1. SUPERIMPOSED ROOF LOAD : 50.0 PSF LIVE LOAD + 10.00 PSF DEAD LOAD
 - 2. LIQUID (WATER) : 62.5 PCF
 - 3. ALLOWABLE GROSS SOIL BEARING CAPACITY : 4500 PSF
 - 4. SEISMIC ACCELERATIONS : 0.831g (S_{gs}) 0.405g (S_{0g})
 - 5. FLUID HORIZONTAL SEISMIC VELOCITY : 3.87 FT/SEC (ASSUMED)
 - 6. MAXIMUM DIFFERENTIAL SETTLEMENT : 3/4" ACROSS TANK DIAMETER (ASSUMED)
 - 7. BACKFILL HEIGHT : 22'-0" ABOVE FOOTING (UNIFORM)
- BUCKLING CRITERIA OF WALL DESIGN
 - THE INTEGRITY OF THE WALL SHOWN ON THESE DRAWINGS IS STRICTLY PREDICATED ON THE FOLLOWING CONDITIONS:
 - A. THE STRESS-TOLERANCE AND OTHER REQUIREMENTS OF THE CIRCUMFERENTIAL PRESTRESSING APPLICATION INDICATED IN THE CIRCUMFERENTIAL PRESTRESSING NOTES ON DRAWING R-102 AND ON OTHER PARTS OF THESE DRAWINGS AND IN THE TECHNICAL SPECIFICATIONS.
 - B. SEE SPECIFICATIONS FOR OUT OF ROUND TOLERANCE.
 - C. THERE SHALL BE NO BLOCK-OUTS OR OTHER TYPES OF WALL OPENINGS OTHER THAN THOSE SHOWN ON THESE DRAWINGS.
- CONCRETE REQUIREMENTS
 - CORE WALL : 4000 PSI
 - FLOOR, FOOTINGS, AND PIPE ENCASUREMENTS : 4000 PSI
 - SHOTCRETE : 4500 PSI (1C:3S)
 - ROOF SLAB AND COLUMNS : 4000 PSI
 - ALL CONCRETE, EXCEPT SHOTCRETE, SHALL HAVE 6.0 SQ/CY (MIN), UNLESS NOTED OTHERWISE AND A MAX WATER CEMENT RATIO OF 0.42.
 - SEE TECHNICAL SPECIFICATION FOR COMPLETE MIX DESIGN INFORMATION INCLUDING AGGREGATE SIZE, AIR ENTRAINMENT REQUIREMENTS AND ACCEPTABLE ADmixTURES.
 - SEE TECHNICAL SPECIFICATIONS FOR CONCRETE PLACING AND FORMING PROCEDURES.
- REINFORCEMENT REQUIREMENTS
 - ALL REINFORCING IN TANK SHALL CONFORM TO ASTM A-615 GRADE 60 UNLESS OTHERWISE NOTED ON THESE DRAWINGS.
 - REINFORCING STEEL CALLED OUT AS GALVANIZED SHALL HAVE A CLASS 1 COATING IN ACCORDANCE WITH ASTM A767.
- SPECIAL INSPECTION
 - INSPECTIONS REQUIRED FOR THIS PROJECT AND SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 12, SPECIAL INSPECTIONS SHALL BE PERFORMED BY A REGISTERED DEPUTY INSPECTOR EMPLOYED BY THE OWNER IN THESE CATEGORIES:
 - CONCRETE PLACEMENT
 - PRESTRESSING
 - STRUCTURAL WELDING
 - REINFORCING STEEL PLACEMENT
 - CONCRETE ANCHORS
 - GRADING, EXCAVATION, AND FILLING
- STRUCTURAL OBSERVATION
 - STRUCTURAL OBSERVATIONS WILL BE PERFORMED BY AN ENGINEER FROM TANK CONTRACTOR ON THE FOLLOWING WORK:
 - WALL FOOTING & FLOOR
 - FIRST WALL
 - FIRST COLUMN
 - ROOF

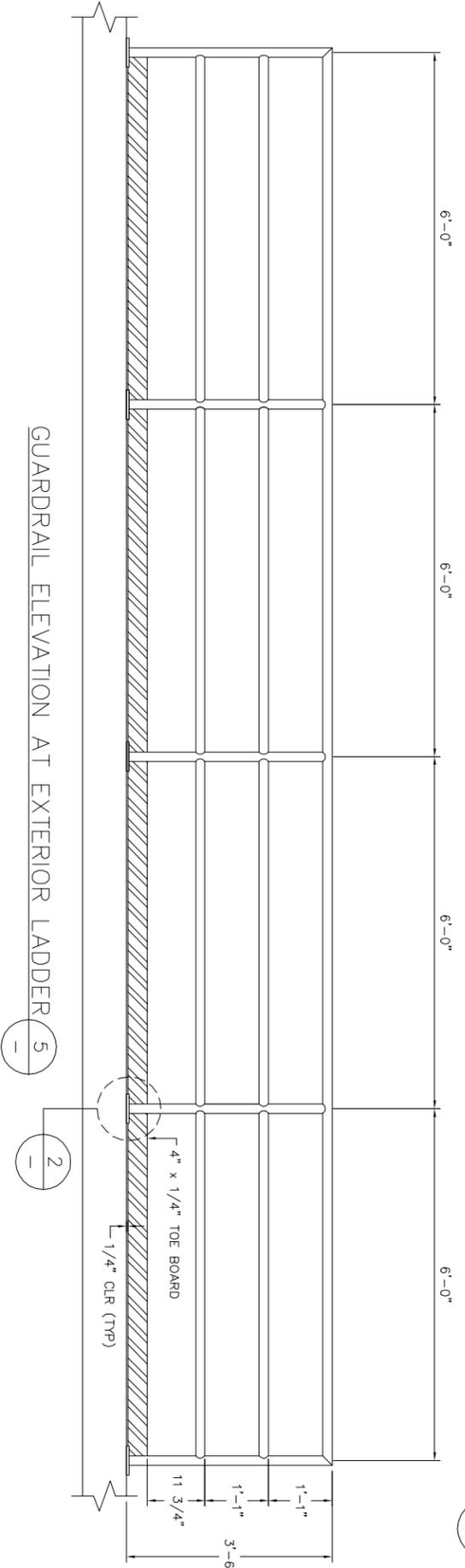
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 IF THIS DRAWING IS NOT TO FALL SCALE

	NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4			REV	DATE	DESCRIPTION	APPR
				PROJECT ENGINEER DAVID J. SCHERSCHTEL	REG NUMBER S1672	EXP DATE 06/30/2011	
CSDD STDS. BNYL/AECOM	ACCOM PROJECT NO. 60061295	DATE JUNE 2010	APPROVED: [Signature]	CHECKED: [Signature]	DESIGNED: [Signature]	DETAIL LED: [Signature]	DATE JUNE 2010
R-101 SHEET 66 OF 95	TANK - PLAN AND SECTION	AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805-542-9840 F 805-542-9990 www.aecom.com	PROJECT NO. 60061295 SHEET NO. R-101 DATE: JUNE 18, 2010	PROJECT ENGINEER: DAVID J. SCHERSCHTEL REG NUMBER: S1672 EXP DATE: 06/30/2011	PROJECT NO. 60061295 SHEET NO. R-101 DATE: JUNE 18, 2010	PROJECT ENGINEER: DAVID J. SCHERSCHTEL REG NUMBER: S1672 EXP DATE: 06/30/2011	PROJECT NO. 60061295 SHEET NO. R-101 DATE: JUNE 18, 2010

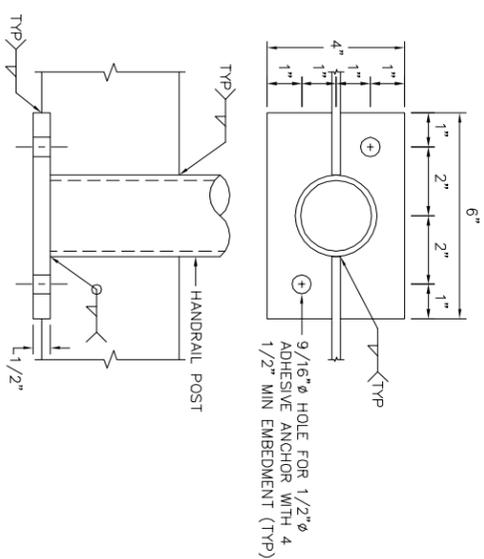


PLAN VIEW OF GUARDRAILS AT ACCESS HATCH (1)

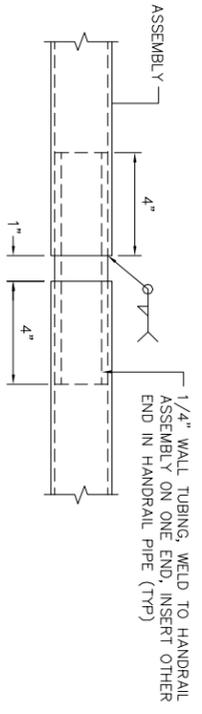
- GUARDRAIL NOTES:
- 1) ALL MATERIAL FOR GUARDRAILS AND BASEPLATES TO BE 6061-T6 ALUMINUM
 - 2) ALL WELDS TO BE 1/4" MINIMUM.
 - 3) ALL ALUMINUM IN CONTACT WITH CONCRETE MUST BE COATED WITH A HEAVY BITUMASTIC COATING OR EPOXY PAINT.
 - 4) USE SST 316 FOR ALL BOLTS UNLESS NOTED OTHERWISE.
 - 5) WHERE SST BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.



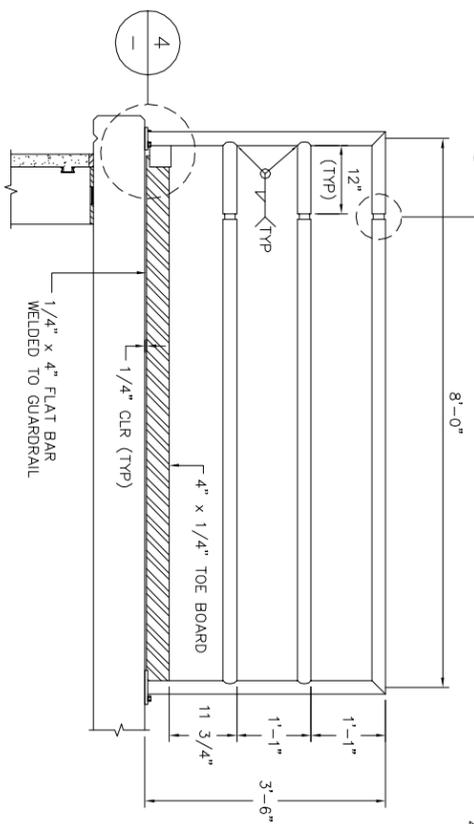
GUARDRAIL ELEVATION AT EXTERIOR LADDER (5)



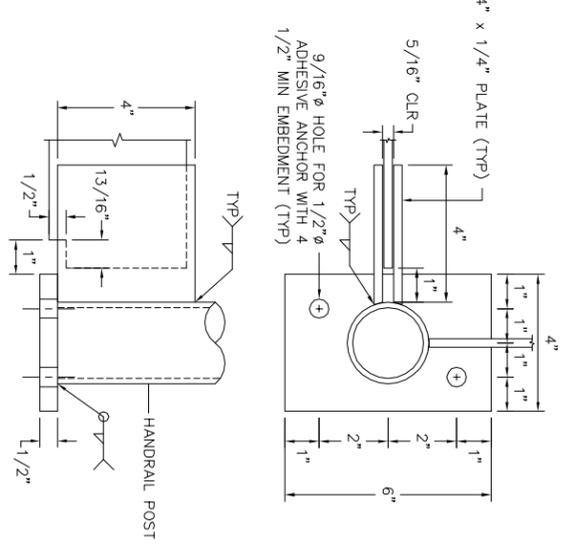
BASE PLATE WITH TOEBOARD (2)



EXPANSION JOINT DETAIL (3)



ELEVATION OF GUARDRAIL (3)



BASE PLATE WITH TOEBOARD JOINT (4)

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010

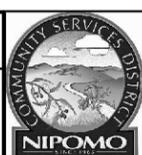
90% PRELIMINARY DESIGN PLANSET

811 Know what's below. Call before you dig.

IF THIS SIGN DOES NOT REQUIRE IT, THEN DRIVING IS NOT TO FALL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4

GUARDRAIL DETAILS



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER	DAVID J. SCHERSCHTEL	REB NUMBER	EXP DATE
		S1572	06/30/2011

DESIGNED: DAS
 CHECKED: TS
 DATE: JUNE 2010
 APPROVED:
 AECOM PROJECT NO. 60061295
 NCS0 PROJECT NO.
 CAD STPS. BOYLE/AECOM
R-105
 SHEET
 70 OF 95

Irrigation Schedule

SYMBOL	DESCRIPTION	MODEL	NOTES
	EMITTER	TORO TURBO-SC-PLUS DPJ04-A (1 GPH) or TORO TURBO-SC-PLUS DPJ08-A (2 GPH)	Dtl.30-33-L-3
	CONTROLLER (Inside Garage)	HUNTER PRO-C 300 (OUTDOOR, 3-STATION) Dtl.11-L-3 WALL-MOUNT ON EXTERIOR WALL, WHERE SHOWN	
	ELECTRIC CONTROL VALVE	HARDIE ULTRAFLOW 700 - SIZE PER PLAN, w/ PRESSURE REGULATOR & FILTER (BELOW)	Dtl.10,L-3
	PRESSURE REGULATOR	WILKINS 500YSBR SERIES or SENNINGER PRL-20 20 PSI	Dtl.20,L-3
	FILTER (DRIP)	AG PRODUCTS #4E, Size to match valve	Dtl.20,L-3
	FLUSH VALVE	AG PRODUCTS 3/4-B BALL VALVE	Dtl.21,L-3
	PRESSURE LINE	SCHEDULE 40 PVC, 18" Deep	Dtl.12,L-3
	LATERAL LINE	CLASS 200 PVC, 12" Deep	Dtl.12,L-3
	DRIP ZONE	RAINBIRD XBS POLYETHYLENE HOSE .613 I.D.	Dtl.30-33,L-3
	PVC SLEEVE	PVC SCH 40, 2x LINE SIZE	

EMITTER SCHEDULE

Plant Size	Emitter	Number Per Plant
1 G	1 GPH EMITTER	1
5 G	1 GPH EMITTER	2
15G	2 GPH EMITTER	2
24" BOX	2 GPH EMITTER	3
36" BOX	2 GPH EMITTER	6
48" BOX	2 GPH EMITTER	9

NOTES:

- SLEEVE UNDER ALL PAVING PER SPECIFICATIONS.
- LATERAL & MAINLINE LOCATIONS ARE SCHEMATIC. LOCATE PIPING IN PLANTER ADJACENT TO PAVING EDGE.

VALVE CALLOUT SYMBOL

VALVE STATION NUMBER $\frac{3+1}{30}$ SIZE OF VALVE
GALLONS PER MINUTE $\frac{30}{30}$

Water Efficient Landscape Ordinance (WELO) Landscape Documentation Package Compliance Checklist

Item	Location
<input checked="" type="checkbox"/> Project Information	Sheet L-1 & Cover Sheet
<input checked="" type="checkbox"/> WELO Hydrozone Information Table	Sheet L-1
<input checked="" type="checkbox"/> Water Budget Calculations (MAWA & ETWU)	Sheet L-1, Tables 1, 2 & 3
<input checked="" type="checkbox"/> Soil Management Report	Sheet L-1
<input checked="" type="checkbox"/> Landscape Design Plans	Sheets L-2, L-3
<input checked="" type="checkbox"/> Irrigation Design Plans	Sheets L-1, L-3
<input checked="" type="checkbox"/> Grading Design Plans	(Refer to Engineer's Drawings)
<input checked="" type="checkbox"/> Maintenance Schedule	Sheet L-2

WELO Compliance Calculation:

Maximum Applied Water Allowance (MAWA)
Estimated Total Water Use (ETWU)

Table 1 (Annual MAWA)

TO CALCULATE MAWA - Maximum Applied Water Allowance	Value
Eto (annual)	52.1
LA	3,500 SF
SLA	0
MAWA (Gallons)	79,140
MAWA (inches per sq.ft.)	36.3
MAWA (inches per DAY)	0.10

Maximum Applied Water Allowance Equation:
MAWA = (Eto) (0.62) [(0.7 x LA) + (0.3 x SLA)]

Table 2a (Annual ETWU)

TO CALCULATE ETWU - Estimated Total Water Use	Value
Eto (annual)	52.1
PF/HA (see Table 2b)	700
HA (same as LA)	3,500 SF
IE (see Table 3)	0.8
SLA	0
ETWU (Gallons)	28,264
ETWU (inches per sq.ft.)	13.0
ETWU (inches per DAY)	0.94

Estimate Total Water Use Equation:
ETWU = (Eto x 0.62) [(PF x HA)/IE] + SLA

Hydrozone (H.Z.) Information Table

Table 3 (Irrigation Efficiency)

To Determine Average System "IE" exceeds .71						
H.Z.	Type	Sprinkler	HA	"IE"	Weighted Area	
1	LW	0	3,150	0.8	2,520	
2	LW	0	350	0.8	280	
3	LW	0	0	0	0	
					3500	Totals
						0.8

Does ETWU Qualify? Yes - ETWU Does Not Exceed Maximum Allowed

Table 4

Irrigation Schedule:
Established Landscape - July through October

CIRCUIT NUMBER	EQUIP TYPE	PR GAL/HR	EQUIP EFFICIENCY (%)	RECOMMENDED RUN TIMES (MINUTES)							WEEKLY APPLICATION (Gallons)	MONTHLY APPLICATION (Gallons)	SOIL S.L.C.	SLOPE F.M.S	SOLAR EXPOSURE S, S/SH, SH	PLANT TYPE LW, MW, HW	ROOT DEPTH T, H, W
				SUN (min)	MON (min)	TUE (min)	WED (min)	THU (min)	FRI (min)	SAT (min)							
1	D	1.0	0.8	0	60	0	60	0	60	0	757	3,027	S	S	S	LW	W
2	D	1.0	0.8	0	60	0	60	0	60	0	84	337	S	S	S	LW	W
3	D	2.0	0.8	0	60	0	60	0	60	0	6	24	S	S	S	LW	W
TOTALS											847	3,388					

Seasonal Modifications:
To Irrigate Nov. through March reduce irrigation times by 50% up to 100%.
To Irrigate April through June reduce irrigation times by up to 50%.

Tables 1 through 4 Symbol Definitions: PR = Precipitation Rate in gallons per hour
Soil: S = Sand, L = Loam, C = Clay; Slope: F = 0% - 5%, M = 5.1% - 10%, S = >10%; Solar Exposure: S = Full Sun, S/SH = Mixed Exposure, SH = Full Shade;
Plant Type: LW = 0.1 - 0.3, MW = 0.4 - 0.6, HW = 0.7 - 0.9 plant factor; Root Depth: T = Turf (2" - 8"), H = Herbaceous Plants (2" - 15"), W = Woody Plants (> 12")

WELO compliance tables are for planning and permitting purposes only. The Contractor shall modify schedule as needed to respond to specific site, plant and weather conditions over the course of landscape establishment and long-term maintenance.

Project Information

Date: May 13, 2010
Project Applicant: Nipomo Community Services District (NCSD)
Project address: (Refer to Cover Sheet)
Total landscape area: 3,500 sf
Project type: Public utility
Water supply type: Potable
Local retail water purveyor: NCSD
Project contacts (Refer to Cover Sheet)

Soil Management Report

Soil samples will be taken prior to project start up and an agronomic soil report created, with recommendations incorporated into project specifications prior to bidding.

Project soil is "Garey Sandy Loam, 2 to 9%." a very deep, well drained, moderately sloping soil developed from stabilized sand dunes. Surface layer, typically, is brown and pale brown sandy loam 36 inches thick. Permeability is moderately slow, and available water capacity is moderate. Surface runoff is slow or medium. Soil blowing hazard is moderate, and soil erosion is slight or moderate.

I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan.

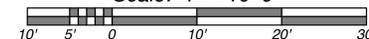
Jim Burrows
Jim Burrows May 13, 2010 Date

I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Document Package.

Applicant Date



North
Scale: 1" = 10'-0"



revision
△
△
△
△

Owner:
Nipomo Community Services District
Nipomo, CA

Project:
Nipomo CSD Waterline Intersect Project BP4
Nipomo, CA

Sheet Title:
Irrigation Plan

Principal: David W. Foote A.S.L.A.
Registered Professional Landscape Architect
1034 Mill Street
San Luis Obispo CA 93401
805.761.9600 fax 805.761.9603

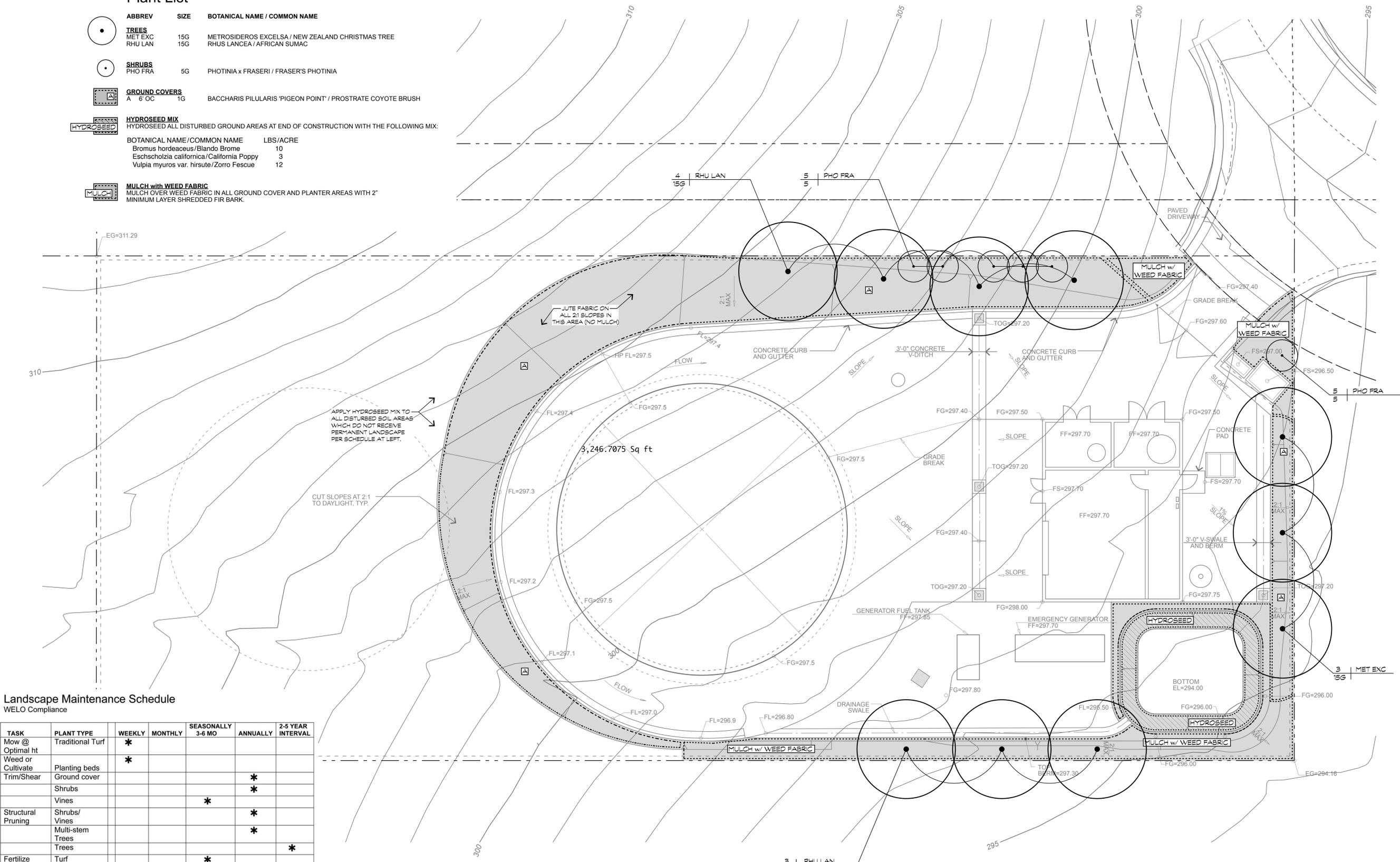
firma
landscape architecture
planning
environmental studies
ecological restoration

job no. 2646
plan check issue date: 5/19/10
bid set issue date:

SHEET
OF 3 SHEETS

Plant List

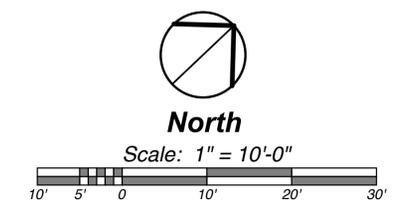
- ABBREV** **SIZE** **BOTANICAL NAME / COMMON NAME**
- TREES**
 MET EXC 15G METROSIDEROS EXCELSA / NEW ZEALAND CHRISTMAS TREE
 RHU LAN 15G RHUS LANCEA / AFRICAN SUMAC
- SHRUBS**
 PHO FRA 5G PHOTINIA x FRASERI / FRASER'S PHOTINIA
- GROUND COVERS**
 A 6 OC 1G BACCHARIS PILULARIS 'PIGEON POINT' / PROSTRATE COYOTE BRUSH
- HYDROSEED**
 HYDROSEED ALL DISTURBED GROUND AREAS AT END OF CONSTRUCTION WITH THE FOLLOWING MIX:
 BOTANICAL NAME / COMMON NAME LBS / ACRE
 Bromus hordeaceus / Blando Brome 10
 Eschscholzia californica / California Poppy 3
 Vulpia myuros var. hirsute / Zorro Fescue 12
- MULCH**
 MULCH WITH WEED FABRIC
 MULCH OVER WEED FABRIC IN ALL GROUND COVER AND PLANTER AREAS WITH 2" MINIMUM LAYER SHREDDED FIR BARK.



Landscape Maintenance Schedule

WELO Compliance

TASK	PLANT TYPE	WEEKLY	MONTHLY	SEASONALLY 3-6 MO	ANNUALLY	2-5 YEAR INTERVAL
Mow @ Optimal ht	Traditional Turf	*				
Weed or Cultivate	Planting beds	*				
Trim/Shear	Ground cover				*	
	Shrubs				*	
	Vines			*		
Structural Pruning	Shrubs/Vines				*	
	Multi-stem Trees				*	
	Trees					*
Fertilize	Turf			*		
	Ground cover			*		
	Shrubs/Vines				*	
	Trees				*	
Pest/Disease Control	Turf			*		
	Fruit Trees			*		
	General			*		
	Herbicide			*		
Replace Mulch						*



revision
△
△
△
△

Owner:
Nipomo Community Services District
 Nipomo, CA

Project:
Nipomo CSD Waterline Interests Project BP4
 Nipomo, CA

Sheet Title:
Planting Plan

Principal: David W. Foote A.S.A.
 Registered Professional
 1034 Mill Street
 San Luis Obispo CA 93401
 805.781.9600 fax: 805.781.9603



job no. 2646
 plan check issue date: 5/20/10
 bid set issue date:

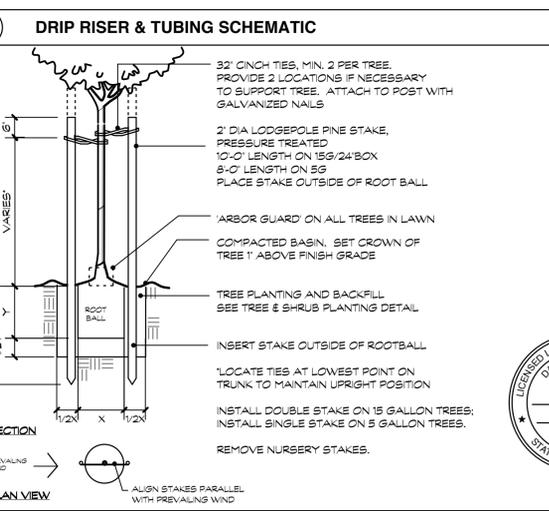
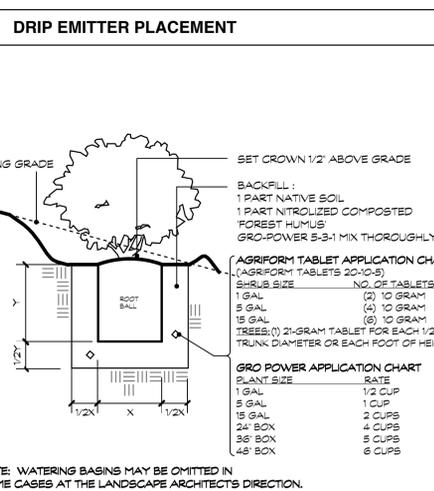
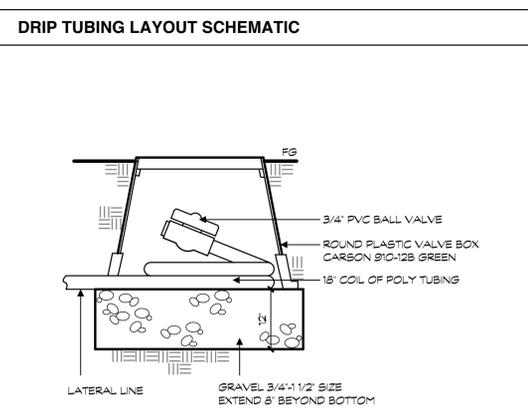
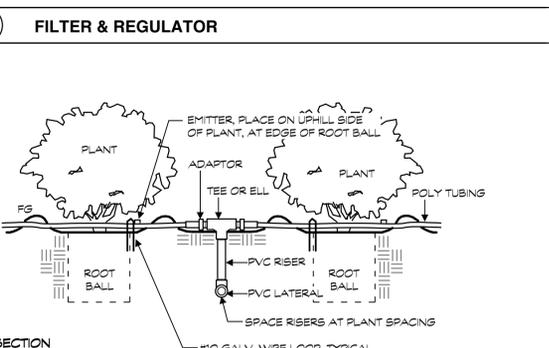
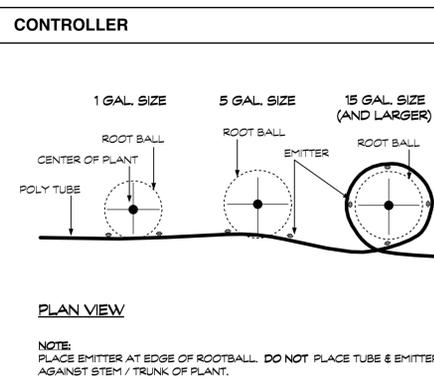
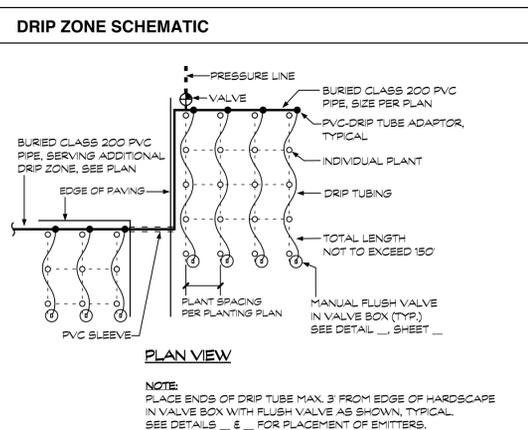
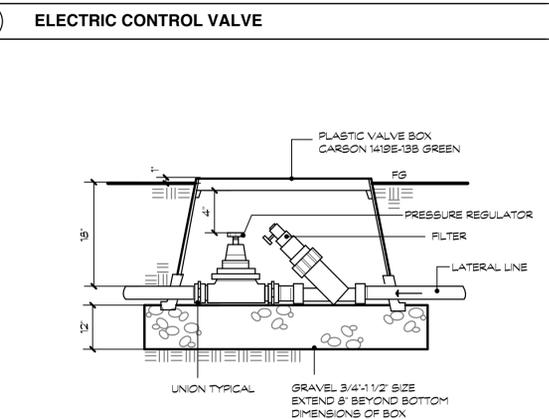
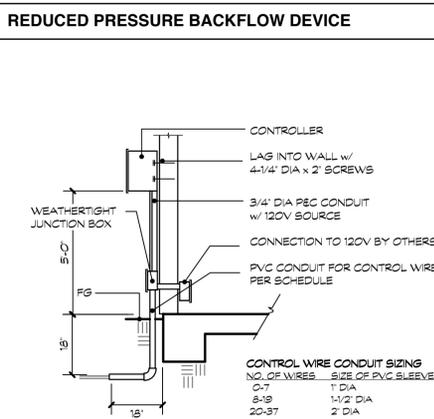
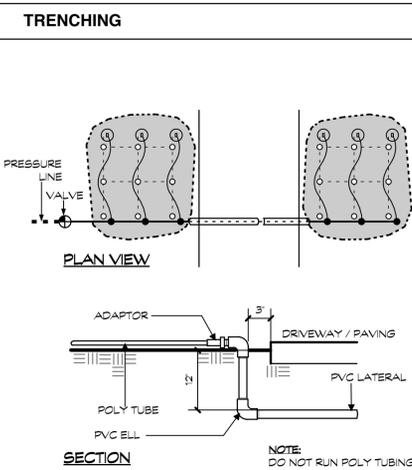
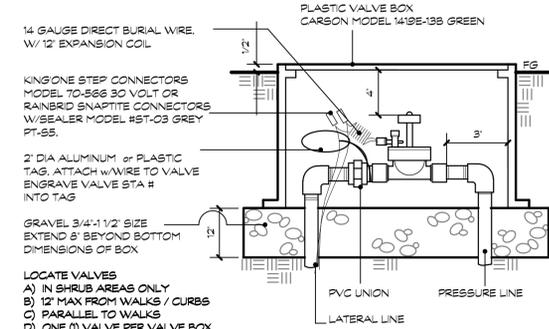
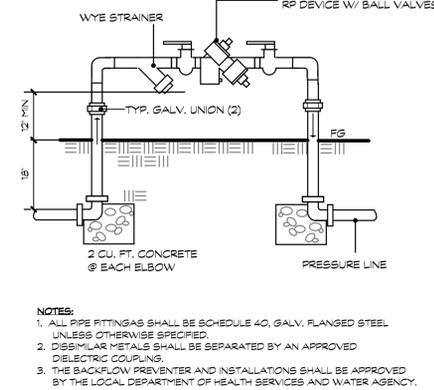
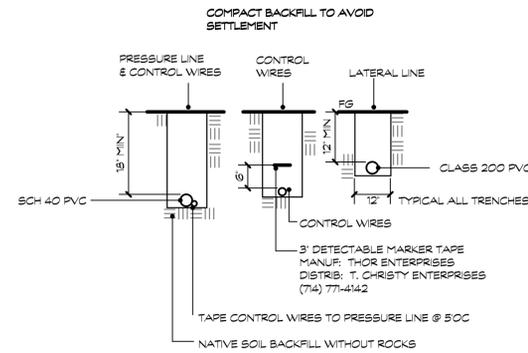
SHEET
L-2
 OF 3 SHEETS

Irrigation Specifications

1. Inspection: Contractor shall notify the Landscape Architect 48 hours in advance when each work phase is ready to be inspected.
2. As Built: Contractor shall provide two copies of an "As-Built" plan of the irrigation system prior to final acceptance of work. One copy shall be reduced and laminated with vinyl film and placed in the controller box, and one copy shall be provided to the Landscape Architect.
3. Guarantee: All work under this section will be guaranteed for a period of one year from the final approval of work. Any damages caused by the irrigation system shall be the responsibility of the Contractor.
4. Control Wires: Shall be solid copper conductors, 600 volt AC, Type UF-AWG, UL approved for direct burial. Common wire to be #12 size; pilot wires to be #14 size.
5. Trenching next to existing trees: Hand dig all trenches within the canopy dripline of existing trees. Do not cut any roots 2 inches in diameter or over.
6. Joints: Plastic to plastic joints shall be solvent-weld using solvent and procedures recommended by the pipe manufacturer.
7. Threaded fittings: Teflon tape or "Rector-Seal" soft set pipe dope shall be used on all threaded fittings.
8. Control wire placement: Wires shall be placed under irrigation mains wherever practical and taped to main at 5 foot intervals. Where wires do not parallel pipes, they shall be buried a minimum of 12", taped at 5 foot intervals, and should run along walks or building edges wherever practical. Control wires under paving shall be in PVC conduit 24" deep.
9. Connection of valves: Connect control wires to valves using Rainbird Model ST-03 wire connectors and PT-S5 sealer or equals. Wire should be installed so that a loop encircles the valve. Provide slack so that it can be cut and reconnected if necessary.
10. General: The Contractor shall not allow nor cause any of his work to be covered or enclosed until it has been inspected and approved by the Landscape Architect. Should any of his work be enclosed or covered before such inspection or test, he shall uncover the work at his own expense, and after it has been inspected, tested and approved, shall make all repairs with like materials necessary to restore all his work and that of the other contractors to its original condition.
11. Pressure test: After completion of the piping system and prior to backfilling and installation of the sprinkler heads, the entire system shall be thoroughly flushed under pressure to remove dirt, scale or other material from the lines. The pressure lines shall then be tested at full pressure for 2 hours with couplings exposed and pipe sections center loaded. Provisions shall be made to bleed the lines of air. Should any leaks develop, the system shall be retested following repair. The pressure test must be made in the presence of the Landscape Architect.
12. Layout: Adjust layout as necessary to meet job conditions. Head locations and adjustments shall be set to achieve full and uniform coverage of the areas intended to be watered, with minimum overspray of walks and roadways.
13. Operation: No planting shall occur until the irrigation system and automatic controller are fully operative and have been inspected and approved by the Landscape Architect.
14. Drip tubing: Maximum drip tubing lateral lengths may not exceed 300 feet from valve. Do not run continuous, winding tube laterals. Lay tubing in parallel lines approximately 5 feet apart, depending on plant spacing, and meander among plants.

Planting Specifications

1. Verification of job conditions: Contractor shall verify actual job conditions and report any discrepancies between the plans and actual conditions immediately to the Landscape Architect, refraining from doing any work in said areas until given approval to do so.
2. Materials receipts: The Contractor shall submit material receipts to the Landscape Architect to verify quantities of all materials used.
3. Guarantee: The Contractor shall repair or replace any or all work, together with any adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or material for the period of 60 days from final acceptance of work for all shrubs and groundcover less than 5 gallon size, and one year for all shrubs and trees 5 gallon size or larger, unusual abuse or neglect excepted.
4. Inspection notice: The Contractor must give 48 hour prior notice to the Landscape Architect when materials or work are ready to be inspected.
5. Grade: Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade. Nursery grown stock only shall be used.
6. Unacceptable material: All plant material overgrown and root bound, too recently canned, with damaged rootballs, or which are diseased, unhealthy or badly shaped are considered unacceptable and shall be removed from the site.
7. Inspection and substitutions: Plants shall be the varieties and sizes shown on the plan. No substitutions will be used without the written approval of the Landscape Architect. The Landscape Architect shall inspect and approve or reject plant material prior to installation.
8. Fertilizer: GRO-POWER 12-8-8 Slow Release Fertilizer at 10 lbs/1000 sq. ft. in ground cover areas. GRO-POWER 5-3-1 fertilizer in backfill per manufacturer's directions.
9. Organic amendments: "Forest Humus" composted bark mixture by Sequoia Products, or equal, conforming to the following minimum certified test standards in all planting areas at 6.25 cu. yd. per 1000 sq. ft.: a. Free from herbicide residue b. average nutrient content 2.0 to 5.0 c. average nutrient ratio 3.0 to 8.0 d. C/N ratio less than 13.0 e. Ammonium nitrate ratio less than 100, pH 6.5-7.5 f. Ash to organic matter ratio 35% OM minimum, 65% ash maximum g. Soluble nutrients and salts (EC5 d.w.) less than 3.0 h. Particle size greater than 6.3mm: zero (0).
10. Spreading amendments: Soil amendments shall be applied to planting areas at specified rates and inspected and approved by Landscape Architect prior to cultivation, or the Contractor shall prepare a test plot under the supervision of the Landscape Architect using the specified amounts of amendments, which shall serve as an approved basis of comparison for the remainder of the soil preparation work.
11. Cultivation: Cultivate amendment into the soil to a depth of six inches. Cultivation shall produce a uniform, well mixed, loose, friable planting soil. Rake smooth to conform to finish grading requirements.
12. Finish grading: Rough grade to be within one-tenth (1) of a foot of finish grade, by others. All planting areas to have minimum slope of 1/4" per foot (2%) to drain. Parking islands to be crowned in center. Landscape Architect to inspect finish grades prior to planting.
13. Tree and ground cover planting: Per details on plans. Notify Landscape Architect if any obstructions, bedrock or hardpan conditions encountered.
14. Ground cover planting: Plant at spacings shown on drawings in a triangular pattern. Ground cover shall be planted in all designated areas under, around and between shrubs unless noted otherwise.
15. Hydroseed area soil prep: Remove all rocks and clods from areas to be seeded. After finish grade is approved, apply 100 lbs/AC 16-8-8 fertilizer and irrigate all areas thoroughly for a period of 10 days, keeping soil moist at all times to germinate weed seed. After germination level approved by Landscape Architect apply systemic herbicide to all sprouted weeds. Do not hydroseed until all weeds are dead.
16. Pre-emergent herbicide: Apply an appropriate pre-emergent herbicide, according to manufacturer's directions, to all ground cover planting areas. Any plant materials showing loss of vigor or health due to improper application of herbicide shall be replaced by the Contractor.
17. Bark Mulch over Weed Barrier Fabric: Shredded and composted forest bark or recycled wood product, consisting principally of wood chips and low in composted green waste fines, free from weeds and soil, plastic, metal, and paper debris, and certified free from levels of chlorine, salts or boron in levels that are harmful to ornamental plants, in 2 inch minimum layer in all ground cover and shrub planting areas. Recycled wood and green waste product with a higher proportion of composted fines from leaves and grass may be conditionally acceptable if placed in a 3 inch layer. Install over layer of weed barrier fabric, stabled down at 8" o.c. maximum spacing.
18. Commencement of establishment period: The establishment period shall begin after all work has been satisfactorily completed and granted final completion notice by the Owner. The establishment period shall be 60 days.
19. Responsibility of contractor: During the establishment period, the Contractor shall maintain all planting areas in a weed free condition, performing pest control, pruning, fertilizing and replacement of dead or unhealthy plants as necessary to establish a healthy, vigorous attractive planting. Fertilize hydroseed areas and ground cover at end of 60 days at 10 lbs/1000 sq. ft. GRO-POWER 12-8-8 fertilizer.
20. Replacement of dead plants: All plants and ground covers that may die during the establishment period shall be replanted immediately. Waiting to replant until the end of the establishment period is not acceptable.



42

FLUSH VALVE

41

TREE, SHRUB & GROUND COVER PLANTING ON SLOPE

40

TREE PLANTING

revision

Owner:
Nipomo Community Services District
 Nipomo, CA

Project:
Nipomo CSD Waterline Interent Project BP4
 Nipomo, CA

Sheet Title:
Planting & Irrigation Details & Specifications

Principal: David W. Foote ASLA
 Registered Professional Landscape Architect
 1034 Mill Street
 San Luis Obispo CA 93401
 805.761.9600 fax: 805.761.9603

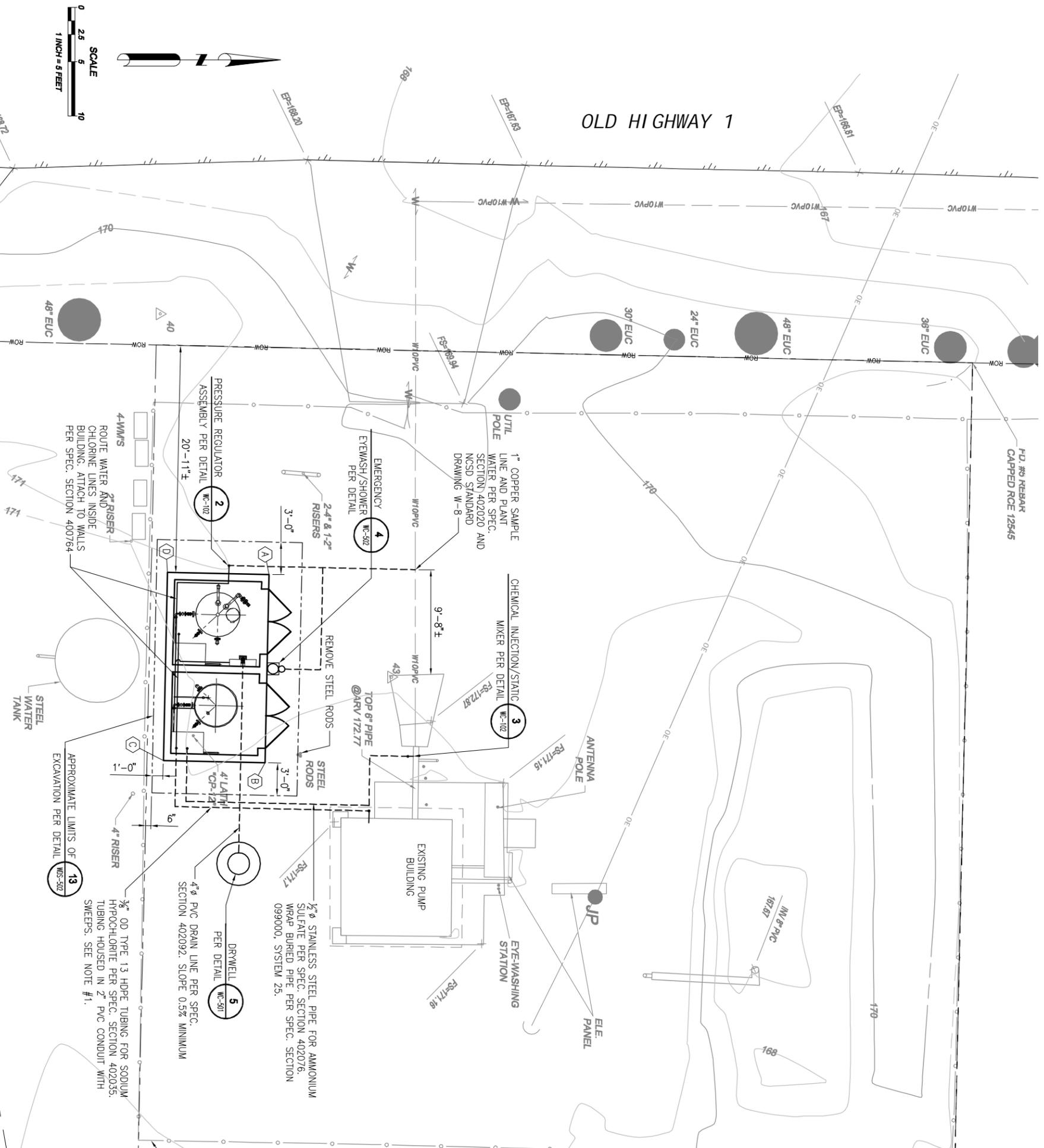
firma
 landscape architecture
 planning
 environmental studies
 ecological restoration

job no.	2646
plan check issue date	5/19/10
bid set issue date	

SHEET
L-3

OF 3 SHEETS





LAYOUT DATA			
ID	COORDINATES	DESCRIPTION	
(A)	N = 2212628.53 E = 5793129.93	BUILDING NORTHWEST CORNER	
(B)	N = 2212628.14 E = 5793147.26	BUILDING NORTHEAST CORNER	
(C)	N = 2212618.81 E = 5793147.06	BUILDING SOUTHEAST CORNER	
(D)	N = 2212619.20 E = 5793129.73	BUILDING SOUTHWEST CORNER	

NOTES:

1. TRENCH BACKFILL AND COMPACTION REQUIREMENTS FOR CHEMICAL AND SAMPLE LINES PER SPECIFICATION SECTION 312316 AND DETAIL W-307
2. TRENCH AND BACKFILL REQUIREMENTS FOR 4" OR LARGER PIPES PER NCSD STANDARD DRAWING W-2.
3. HYPOCHLORITE TUBING TO BE HOUSED INSIDE PVC CONDUIT WITHIN WELL CASING. TUBING AND CONDUIT SHALL EXTEND TO WITHIN ONE FOOT OF PUMP INTAKE.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERLIE PROJECT - BP4
EUREKA WELL SITE



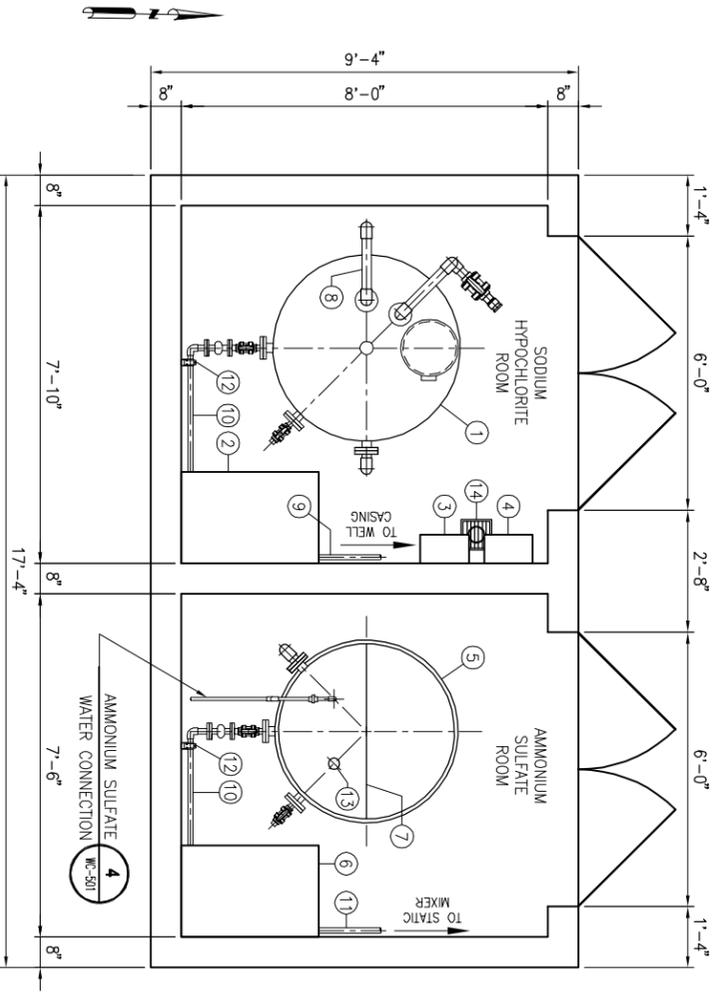
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		DESCRIPTION	EXP DATE
JON HANLON		M33232	09/30/2009

WC-101
 SHEET
 74 OF 95

DESIGNED: JH
 CHECKED: JH
 APPROVED: JH
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. BIVLE/AECOM
 CADW STPS. BIVLE/AECOM



CHLORAMINATION BUILDING LAYOUT

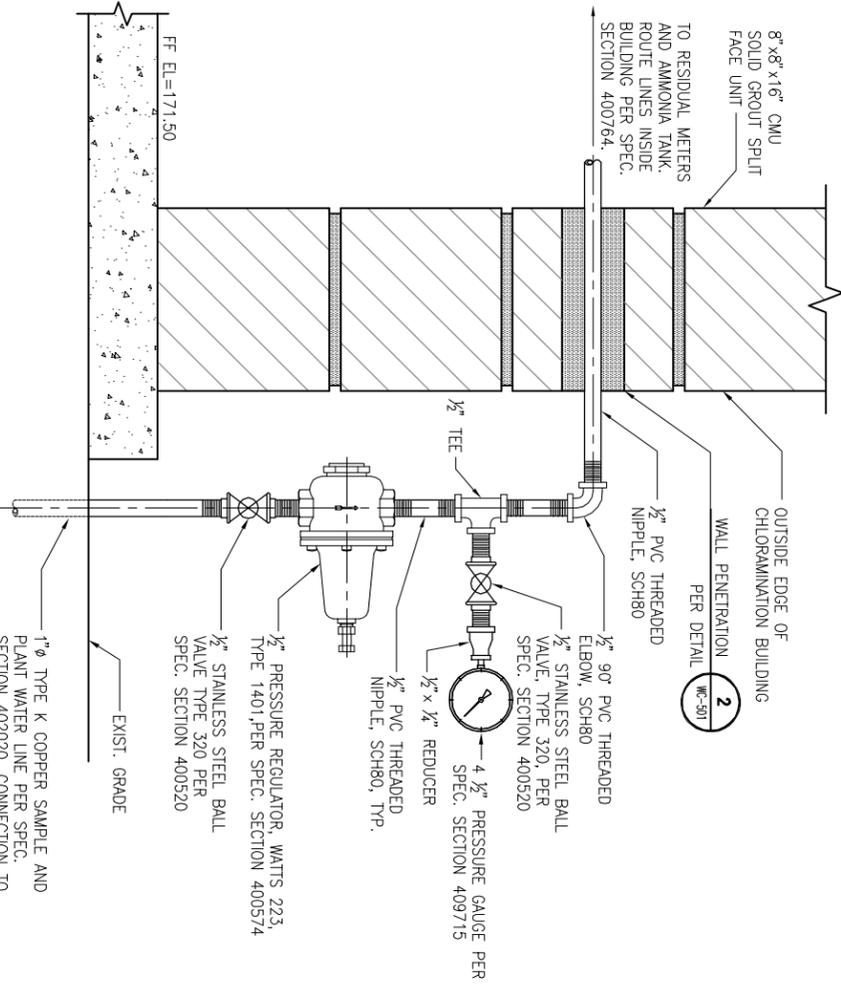
SCALE: 1/2" = 1'-0"

EQUIPMENT LIST

- ① SODIUM HYPOCHLORITE CONTAINMENT TANK (500 GALLON, SYDNER INDUSTRIES) PER SPECIFICATION SECTION 434127.
- ② SODIUM HYPOCHLORITE FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ③ FREE CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- ④ TOTAL CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- ⑤ AMMONIUM SULFATE SOLUTION STORAGE TANK (330 GALLON OPEN TOP TANK WITHIN 370 GALLON OPEN TOP TANK, POLY PROCESSING COMPANY).
- ⑥ AMMONIA FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ⑦ 1/2"-HINGED LID WITH 2" INLET/OUTLET/VENT
- ⑧ MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
- ⑨ HYPOCHLORITE DISCHARGE PIPING
- ⑩ 1"Ø P.V.C. PIPE PER SPECIFICATION SECTION 402090
- ⑪ AMMONIUM SULFATE DISCHARGE PIPING
- ⑫ 1 1/2" CHANNEL MOUNTED ON WALL WITH PIPE CLAMP FOR PIPE SUPPORT PER SPECIFICATION SECTION 400764
- ⑬ THREADED 2" NPT BUNG FOR LEVEL SENSOR
- ⑭ FLOOR DRAIN PER DETAIL _____

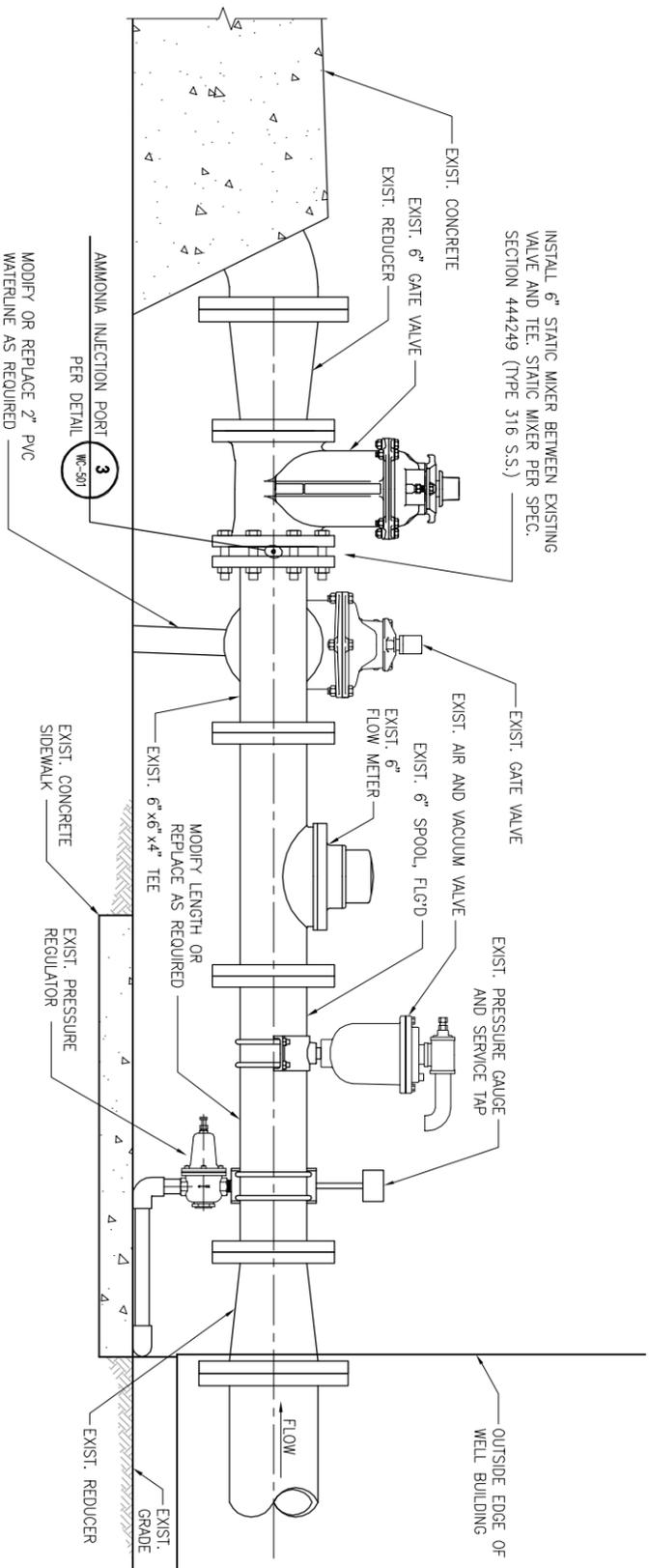
NOTES:

1. CONTRACTOR TO CONFIRM MAXIMUM SYSTEM PRESSURE AT WELL SITE TO ENSURE PRESSURE CAPABILITY OF CHEMICAL SKID PIPING, PUMPS, AND APPURTENANCES.
2. PROVIDE AND INSTALL SEISMIC RESTRAINTS ON CHEMICAL TANKS PER SPECIFICATION SECTION 434127 AND MANUFACTURER'S RECOMMENDATIONS.
3. CHEMICAL FEED SKID FOOTPRINT SHALL BE 24'x36" MAXIMUM.
4. SEE WC-503 FOR TANK SECTIONS AND DETAILS.



PRESSURE REGULATOR ASSEMBLY

SCALE: 3/4" = 1'-0"



STATIC MIXER/AMMONIA INJECTION POINT

SCALE: 1-1/2" = 1'-0"

FOR PRELIMINARY USE ONLY

AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



WC-101

WC-101

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
**EUREKA WELL SITE
 CHLORAMINATION BUILDING LAYOUT
 AND SITE SPECIFIC DETAILS**



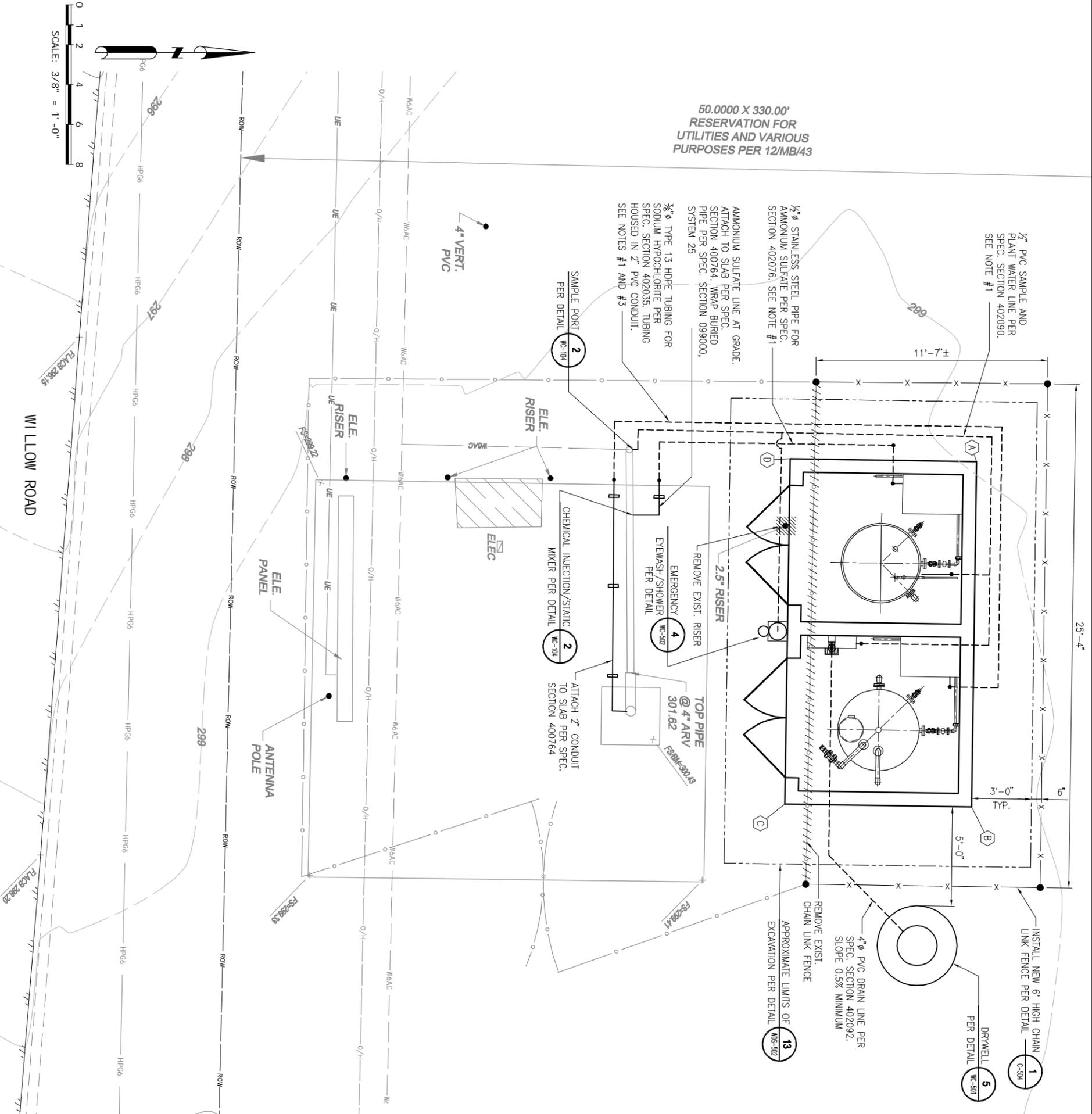
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REB NUMBER	EXP DATE
JON HANLON		M33232	09/30/2009

WC-102
 SHEET
 75 OF 95

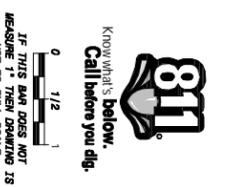


LAYOUT DATA	
ID	DESCRIPTION
(A)	BUILDING NORTHWEST CORNER
(B)	BUILDING NORTHEAST CORNER
(C)	BUILDING SOUTHEAST CORNER
(D)	BUILDING SOUTHWEST CORNER

- NOTES:**
- TRENCH BACKFILL AND COMPACTION REQUIREMENTS FOR CHEMICAL AND SAMPLE LINES PER SPECIFICATION SECTION 312316 AND DETAIL **6**
 - TRENCH AND BACKFILL REQUIREMENTS FOR 4" AND LARGER PIPES PER NCSD STANDARD DRAWING W-2.
 - HYPOCHLORITE TUBING TO BE HOUSED INSIDE PVC CONDUIT WITHIN WELL CASING. TUBING AND CONDUIT SHALL EXTEND TO WITHIN ONE FOOT OF PUMP INTAKE.

LAYOUT DATA		
ID	COORDINATES	DESCRIPTION
(A)	N = 2213312.47 E = 5798536.64	BUILDING NORTHWEST CORNER
(B)	N = 2213312.22 E = 5798553.98	BUILDING NORTHEAST CORNER
(C)	N = 2213302.89 E = 5798553.84	BUILDING SOUTHEAST CORNER
(D)	N = 2213303.14 E = 5798536.51	BUILDING SOUTHWEST CORNER

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERLIE PROJECT - BP4
BLACKLAKE #4 WELL SITE



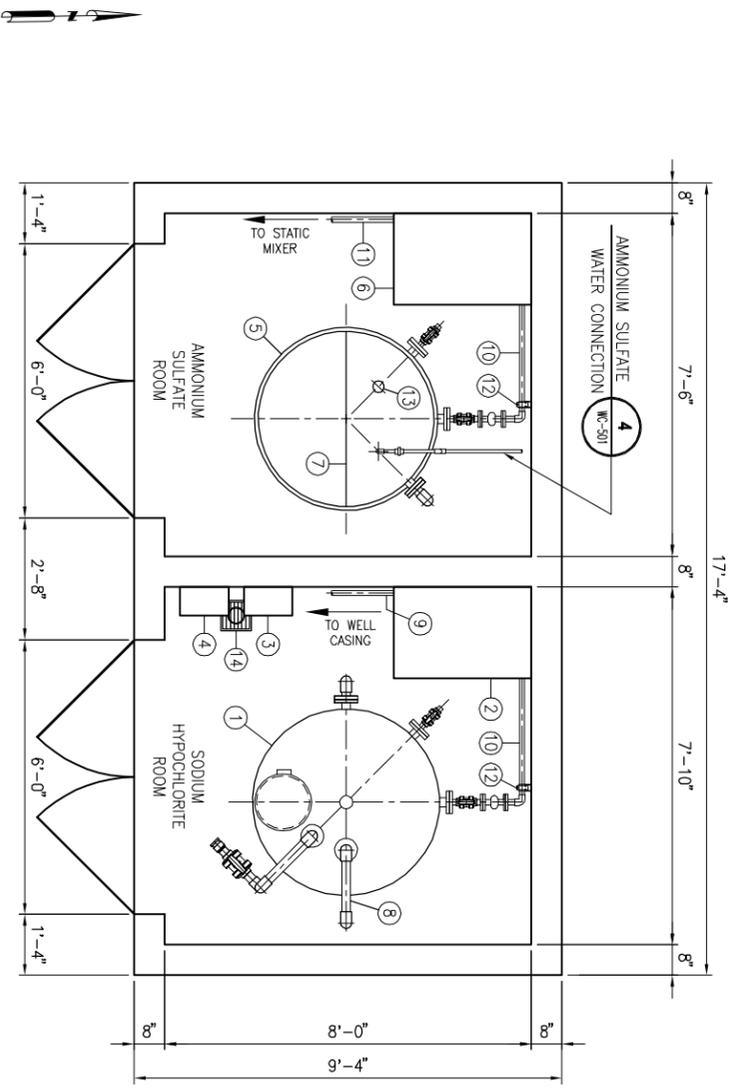
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



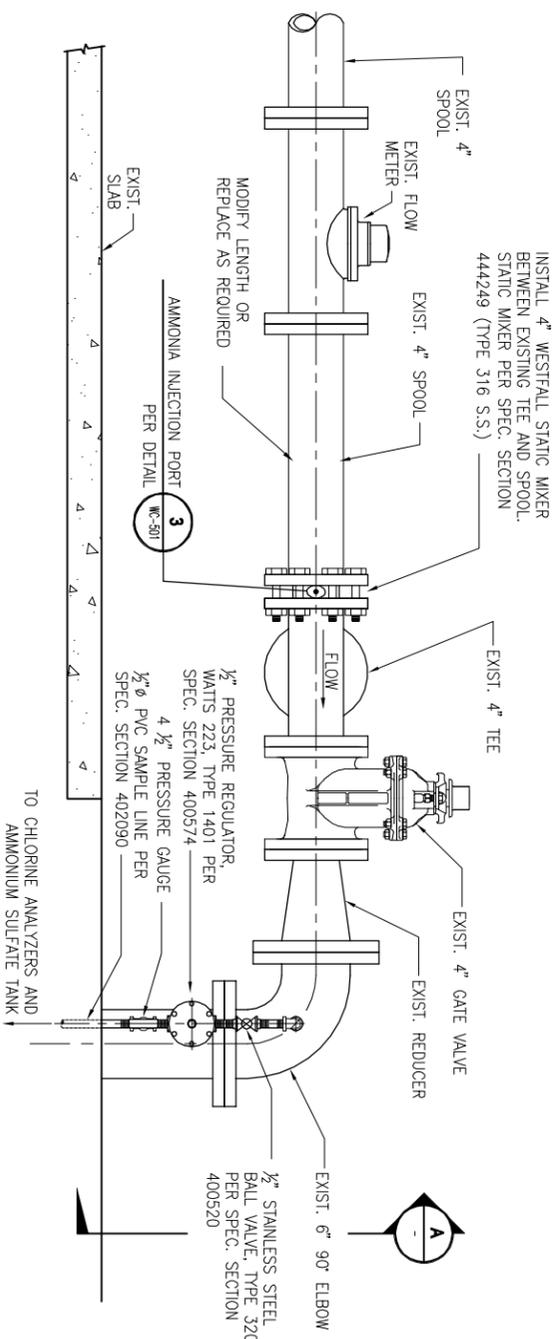
REV	DATE	DESCRIPTION	APPR

PROJECT ENGINEER: JON HANLON
 DATE: 09/30/2009
 DESCRIPTION: M33232

DESIGNED: JH
 DETAIL LEO: JPF
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO.: 60061295
 NCSD PROJECT NO.:
 CAD STGS.:
 BDT/E/AECOM
WC-103
 SHEET
 76 OF 95



CHLORAMINATION BUILDING LAYOUT
 SCALE: 1/2" = 1'-0"



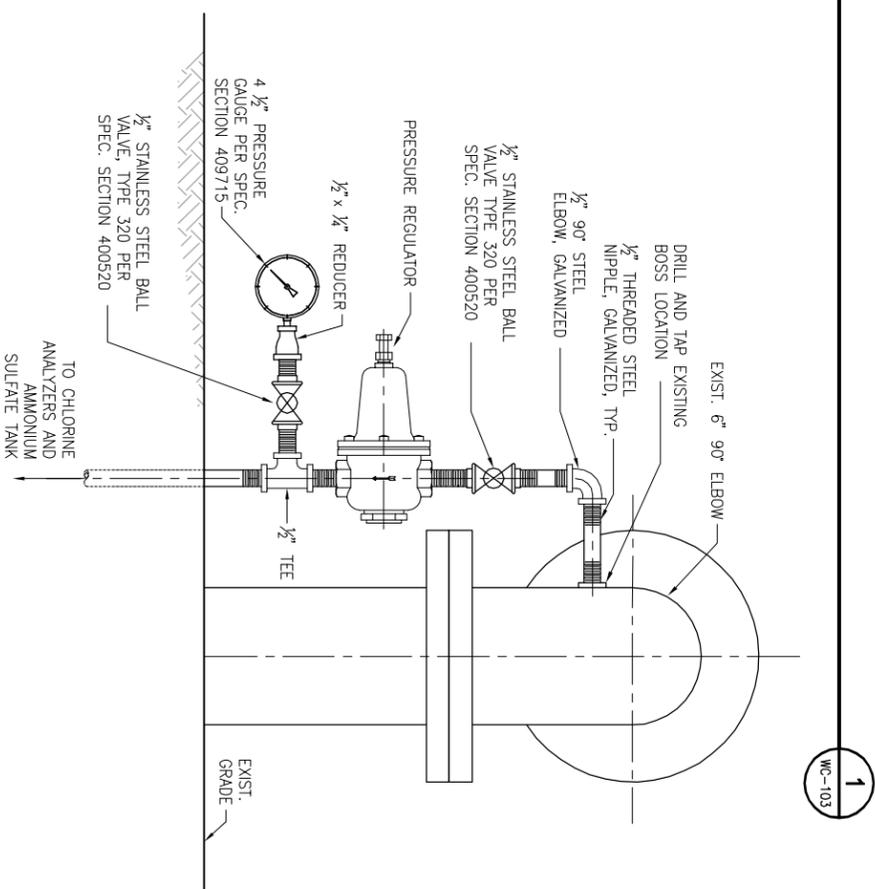
STATIC MIXER AMMONIA INJECTION POINT AND SAMPLE PORT
 SCALE: 1-1/2" = 1'-0"

EQUIPMENT LIST

- 1 SODIUM HYPOCHLORITE CONTAINMENT TANK (360 GALLON, SNYDER INDUSTRIES) PER SPECIFICATION SECTION 434127.
- 2 SODIUM HYPOCHLORITE FEED SYSTEM PER SPECIFICATION SECTION 433280.
- 3 FREE CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- 4 TOTAL CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- 5 AMMONIUM SULFATE SOLUTION STORAGE TANK (330 GALLON OPEN TOP TANK WITHIN 370 GALLON OPEN TOP TANK, POLY PROCESSING COMPANY).
- 6 AMMONIA FEED SYSTEM PER SPECIFICATION SECTION 433280.
- 7 1/2"-HINGED LID WITH 2" INLET/OUTLET/VENT
- 8 MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
- 9 HYPOCHLORITE DISCHARGE PIPING
- 10 1"Ø P.V.C. PIPE PER SPECIFICATION SECTION 402090
- 11 AMMONIUM SULFATE DISCHARGE PIPING
- 12 1 1/2" CHANNEL MOUNTED ON WALL WITH PIPE CLAMP FOR PIPE SUPPORT PER SPECIFICATION SECTION 400764
- 13 THREADED 2" NPT BUNG FOR LEVEL SENSOR
- 14 FLOOR DRAIN PER DETAIL

NOTES:

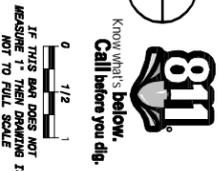
1. CONTRACTOR TO CONFIRM MAXIMUM SYSTEM PRESSURE AT WELL SITE TO ENSURE PRESSURE CAPABILITY OF CHEMICAL SKID PIPING, PUMPS, AND APPURTENANCES.
2. PROVIDE AND INSTALL SEISMIC RESTRAINTS ON CHEMICAL TANKS PER SPECIFICATION SECTION 434127 AND MANUFACTURER'S RECOMMENDATIONS.
3. CHEMICAL FEED SKID FOOTPRINT SHALL BE 24"x36" MAXIMUM.
4. SEE WC-503 FOR TANK SECTIONS AND DETAILS.



SECTION
 SCALE: 3" = 1'-0"

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

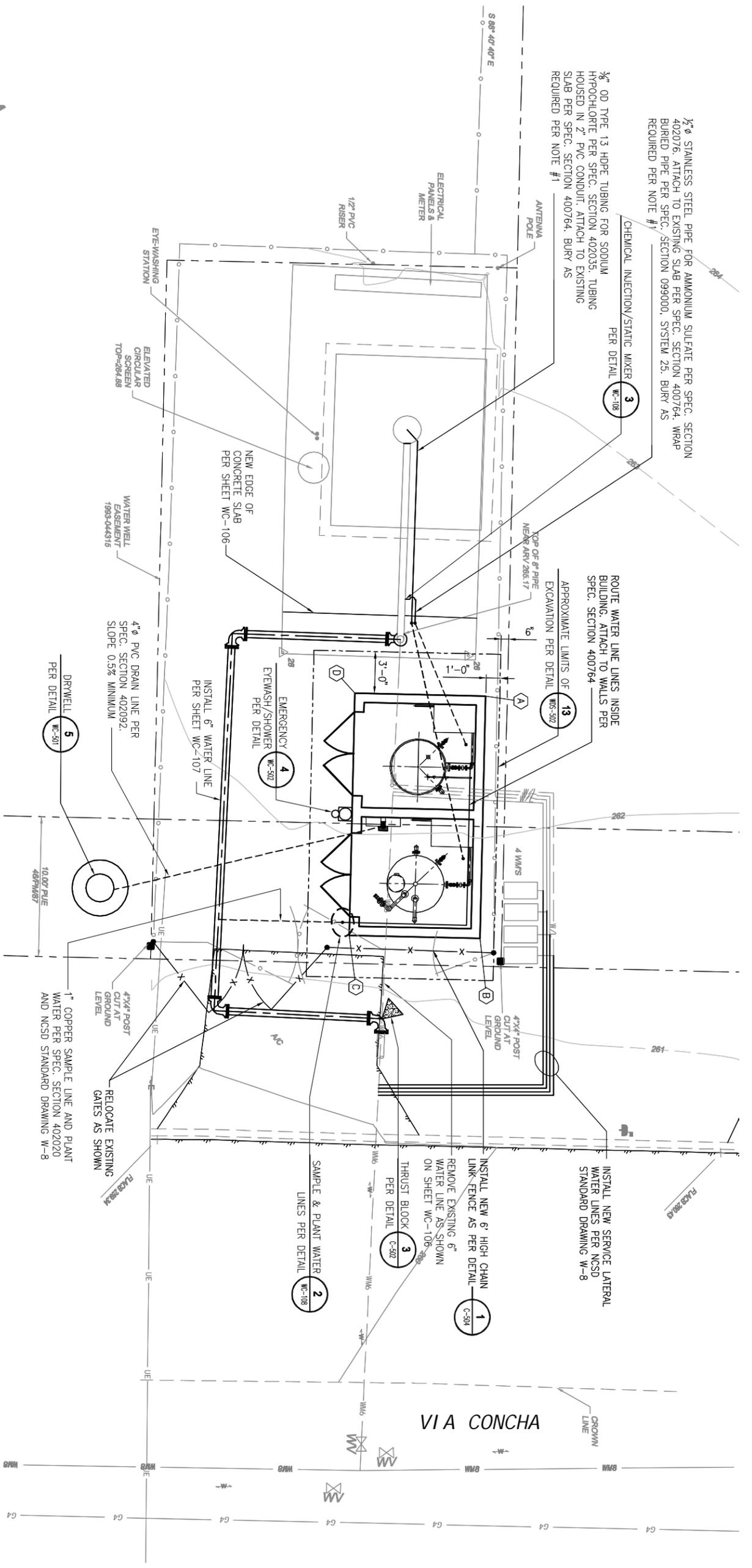


IF THIS PLAN DOES NOT MEASURE 1", THEN DRAWING IS NOT TO FULL SCALE



LAYOUT DATA		
ID	COORDINATES	DESCRIPTION
(A)	N = 2212246.93 E = 5798300.22	BUILDING NORTHWEST CORNER
(B)	N = 2212246.53 E = 5798312.55	BUILDING NORTHEAST CORNER
(C)	N = 2212237.20 E = 5798317.33	BUILDING SOUTHEAST CORNER
(D)	N = 2212237.60 E = 5798300.00	BUILDING SOUTHWEST CORNER

- NOTES:**
1. TRENCH BACKFILL AND COMPACTION REQUIREMENTS FOR CONDUIT AND PIPE 2" AND SMALLER PER DETAIL **WC-301**
 2. TRENCH AND BACKFILL REQUIREMENTS FOR 4" AND LARGER PIPE PER NCSD STANDARD DRAWING W-2.
 3. HYPOCHLORITE TUBING TO BE HOUSED INSIDE PVC CONDUIT WITHIN WELL CASING. TUBING AND CONDUIT SHALL EXTEND TO WITHIN ONE FOOT OF PUMP INTAKE.



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's Below.
Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

VIA CONCHA WELL SITE



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

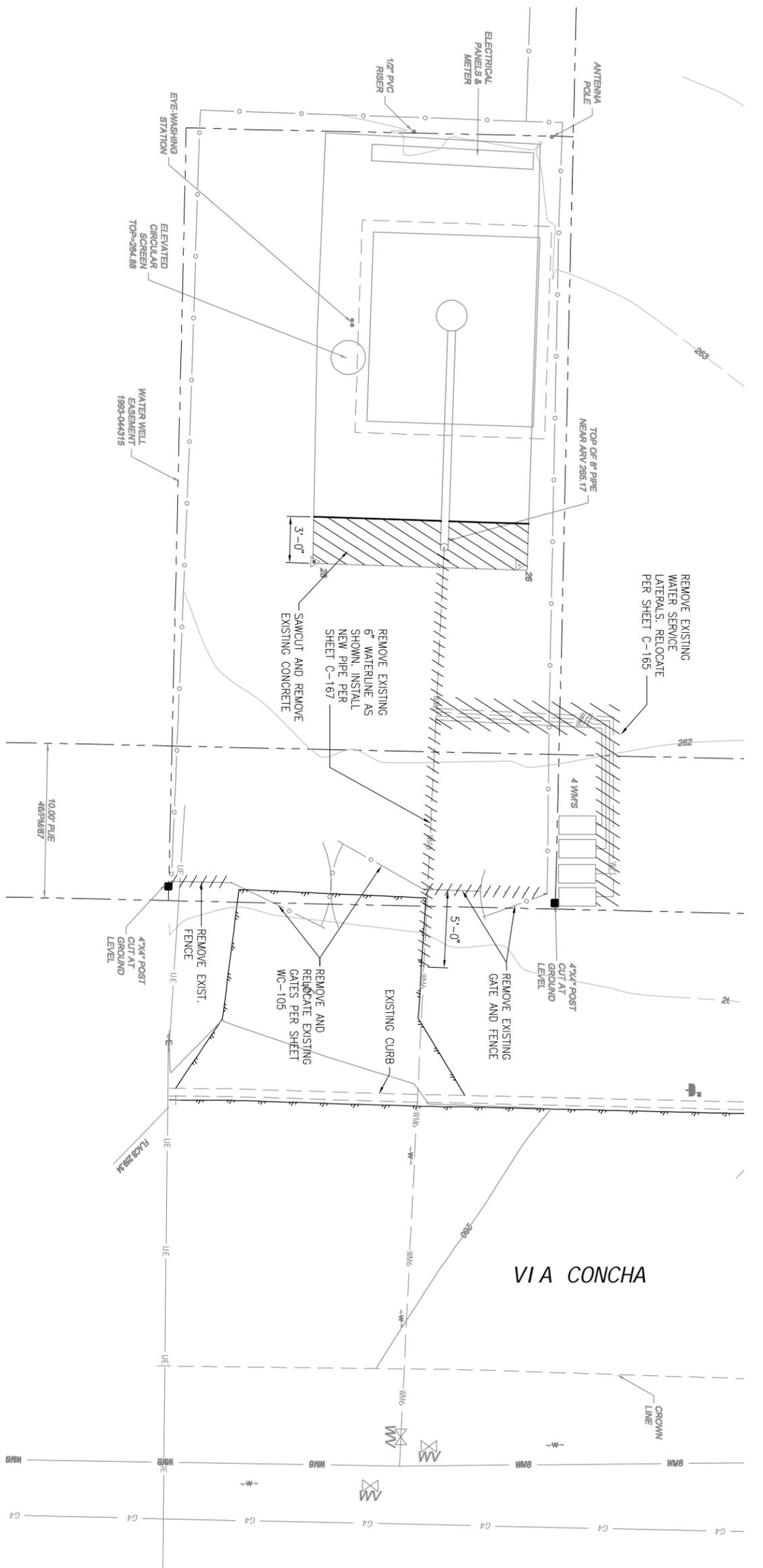


REV	DATE	DESCRIPTION	APPR

PROJECT ENGINEER: **JON HANLON**
 REG NUMBER: **M33232**
 EXP DATE: **09/30/2009**

DESIGNED: JH	CADD STDS: BY/LE/AECOM
DETAIL LEAD: JPF	
CHECKED: JPF	
APPROVED: JPF	
DATE: JUNE 2010	
AECOM PROJECT NO.: 60061295	
NCSD PROJECT NO.: 	

WC-105
 SHEET
 78 OF 95



VIA CONCHA

FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
Call before you dig.

IF THIS SIGN DOES NOT MEASURE 1\"/>

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

**VIA CONCHA WELL SITE
 DEMOLITION PLAN**



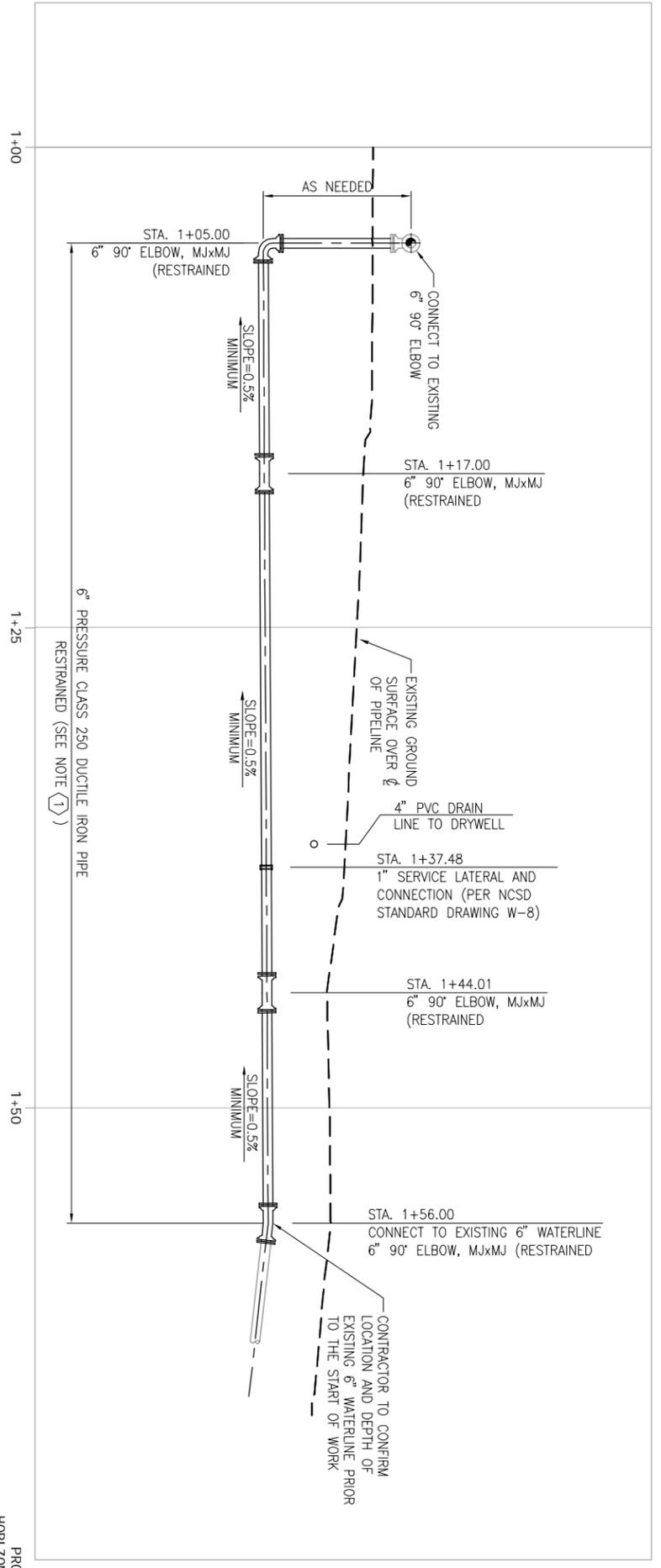
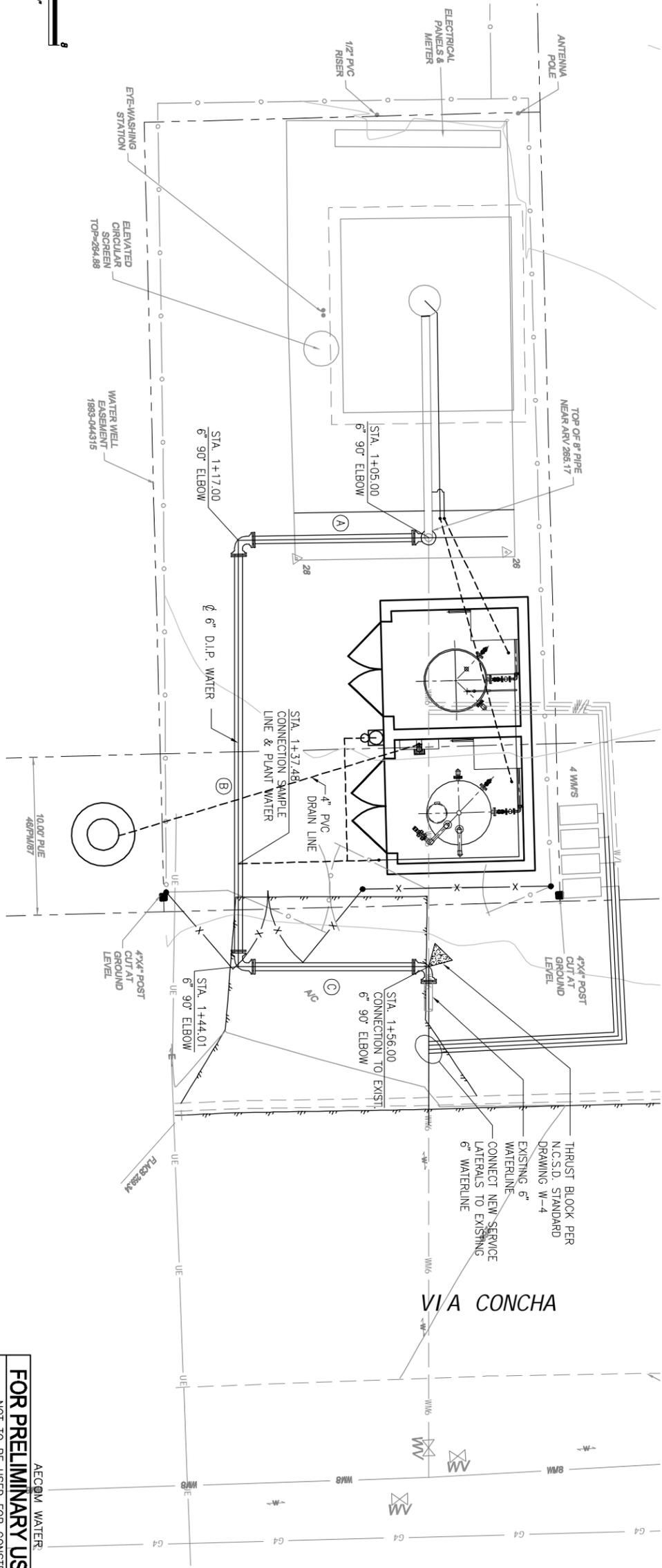
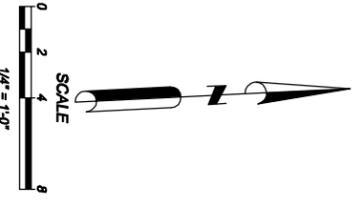
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REG NUMBER	EXP DATE
JON HANLON		M33232	09/30/2009

DESIGNED: <i>JH</i>	DATE: JUNE 2010
DETAIL LEAD: <i>JPF</i>	APPROVED:
CHECKED:	DATE: JUNE 2010
APPROVED:	DATE: JUNE 2010
AECOM PROJECT NO. 60061295	NCSD PROJECT NO.
CADD STDS. BY/LE/AECOM	WC-106 SHEET 79 OF 95



PIPELINE BEARINGS		
(A)	S 158°07.54' W	12.00'
(B)	S 87°13'14.81" E	27.01'
(C)	N 24°7'02.04" E	12.00'

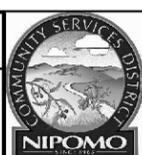
CONSTRUCTION NOTES:
 (1) INSTALL PIPE AND RESTRAINED JOINT FITTINGS PER SPECIFICATION SECTION 402040.

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below.
Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERLIE PROJECT - BP4
VIA CONCHA WELL SITE
NEW 6" WATERLINE PLAN & PROFILE

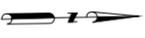


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



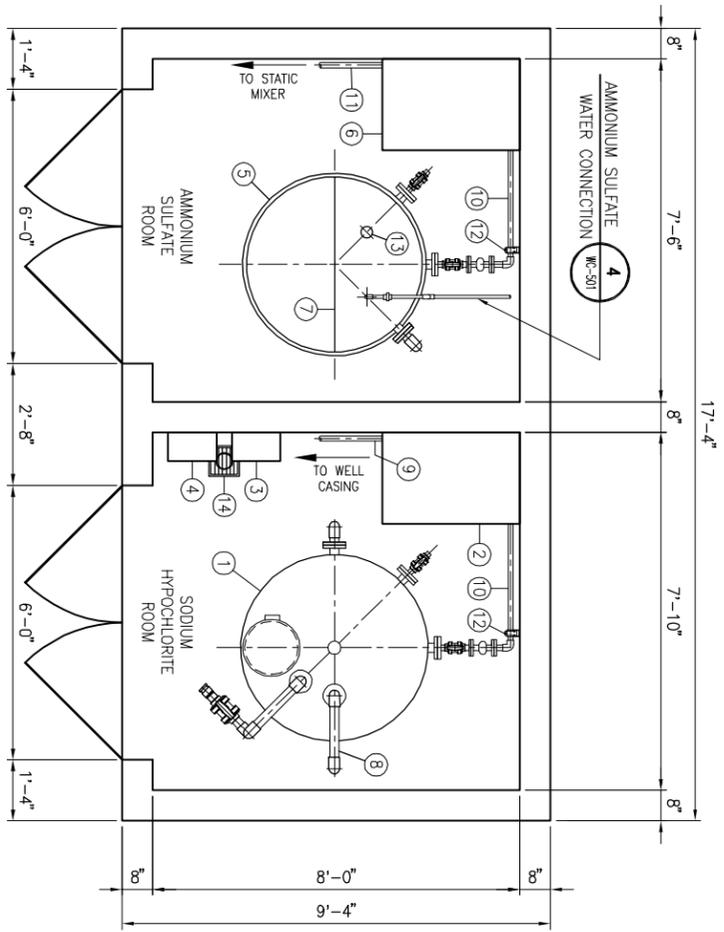
REV	DATE	DESCRIPTION	APPR
1			

PROJECT ENGINEER: **JON HANLON**
 REG NUMBER: **M33232**
 EXP DATE: **09/30/2009**



CHLORAMINATION BUILDING LAYOUT

SCALE: 1/2" = 1'-0"



EQUIPMENT LIST

- ① SODIUM HYPOCHLORITE CONTAINMENT TANK (500 GALLON, SNYDER INDUSTRIES) PER SPECIFICATION SECTION 434127.
- ② SODIUM HYPOCHLORITE FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ③ FREE CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- ④ TOTAL CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
- ⑤ AMMONIUM SULFATE SOLUTION STORAGE TANK (350 GALLON OPEN TOP TANK WITHIN 370 GALLON OPEN TOP TANK, POLY PROCESSING COMPANY).
- ⑥ AMMONIA FEED SYSTEM PER SPECIFICATION SECTION 433280.
- ⑦ 1/2"-HINGED LID WITH 2" INLET/OUTLET/VENT
- ⑧ MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
- ⑨ HYPOCHLORITE DISCHARGE PIPING
- ⑩ 1" Ø P.V.C. PIPE PER SPECIFICATION SECTION 402090
- ⑪ AMMONIUM SULFATE DISCHARGE PIPING
- ⑫ 1 1/2" CHANNEL MOUNTED ON WALL WITH PIPE CLAMP FOR PIPE SUPPORT PER SPECIFICATION SECTION 400764
- ⑬ THREADED 2" NPT BUNG FOR LEVEL SENSOR
- ⑭ FLOOR DRAIN PER DETAIL

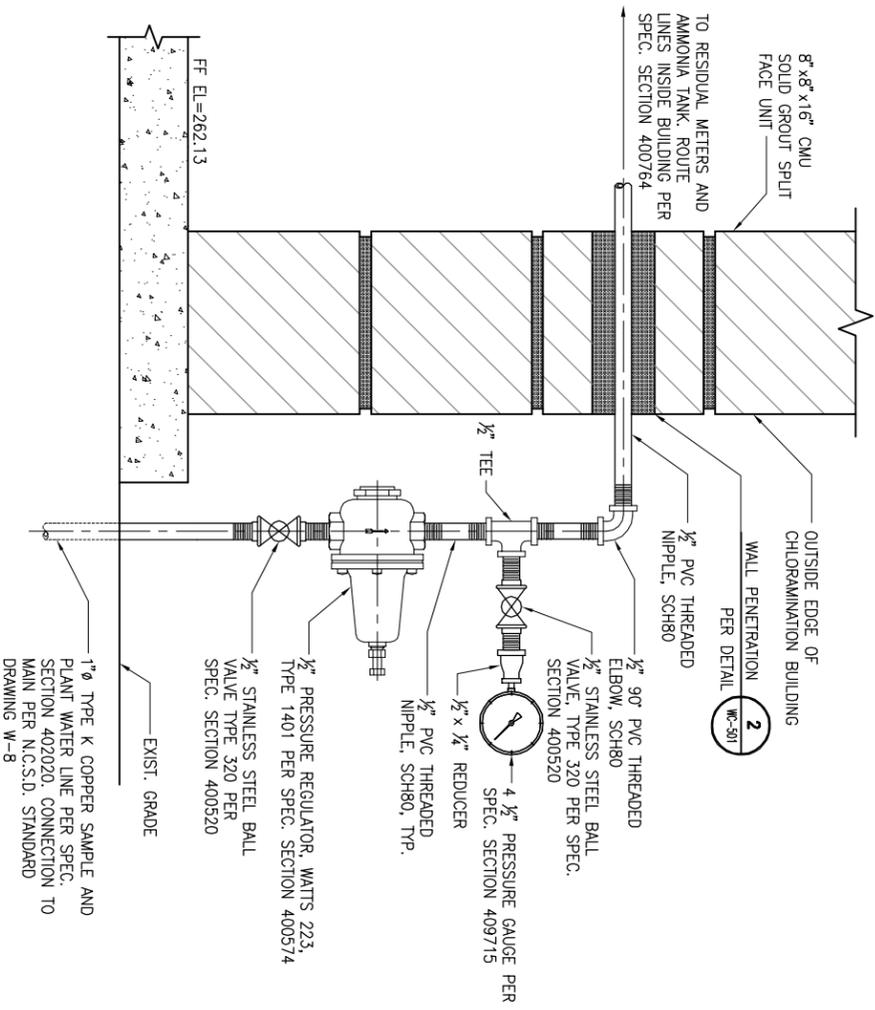
NOTES:

1. CONTRACTOR TO CONFIRM MAXIMUM SYSTEM PRESSURE AT WELL SITE TO ENSURE PRESSURE CAPABILITY OF CHEMICAL SKID PIPING, PUMPS, AND APPURTENANCES.
2. PROVIDE AND INSTALL SEISMIC RESTRAINTS ON CHEMICAL TANKS PER SPECIFICATION SECTION 434127 AND MANUFACTURER'S RECOMMENDATIONS.
3. CHEMICAL FEED SKID FOOTPRINT SHALL BE 24" X 36" MAXIMUM.
4. SEE WC-503 FOR TANK SECTIONS AND DETAILS.

1
WC-105

PRESSURE REGULATOR ASSEMBLY

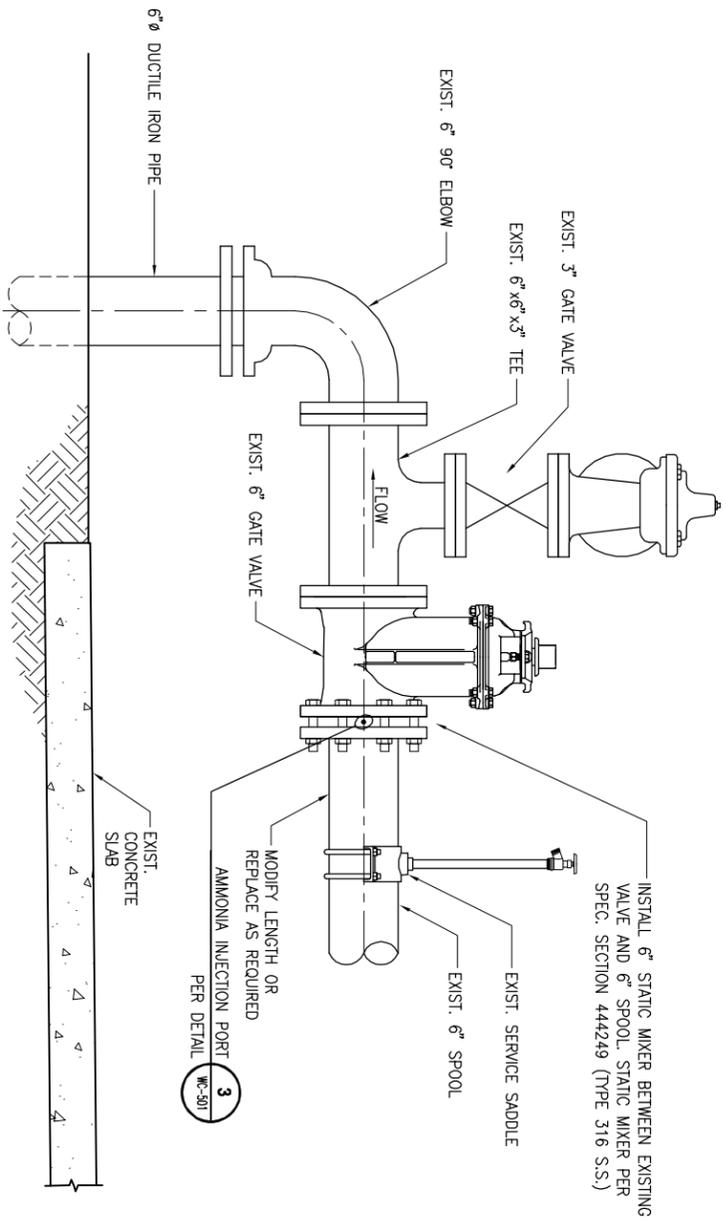
SCALE: 3/8" = 1'-0"



2
WC-105

STATIC MIXER/AMMONIA INJECTION POINT

SCALE: 1-1/2" = 1'-0"



3
WC-105

FOR PRELIMINARY USE ONLY

AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



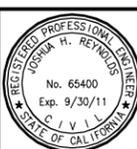
NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

VIA CONCHA WELL SITE CHLORAMINATION BUILDING LAYOUT AND SITE SPECIFIC DETAILS



AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM

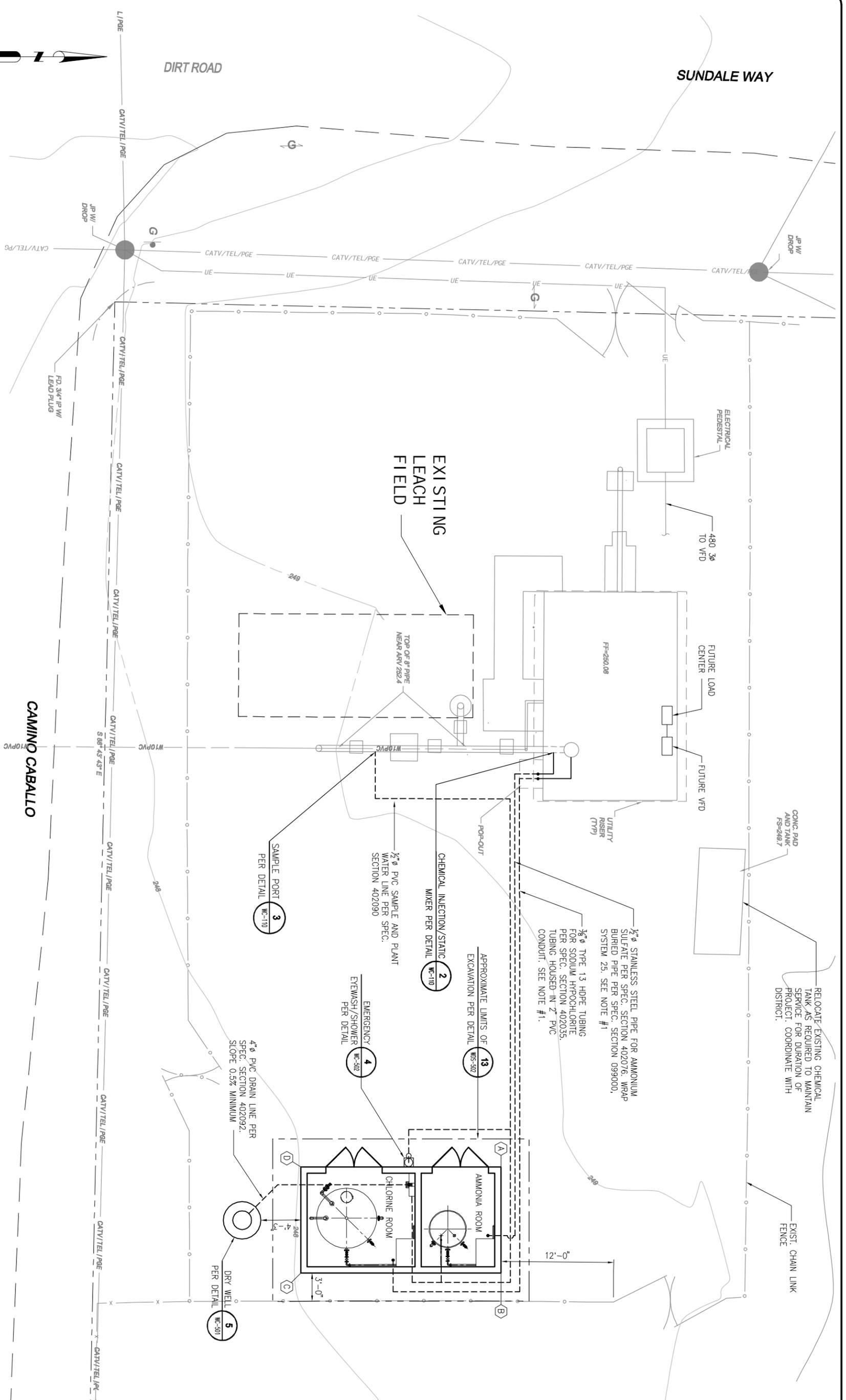


REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER		REB NUMBER	EXP DATE
JON HANLON		M33232	09/30/2009

DESIGNED: JH	DATE: JUNE 2010
DETAIL LBY: JPH	APPROVED:
CHECKED:	AECOM PROJECT NO. 60061295
APPROVED:	NCSD PROJECT NO.
CADD STDS. BY: EACOM	WC-108 SHEET 81 OF 95



LAYOUT DATA		
ID	COORDINATES	DESCRIPTION
(A)	N = 2208767.19 E = 5801031.34	BUILDING NORTHWEST CORNER
(B)	N = 2208767.19 E = 5801042.68	BUILDING NORTHEAST CORNER
(C)	N = 2208745.86 E = 5801042.69	BUILDING SOUTHEAST CORNER
(D)	N = 2208745.85 E = 5801031.36	BUILDING SOUTHWEST CORNER

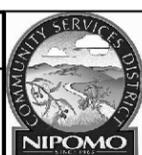


- NOTES:**
- TRENCH BACKFILL AND COMPACTION REQUIREMENTS FOR CHEMICAL AND SAMPLE LINES PER SPECIFICATION SECTION 312316 AND DETAIL **6**
 - HYPOCHLORITE TUBING TO BE HOUSED INSIDE PVC CONDUIT WITHIN WELL CASING. TUBING AND CONDUIT SHALL EXTEND TO WITHIN ONE FOOT OF PUMP INTAKE.



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
SUNDALE WELL SITE

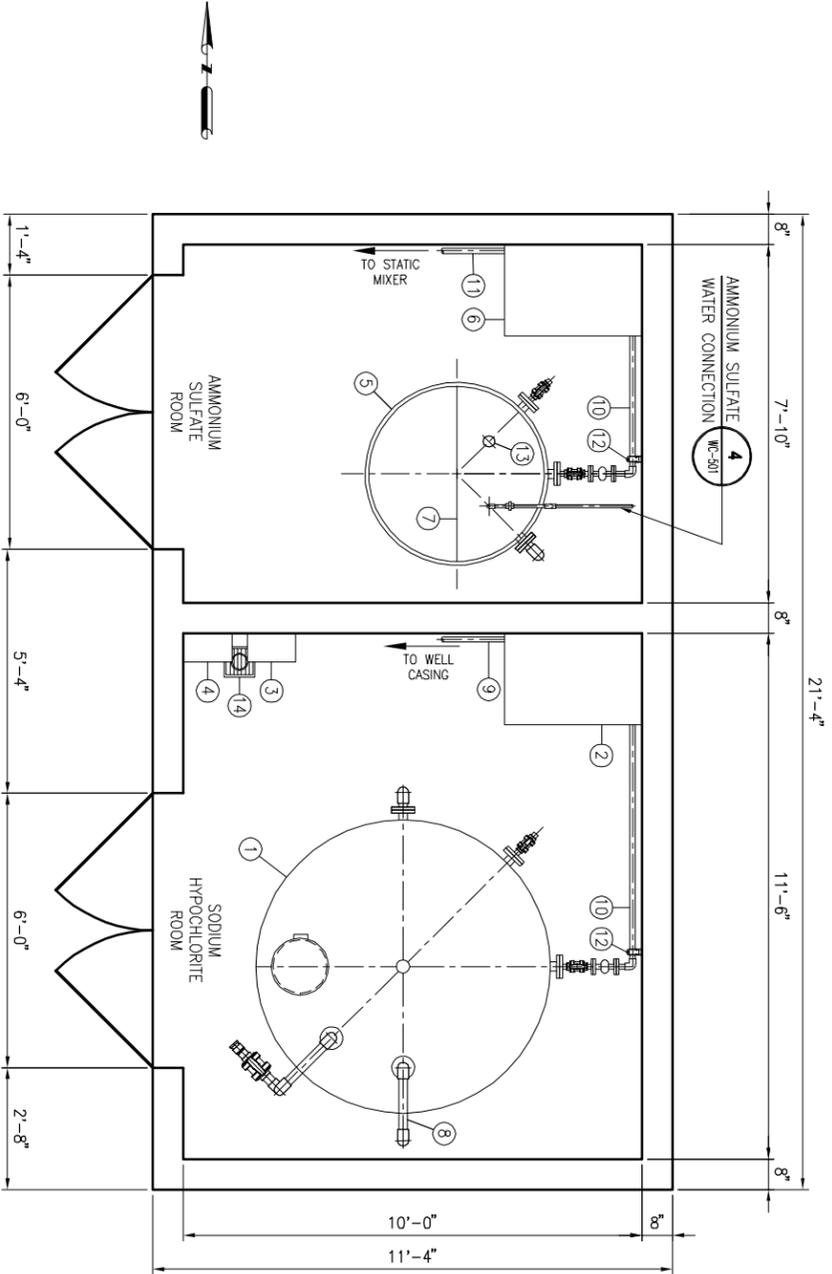


AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



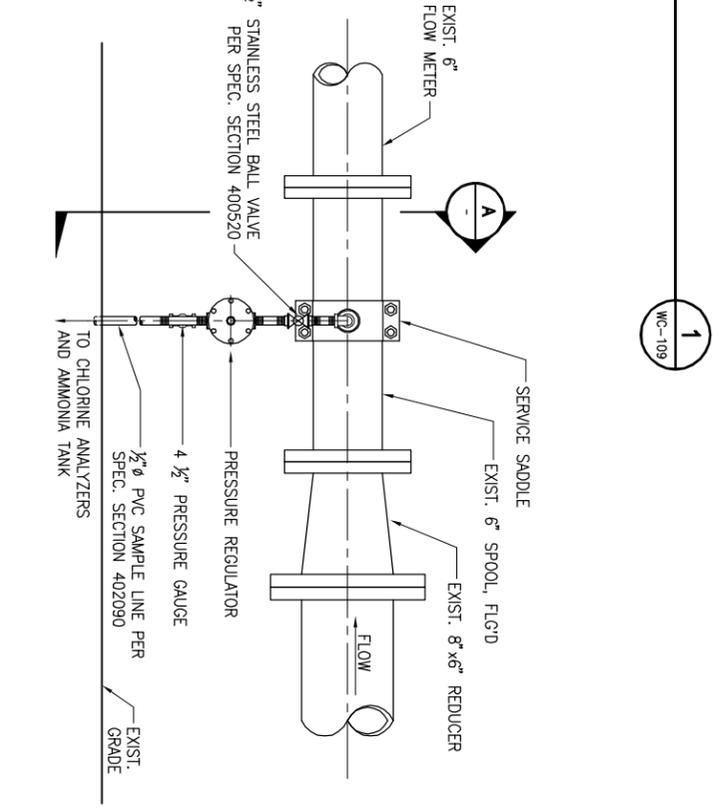
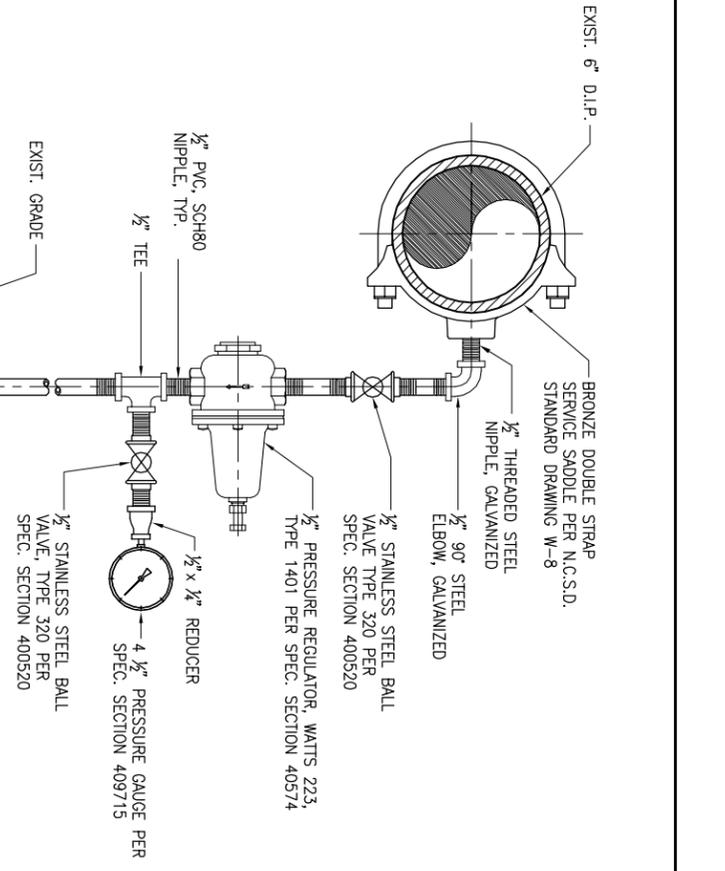
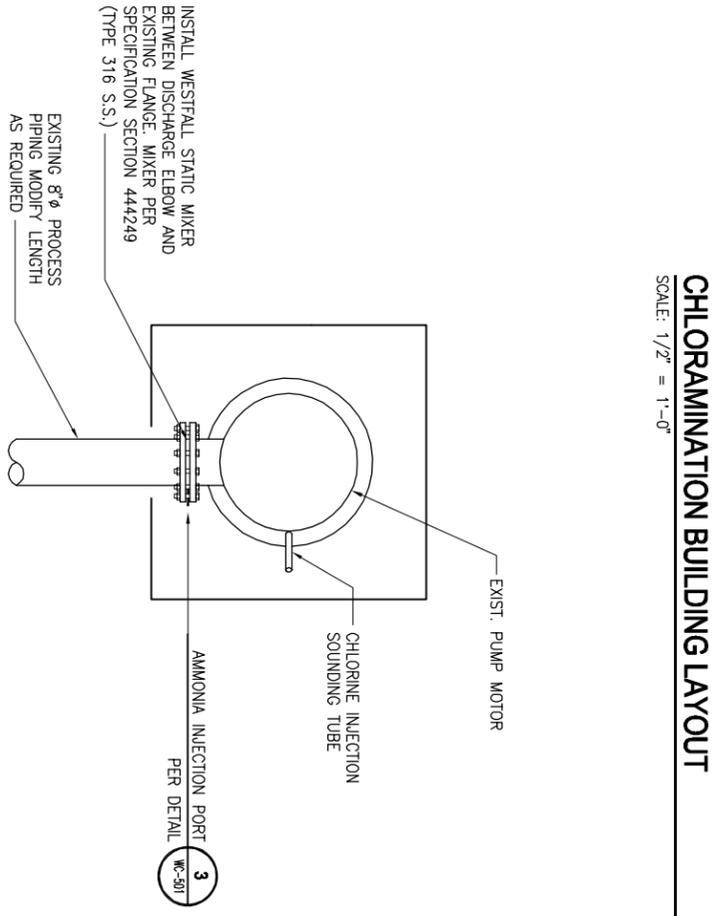
REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER			
JON HANLON		M33232	09/30/2009

DESIGNED: JH
 CHECKED: JPF
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. CADW STPS. BRYL/AECOM
WC-109
 SHEET 82 OF 95



- EQUIPMENT LIST**
- 1 SODIUM HYPOCHLORITE CONTAINMENT TANK (1000 GALLON, POLY PROCESSING INDUSTRIES) PER SPECIFICATION SECTION 434127.
 - 2 SODIUM HYPOCHLORITE FEED SYSTEM PER SPECIFICATION SECTION 433290.
 - 3 FREE CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
 - 4 TOTAL CHLORINE ANALYZER PER SPECIFICATION SECTION 433277.
 - 5 AMMONIUM SULFATE SOLUTION STORAGE TANK (330 GALLON OPEN TOP TANK WITHIN 370 GALLON OPEN TOP TANK, POLY PROCESSING COMPANY).
 - 6 AMMONIA FEED SYSTEM PER SPECIFICATION SECTION 433280.
 - 7 1/2"-HINGED LID WITH 2" INLET/OUTLET/VENT
 - 8 MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
 - 9 HYPOCHLORITE DISCHARGE PIPING
 - 10 1" Ø P.V.C. PIPE PER SPECIFICATION SECTION 402090
 - 11 AMMONIUM SULFATE DISCHARGE PIPING
 - 12 1 1/2" CHANNEL MOUNTED ON WALL WITH PIPE CLAMP FOR PIPE SUPPORT PER SPECIFICATION SECTION 400764
 - 13 THREADED 2" NPT BUNG FOR LEVEL SENSOR
 - 14 FLOOR DRAIN PER DETAIL

- NOTES:**
1. CONTRACTOR TO CONFIRM MAXIMUM SYSTEM PRESSURE AT WELL SITE TO ENSURE PRESSURE CAPABILITY OF CHEMICAL SKID PIPING, PUMPS, AND APPURTENANCES.
 2. PROVIDE AND INSTALL SEISMIC RESTRAINTS ON CHEMICAL TANKS PER SPECIFICATION SECTION 434127 AND MANUFACTURER'S RECOMMENDATIONS.
 3. CHEMICAL FEED SKID FOOTPRINT SHALL BE 24" x 36" MAXIMUM.
 4. SEE WC-503 FOR TANK SECTIONS AND DETAILS.



SCALE: 3/4" = 1'-0" **2** WC-109

SCALE: 3" = 1'-0" **A**

SCALE: 1-1/2" = 1'-0" **3** WC-109

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™
 IF THIS DRAWING DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

DESIGNED: JH	CADD STGS.: BRYL/AECOM
DRAWN: JH	WC-110
CHECKED: JH	SHEET
APPROVED: JH	83 OF 95
DATE: JUNE 2010	
AECOM PROJECT NO.: 60061295	
NCSO PROJECT NO.:	

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

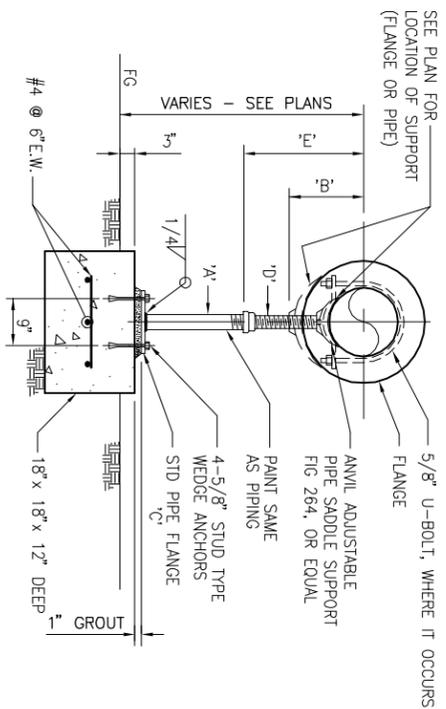
SUNDALE WELL SITE CHLORAMINATION BUILDING LAYOUT AND SITE SPECIFIC DETAILS

AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
 JOSHUA H. REYNOLDS
 No. 65400
 Exp. 9/30/11
 STATE OF CALIFORNIA

REV	DATE	DESCRIPTION	REV NUMBER	APPR	EXP DATE
1		PROJECT ENGINEER	M33232	JON HANLON	09/30/2009

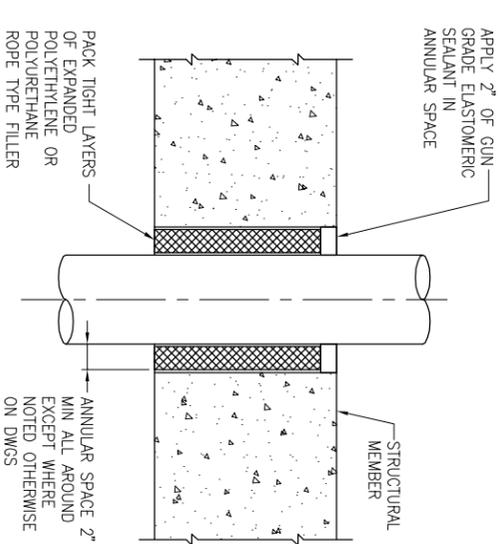


NOTES:
 1. FOR BASE, HEIGHT, & FLANGE DIMENSIONS, SEE TABLE.
 2. PROVIDE CONCRETE PAD FOR PIPE SUPPORTS ON SOIL.

PIPE DIA. (IN.)	'A'	'B'	'C'	'D'	'E'	
					MIN	MAX
4	3	4 1/4	9	2 1/2	9 1/4	14
6	3	5 1/2	9	2 1/2	10 1/2	15 1/4
8	3	6 7/8	9	2 1/2	11 3/4	16 1/2

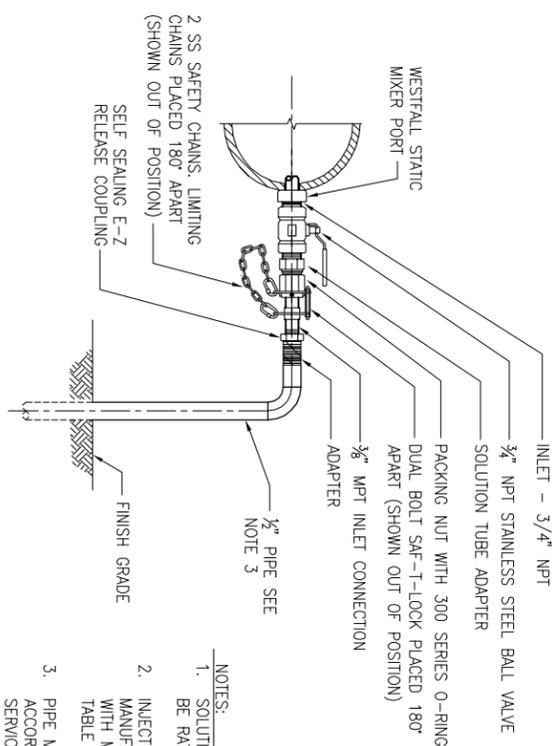
PIPE SUPPORT

NOT TO SCALE



SLAB OR WALL PENETRATION

NOT TO SCALE



- NOTES:
 1. SOLUTION TUBE ASSEMBLY SHALL BE RATED 250psi MINIMUM.
 2. INJECTION QUILLS SHALL BE MANUFACTURED BY SAF-T-FLO, WITH MODEL NUMBERS PER TABLE 1.
 3. PIPE MATERIAL VARIES ACCORDING TO CHEMICAL SERVICE. SEE SITE PLANS.

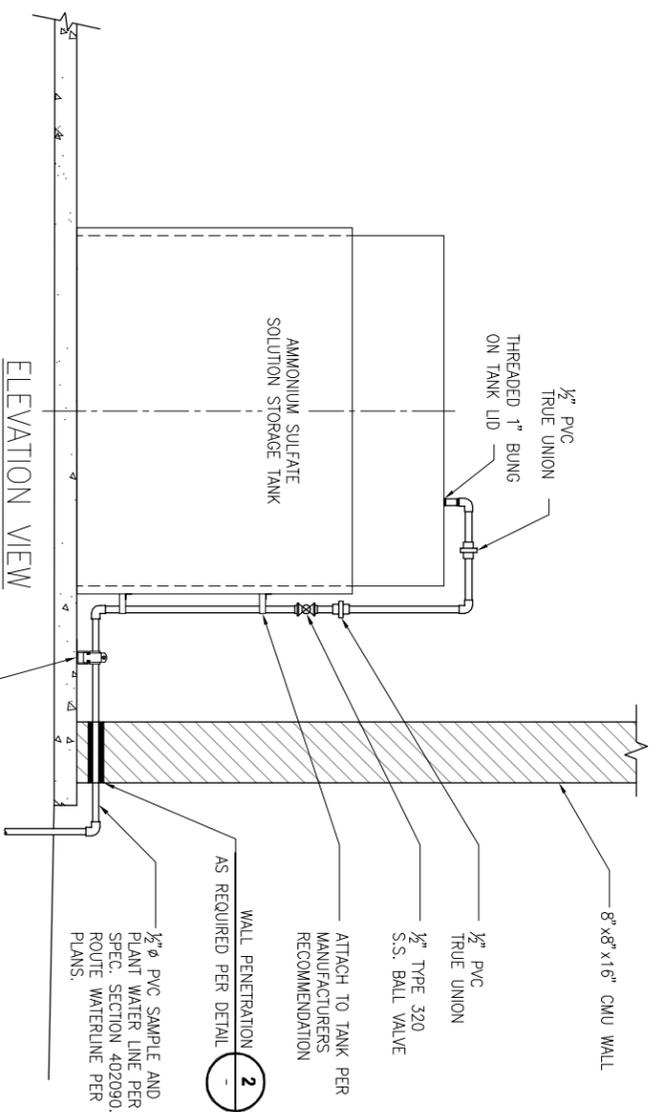
TABLE 1 - SAF-T-FLO INJECTION QUILLS

LOCATION	SERVICE	SAF-T-FLO QUIL MODEL NUMBER
EUREKA	AMMONIUM SULFATE	EB-168-S-5-3-CE (SS CKV)
BLACKLAKE #4	AMMONIUM SULFATE	EB-168-S-5-2-CE (SS CKV)
VIA CONCHA	AMMONIUM SULFATE	EB-168-S-5-3-CE (SS CKV)
SUNDALE	AMMONIUM SULFATE	EB-168-S-5-4-CE (SS CKV)
PUMP STATION	AMMONIUM SULFATE	EB-168-S-5-4-CE (SS CKV)
PUMP STATION	SODIUM HYPOCHLORITE	EB-168-S-H-4-CV (H CKV)

ALL AMMONIUM SULFATE QUILLS SHALL HAVE STAINLESS STEEL CHECK VALVES. SODIUM HYPOCHLORITE QUILLS SHALL HAVE A HASTELLOY C CHECK VALVE.

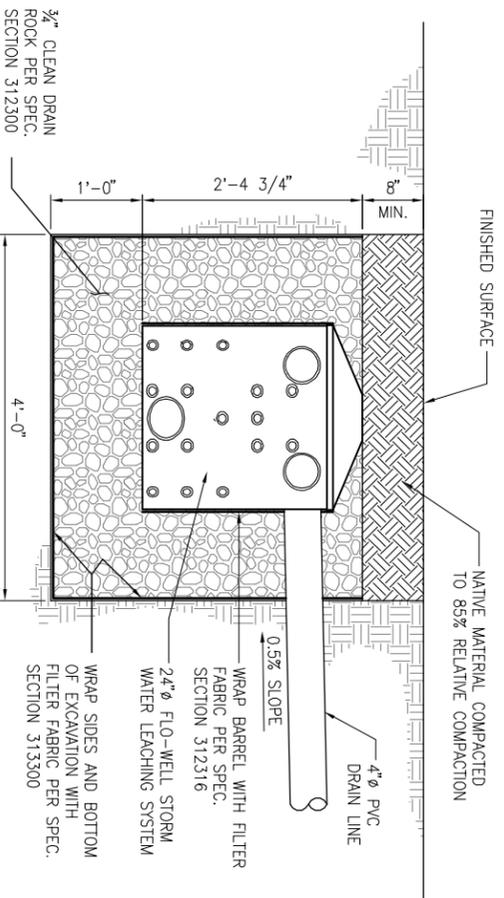
CHEMICAL INJECTION PORT

NOT TO SCALE



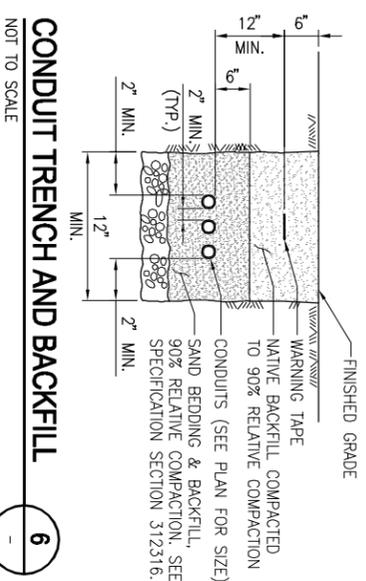
WATER CONNECTION AT AMMONIA TANK

NOT TO SCALE



DRYWELL

NOT TO SCALE



CONDUIT TRENCH AND BACKFILL

NOT TO SCALE



FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



IF THIS BAR DOES NOT MEASURE 1\"/>

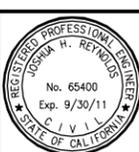
NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

CHLORAMINATION SYSTEM DETAILS - 1



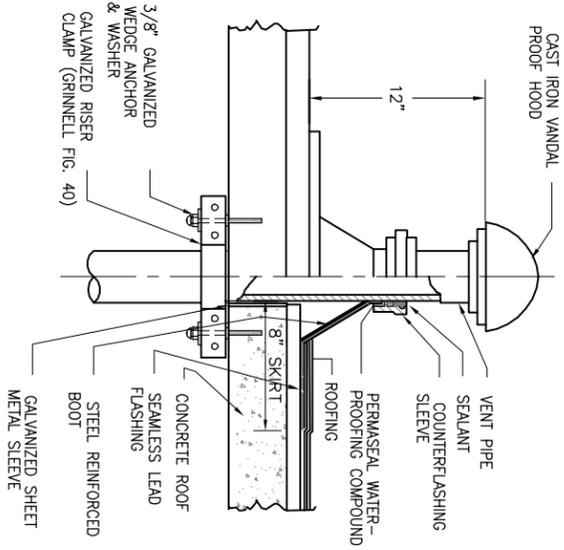
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

AECOM



REV	DATE	DESCRIPTION	APPR
PROJECT ENGINEER	JON HANLON	REG NUMBER M33232	EXP DATE 09/30/2009

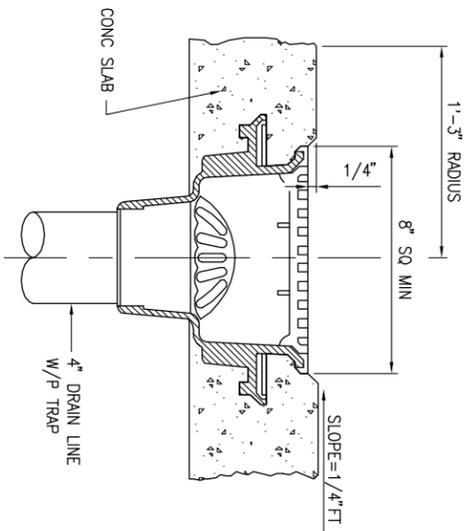
WC-501 SHEET 84 OF 95



NOTE:
 DETAIL IS BASED ON STONEMAN STORMWIE NO. S1110-4
 (6 LB LEAD) ROOF FLASHING ASSY.

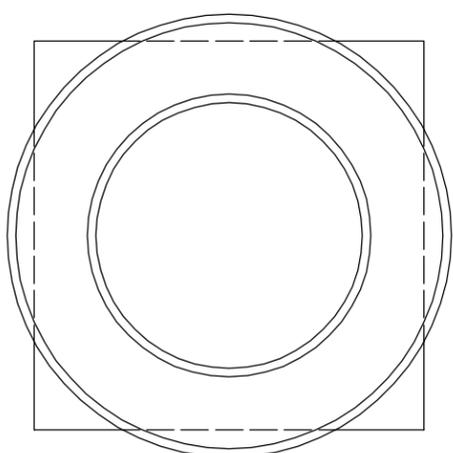
CHEMICAL TANK VENT THROUGH ROOF

NOT TO SCALE

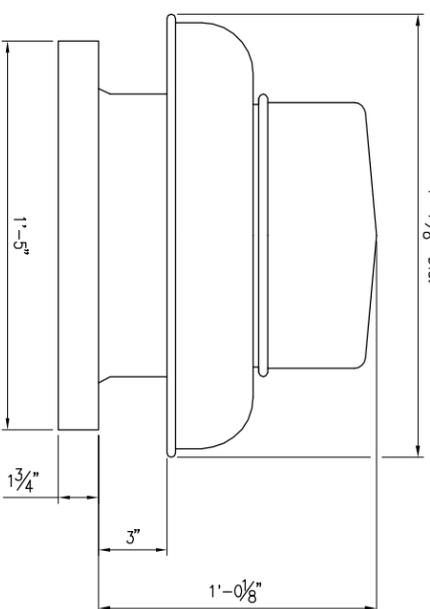


FLOOR DRAIN DETAIL

NOT TO SCALE



TOP VIEW



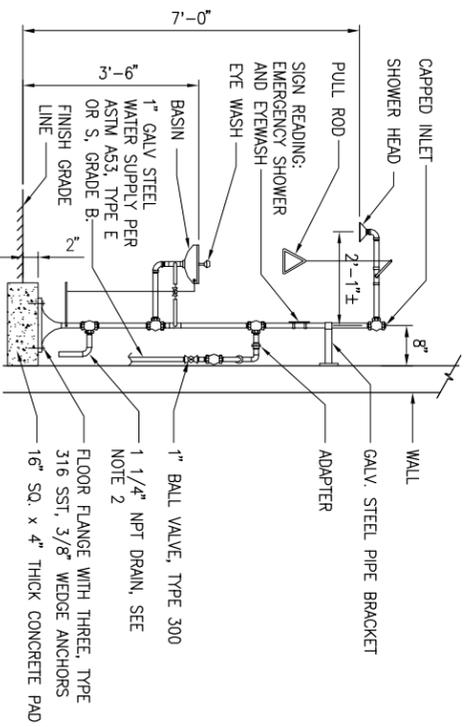
SIDE VIEW

NOTES:

1. ROOF-MOUNTED EXHAUST FAN, 1/100 HP, 125 CFM AT 0.125" WGSP, 1300 RPM, GREENHECK MODEL G-060-G OR APPROVED EQUAL. INSTALL WITH CURB GFF-17-G-8 OR APPROVED EQUAL PER MANUFACTURER'S RECOMMENDATIONS. TIE TO LIGHT SWITCH TO START WHEN ROOM IS OCCUPIED.

ROOF EXHAUST FAN

NOT TO SCALE



NOTES:

1. SHOWER SHALL BE A FREE-STANDING FREEZE PROOF EMERGENCY SHOWER/EYEWASH COMBINATION. SHOWER SHALL BE ACTIVATED BY STAINLESS-STEEL PULL ROD THAT OPERATES A 1-INCH STAY-OPEN BALL VALVE. A PUSH FLAG THAT OPERATES A 1/2-INCH STAY-OPEN BALL VALVE SHALL ACTIVATE EYEWASH. SHOWER SHALL BE BRADLEY S19-S10AC, SPEAKMAN SE-612, OR EQUAL.
2. TERMINATE THE EYEWASH DRAIN 4-INCHES ABOVE FINISHED GRADE.

EMERGENCY EYEWASH/SHOWER

NOT TO SCALE



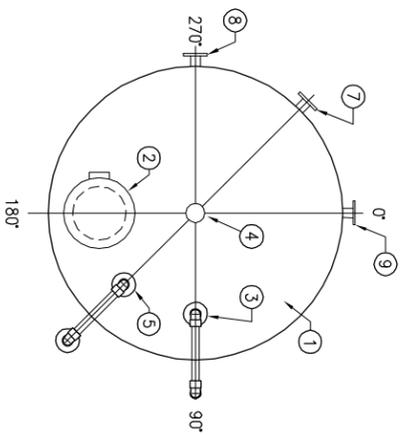
FOR PRELIMINARY USE ONLY

NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

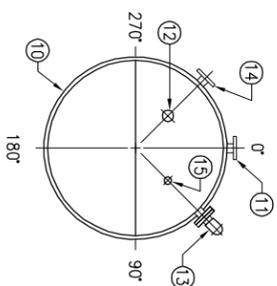
Know what's below.
Call before you dig.

 IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4		AECOM <small>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805.542.9840 F 805.542.9990 www.aecom.com</small>			
CHLORAMINATION SYSTEM DETAILS - 2		PROJECT ENGINEER JON HANLON		DESCRIPTION M33232	
WC - 502 SHEET 85 OF 95		DATE JUNE 2010		EXP DATE 09/30/2009	



HYPHOCHLORITE TANK NOZZLE ORIENTATION
 NOT TO SCALE

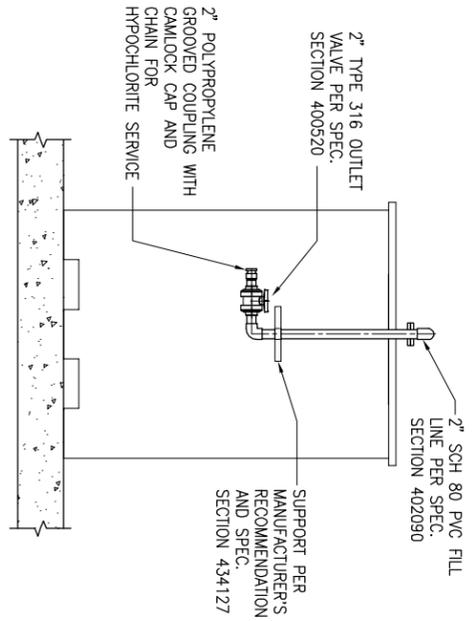


AMMONIUM SULFATE TANK NOZZLE ORIENTATION
 NOT TO SCALE

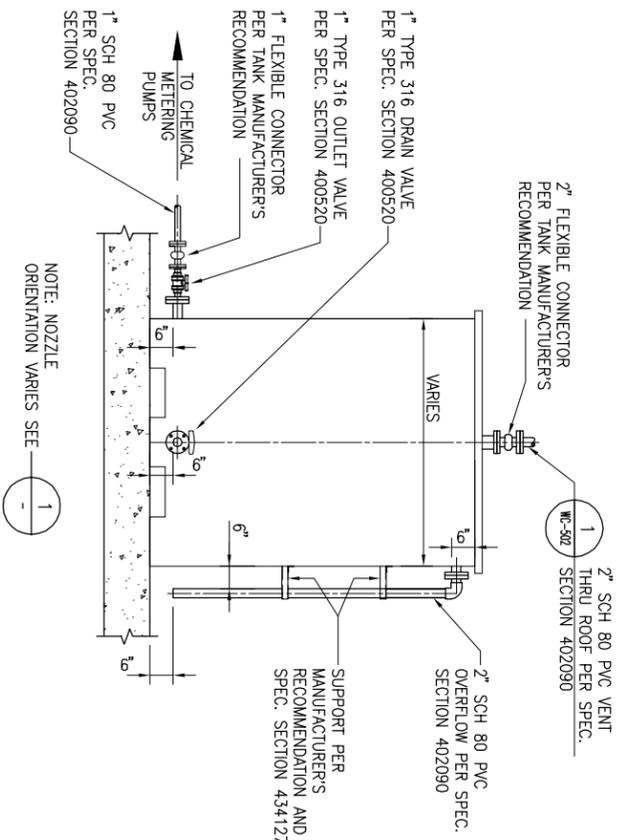


TANK NOZZLE & PORT ORIENTATION

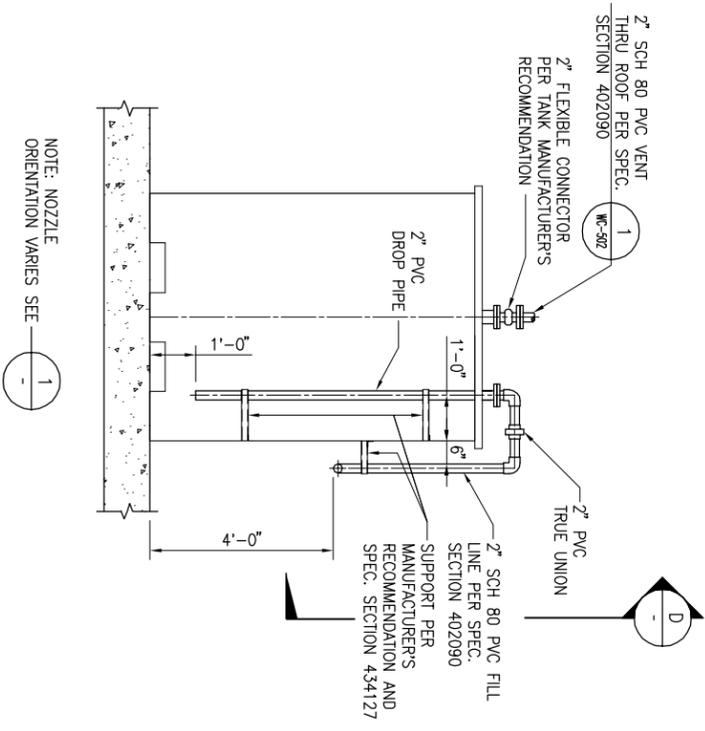
LOC.	ORIENTATION	DESCRIPTION
1	-	HYPHOCHLORITE TANK ASSEMBLY PER SPECIFICATION SECTION 434127 - SIZE VARIES SEE DRAWINGS
2	180°	HINGED MANWAY
3	90°	MAGNETIC LEVEL INDICATOR PER SPECIFICATION SECTION 409117
4	ROOF CENTER	3" VENT
5	135°	2" FILL, SEE - B
6	-	NOT USED
7	315°	DRAIN, SEE - A
8	270°	OVERFLOW, SEE - A
9	0°	2" FLANGED OUTLET, SEE - A
10	-	AMMONIUM SULFATE TANK ASSEMBLY PER SPECIFICATION SECTION 434127
11	0°	2" FLANGED OUTLET
12	315°	THREADED 2" NPT BUG FOR LEVEL SENSOR, SEE - C
13	45°	OVERFLOW, SEE - C
14	315°	DRAIN, SEE - C
15	45°	THREADED 1" NPT BUNG FOR WATER LINE



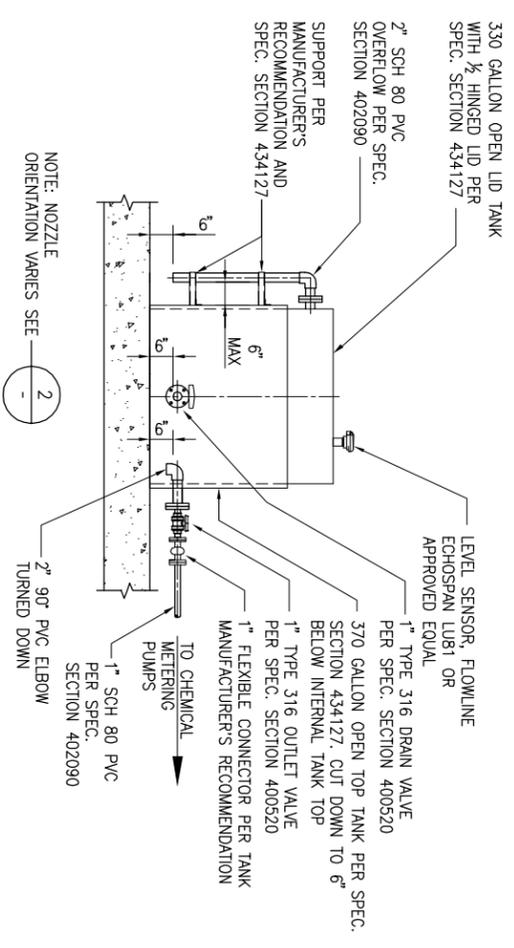
HYPHOCHLORITE SECTION
 NOT TO SCALE



HYPHOCHLORITE DRAIN, OVERFLOW & OUTLET
 NOT TO SCALE



HYPHOCHLORITE FILL LINE
 NOT TO SCALE



AMMONIUM SULFATE DRAIN, OVERFLOW & OUTLET
 NOT TO SCALE



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

Know what's below. Call before you dig. **811**

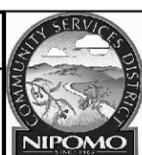
IF THIS SIGN DOES NOT REQUIRE IT, THEN DRAWING IS NOT TO FULL SCALE

0 1/2"

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4

TANK SECTION AND DETAILS

DESIGNED: JHR/ES
 DETAIL LBY: JPF
 CHECKED: JPF
 APPROVED: JPF
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.

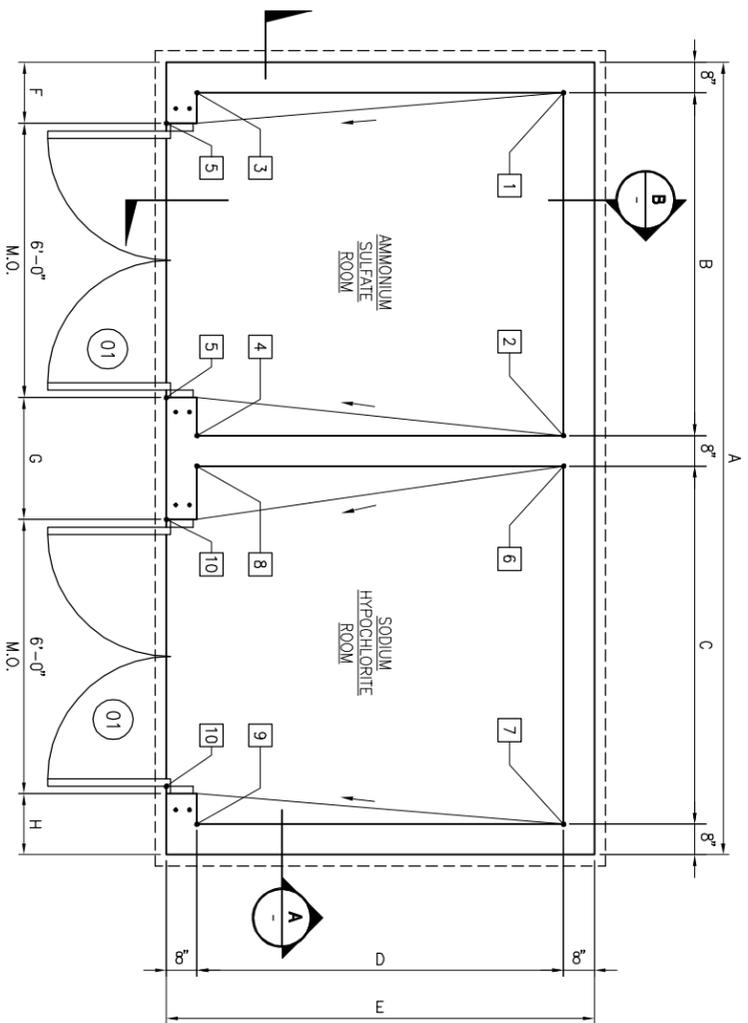


AECOM

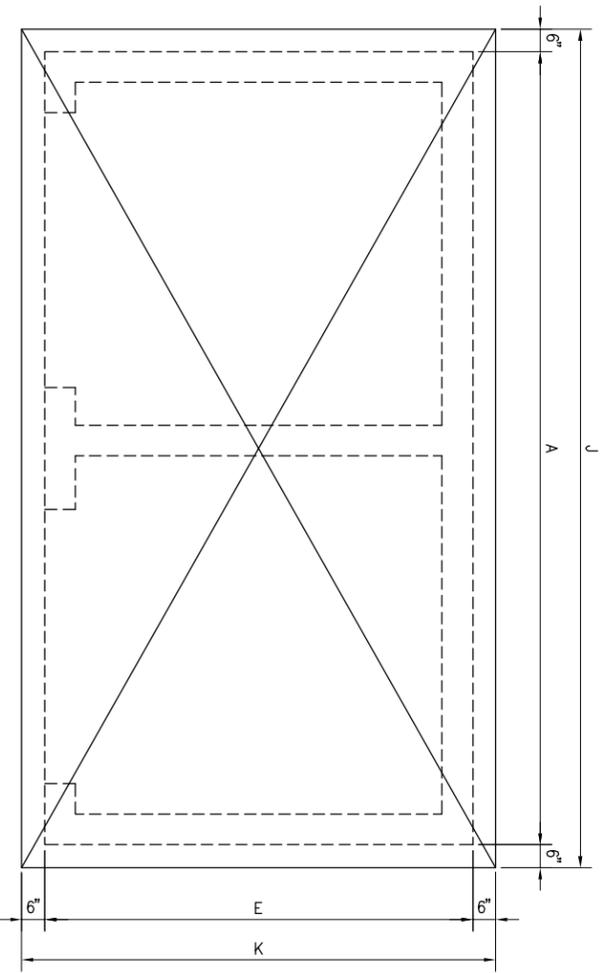
AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	REB NUMBER	APPR	EXP DATE
PROJECT ENGINEER					
JOSHUA H. REYNOLDS			C58400		09/30/2009



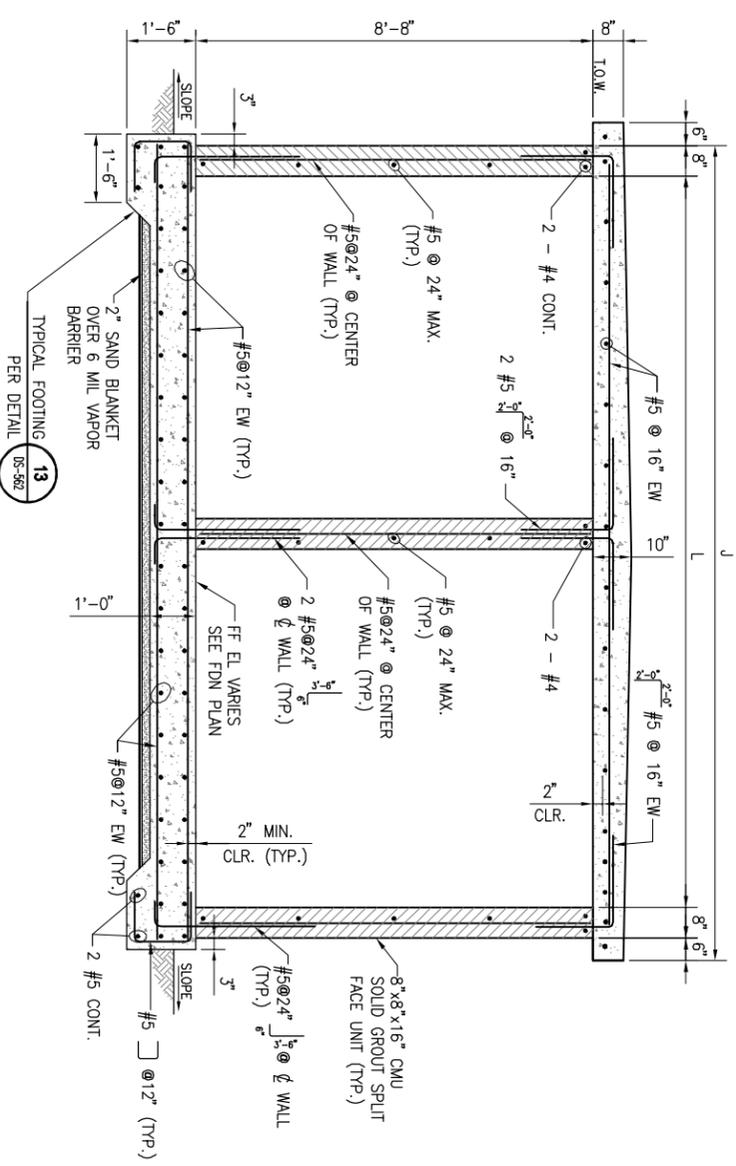
FOUNDATION PLAN
 SCALE: 1/2" = 1'-0"



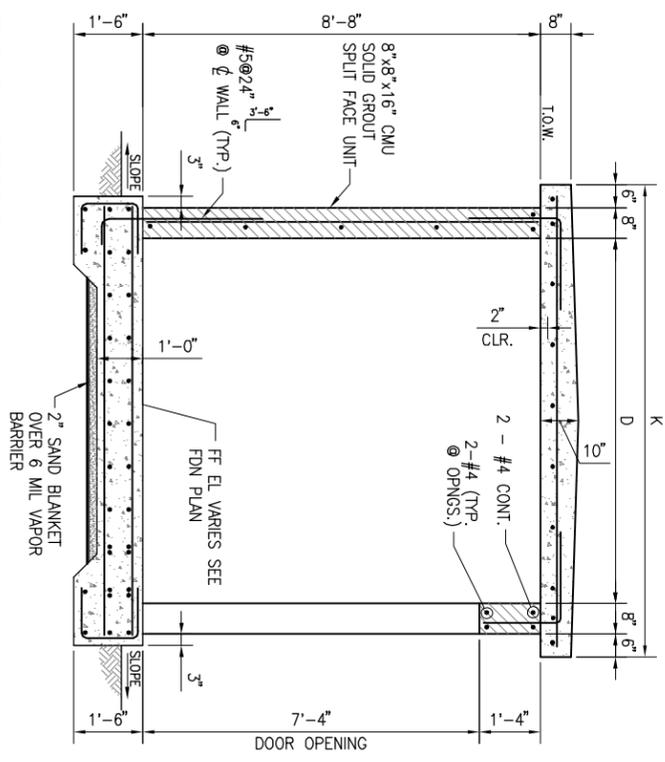
ROOF PLAN
 SCALE: 1/2" = 1'-0"

CHLORAMINATION BUILDING DIMENSIONS

WELL SITE	A	B	C	D	E	F	G	H	J	K	L	REFERENCE SHEETS
EUREKA WELL SITE	17'-4"	7'-6"	7'-10"	8'-0"	9'-4"	1'-4"	2'-8"	1'-4"	18'-4"	10'-4"	16'-0"	WC-101 to WC-102
BLACKLAKE #4 WELL SITE	17'-4"	7'-6"	7'-10"	8'-0"	9'-4"	1'-4"	2'-8"	1'-4"	18'-4"	10'-4"	16'-0"	WC-103 to WC-104
VIA CONCHA WELL SITE	17'-4"	7'-6"	7'-10"	8'-0"	9'-4"	1'-4"	2'-8"	1'-4"	18'-4"	10'-4"	16'-0"	WC-105 to WC-108
SUNDALE WELL SITE	21'-4"	7'-10"	11'-6"	10'-0"	11'-4"	1'-4"	5'-4"	2'-8"	22'-4"	12'-4"	20'-0"	WC-109 to WC-110



TYPICAL SECTION
 SCALE: 1/2" = 1'-0"



TYPICAL SECTION
 SCALE: 1/2" = 1'-0"

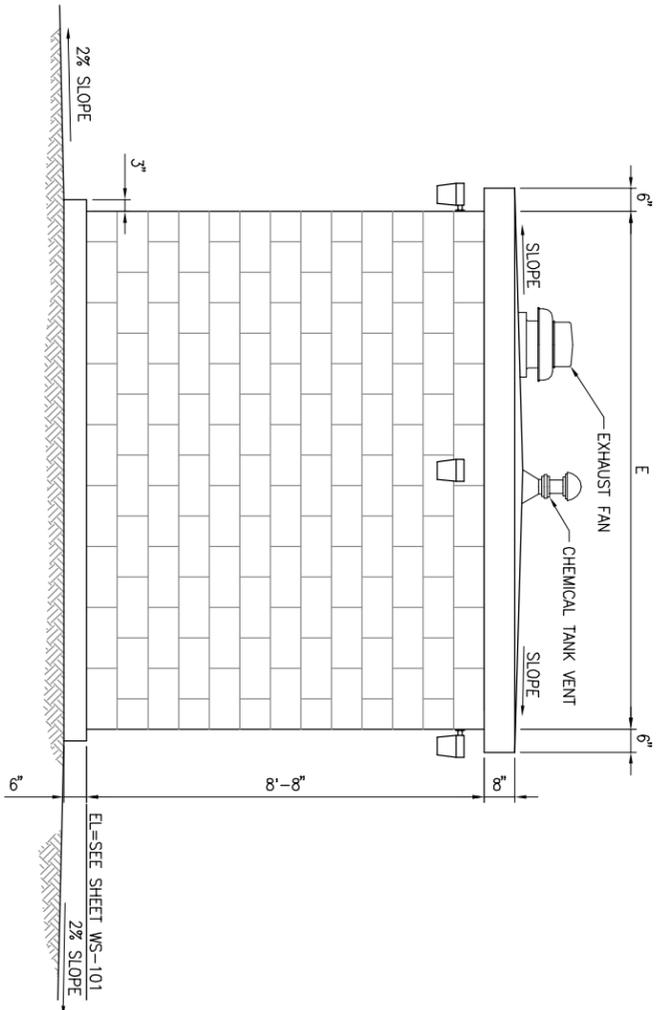
- GENERAL NOTES:**
1. THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 12-INCHES, UNIFORMLY MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 90% RELATIVE COMPACTION.
 2. CMU SHALL BE 8"x8"x16" SPLIT FACE BLOCK. COLOR TO BE SELECTED BY THE DISTRICT. MORTAR COLOR TO MATCH.

CHLORAMINATION BUILDING FINISH ELEVATIONS

WELL SITE	1	2	3	4	5	6	7	8	9	10	REFERENCE SHEETS
EUREKA WELL SITE	177.33	177.33	177.33	177.33	177.29	177.33	177.33	177.33	177.33	177.29	WC-101 to WC-102
BLACKLAKE #4 WELL SITE	305.27	305.27	305.27	305.27	305.53	305.57	305.57	305.57	305.57	305.53	WC-103 to WC-104
VIA CONCHA WELL SITE	268.65	268.65	268.65	268.65	268.61	268.65	268.65	268.65	268.65	268.61	WC-105 to WC-108
SUNDALE WELL SITE	254.78	254.78	254.78	254.78	254.73	254.78	254.78	254.78	254.78	254.73	WC-109 to WC-110

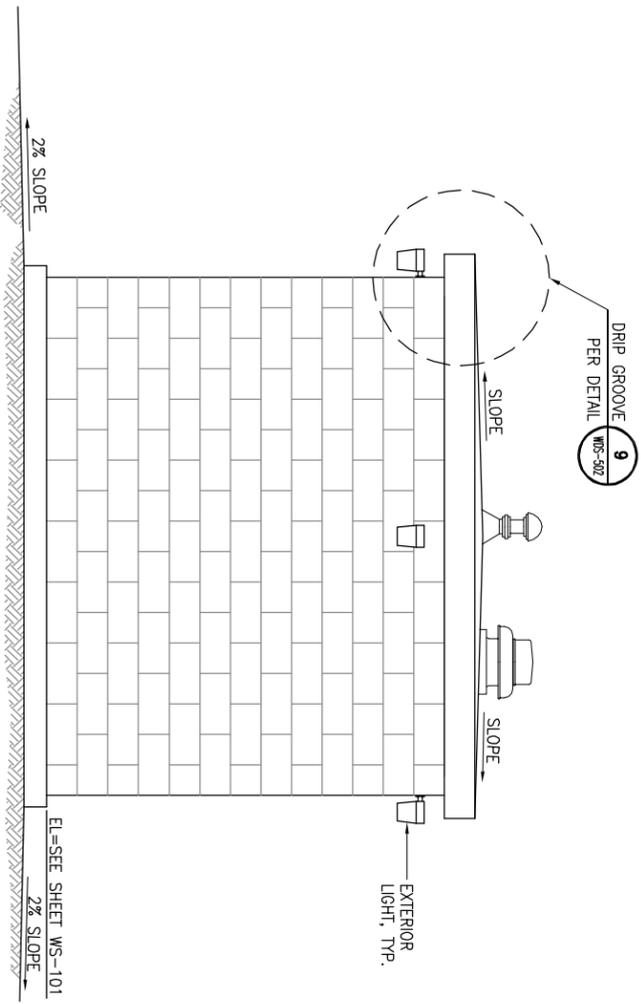


NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4		AECOM <small>AECOM USA, Inc. 1194 Pacific Street, Suite 204 San Luis Obispo, California 93401 T 805-542-9840 F 805-542-9990 www.aecom.com</small>			
CHLORAMINATION BUILDING FOUNDATION AND ROOF PLAN		PROJECT ENGINEER JON HANLON		DESCRIPTION M33232	
DATE JUNE 2010		REVISION 09/30/11		EXP. DATE 09/30/2009	
DESIGNED BY JH		CADD STGS. BRYLE/AECOM		APPR	
CHECKED BY JH		MSD PROJECT NO. 60061295		REV	
APPROVED:		MSD PROJECT NO. 60061295		DATE JUNE 2010	
DATE JUNE 2010		AECOM PROJECT NO. 60061295		PROJECT ENGINEER JON HANLON	
MSD PROJECT NO. 60061295		CADD STGS. BRYLE/AECOM		DESCRIPTION M33232	
WS-101 SHEET		87 OF 95		EXP. DATE 09/30/2009	



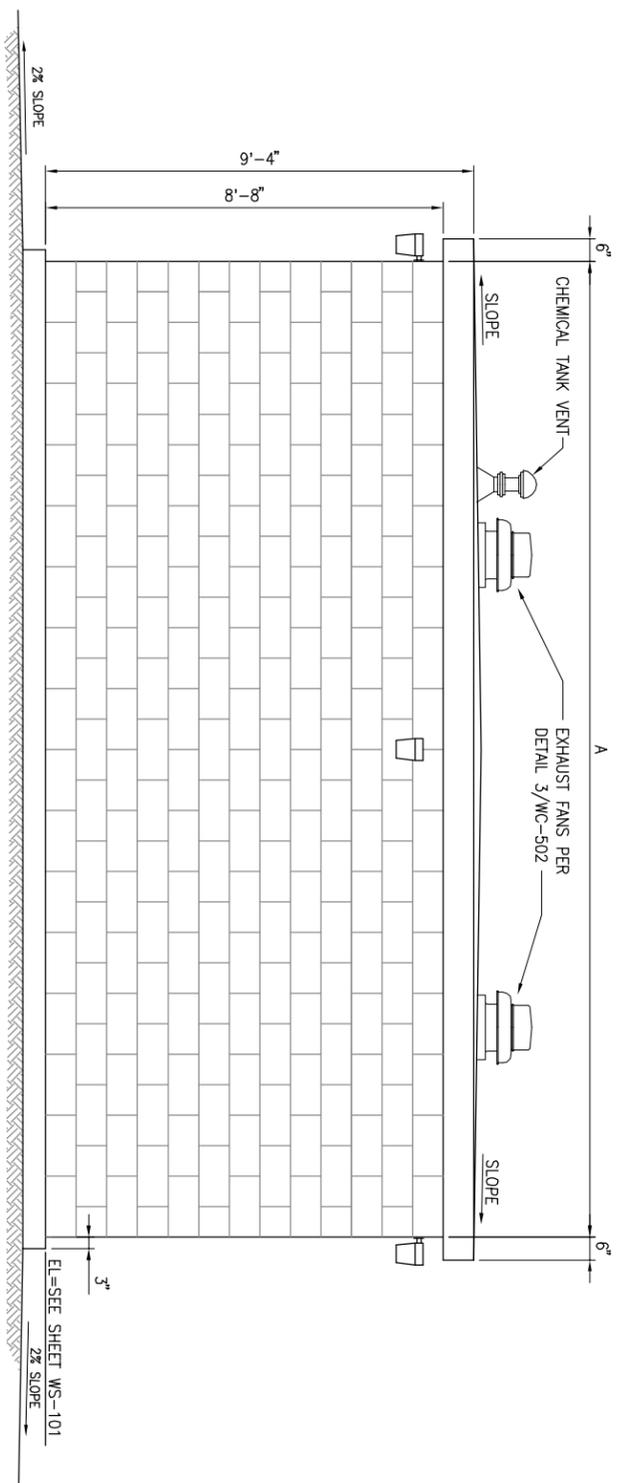
LEFT ELEVATION

SCALE: 1/2" = 1'-0"



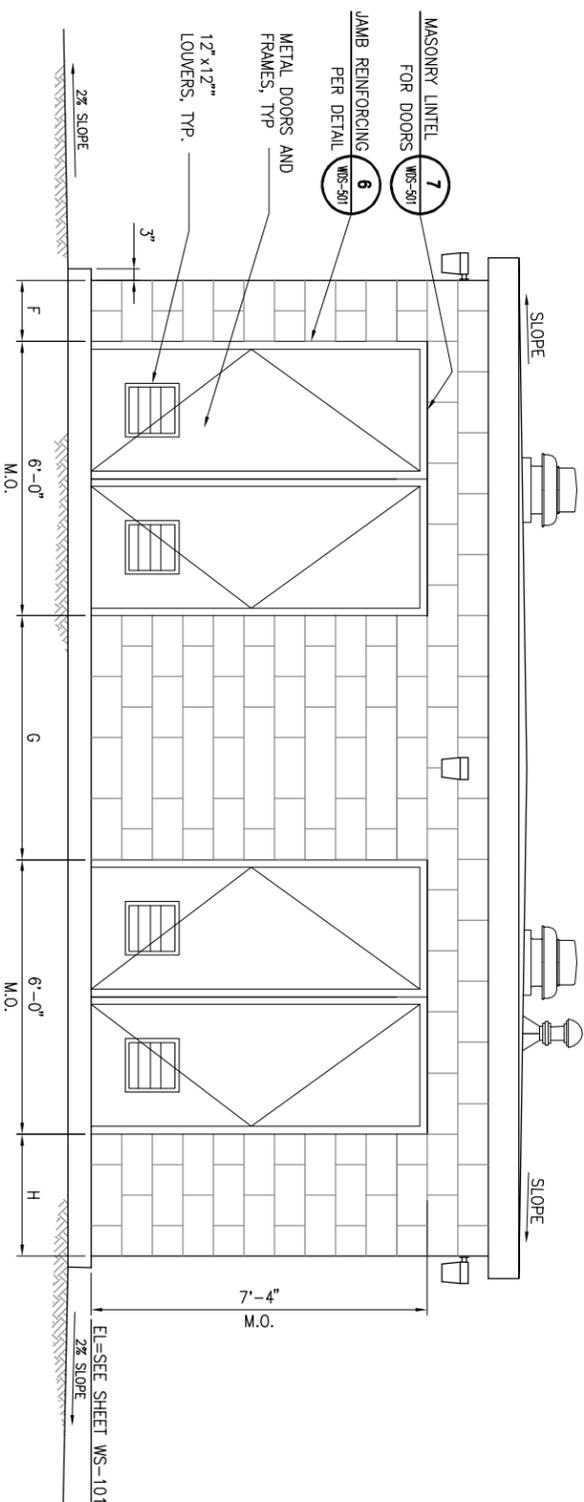
RIGHT ELEVATION

SCALE: 1/2" = 1'-0"



REAR ELEVATION

SCALE: 1/2" = 1'-0"

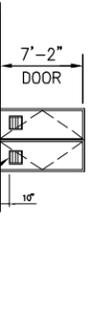


FRONT ELEVATION

SCALE: 1/2" = 1'-0"

NUMBER	SIZE	THK.	LOUVER	MAT'L	REMARKS
01	3" x 7 1/2" SGL	1 3/4"	12" x 12"	STEEL	SEE NOTE 1 AND SPEC. SECTIONS 087110 AND 081110

- NOTE:
 1. SCHEDULE DOOR SIZE DOES NOT INCLUDE FRAME
 2. PROVIDE ASTRAGAL



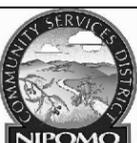
DOOR TYPE

DOOR LOUVER

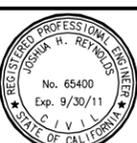
FOR PRELIMINARY USE ONLY
 AECOM WATER
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's Below.
811
 Call before you dig.
 IF THIS SIGN DOES NOT MEASURE 1' THEN DRIVING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**
**SUNDALE WELL SITE
 CHLORAMINATION BUILDING
 ELEVATION VIEWS**



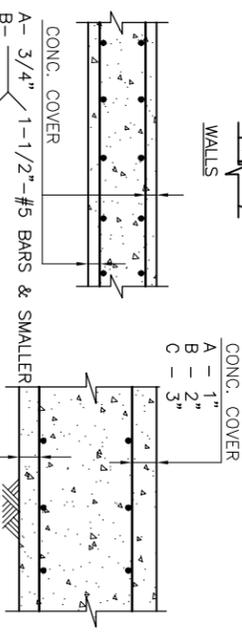
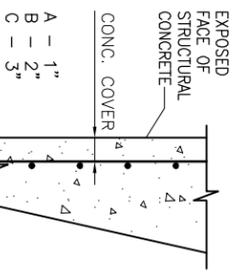
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805-542-9840 F 805-542-9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR

PROJECT ENGINEER: **JON HANLON**
 REG NUMBER: **M33232**
 EXP DATE: **09/30/2009**

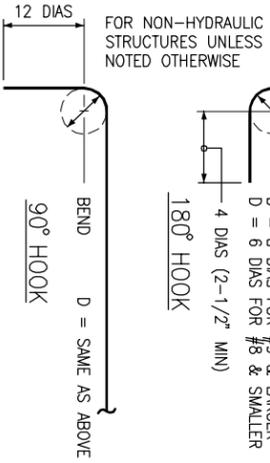
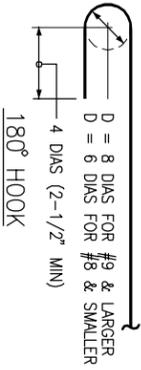
DESIGNED: JH	CADD STPS: BY/VE/AECOM
DETAIL LEAD: JH	WS - 102
CHECKED:	SHEET
APPROVED:	88 OF 95
DATE: JUNE 2010	
AECOM PROJECT NO. 60061295	
NCSD PROJECT NO.	



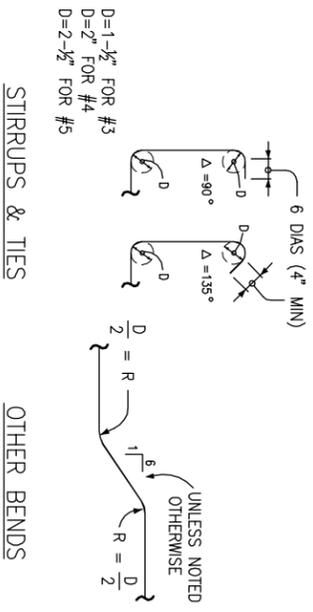
COVER
 A. NO EXPOSURE TO GROUND, WEATHER, OR WATER AFTER FORM REMOVAL.*
 B. EXPOSURE TO GROUND, WEATHER, OR WATER AFTER FORM REMOVAL.
 C. CONCRETE PLACED AGAINST SOIL.

* USE COVER "B" WHEN EXPOSURE IS TO INTERIOR OF HYDRAULIC CONTAINED SPACES. (IE: RESERVOIR OR PROCESS ROOF SLABS)
 NOTE: UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS, COORDINATE WITH PLASTIC LINER DETAILS.

CONCRETE COVER OVER REINFORCING STEEL



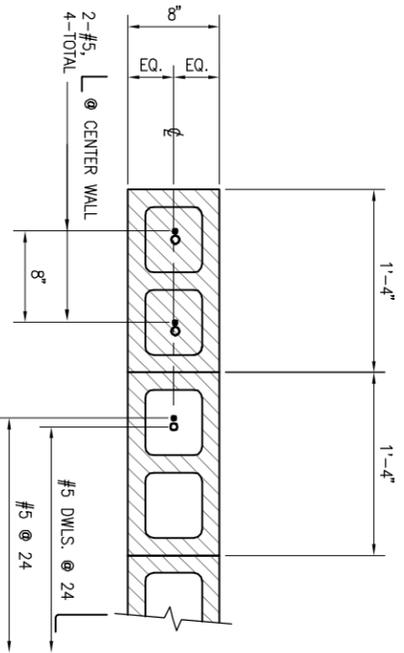
FOR NON-HYDRAULIC STRUCTURES UNLESS NOTED OTHERWISE



BAR SIZE	90° HOOKS "X"	BAR SIZE	90° HOOKS "X"
#3	6"	#8	16"
#4	8"	#9	19"
#5	10"	#10	22"
#6	12"	#11	24"
#7	14"		

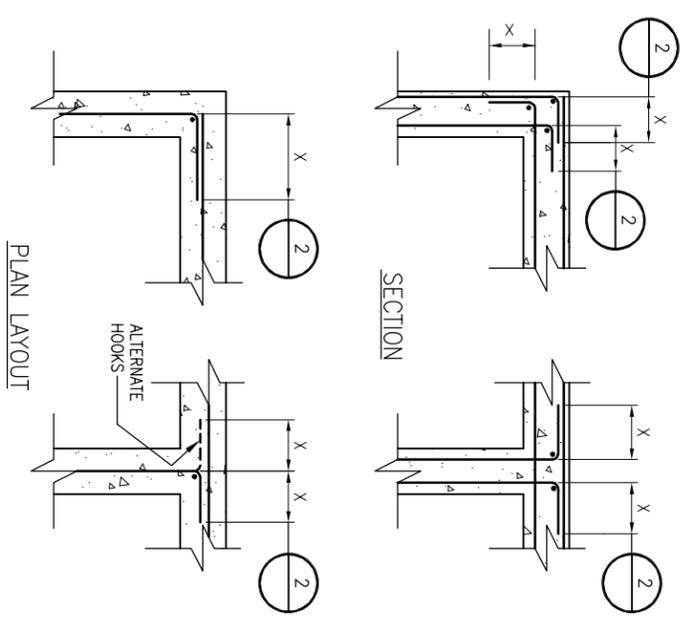
NOTE: UNLESS NOTED OTHERWISE ON DRAWINGS, ALL LENGTHS OF BAR HOOKS IN FOOTINGS, COLUMNS, WALLS AND SLABS SHALL BE GIVEN IN TABLE. HOOK LENGTH "X" IS STANDARD 90° BAR HOOK LENGTH.

STANDARD 90° BAR HOOK



JAMB REINFORCING

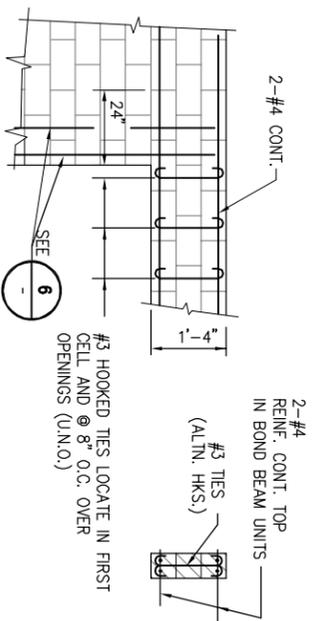
NOT TO SCALE



HORIZONTAL REINFORCEMENT AT WALL INTERSECTION



UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS



TYPICAL MASONRY LINTEL FOR DOORS

NOT TO SCALE

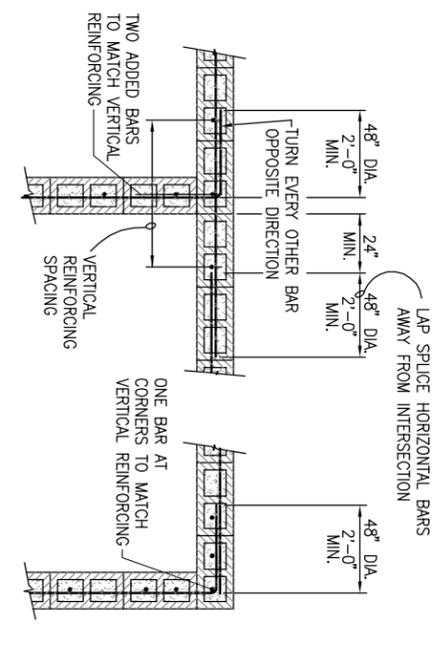


BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
* TOP BARS	52"	64"	77"	112"	129"	145"	163"	181"	181"
OTHER BARS	30"	38"	46"	67"	76"	86"	97"	108"	

UNLESS OTHERWISE SHOWN, CONCRETE WALLS & SLABS SHALL BE REINFORCED AS FOLLOWS:
 #4 @ 12" E.W. CENTER OF 6" SECTIONS; #5 @ 312" E.W. CENTER OF 8" SECTION; #4 @ 12" E.W. E.F. OF 10" SECTION; #5 @ 12" E.W. E.F. OF 12" SECTION; SINGLE MAT REINFORCING SHALL BE CENTER OF SECTION UNLESS SHOWN OTHERWISE.
 UNLESS NOTED OTHERWISE ALL WALL REINFORCING BARS SHALL BE CONT AROUND CORNERS & THROUGH COLUMNS OR PILASTERS. ALL REINFORCEMENT LAPS, UNLESS NOTED OTHERWISE, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS IN ANY SINGLE POUR.
 ** LAP LENGTH TO BE INCREASED BY 1.5 X FOR COVER LESS THAN 1 BAR DIAMETER.

REINFORCEMENT DETAILS



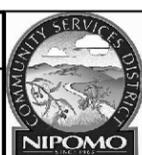
WALL REINFORCEMENT DETAILS

NOT TO SCALE



PLAN WALL INTERSECTION
 PLAN WALL CORNER

NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4
CHLORAMINATION BUILDING DETAILS - 1



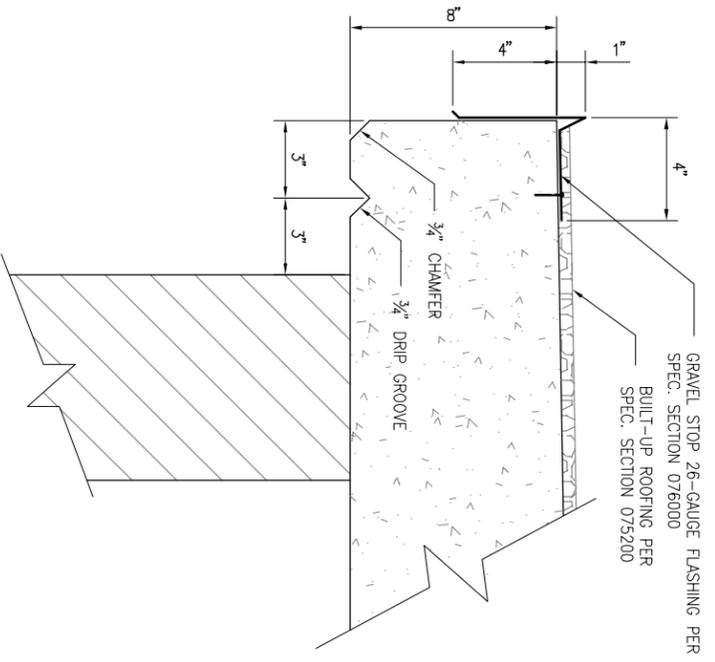
AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



REV	DATE	DESCRIPTION	APPR

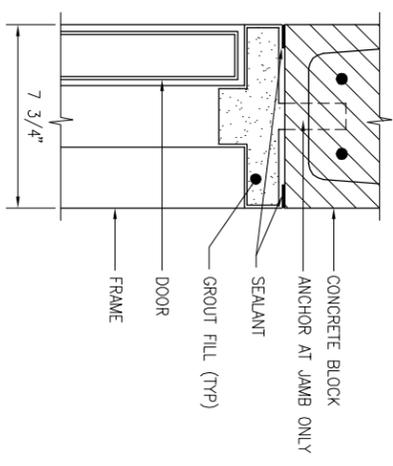
PROJECT ENGINEER: **JON HANLON**
 DESCRIPTION: **M33232**
 EXP DATE: **09/30/2009**

DESIGNED: **JH**
 CHECKED: **JH**
 DATE: **JUNE 2010**
 APPROVED: **JH**
 DATE: **JUNE 2010**
 AECOM PROJECT NO.: **60061295**
 WDS PROJECT NO.: **WDS-501**
 SHEET: **89 OF 95**

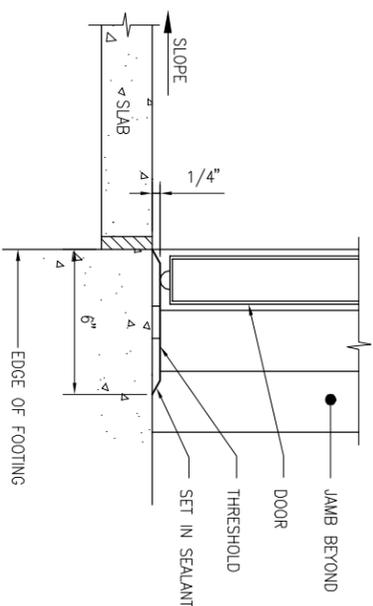


GRAVEL STOP 26-GAUGE FLASHING PER SPEC. SECTION 076000
 BUILT-UP ROOFING PER SPEC. SECTION 075200

DRIP GROOVE DETAIL
 NOT TO SCALE **9**

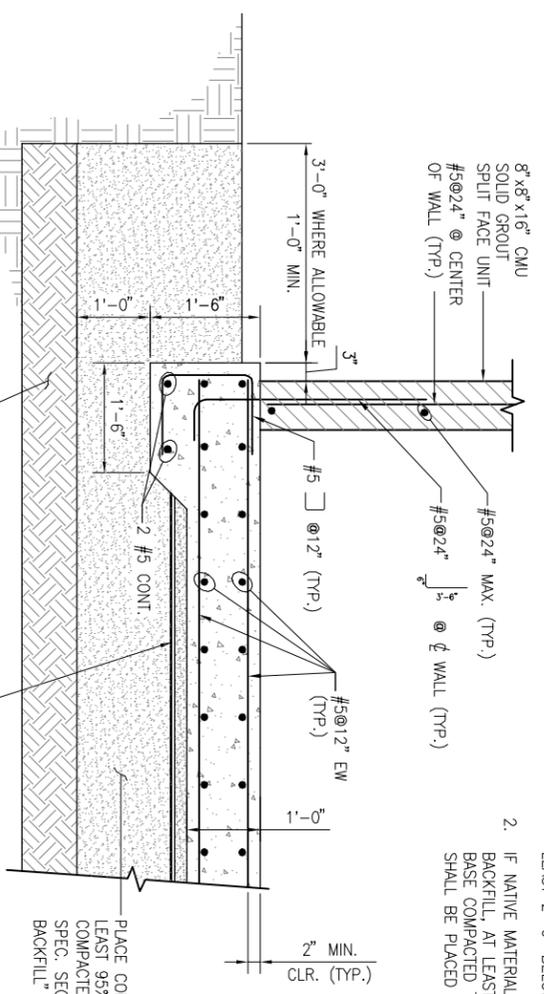


DOOR JAMB
 NOT TO SCALE **10**



DOOR THRESHOLD
 NOT TO SCALE **11**

NOT USED
12



8"x8"x16" CMU
 SOLID GROUT
 SPLIT FACE UNIT
 #5@24" @ CENTER
 OF WALL (TYP.)

- NOTES:
1. EXCAVATE EXISTING SOIL TO A DEPTH OF AT LEAST 2'-0" BELOW EXISTING GROUND SURFACE.
 2. IF NATIVE MATERIAL IS USED FOR STRUCTURAL BACKFILL, AT LEAST 6" OF CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION SHALL BE PLACED BELOW THE FOUNDATION

TYPICAL FOOTING
 NOT TO SCALE **13**

3'-0" WHERE ALLOWABLE
 1'-0" MIN.
 3"
 #5 @ 12" (TYP.)
 #5@24" MAX. (TYP.)
 #5@24" @ 1/2" @ 1/2" WALL (TYP.)
 #5@12" EW (TYP.)
 2 #5 CONT.
 2" MIN. CLR. (TYP.)

SCARIFY TO A MINIMUM OF 9-INCHES, MOISTURE CONDITION TO AT LEAST OPTIMUM AND RECOMPACT TO 90% RELATIVE COMPACTION

PLACE COMPACTED BACKFILL TO AT LEAST 95% RELATIVE COMPACTION. COMPACTED FILL SHALL COMPLY WITH SPEC. SECTION 312300, "STRUCTURAL BACKFILL"

2" SAND BLANKET OVER 6 MIL VAPOR BARRIER

NOT USED
14

NOT USED
 AECOM WATER
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

	NIPOMO COMMUNITY SERVICES DISTRICT WATERLINE INTERTIE PROJECT - BP4				PROJECT ENGINEER JON HANLON	DESCRIPTION M33232	EXP DATE 09/30/2009
	CHLORAMINATION BUILDING DETAILS - 2				REV DATE DESCRIPTION APPR		
DESIGNED: JH CHECKED: JPF APPROVED: DATE: JUNE 2010	AECOM PROJECT NO. 60061295	WDS PROJECT NO. WDS-502	CADW STPS. BRYLE/AECOM				

ELECTRICAL SYMBOLS - PLANS	
SYMBOL	DESCRIPTION
-----	CONDUIT IN SLAB OR UNDER GROUND
-----	CONDUIT EXPOSED
///	QUANTITY #12 CURRENT CARRYING WIRES. (EQUIPMENT GND NOT INCLUDED IN THE COUNT) UNLESS OTHERWISE SHOWN IN SINGLE LINE OR NOTED
—G—	GROUNDING CONDUCTOR 2/0 BC IN BUILDING FOOTING
—A-1,3	HOMERUN TO PANEL A, CIRCUITS 1 AND 3
○	CONDUIT BENDS TOWARD OBSERVER
—●—	CONDUIT BENDS AWAY FROM OBSERVER
—┘	CONDUIT STUB-OUT AND CAPPED
①	FLEXIBLE CONDUIT CONNECTION
⊙	GROUND ROD, 3/4" x 10'-0" COPPERCLAD
■	PANELBOARD
1	SEE NOTE INDICATED
⊕	DUPLEX RECEPTACLE, GF & WP TYPE *
\$	SINGLE POLE SWITCH **
⊕	JUNCTION BOX, WALL
\$M	MOTOR RATED SWITCH
□	NON-FUSED DISCONNECT
+12"	INDICATES HEIGHT FROM FINISHED FLOOR GRADE TO CENTERLINE OF DEVICE
*	+ 12" UON
**	+ 48" UON

ELECTRICAL SYMBOLS - SINGLE LINE DIAGRAM	
SYMBOL	DESCRIPTION
Ⓜ	UTILITY METERING
⊕	CURRENT TRANSFORMER, QUANTITY AS REQUIRED
⊕	POTENTIAL TRANSFORMER, QUANTITY AS REQUIRED
⊕	DRY TYPE TRANSFORMER
1) 30A 1) 3P	CIRCUIT BREAKER, 3P - 3 POLE
⊕	GROUND

ELECTRICAL SYMBOLS	
A	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AICS	AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
AWG	AMERICAN WIRE GAUGE
AF	AMPERE FRAME
AT	AMPERE TRIP
BC	BARE COPPER
C	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DWG	DRAWING
ELEV	ELEVATION
ENCL	ENCLOSED
ETM	ELAPSED TIME METER
EXIST	EXISTING
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FT	FLOW TRANSMITTER
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GR	GROUND FAULT RELAY
HH	HANDHOLE
HHD	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HZ	HERTZ
JB	JUNCTION BOX
KMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LCL	LONG CONTINUOUS LOAD
LIT	LEVEL INDICATOR TRANSMITTER
LSH	LEVEL SWITCH-HIGH
LT	LEVEL TRANSMITTER
LOS	LOCKOUT STOP PUSHBUTTON
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OLS	MOTOR OVERLOAD CONTACTS
P	POLE
PB	PUSHBUTTON, PULLBOX
PH	PHASE
POC	POINT OF CONNECTION
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
REC	RECEPTACLE
REF	REFERENCE
REQ'D	REQUIRED
SHT	SHEET
STD	STANDARD
SW	SWITCH
TB	TERMINAL BOARD
TEL	TELEPHONE
TEMP	TEMPERATURE
TRANSF	TRANSFORMER
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATT, WIRE
WP	WEATHERPROOF
W/	WITH
XFMR	TRANSFORMER

FOR PRELIMINARY USE ONLY

DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™

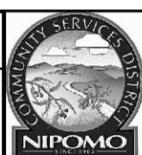
Know what's Below.
 Call before you dig.



IF THIS SIGN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERTIE PROJECT - BP4**

**ELECTRICAL LEGEND
 AND ABBREVIATIONS**



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com



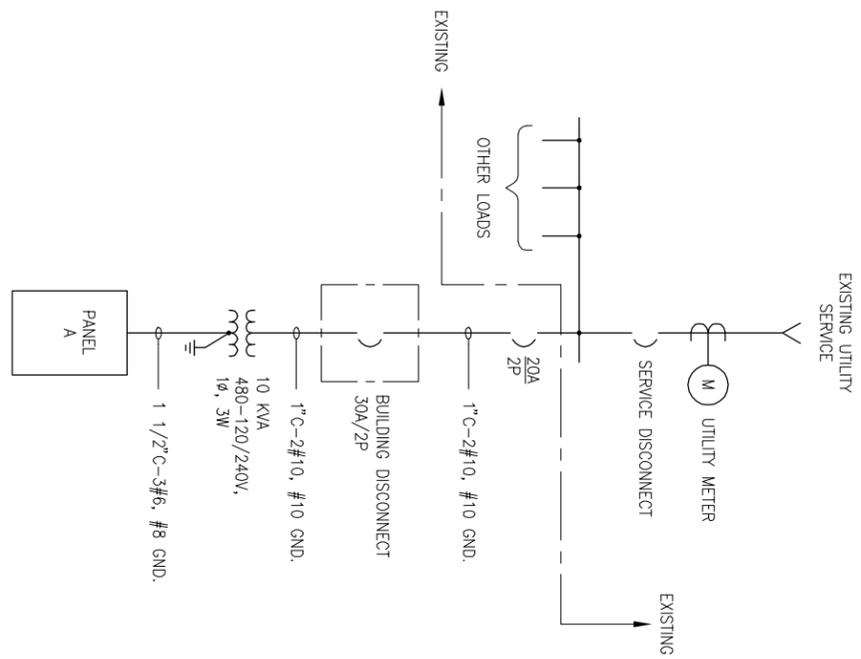
REV	DATE	DESCRIPTION	APPR

DESIGNED: **APR**
 CHECKED: **DMD**
 APPROVED: **DMD**
 DATE: JUNE 2010
AECOM PROJECT NO.
 60061295
NCSD PROJECT NO.
WATER
WE - 001
 SHEET
 91 OF 95

NAMEPLATE	A		MFG: SURFACE		MAIN 40A/2P		
BUS: AMPS	100A		VOLTS: 120/240V, 1PH, 3W				
LIGHTING	WATTAGE	OUTLETS	10,000 AMPS 20A-1P U.O.N.I.		OUTLETS	WATTAGE	
	A	B	LIT	REC	MISC	A	B
	450	7	1	2	4	4	800
SPARE			3	4			800
SPARE			5	6			100
SPARE			7	8			100
SPARE			9	10			50
SPARE			11	12			50
SPARE			13	14			1
SPARE			15	16			50
SPARE			17	18			
SPARE			19	20			
TOTAL LOAD	450					950	1000
TOTAL LOAD		450		TOTAL LOAD		1000	
2.4 KW + LCL		0 KW =		2.4 KW AT		120/240 VOLTS	
						1PH = 10 AMPS	

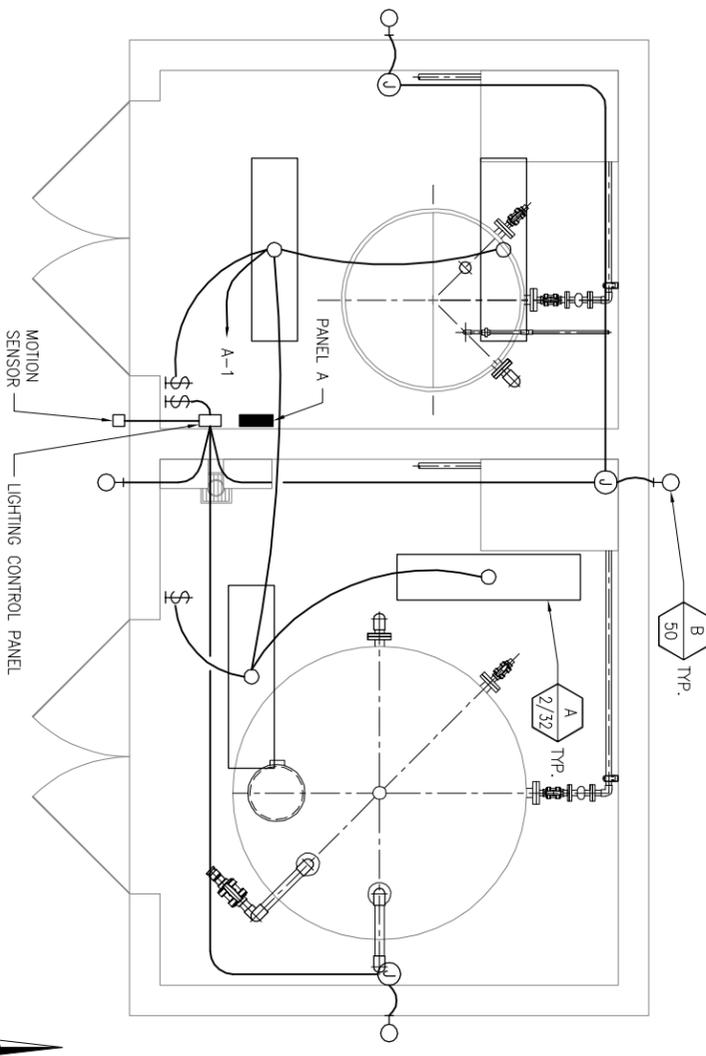
REFERENCE	VOLTS	LAMPS		MOUNTING	DESCRIPTION	MANUFACTURERS' CATALOG REFERENCE
		NUMBER	TYPE			
A 2/32	120V	2	FLUOR.	32	SURFACE	FLUORESCENT FIXTURE, WRAP AROUND ENCLOSURE, HOUSING FORMED FROM REINFORCED POLYESTER FIBERGLASS OR HIGH IMPACT ACRYLIC, CLEAR PRISMATIC LEXAN LENS, SUITABLE FOR WET AND CORROSIVE LOCATIONS. U.L. LISTED.
B 50	120V	1	HPS	50	WALL	WALL PACK, HIGH PRESSURE SODIUM FIXTURE, DIE CAST ALUMINUM HOUSING, STAINLESS STEEL EXTERIOR HARDWARE, SUITABLE FOR WET LOCATIONS, ONE PIECE FRONT HOUSING AND REFLECTOR, INJECTION MOLDED UV STABILIZED POLYCARBONATE U.L. LISTED. IES CUTOFF DISTRIBUTION.
						APPLETON: FR SERIES, LITHONIA: DMW SERIES, OR EQUAL
						LITHONIA TWC OR EQUAL

LIGHTING FIXTURE SCHEDULE

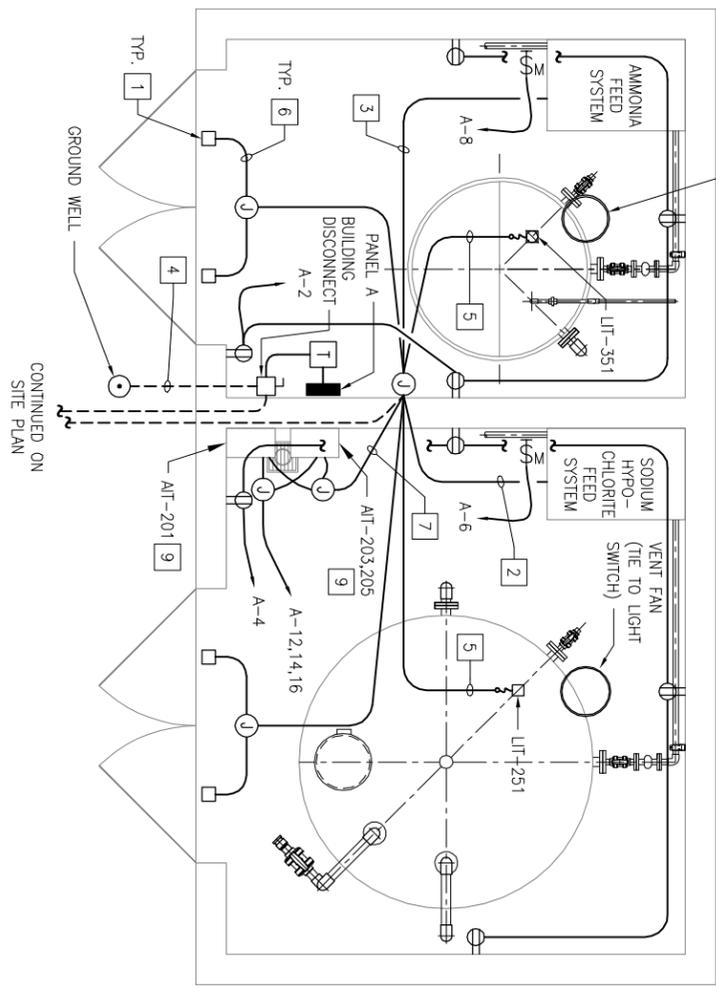


SINGLE LINE DIAGRAM

- NOTE:
1. CORROSIVE LOCATIONS.
- NOTES:
1 INTRUSION SWITCH.
2 1" C-18#14, #14 GND. + 3/4" C-2#18 TSP.
3 1" C-18#14, #14 GND. + 3/4" C-2#18 TSP.
4 3/4" C-1#6 GND.
5 3/4" C-1#18 TSP.
6 3/4" C-2#14, #14 GND.
7 3/4" C-3#18 TSP.
8 (NOT USED).
9 PROVIDE EACH AIT WITH A 15A LOCAL DISCONNECT SWITCH.



LIGHTING PLAN (See note 1)

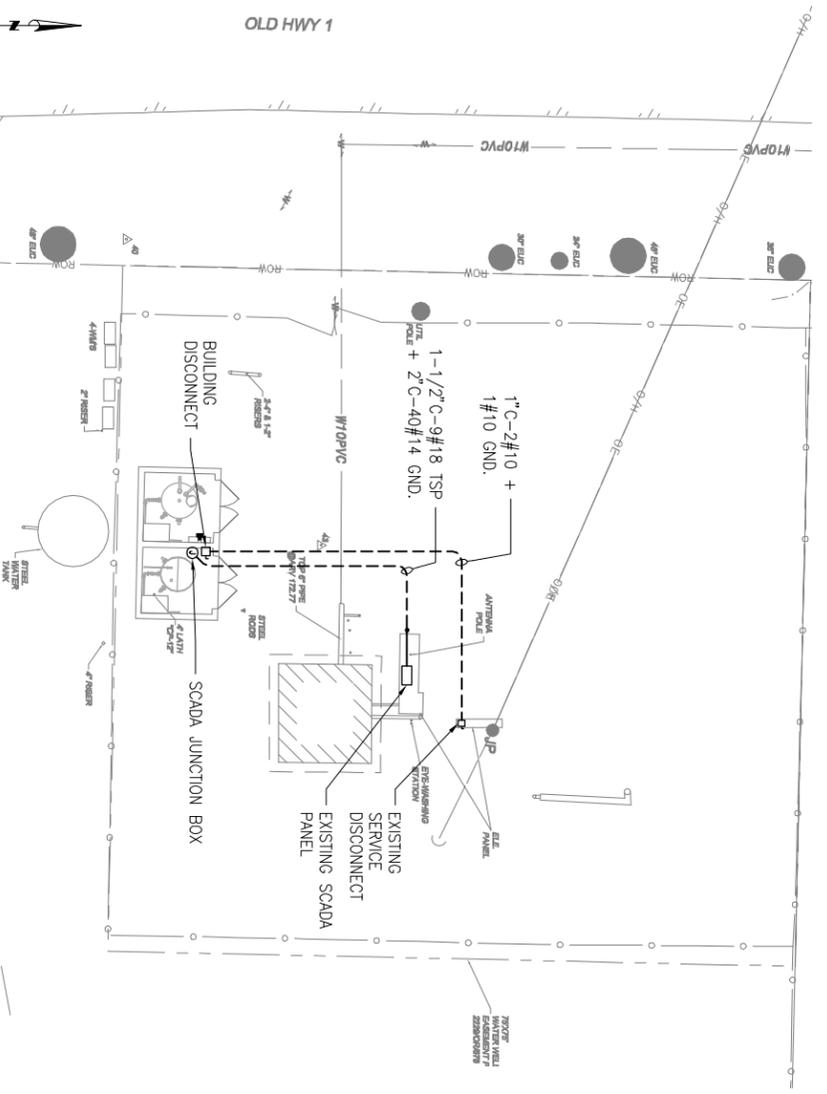


POWER AND CONTROLS PLAN (See note 1)

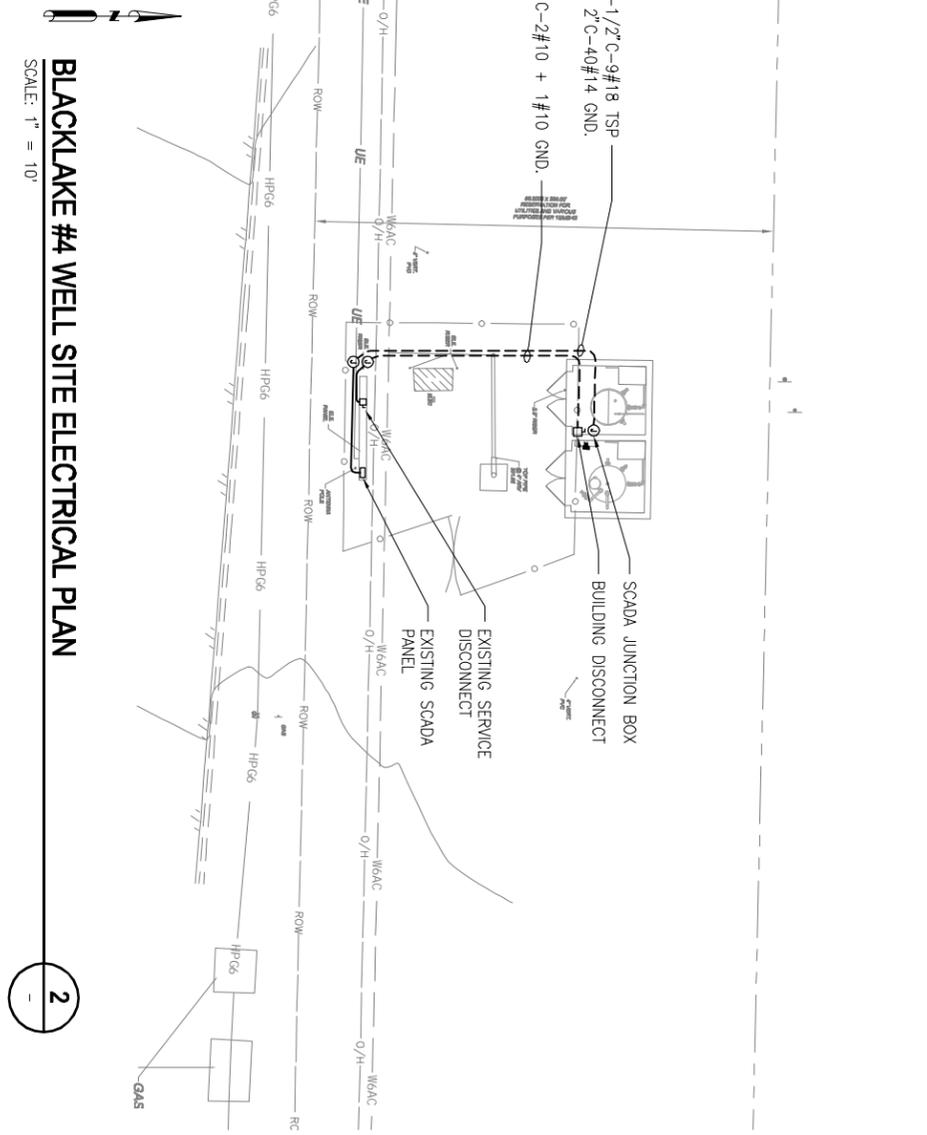


FOR PRELIMINARY USE ONLY
NOT TO BE USED FOR CONSTRUCTION
DATE: JUNE 18, 2010
90% PRELIMINARY DESIGN PLANSET

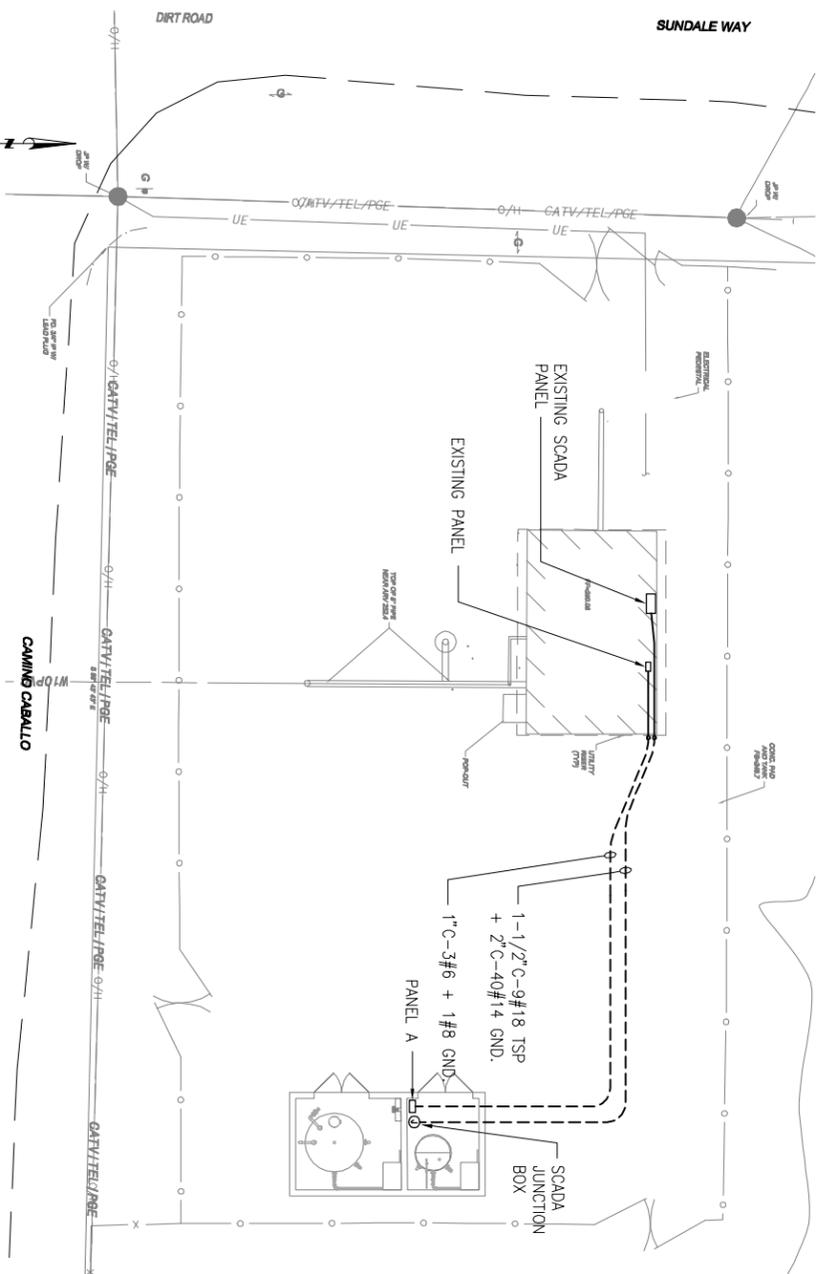
AECOM WATER
SCALE: 1/2" = 1'-0"
DATE: JUNE 18, 2010
90% PRELIMINARY DESIGN PLANSET



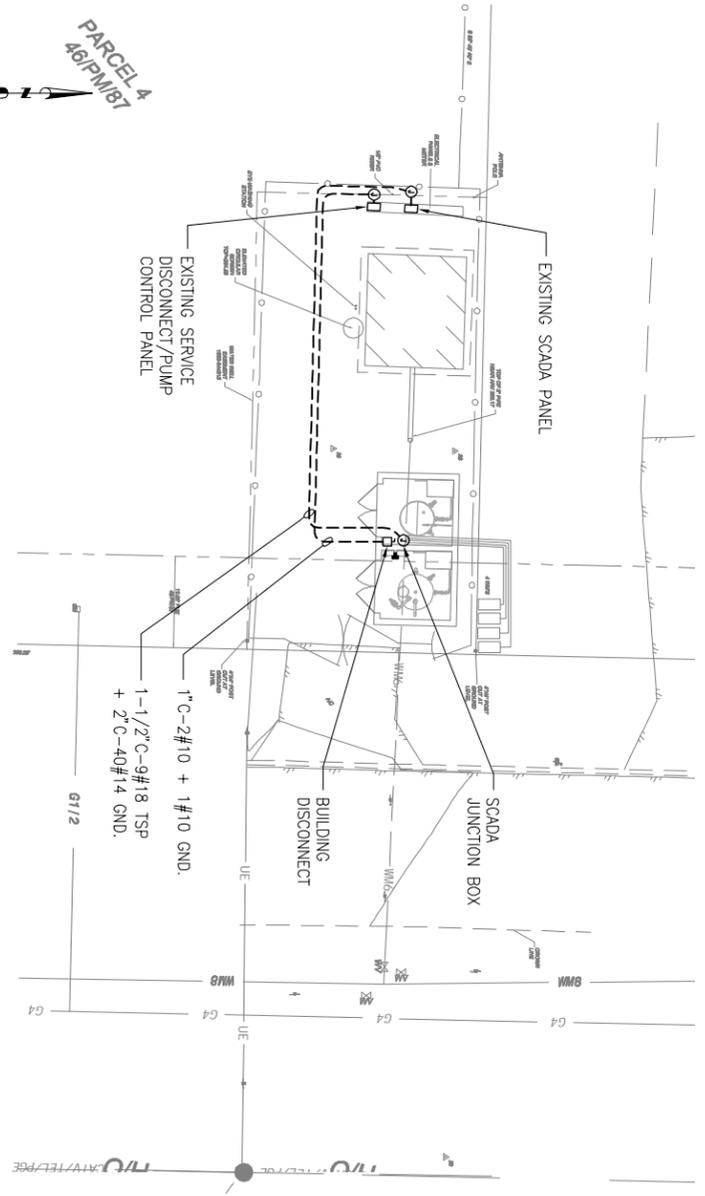
EUREKA WELL SITE ELECTRICAL PLAN
 SCALE: 1" = 10'



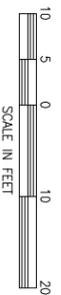
BLACKLAKE #4 WELL SITE ELECTRICAL PLAN
 SCALE: 1" = 10'



SUNDALE WELL SITE ELECTRICAL PLAN
 SCALE: 1" = 10'



VIA CONCHA WELL SITE ELECTRICAL PLAN
 SCALE: 1" = 10'



FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET

Know what's below.
 Call before you dig.

IF THIS PLAN DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**NIPOMO COMMUNITY SERVICES DISTRICT
 WATERLINE INTERLIE PROJECT - BP4**

**MULTIPLE SITES
 ELECTRICAL LAYOUT**



AECOM

AECOM USA, Inc.
 www.aecom.com



REV	DATE	DESCRIPTION	APPR

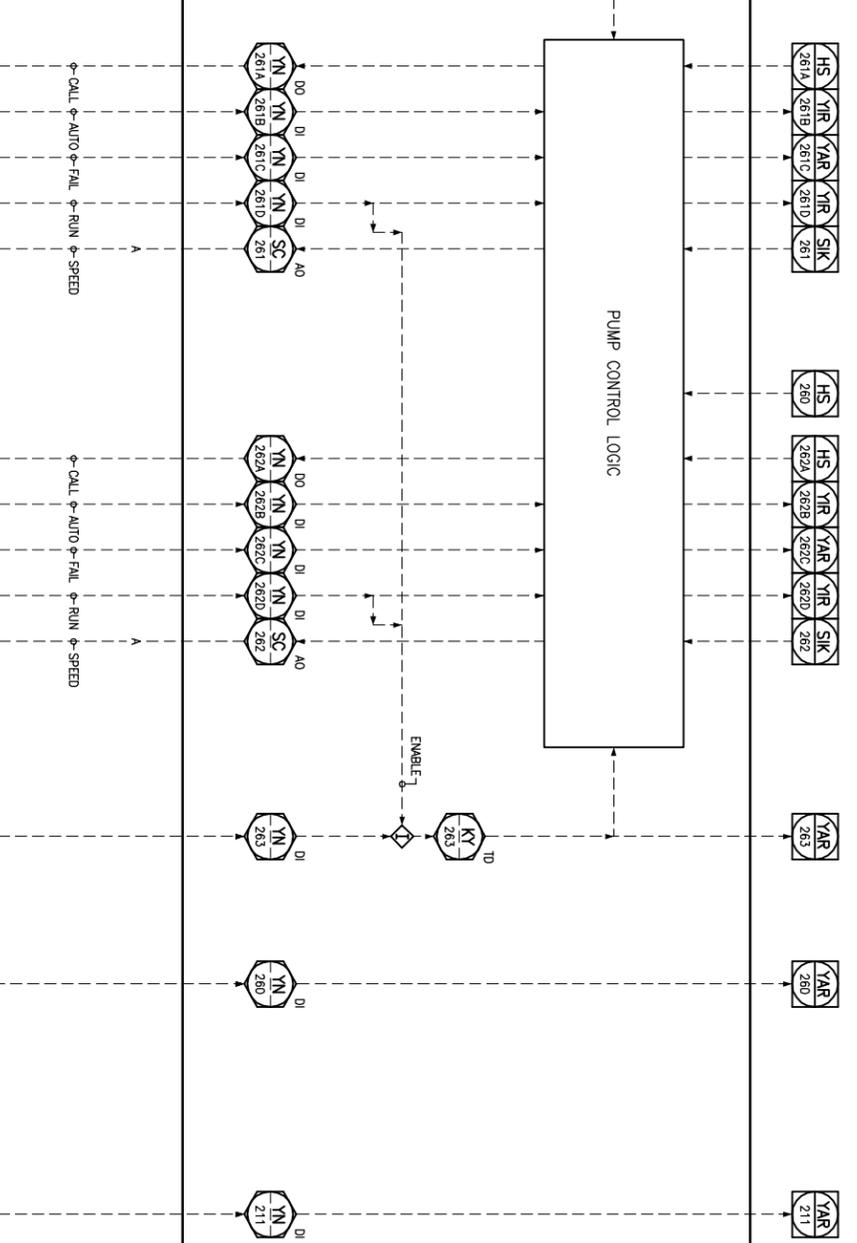
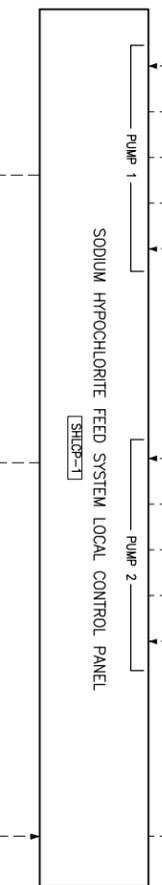
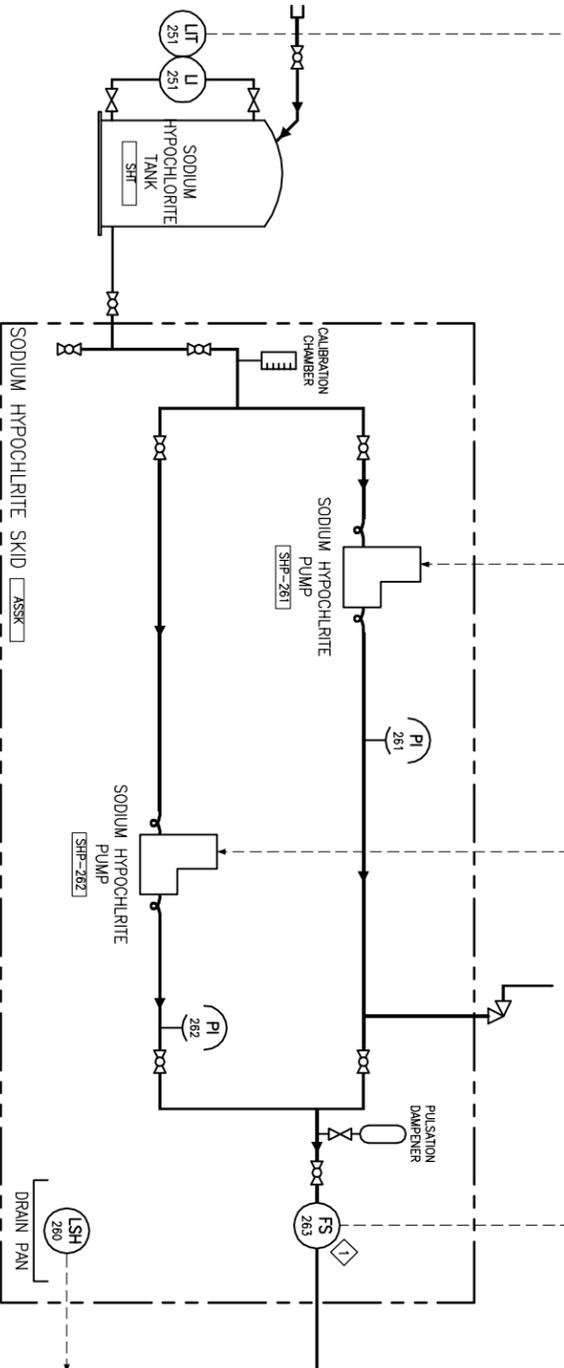
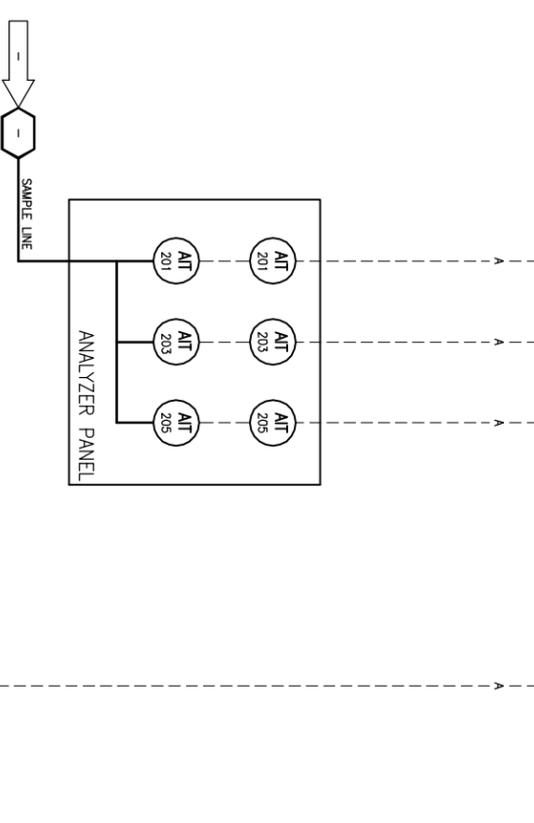
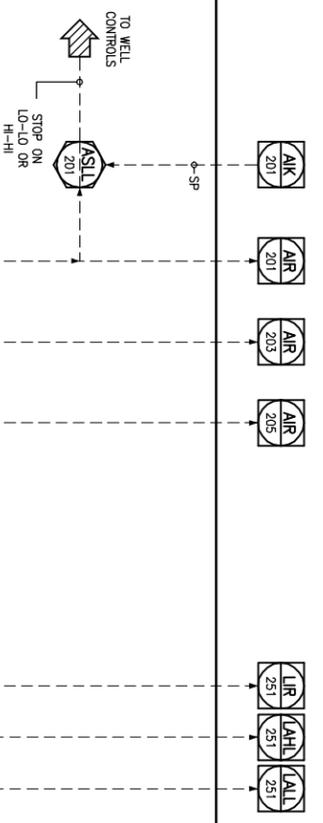
PROJECT ENGINEER: REG NUMBER: EXP DATE:

WE - 003
 SHEET
 93 OF 95

MSD PROJECT NO. 60061295
 AECOM PROJECT NO. 60061295
 DATE: JUNE 2010
 APPROVED: BOYLE/AECOM
 DESIGNED: AJP
 CHECKED: DMD
 DETAILED: DMD

SCS

PLC-X



NOTES
 1. ALL INSTRUMENTS AND LOOPS SHOWN IN THE DRAWING HAVE PREFIX *X* AS DEFINED IN NOTE 2.

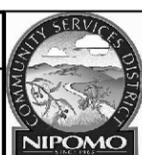
WELL	X
EUREKA	101
BLACKLAKE WELL	103
VIA CONCHA WELL	105
SUNDALE WELL	109

FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION

AECOM WATER
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERTIE PROJECT - BP4
WELLS
SODIUM HYPOCHLORITE SYSTEM P&ID



AECOM
 AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

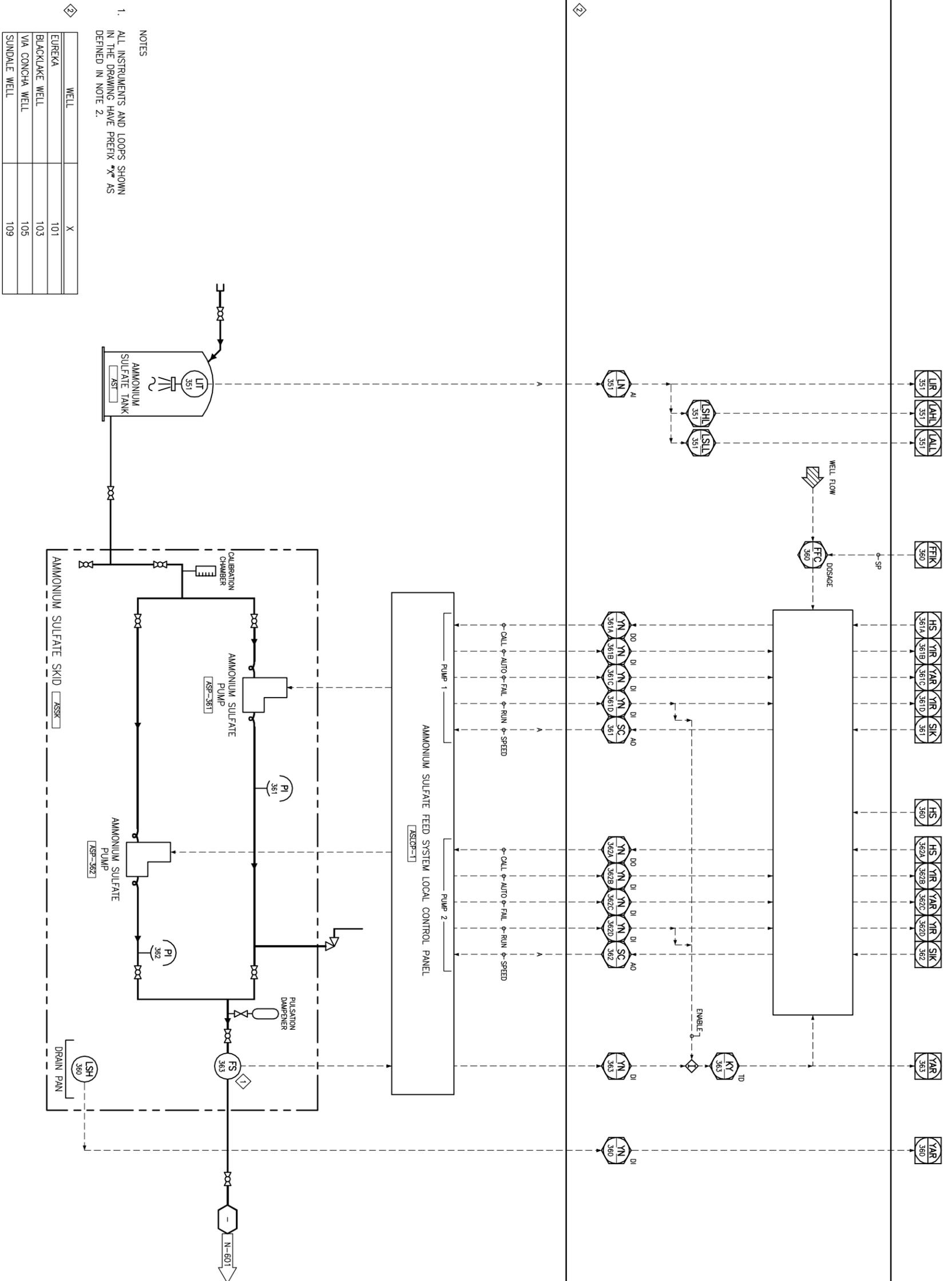


REV	DATE	DESCRIPTION	APP

DESIGNED: ES
 DRAWN: MS
 CHECKED: MS
 APPROVED: MS
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO. BNYL/AECOM
WN - 602
 SHEET
 94 OF 95

SCS

PLC-X



- NOTES
1. ALL INSTRUMENTS AND LOOPS SHOWN IN THE DRAWING HAVE PREFIX "Y" AS DEFINED IN NOTE 2.

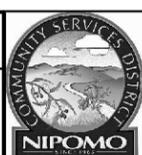
WELL	X
EUREKA	101
BLACKLAKE WELL	103
VIA CONCHA WELL	105
SUNDALE WELL	109

AECOM WATER
FOR PRELIMINARY USE ONLY
 NOT TO BE USED FOR CONSTRUCTION
 DATE: JUNE 18, 2010
 90% PRELIMINARY DESIGN PLANSET™



NIPOMO COMMUNITY SERVICES DISTRICT
WATERLINE INTERLIE PROJECT - BP4

WELLS
AMMONIUM SULFATE SYSTEM P&ID



AECOM

AECOM USA, Inc.
 1194 Pacific Street, Suite 204
 San Luis Obispo, California 93401
 T 805.542.9840 F 805.542.9990
 www.aecom.com

REV	DATE	DESCRIPTION	APPR

DESIGNED: SS
 DETAIL LED: MS
 CHECKED:
 APPROVED:
 DATE: JUNE 2010
 AECOM PROJECT NO. 60061295
 NCSD PROJECT NO.
 CAD STPS. BOYLE/AECOM
WN - 603
 SHEET
 95 OF 95